

FM 61-100

DEPARTMENT OF THE ARMY FIELD MANUAL

THE DIVISION



HEADQUARTERS, DEPARTMENT OF THE ARMY
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HEADQUARTERS
 DEPARTMENT OF THE ARMY
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THE DIVISION

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*This manual supersedes FM 61-100, 4 January 1962, including C 1, 27 March 1963; FM 7-100, 15 November 1960; and FM 17-100, 12 May 1958, including C 1, 8 June 1959, and C 2, 25 May 1961.

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Purpose

a. This manual sets forth military doctrine, tactics, and techniques for the employment of the division. It provides guidance for division and subordinate commanders and their staffs.

b. The material presented in this manual agrees with applicable portions of STANAG 2007 (SOLOG-20)—Use of Abbreviations by the NATO Armed Forces.

1-2. Scope

a. This manual provides information on the organization, capabilities, limitations, command, planning, tactical employment, and combat service support of airborne, armored, infantry, and mechanized infantry divisions. It presents doc-

trine common to all areas of operations and is applicable to nuclear and nonnuclear operations. Special operations (such as airborne, amphibious and those in northern, jungle and desert areas) are covered in detail in other publications (app. I). These subjects are therefore discussed only in general terms herein.

b. Technological advancement and the continuing improvement in organizational and operational concepts will necessitate modification of this manual from time to time. Recommendations for changes should be forwarded directly to the U.S. Army Combat Developments Command Combined Arms Agency, Fort Leavenworth, Kans., 66027, on DA Form 1598 (Record of Comments on Publications).

Section II. MISSIONS AND ROLES OF THE DIVISION

1-3. Mission

The mission of the division is the destruction of enemy military forces and the seizure or domination of critical land areas, their populations, and resources.

1-4. Other Roles

In addition to its basic mission, the division may be employed to accomplish counterinsurgency and

other tasks similar to the following:

- a.* A show of force.
- b.* Truce enforcement.
- c.* International police action.
- d.* Encouragement of a faltering government.
- e.* Legal occupation.
- f.* Restoration of order.
- g.* Protection of personnel and property.
- h.* Assistance to civil defense efforts.

Section III. ORGANIZATION, CAPABILITIES, AND LIMITATIONS OF THE DIVISION

1-5. General Characteristics

a. The division consists of a relatively fixed command, staff, combat, and support structure to which are assigned combat battalions (airborne infantry, infantry, mechanized infantry, tank) in types and numbers appropriate to the division's mission and its anticipated operational environment. Determination of the types and numbers of combat battalions in a particular division is called

“tailoring.” Making this determination prior to deploying a division to a particular area of operations is “strategic tailoring.” The transfer of units by higher field commanders from one division to another, or the augmentation of a division from nondivisional sources to meet specific needs, or the streamlining of a division by detaching some of its elements or equipment is “tactical tailoring.” Grouping appropriate elements of the division under its three brigades and other control head-

quarters in types and numbers appropriate to each brigade or other control unit's specific mission is organization of the division for combat.

b. A division is designated by the Department of the Army as airborne, armored, infantry, or infantry (mechanized), depending upon the types and numbers of combat battalions assigned when it is strategically tailored. This tailoring gives the division and its subordinate units the capability to perform specific missions in an anticipated operational environment.

c. Within the division, the three brigade headquarters are the major tactical command headquarters to which combat, combat support, and combat service support elements may be attached or placed in support to perform specific missions.

d. The division support command consists of a headquarters and headquarters company and appropriate functionalized combat service support units. Combat service support units can be fragmented to provide functional support elements which can be attached to or placed in support of the brigades or other combat units.

e. Since the organization, strength, and equipment of the division are based upon its contemplated mission and the operational environment, its capabilities and limitations will depend upon the manner in which it has been strategically or tactically tailored. The lists of capabilities and limitations which follow are a guide to the conditions under which the various divisions might be employed.

f. All divisions can—

- (1) Perform ground operations under conditions of nuclear or nonnuclear warfare to include counter guerrilla operations.
- (2) Operate as a part of a joint amphibious force.
- (3) Control and administer up to 15 combat battalions.
- (4) Control enemy populations.
- (5) Restore order.
- (6) Conduct airmobile operations.
- (7) Conduct long range patrolling.
- (8) Perform approximately 75 percent of their own vehicle and equipment maintenance.
- (9) Be tailored to suit the mission and the terrain in which they will fight.

g. All divisions lack organic air defense artillery.

1-6. Organization, Capabilities, and Limitations of the Infantry Division

a. The organization of the infantry division (app. II) provides a capability for—

- (1) Sustained combat operations against similarly or less well equipped ground forces.
- (2) Operations in difficult weather and terrain.
- (3) Airborne operations as a part of a joint force.
- (4) Operations with austere logistical support.

b. The infantry division has the following limitations:

- (1) Limited mobility.
- (2) Limited airlift capability.
- (3) Limited protection against armor.
- (4) Limited protection against artillery and nuclear effects.

1-7. Organization, Capabilities, and Limitations of the Mechanized Infantry Division

a. The organization of a mechanized infantry division (app. II) provides a capability for—

- (1) Sustained combat operations against similarly or less well equipped ground forces.
- (2) Rapid movement, deep penetration, and pursuit.
- (3) Dispersing and concentrating rapidly over great distances.
- (4) Exploitation of successes, including effects of nuclear, nonnuclear, and chemical fires.
- (5) Covering force operations.
- (6) Mobile defense.
- (7) Relatively good protection against nuclear and artillery effects.

b. The mechanized infantry division has the following limitations:

- (1) In airborne operations, it loses much of its striking power and ground mobility.
- (2) Restricted vehicular mobility in jungle; in dense forest; in marshy, rocky, and steeply rugged terrain, and over water and enemy-placed obstacles.
- (3) Requirement for more logistical support, particularly maintenance and fuel,

than the infantry division. This includes rail or highway transport of tracked vehicles for long administrative moves.

1-8. Organization, Capabilities, and Limitations of the Armored Division

a. The organization of the armored division (app. II) provides a capability for—

- (1) Sustained combat operations against any type of opposing ground forces.
- (2) Rapid movement, deep penetration, and pursuit.
- (3) Dispersing and concentrating rapidly over great distances.
- (4) Exploitation of successes, including effects of nuclear, nonnuclear, and chemical fires.
- (5) Covering force operations.
- (6) Conducting the mobile defense and use as a mobile counterattack force.
- (7) Optimum protection against tank, artillery, and nuclear fires.

b. The armored division has the following limitations:

- (1) Primary fighting vehicles are not air-mobile.
- (2) Restricted vehicular mobility in jungle; in dense forest; in marshy, rocky, and steeply rugged terrain; and over water and enemy-placed obstacles.
- (3) Requirements for heavy logistical support, particularly maintenance, fuel, and ammunition. This includes rail or high-

way transport of tracked vehicles for long administrative moves.

1-9. Organization, Capabilities, and Limitations of the Airborne Division

a. The organization of the airborne division (app. II) provides a capability for—

- (1) Airborne operations alone or as a part of a joint force, including assault by parachute or air landing.
- (2) Closing with the enemy and destroying or capturing him, using fire, maneuver, and close combat.
- (3) Conducting all types of ground operations when augmented by combat and logistical units.
- (4) Coordinating reinforcing units.
- (5) Rapid strategic deployment by air.
- (6) Conducting Army airmobile operations.

b. The airborne division has the following limitations:

- (1) Requirement for considerable initial and continuing Air Force support when employed in an airborne role.
- (2) Limited ground vehicular mobility.
- (3) Less protection than other divisions against tanks, artillery, and nuclear attack.
- (4) Sensitivity to weather conditions and aircraft availability when employed in an airborne role.
- (5) Requires combat support and combat service support augmentation if employed in sustained operations.

CHAPTER 2

COMMAND

Section I. GENERAL

2-1. Commanders

Combat unit commanders at all echelons must be prepared to employ combined arms teams and

to use all available means in developing and applying combat power.

Section II. DIVISION COMMAND

2-2. Division Commander

The commander must concentrate on the essential aspects of his mission and delegate to his staff supervision of less critical activities. The division commander's concept of operation must provide overall guidance to his staff and to subordinate commanders. The subordinate must have freedom of action to exploit rapid changes in the tactical situation and still operate within the overall concept of the division commander.

2-3. Assistant Division Commanders

a. The two assistant division commanders (ADC) perform those tasks assigned them by the division commander.

b. Examples of tasks that may be assigned assistant division commanders are listed in chapter 1, FM 101-5.

2-4. Command Channels

The division commander exercises command through the commanders of the brigades; division artillery; support command; the armored cavalry squadron; aviation, engineer, and signal battalions; and the military police company. If, under extreme conditions, instructions have to be issued by the division Commander directly to units below these subordinates, the intermediate commanders must be informed of the action taken, and normal command channels must be restored at the earliest opportunity.

2-5. Succession of Command

In the event the commander becomes a casualty, seniority determines the succession of command. Commanders should designate individuals, in order of succession, to direct operations until the next senior assumes command or a new commander is appointed.

Section III. DIVISION STAFF

2-6. General

a. Purpose. The purpose of the division staff is to assist the division commander in the exercise of command.

b. General Staff. General staff responsibilities, procedures, and relationships are described in FM 101-5.

c. Special Staff.

- (1) Except for the chemical section, the division surgeon section, and the headquarters commandant section, the special staff sec-

tions are provided by divisional units other than the division headquarters and headquarters company. Air defense representation is provided by attached air defense units. When air defense units are not attached to the division, the G3 will advise the commander on matters pertaining to air defense.

- (2) The division staff is normally augmented with a weather section and an air liaison officer from the supporting Air Force.

(3) Special staff responsibilities, procedures, and relationships are described in FM 101-5.

2-7. Staff Organization

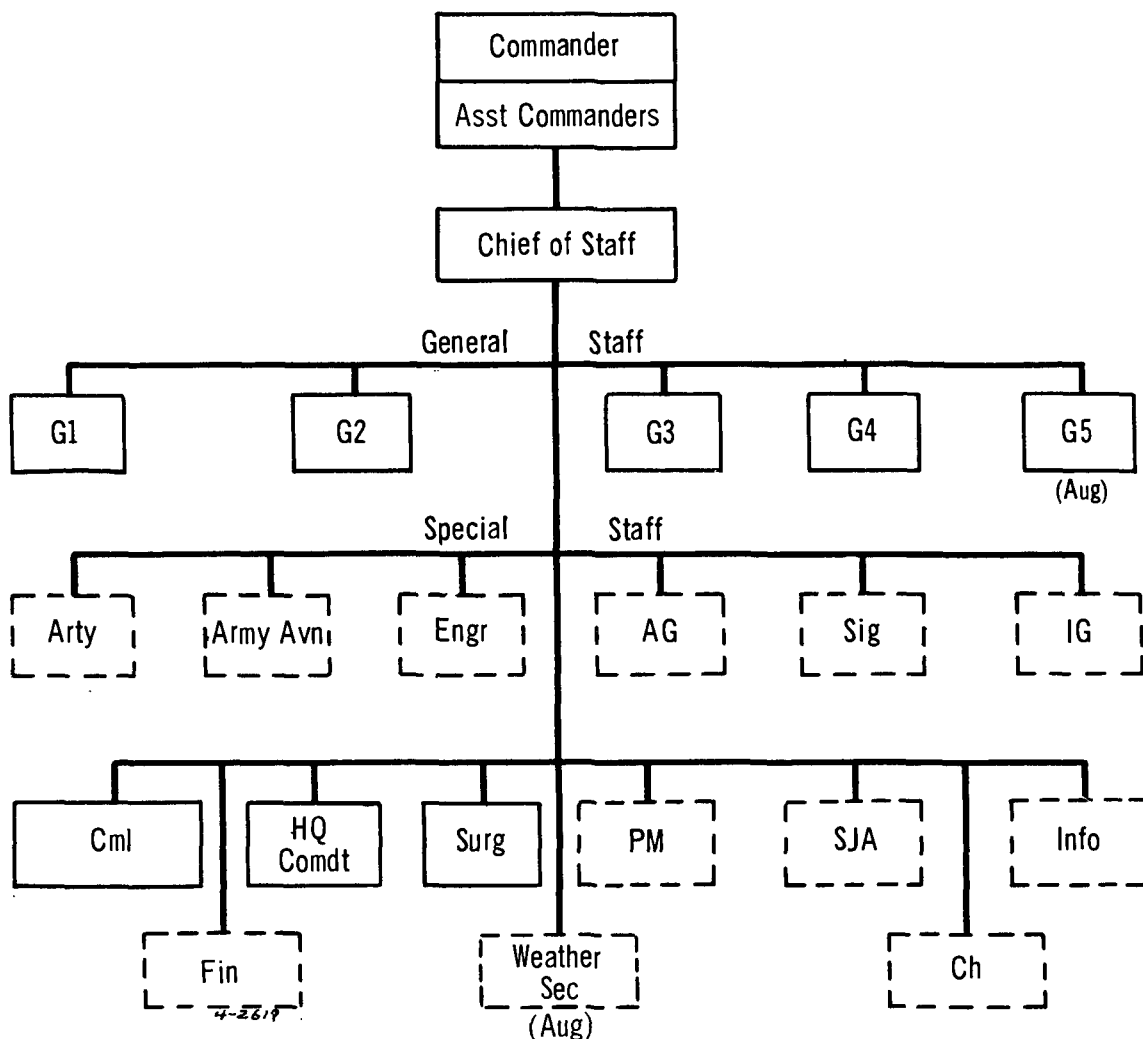
Organization of the division staff is shown in figure 1.

2-8. Staff Arrangements and Liaison

a. General. To expedite staff reaction, a tactical operations center will normally be established during active operations. This operation center is

not a separate organizational entity in the tables of organization.

b. The Tactical Operations Center. The Tactical operations center (TOC) is a facility at the division main within which are grouped representatives of general and special staff sections concerned with current combat and combat support operations. These representatives assist the commander by providing current information, making recommendations for command decisions, taking action within established policies, and issuing implementing instructions. The chief of staff exercises overall direction of the staff representa-



- NOTE: 1. Personnel for sections shown in dotted lines are furnished from units other than division headquarters and headquarters company.
 2. Support command commander furnishes staff advice on logistical operations.
 3. IG, SJA, INFO Officers may be on the personal staff of the commander.

Figure 1. Division staff.

tives in the TOC. Normally the G3, without derogation of the normal responsibilities and functions of other general and special staff officers, will be assigned primary general staff responsibility for supervision of the TOC. Details of organization and functions of the TOC will be published in appendix XIII of FM 101-5.

c. Logistical Operations. Logistical operations are controlled, coordinated, and regulated by the support command. Personnel from the division

staff agencies and units may be furnished to the support command headquarters as required to assist in logistical functions.

d. Liaison.

- (1) The division chief of staff is responsible for establishing division level liaison in accordance with the desires of the commander and the policy of higher headquarters.
- (2) The duties of liaison officers are discussed in FM 101-5.

Section IV. BRIGADE COMMAND

2-9. General

The brigade headquarters consisted of the command and staff personnel required to supervise tactical training and to conduct tactical operations. The brigade headquarters monitors administrative and logistical operations within the brigade to insure continuous and adequate combat service support. The brigade headquarters is prepared to act as emergency division headquarters. See FM 7-30 and FM 17-30.

2-10. Brigade Commander

The brigade commander is guided by the principles stressed in paragraph 2-2 and exercises command in accordance with the policies of the division commander.

2-11. Brigade Executive Officer

The brigade executive officer is the principal assistant to the brigade commander. His functions and responsibilities are similar to those of a chief of staff. He represents and acts for the brigade commander and during the absence of the latter.

Section V. BRIGADE STAFF

2-12. General

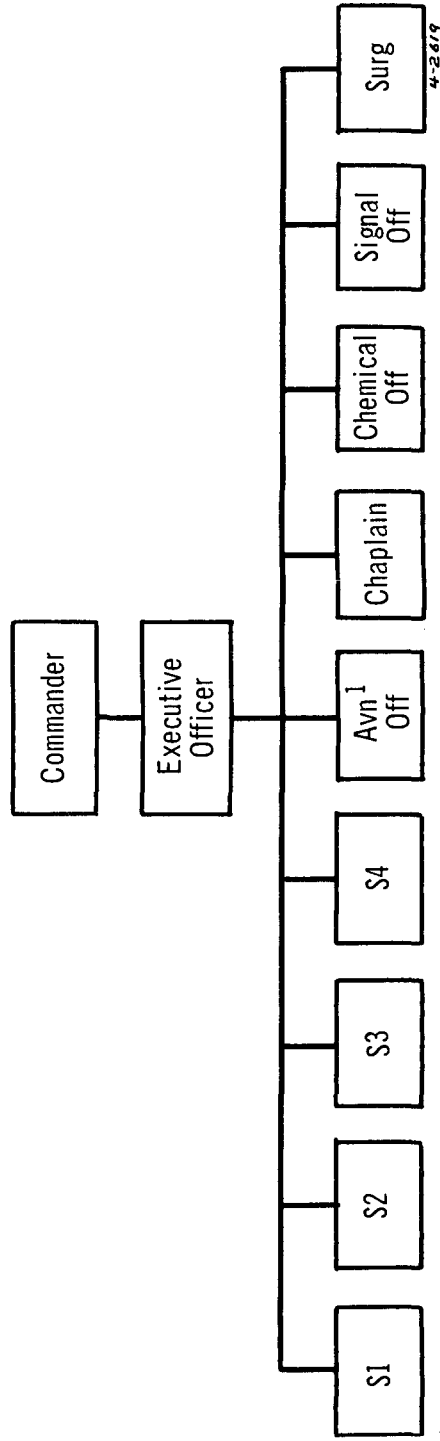
The duties of the members of the brigade staff are similar, except in scope, to those of their counterparts on the division staff. The brigade staff has a limited capability for future planning while conducting current operations. (See FM 7-30 and FM 17-30.)

2-13. Staff Organization

Organization of the brigade staff is shown in figure 2.

2-14. Liaison

Liaison is established in accordance with division and brigade policies and orders. For details see FM 101-5.



¹Aviation Section Commander.

Figure 2. Brigade staff.

Section VI. COMMAND POSTS

2-15. General

a. Command and staff elements of the division headquarters are normally echeloned into three headquarters installations: division main, division alternate, and division rear.

b. Since the manner in which these installations function largely determines the effectiveness of the division, division standing operating procedures are developed for their organization, operation, location, movement, internal arrangement, and security.

c. The composition of headquarters echelons is changed as the situation warrants.

2-16. Division Main

a. General. The division main is the principal facility through which the division commander exercises command.

b. Composition. The following are normally located within the division main:

- (1) Division commander and aides.
- (2) An assistant division commander and aides.
- (3) Chief of staff section.
- (4) The general staff sections.
- (5) The division tactical operations center (DTOC).
- (6) Aviation section.
- (7) Engineer section.
- (8) Signal section.
- (9) Chemical section.
- (10) Provost marshal section.
- (11) HQ commandant section.
- (12) Liaison officers to the division.
- (13) HQ of attached intelligence detachments.
- (14) US Army security agency personnel.
- (15) Division headquarters company.
- (16) MP company headquarters, security platoon, and other security personnel as required.
- (17) Command signal center platoon.
- (18) AG team (message center).
- (19) Chaplain section.
- (20) Other special or personal staff sections as required.

c. Location. The general location of the division main is approved by the division commander

upon the recommendation of G3 with advice from the signal officer. The specific location is selected by the headquarters commandant. Considerations in locating the division main include:

- (1) The commander's concept of operations.
- (2) Command of subordinate units.
- (3) Accessibility to higher, lower, and adjacent headquarters.
- (4) Sufficient space to accommodate all command post elements.
- (5) Suitable placement of communication means.
- (6) Adequate cover, concealment, and dispersion.
- (7) Defense of the installation to include distance from probable targets for enemy fire and defense against infiltration, guerrilla, air, and artillery attacks.
- (8) Drainage.
- (9) Vehicle parking areas.
- (10) Adequate internal and access road nets.
- (11) Security afforded by proximity to division combat units.

d. Security. Local and internal security of the division main command post is the responsibility of the division provost marshal. Working in close coordination with the headquarters commandant, he plans and supervises the employment of the security force. Security is enhanced by locating the command post near combat units. Internal security is provided by the security platoon of the division military police company. Special attention is given to the security of such key portions of the installation as the war room, the TOC, the division commander's van, and classified signal facilities. The security platoon also operates the dismount point at the entrance to the command post and, within its capabilities, provides local perimeter security for the installation. Additional security personnel are furnished by the division headquarters company and the staff sections as required. Other troops may be attached to provide increased security, but such attachments are made only when absolutely necessary.

e. Tactical Command Group. When it is necessary for the division commander to operate away from the division main, a tactical command group is formed. This group will normally consist of

G2, G3, and fire support representatives; communications and security personnel, and such other personnel as are required. With the occasional exception of security personnel, this group is drawn from division main and is not considered a separate echelon in the command and control system.

2-17. Division Alternate

The division provides for the establishment of an alternate command post to insure continuity of operations should division main become incapable of operating. The alternate tactical operations center is the nucleus of the division alternate. Necessary duplicate records and maps are maintained. The division alternate is established by providing a small separate command facility with adequate personnel and communications or designating a major subordinate headquarters as the alternate. Detailed plans for rapid augmentation of the division alternate are prepared and kept current.

2-18. Displacement

The division must maintain continuous control of operations during command post displacement. Continuous operation may be accomplished by—

- a. Shifting control to alternate during the move. This will require augmentation of alternate, the tactical command group being the most likely augmentation.
- b. Early provision of new signal facilities.
- c. Expediting movement by use of advance parties from each staff section.
- d. Use of radio and messengers to maintain contact with key personnel during the move.

2-19. Division Rear

a. *General.* Elements of the division staff not required to assist the division commander in the command of tactical operations are assigned to the administration company and constitute the division rear echelon. These include the adjutant general, finance officer, inspector general, staff judge advocate, and information officer. Other elements may be located there in accordance with the desires of the division commander. Unless designated otherwise by the division commander, the division adjutant general is designated the of-

ficer-in-charge of the rear echelon. Details of its organization and operations are presented in FM 12-11.

b. *Location.* The location of the division rear is approved by the division commander upon the recommendation of the G1 with advice from the signal officer. It is normally located in the division rear area but may be located farther to the rear in the corps or army area. Considerations of security, space, facilities, accessibility, and communications apply to selection of its location.

c. *Displacement.* Movement of the division rear is performed under the supervision of the officer-in-charge and is under the tactical control of the support command commander.

d. *Rear Area Security and Area Damage Control.* The officer-in-charge (OIC), division rear echelon, is responsible for the internal security of the division rear. The support command commander integrates the division rear echelon into the area damage control plan and the rear area security plan when the division rear is located within the division rear area. When the division rear is located outside the division area, the officer-in-charge (OIC) is responsible to insure that the division rear is included in local rear area security and area damage control plans.

e. *Communication.* Communications are provided by the signal battalion.

2-20. Division Support Command Command Post

The division support command command post is established in the division support area. Basic considerations for the movement, location, and security of the support command command post are generally the same as for the division main. Details of organization and operation of the support command command post are contained in FM 54-2.

2-21. Brigade Command Posts

The brigade headquarters installations perform functions similar to those of the division. They must be located to permit adequate communication with their subordinate units and with the division main. Details of organization and operation of brigade command posts are contained in FM 7-30 and FM 17-30.

Section VII. SIGNAL COMMUNICATIONS

2-22. General

The division communication system provides commanders with the means of rapidly transmitting orders and instructions. All signal communication means are employed, and it is essential that the system be capable of integrating the organic signal communications of the various combat battalions and combined arms teams that are organized within the division.

2-23. Responsibility

a. The G3 has primary general staff supervision for the formulation of signal plans, policies, and procedures, and the integration of signal plans with other tactical operations. The division signal officer commands the signal battalion, prepares signal plans, and is responsible to the division commander for the operation of the division communications system.

b. Each subordinate commander must—

- (1) Establish communication within his command;
- (2) Establish communication with the supported and the adjacent unit on his right and/or unit to his front;
- (3) Establish other external communications in accordance with the policies of higher headquarters and as specifically directed;
- (4) And in the event of interruption, reestablished communication regardless of responsibility for initial installation.

2-24. Signal Communication Planning

Signal communication planning encompasses all staff actions taken by the division signal officer in

preparation for projected operations. For details on signal planning, see FM 24-16 and FM 101-5.

2-25. Communication Considerations in Headquarters Installations

The principal consideration for the positioning of headquarters installations with respect to communications are the—

- a.* Location of powerlines, electrical stations, hill masses, and dense woods.
- b.* Effect of distance and terrain on wire, radio, and messenger communications.
- c.* Routes of communication and traffic conditions.

2-26. Communications Security

The commander establishes communications security measures by stating general principles in the unit SOP and by announcing before an operation any variation from normal security practices. Detailed information concerning communications security is contained in FM 32-5.

2-27. Means of Communication

See appropriate tables of organization and equipment (TOE) and paragraphs 4-22 through 4-25.

2-28. Applicable STANAG

The material presented in this chapter agrees with applicable portions of STANAG 2101 (SOLOG-104)—Principles and Procedures for Establishing Liaison.

CHAPTER 3

ORGANIZATION

Section I. THE DIVISION BASE

3-1. General

Divisions have a common base consisting of the division headquarters and headquarters company, three brigade headquarters and headquarters companies; division artillery; support command; aviation, engineer, and signal battalions; an armored cavalry squadron; and a military police company. Capabilities of the division support command are modified to meet the varying supply and maintenance requirements of differing combinations of combat battalions. Further, the quantity and type of equipment vary depending upon the type division. Examples of this modification are found in the military police company, the air equipment support company, and the division artillery of the airborne division.

3-2. Division Headquarters and Headquarters Company

a. General. The division headquarters provides command, control, and supervision of operations of the division and attached units. The headquarters company provides logistical support for the division headquarters. The headquarters company is normally located at the division main.

b. Organization. See figure 1 and appendix II.

3-3. Division Military Police Company

a. General. The division military police company provides military police support for the division to include:

- (1) A provost marshal section for the division special staff.
- (2) Traffic control through the operation of traffic control posts (TCP) and motor patrols.
- (3) Operation of division prisoner of war (PW) collection points and evacuation of PW from brigade to division.
- (4) Prevention and investigation of crime.
- (5) Circulation control of individuals, including the operation of a division straggler collecting point when required.
- (6) Escort and security of sensitive material, key installations and facilities, critical movements, and designated personnel.
- (7) Security for division main and tactical command posts.
- (8) Enforcement of military laws, orders, and regulations.
- (9) Assistance to commanders in the maintenance of discipline.
- (10) Operation of a temporary confinement facility for U.S. military prisoners when required.
- (11) Operation of a civilian internee collecting point when required.

b. Organization. See appendix II.

c. Employment. Details of employment of the company are contained in chapters 4 through 10.

3-4. Division Aviation Battalion

a. General. The division aviation battalion provides aviation support for the division to include:

- (1) Support of division headquarters, the support command, and other elements without organic aviation.
- (2) Reinforcement of units with organic aircraft.
- (3) An aviation section for the division special staff and the army aviation element (AAE) of the TOC.
- (4) Operation of a central aircraft communication and control facility and a division instrumented airfield with terminal flight facilities and ground control approach radar.
- (5) Aerial battlefield surveillance and target acquisition.
- (6) Aircraft for employment under operational control of combat unit commanders in airmobile operations with an organic

single lift capability of the assault elements of one dismounted infantry company.

- (7) Logistical lift to include augmenting army aeromedical evacuation capability.
- (8) Provision of armed escort for airmobile operations.
- (9) Provision of an airborne voice relay (FM) in the various division radio nets as required.
- (10) Airborne messenger courier service as required.

b. Organization. See appendix II.

c. Employment. Employment of the battalion is covered in chapters 4 through 10.

3-5. Division Armored Cavalry Squadron

a. General.

- (1) The division armored cavalry squadron is a combat unit which can—
 - (a) Collect and report information of intelligence value over wide fronts and to extended depths.
 - (b) Cover the flank or flanks of the division.
 - (c) Provide security and liaison between division units or between the division and adjacent units.
 - (d) Act as a covering force in the movement to contact, offense, defense, or retrograde.
 - (e) Provide communication relay.
 - (f) Conduct chemical detection and radiological monitoring and survey.
 - (g) Perform area damage control operations.
 - (h) Provide rear area security.
 - (i) Provide armed escort for airmobile operations.
 - (j) Conduct semi-independent operations when suitably reinforced.
 - (k) Conduct offensive, defensive, and delay missions as an economy of force unit.

b. Organization. See appendix II.

c. Employment. Employment of the squadron is covered in chapters 4 through 10, and FM 17-36.

3-6. Division Engineer Battalion

a. General. The division engineer battalion provides engineer support for the division to include:

- (1) Construction, maintenance, removal, and rehabilitation of obstacles, roads, bridges, culverts, deception devices, camouflage, fortifications, fords, air-landing facilities, and emplacements.
- (2) Technical assistance to and training of other division troops in performing the functions listed above.
- (3) Demolition to include conventional and atomic demolition munitions (ADM).
- (4) Establishment and operation of a maximum of five water supply points.
- (5) Engineer reconnaissance and intelligence.
- (6) An engineer section for the division special staff and the engineer element (ENGRE) of the TOC.
- (7) Support of river-crossing operations with boats, rafts, and bridges.
- (8) Bridging for passage of short gaps.
- (9) Performance of infantry-type missions and assisting combat elements in breaching fortifications.

b. Organization. See appendix II.

c. Employment. Employment of the battalion is covered in chapters 4 through 10.

3-7. Division Signal Battalion

a. General. The division signal battalion provides communications-electronics support for the division to include:

- (1) Installation and operation of a major portion of the division communication system.
- (2) A signal section for the division special staff and the communications-electronics element (CEE) of the TOC.
- (3) Photography (except aerial photography) and still picture laboratory service.
- (4) Direct support maintenance of all cryptographic equipment.
- (5) Distribution of cryptographic material to organic elements of the division. Augmentation by Team NA, TOE 11-500, may be required to provide cryptologists support to attached units.

b. Organization. See Appendix II.

c. Employment. Employment of the signal battalion is covered in chapter 4.

3-8. Division Support Command

a. General. The division support command provides logistical support for the division to include:

- (1) Supply, including establishment of distribution points for Class I through IV supplies and maps and control of Class V supply.
- (2) Direct support maintenance (except for medical and cryptographic equipment).
- (3) Division level medical service, including evacuation of patients, treatment (including emergency dental), medical supply, and organization maintenance of medical equipment.
- (4) In the airborne division, air equipment required for air drop of personnel, supplies, and equipment; and organizational maintenance support for quartermaster air equipment.
- (5) Advice on quartermaster and ordnance operations, on all supply and maintenance matters except water supply and maintenance of cryptographic material, and on transportation matters pertaining to the operations of the support command.

b. Organization.

- (1) See appendix II, and FM 54-2.
- (2) Support command units are capable of fragmentation in order to provide attachments to division elements on missions which cannot be supported directly.
- (3) The support command commander exercises tactical command authority over the administration company. Performance of its primary mission is carried out under the staff supervision of the G1.
- (4) The combat service support functions of the support command are organized on a functional basis.
- (5) The support command commander exercises command authority over the medical battalion. The performance of its primary mission is carried out under the staff supervision of the division surgeon.

c. Employment.

- (1) The support command is normally located in the division rear area. Combat service support units are located forward with the brigades. Units in the division

rear area receive support from the division support area.

- (2) Combat service support can be provided on an area basis or a unit basis. Support on an area basis is generally employed, although both methods may be used.
- (3) Details of support command logistical operations are covered in FM 54-2.

3-9. Division Artillery

a. General. The division artillery provides combat support for the division by accurate delivery of nuclear and nonnuclear artillery fires of appropriate type, caliber, and density under all conditions of weather, visibility, and terrain. The division artillery provides an artillery section for the division special staff and the artillery fire support element (FSE) of the TOC.

b. Organization. See appendix II.

c. Employment.

- (1) Employment of division artillery is covered in chapters 4 through 10.
- (2) Artillery attached to the division or artillery in support of the division is integrated into the division artillery's operational system.
- (3) When artillery battalions are attached to brigades for independent or semi-independent operations, it may be necessary to augment them with survey equipment and personnel, long-range radio equipment, forward observers, and ammunition supply means.
- (4) Firing batteries are capable of operating independently for several days. Attachments from the headquarters and service battery are normally provided for periods of extended independent operations.
- (5) The HONEST JOHN or LITTLE JOHN battalion is normally employed by separate battery with extended distances between firing elements. Its nuclear and nonnuclear capabilities are employed under division, brigade, or battalion command as the situation requires.

3-10. Brigade Headquarters and Headquarters Company

a. General. The brigade headquarters assists the brigade commander in commanding all elements of the division which are attached and in supervising all elements in support of the brigade

in either combat or training situations. The brigade headquarters company provides logistic support for the brigade headquarters.

b. Organization. See appendix II.

c. Employment.

- (1) The brigade normally commands the tactical operations of two to five attached combat battalions.

- (2) The brigade may be employed on independent or semi-independent operations when appropriately organized for combat.

- (3) Details of brigade employment are covered in FM 7-30, FM 17-30, and in chapters 4 through 10 of this manual.

Section II. COMBAT BATTALIONS

3-11. Infantry Battalion

a. General.

- (1) Infantry battalions close with the enemy by means of fire and maneuver in order to destroy or capture him or to repel his assault by fire, close combat, and counter-attack.
- (2) Infantry battalions are particularly well suited for holding terrain, operating in difficult terrain and adverse weather, moving by aircraft, breaching fixed defenses, destroying antitank defenses, and closing with enemy forces.
- (3) Infantry battalions are limited to foot mobility unless motorized or mechanized. When motorized or mechanized, their mobility increases the scope and tempo of their operations.

b. Organization. See appendix II.

c. Employment.

- (1) In the infantry and airborne divisions, the infantry battalions constitute the primary combat maneuver elements. The battalion is normally attached to a brigade and employed in coordination with other combat and combat support elements in offensive and defensive operations.
- (2) When attached to the mechanized or armored division, the infantry battalion may be used to increase the division's infantry strength or as a substitute for the mechanized infantry battalion. When so attached, the role of the infantry battalion is essentially the same as that of the mechanized infantry battalion, but, because of its limited vehicular mobility, consideration must be given to motorizing it.
- (3) Details of employment are covered in chapters 4 through 10.

3-12. Mechanized Infantry Battalion

a. General.

- (1) Mechanized infantry battalions perform generally the same types of missions and have generally the same capabilities as infantry battalions except that they possess the mobility, protection, and communications afforded by their organic armored personnel carriers. These characteristics make them especially suitable for exploitation, pursuit, and counterattack.
- (2) Mechanized infantry battalions require more equipment maintenance and supplies than infantry or airborne battalions. They are more sensitive to difficult terrain and barriers than their nonmechanized counterparts. Over appropriate terrain, their mechanization enables them to be employed more rapidly and on a wider front than infantry and airborne battalions.

b. Organization. See appendix II.

c. Employment.

- (1) In the armored and mechanized infantry divisions, the mechanized infantry battalion is normally attached to a brigade and may be employed without attachments, or, after cross attachment with a tank battalion, may serve as part of a combined arms battalion task force.
- (2) In the infantry and airborne divisions, the mechanized infantry battalion may be used to increase infantry strength.
- (3) Details of employment are covered in chapters 4 through 10.

3-13. Tank Battalion

a. General.

- (1) Tank battalions close with and destroy enemy forces using fire, maneuver, and shock effect.

- (2) Tank battalions are particularly well suited to operations which require mobility, direct firepower and armor protection. They are well suited for rapid exploitation, pursuit, disruption of the enemy's rear, and mobile defense. They contribute mobility, firepower, and shock effect to the tank-infantry team. Their armor shielding reduces vulnerability to hostile fire and permits rapid exploitation through contaminated areas.
- (3) Tank battalions require more equipment maintenance and logistical support than infantry, mechanized infantry, and airborne infantry battalions. They are more sensitive to difficult terrain and barriers than their less mechanized counterparts. Their primary equipment is not air transportable.

b. Organization. See appendix II.

c. Employment.

- (1) In the armored division, the tank battalion is normally attached to a brigade and may be employed without attachments, or, after cross attachment with a mechanized infantry battalion, may serve as part of a combined arms battalion task force.

- (2) In the airborne, infantry, and mechanized infantry divisions, tank battalions are employed in roles that take advantage of their firepower, armor protection, and mobility, consistent with the division's mission. The battalion, except the airborne tank battalion, is normally attached to a brigade, thereby adding to the firepower of the brigade and depth to the antitank defense. In the mechanized infantry division, the tank battalion is normally used after cross attachment to form a combined arms battalion task force. The airborne tank battalion may form the nucleus of the airborne division reserve, or its companies may be attached to brigades to supplement their antitank fires. The tank battalion may be employed to reinforce other units in offensive and defensive operations or may be employed without attachments.

3-14. Airborne Infantry Battalion

The airborne infantry battalion is organized and operates in the same manner as an infantry battalion. There are minor variations in personnel and equipment to make it capable of airborne assaults by parachute and assault type aircraft. See appendix II for organization.

Section III. ORGANIZATION FOR COMBAT

3-15. Division Organization for Combat

a. Control of the division is exercised through the division headquarters and the five major subordinate headquarters: Division artillery, support command, and three brigades. During tactical operations, six major tactical groupings are normally employed: Division troops, support command, division artillery, and the three brigades. Additional tactical groupings may be organized when units with suitable control capabilities are attached to the division; for example, an armored cavalry regiment, or by using organic units, such as a combat battalion.

b. In making his estimate of the situation, the division commander analyzes each factor to decide what grouping of maneuver units, support units, and firepower within each brigade will best accomplish the division mission. The appropriate units are then attached to or placed in support of the brigades. The organization for combat is

modified as required during operations. The organization for combat is covered in the division operation order (task organization), examples of which are in FM 101-5.

c. Division troops include those headquarters and combat and combat support troops not attached to the brigades, to the support command, or to division artillery.

d. Particular considerations in division organization for combat in offensive, defensive, and retrograde operations are discussed in chapters 5, 6, and 7.

3-16. Brigade Organization for Combat

Brigades organize for combat by using combat battalions as nuclei for battalion task forces and cross attaching companies or employing pure battalions. Support units are provided as necessary. Mission, enemy situation, terrain, and troops available are considered in determining the organization. For details see FM 7-30 and FM 17-30.

CHAPTER 4

COMBAT SUPPORT AND COMBAT SERVICE SUPPORT

Section I. GENERAL

4-1. Combat Support Elements

a. Division Elements. The organic combat support elements available to the division commander are the division artillery, aviation battalion, engineer battalion, and the signal battalion.

b. Corps and Field Army Elements. Combat support elements of corps and field army normally are available to support the division. These elements may be attached or placed in support of the division by the assignment of appropriate missions as required by the division mission and the area of operations. These elements include field artillery and air defense artillery; military intelligence units; technical intelligence detachments; and army security agency, army aviation, engineer, signal, chemical, civil affairs, and psychological warfare units.

c. Other Combat support. The division may also receive combat support from other Services.

4-2. Combat Service Support Elements

a. Division Elements. The organic division combat service support units are the military police company and the units of the division support command. In addition, the division aviation, engineer, and signal battalions, although primarily combat support units, perform certain combat service support functions.

b. Corps and Field Army Elements. Combat service support elements from corps and field army may be attached or placed in support of the division as required by the division mission and the area of operations.

Section II. FIRE SUPPORT

4-3. General

a. Concept. Firepower, as an element of combat power, is composed of all fires directly controlled by the commander as well as those supporting fires that are available to him. The commander is responsible for the coordination of all available supporting fires. Fire support units have the primary function of support of maneuver units by neutralizing or destroying with fire those targets most likely to hinder the accomplishment of the division mission. The division artillery is the primary source of fire support organic to the division. The firepower of the division artillery is augmented by close support aircraft and/or naval gunfire, and by attaching artillery units from higher headquarters to the division or by assigning tactical missions to them to support the division with all or part of their fires. FM 6-20-1 and FM 6-20-2 contain details on artillery fire support.

b. Fire Support Coordinator. At division level, the division artillery commander is normally the

fire support coordinator and principal adviser to the commander on fire support matters. In brigade and lower headquarters, the commander of, or liaison officer from, the supporting artillery unit normally performs this function, see FM 6-20-2 and FM 101-5.

c. The Fire Support Element, TOC. For operation of the fire support element, see FM 6-20-2.

4-4. Fire Support Plan

a. Development. The fire support plan is prepared by the FSE and, when approved by the commander, becomes an annex to the operation order. It coordinates all fire support available to the division. The fire support plan contains the commander's concept of fire support and provides specific orders and instructions to fire support agencies. The formality of this development varies with the echelon of command within the division and the time available for planning. At company level, the plan normally consists of no

more than a target list. At battalion level, the plan may include nuclear fires, air, and naval gunfire in addition to artillery fires. The fire requests initiated by the companies are coordinated and integrated with the battalion planned fires. At brigade level, the subordinate unit fire support plans are again coordinated and integrated into the brigade fire support plan. At division level, the fire requests initiated by subordinate echelons are coordinated with the division's requirements and formalized into a fire support plan.

b. Division Fire Support Plan. The development of this plan includes the preparation and integration of the artillery fire plan, chemical fire plan, naval gunfire plan, and the air fire plan. Normally, nuclear fires are included in the fire support plans of each fire support agency, and no separate nuclear fire plan is prepared. As warranted by the quantity of information, however, a separate nuclear fire plan may be prepared. When prepared, the nuclear fire plan becomes an appendix to the fire support plan and is referenced in other appendixes.

4-5. Fire Support Requests

a. Nuclear, Chemical, and Biological Fires. When their use has been authorized, decisions to employ nuclear weapons and chemical and biological agents rest with the commanders to whom the weapons are allocated. Authority to employ fallout-producing bursts normally is delegated to the lowest commander whose area of operations can be expected to encompass the probable area of predicted, tactically significant fallout. Authority to employ chemical agents normally is delegated to the lowest commander whose area of operations can be expected to encompass the probable area of predicted contamination to include the downwind hazard. Requests for fires are transmitted through command channels to the commander authorized to act on the request or to his representative. Notification of the request should also be sent through fire support channels to alert the fire direction center and to insure prompt delivery of fire. Casualty producing levels of fallout from nuclear weapons can extend to greater distances and cover greater areas than any other nuclear weapons effects and can exert an influence on the battlefield for a considerable period of time. Accordingly, when fallout, chemical, or biological effects may extend into an adjacent commander's area of responsibility, the concur-

rence of the affected commander must be obtained or the matter decided at the next higher headquarters. When fallout producing bursts are to be delivered by other services, the supported Army commander must specify the target, the time of attack, troop safety measures, and prediction of fallout patterns.

b. Other Artillery Fires. Requests for non-nuclear artillery fires are sent by the forward observer of the supported unit direct to the fire direction center (FDC) of the supporting artillery battalion. This FDC will request any additional fires required from a reinforcing artillery unit or from the FDC of the next higher echelon.

c. Close Air Support.

- (1) Requests for preplanned close air support missions are passed through command channels and form the basis for the air fire plan.
- (2) Requests for immediate close air support pass directly from the air control team (ACT) at battalion to the division G3 air group in the tactical air support element (TASE) of the tactical operation center (TOC) on the division air requests net. These requests for immediate close air support are monitored by the brigade S3 air. If the requests are disapproved, the brigade S3 notifies the battalion S3 air and division G3 air. If brigade does not intervene in this request, approval is indicated. The division G3 air reviews the immediate air requests approved by brigade and coordinates them with the fire support element (FSE) in the TOC. Those approved immediate air requests that can be fulfilled effectively by available Army fire support means are normally carried out by such means. The TASE at division forwards the other approved immediate air requests directly to the TASE of the field army TOC (FATOC) on the army air request net. These division requests are monitored by the TASE of the corps TOC (CTOC) which intervenes only if it disapproves.
- (3) Close air support provided by Navy and Marine elements is controlled by attached ANGLICO personnel as described in FM 31-12.

d. Naval Gunfire. Requests from combat units for naval gunfire are submitted through naval

gunfire liaison personnel attached to the division. These representatives normally are part of an air naval gunfire liaison company (ANGLICO). When naval gunfire is employed to attack a target, it is fired by direct or general support ships using naval gunfire procedures.

e. Armed Helicopters. Most of the helicopters in the division are armed with varying combinations of aircraft weapons. This aerial fire support means normally is employed in support of assault units in air-mobile operations. Requests for this fire support are forwarded to the Army aviation element (AAE) of the TOC. Approved requests are assigned to the aviation battalion for implementation.

f. Channels of Fire Requests. Figure 3 illustrates the channels of fire requests.

4-6. Artillery Fire Planning

a. General. The artillery fire plan is an appendix to brigade and division fire support plans.

b. Development.

- (1) Artillery fire planning begins with the company commander and the forward observer from the direct support artillery battalion. The company plan is coordinated with the plans of other companies of the battalion by the battalion fire support coordination agency. Artillery requirements in the form of battalion plans are forwarded to the FDC of the artillery battalion in direct support of the brigade where the details of the brigade artillery fire plan are completed. The brigade artillery fire plan is forwarded to the division artillery FDC, and, after integration with the division plan, a copy is attached as an appendix to the brigade fire support plan. Brigade requirements for nuclear, chemical, and biological fires are processed through command channels.
- (2) At division level, the FSE, in coordination with the G3 and chemical officer, determines the division requirements for artillery fire support. Artillery fire requirements—including nuclear, chemical, and biological fires—are forwarded to the division artillery FDC where they are integrated with brigade fire requirements, and the division artillery fire plan is pre-

pared. The division artillery fire plan is disseminated to corps artillery with requests for additional fires, to the division FSE for inclusion in the division fire support plan, to artillery battalions with the division, and to the adjacent units.

c. Fire Planning Channels. Figure 4 illustrates fire planning channels.

4-7. Fire Coordination Measures

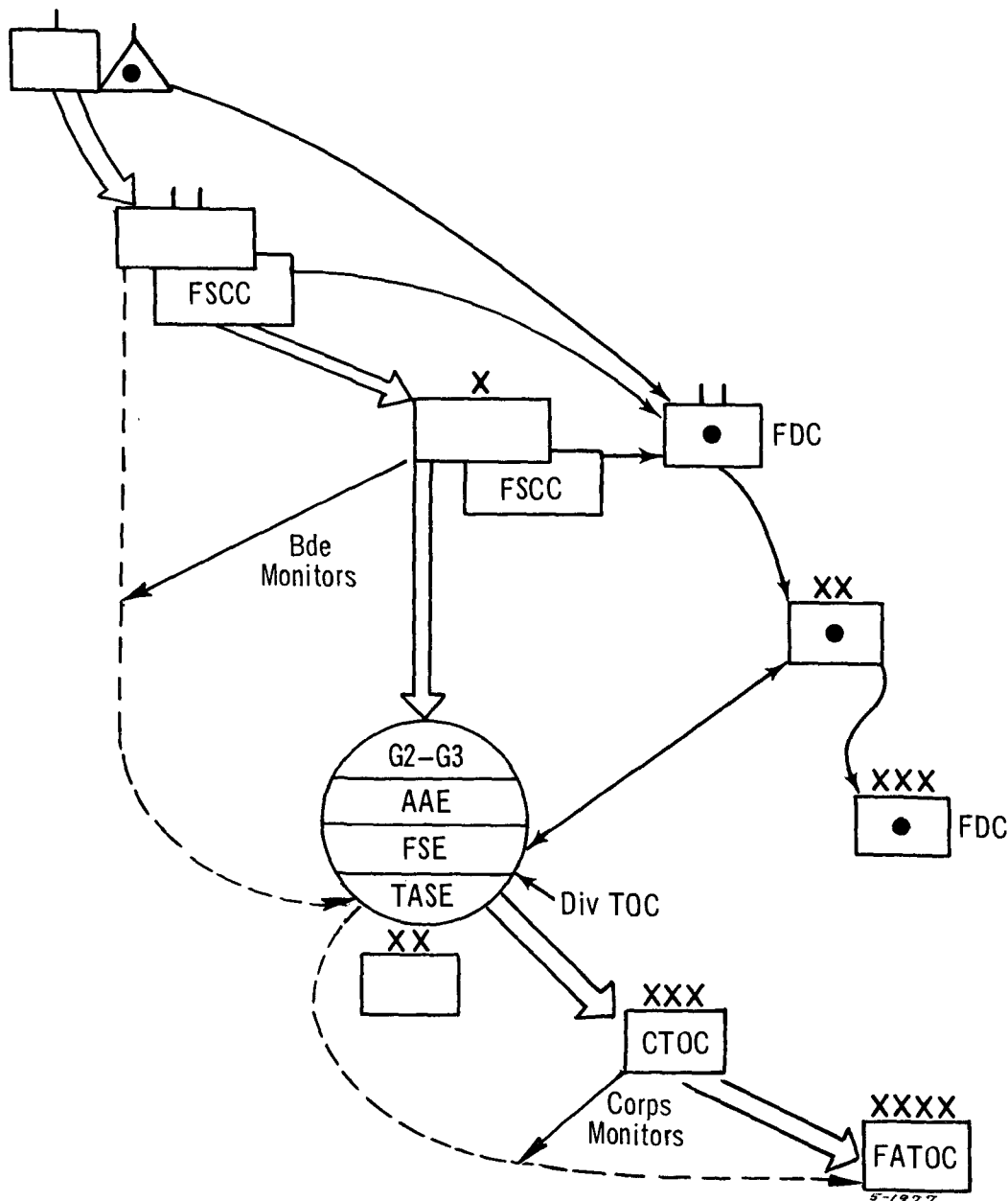
a. Boundaries. In addition to their use in defining areas of responsibility, boundaries serve as a measure for coordinating fire support. When nuclear, chemical, or biological fires employed by one force will have casualty or damage producing effects in the zone of an adjacent force, these fires must be coordinated with the adjacent force.

b. No-Fire Line. The no-fire line is a line beyond which artillery units may fire without prior clearance from the direct support artillery provided no more than negligible effects for prescribed conditions occur short of the line. The location of the division no-fire line is established by the division artillery commander after coordinating the no-fire line within the division sector.

c. Fire Support Coordination Line (FSCL). The fire support coordination line (FSCL) is a line recommended by the appropriate ground force commander to higher headquarters to insure coordination of fire not under his control, but which may affect current tactical operations. Where possible, the FSCL should follow well defined terrain features. The establishment of the FSCL is normally coordinated with the appropriate tactical air commander and other supporting elements.

d. Fire Coordination Line. The fire coordination line (FCL) is established to coordinate fires between airborne or airmobile forces and link-up forces or between two converging forces. It is used to regulate flat-trajectory and high angle fires and offensive airstrikes. Fires with effects extending beyond this line will be coordinated with the unit on the other side.

e. Preplanned Fires. Commanders must insure flexibility in the procedures governing the use of preplanned fires and fire coordination measures. Many operations may gain such momentum that preplanned fires are not required for their success.



LEGEND

- > Nonnuclear artillery support.
- - - - -> Immediate close air support (nonnuclear).
- =====> Nuclear, chemical, and biological fires (command channels), preplanned close air support, and armed helicopter support.

NOTE: Naval gunfire is requested through ANGLICO teams.

Figure 3. Fire support requests.

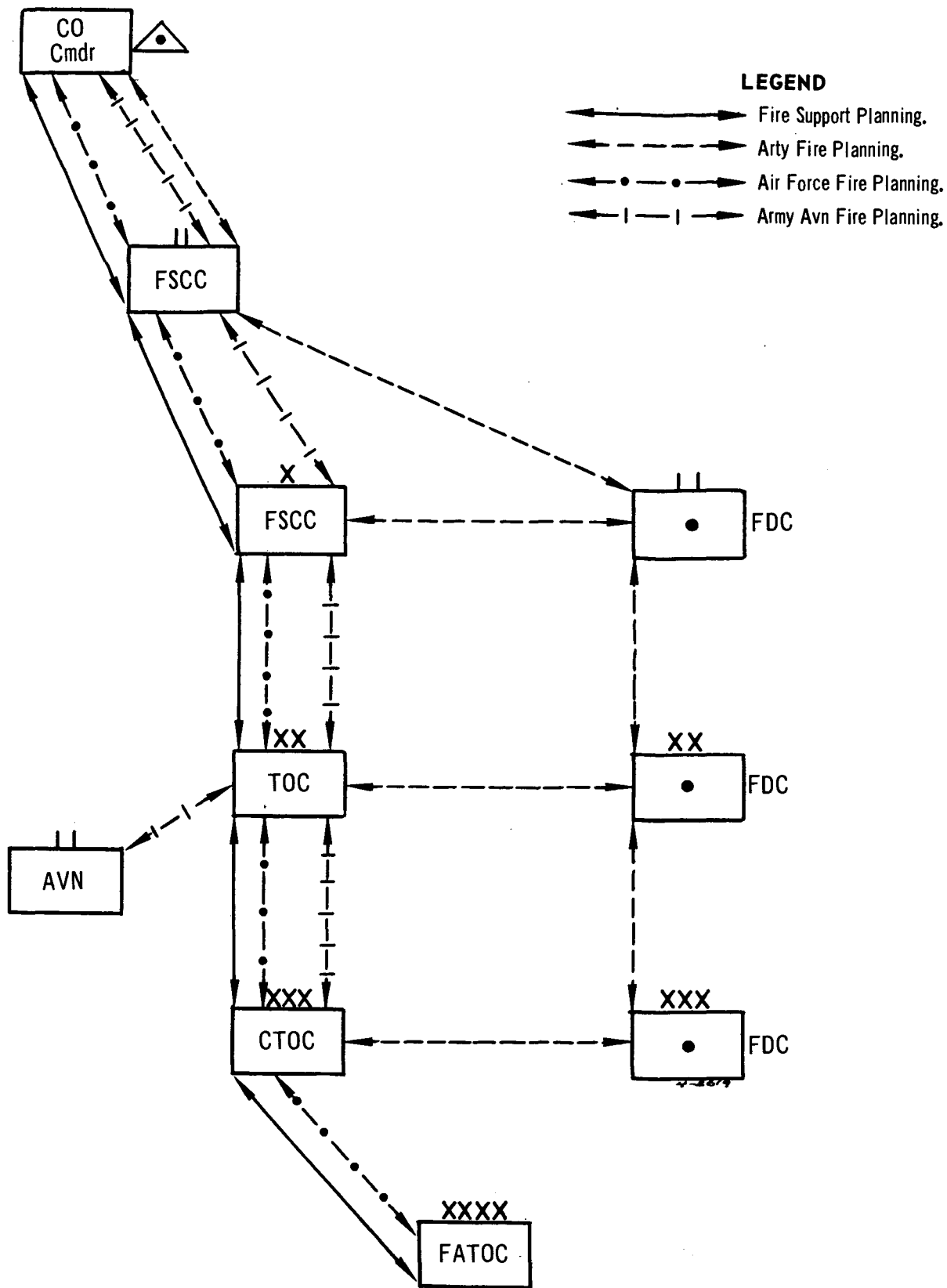


Figure 4. Fire Planning Channels.

Section III. AIR DEFENSE ARTILLERY

4-8. General

a. Air defense of the field army area of responsibility is provided by the field army air defense commander through the air defense artillery brigade. This defense by air defense artillery units is in conjunction with the air defense (missile and aircraft) provided by the theater. Air defense of the corps area is provided by air defense artillery units and is coordinated with the army air defense commander. Air defense artillery units may be attached to the division.

b. Plans for the employment of attached air defense artillery units are coordinated with adjacent and higher headquarters. The air defense intelligence means of all air defense artillery units are integrated with the air defense intelligence system to provide for early warning information, transmission of flash messages, and dissemination of information and instructions pertaining to air defense.

c. In the event of an attack of a defended area by aircraft or missiles, air defense units will engage the target in accordance with the rules of engagement in effect in the command.

4-9. Employment of Attached Air Defense Artillery Battalions

a. The air defense artillery battalion is normally retained under division control.

b. Air defense artillery units are employed to defend vital areas or units in accordance with priorities established by the division commander. Because of the range of air defense missiles, a single fire unit may defend several vital areas and units, but the terrain may require that a single vital area or unit be defended by more than one fire unit.

c. Air defense should be provided for elements of the division while moving and for critical points along a route of march. Air defense fire unit sites should be selected to provide maximum defense for the march columns.

d. Air defense artillery units should be in position to provide air defense before the first major units arrive in the assembly areas.

e. See FM 44-1 for details of employment of air defense artillery.

Section IV. INTELLIGENCE SUPPORT

4-10. General

The intelligence capabilities of the division are supplemented by intelligence agencies of higher echelons. Detailed intelligence procedures are prescribed in FM 30-5 and in other appropriate field manuals.

4-11. Flow of Information and Intelligence

a. As information is processed into intelligence, the G2 insures its timely dissemination to all staff sections concerned and to higher, lower, and adjacent units. The transmission of target acquisition information to the FSE normally takes precedence over the dissemination of the intelligence information.

b. An operations and intelligence net providing direct communication between division headquarters and major subordinate tactical units and selective monitoring of the radio transmission of subordinate units assists in rapid production of intelligence.

4-12. Reconnaissance

a. General. Effective reconnaissance provides much of the information concerning the enemy, terrain, and weather essential to the conduct of operations. All division units must exploit their organic reconnaissance capabilities, and the activities of these units must be integrated with the division's reconnaissance operations and tactical plans.

b. Ground Reconnaissance. The division armored cavalry squadron is the principal ground reconnaissance unit of the division. In addition, each combat battalion has an organic ground reconnaissance capability. Aggressive ground reconnaissance is a positive means of determining disposition and identification of enemy forces. The greater the dispersion on the battlefield, the greater is the requirement for reconnaissance and the more readily patrols can penetrate and develop enemy positions.

c. Air Reconnaissance. Air reconnaissance should be continuous and coordinated with ground reconnaissance. The G2 must exploit the capa-

bilities of Army aviation and the Air Force. Requests for air reconnaissance missions are received, processed, and coordinated by the G2 air group of the TASE, TOC, as prescribed in FM 30-20. If the request is within the capability of Army aviation, if aircraft are available, and if the mission can be accomplished within the time desired, the request is passed to the Aerial Surveillance and Target Acquisition Platoon for implementation. Requests which cannot be accomplished by Army aviation are forwarded to the G2 air group of the TASE, FATOC.

- (1) *Army aviation.* Army aviation may be used in support of ground reconnaissance elements. The division aviation battalion has an aerial surveillance capability employing visual observation and sensory devices to include photography, infrared, and radar. It also has the capability for battle area illumination. The air cavalry troop of the armored cavalry squadron also provides visual surveillance and reconnaissance of the division area of interest as one of its primary missions. Helicopters may assist patrols and extend their range by moving them to their starting points and by picking them up at pre-arranged locations.
- (2) *Tactical air force.* The reconnaissance wings of the tactical air force include reconnaissance-fighter and reconnaissance-bomber type aircraft. Reconnaissance-bomber type aircraft normally provide night photographic, electronic, weather, and limited visual reconnaissance information. The reconnaissance-fighter aircraft perform visual and photo air reconnaissance missions over the forward areas as well as at great distances beyond the forward edge of the battle area. Requests for Air Force reconnaissance missions are processed by the G2 air group of the TASE to the FATOC.

4-13. Agencies

a. Division Agencies. All units of the division are potential information collecting agencies. However, the maneuver elements, artillery battalions, the aviation battalion, the engineer battalion and the military police company are the principal contributing agencies.

b. Nondivision Agencies. In addition to higher and adjacent headquarters, the division has several other agencies available to support its intelligence operations.

- (1) *Military intelligence detachment.* A military intelligence detachment is normally attached to the division. This detachment provides specialists in image interpretation, language translation and interpretation, order of battle, prisoner of war interrogation, and counterintelligence. Details are contained in FM 30-9.
- (2) *U.S. Army Security Agency division support company.* This company will normally support the division by assisting in the planning and conduct of communication-electronics intelligence and security, to include certain electronic countermeasures. The communications intelligence activities extend the depth of intelligence operations and contribute to target acquisition. The unit furnishes information and intelligence of enemy electronic equipment, organization, and locations by the detection and study of enemy electromagnetic emissions from other than nuclear detonations and communications sources. The G2 has primary general staff responsibility for those operations which support intelligence requirements; the G3 has primary general staff responsibility for active electronic countermeasures.
- (3) *Air weather service detachment.* These detachments are normally located at field army and corps headquarters. A weather section normally operates at division level. From these detachments (sections), the division G2 may obtain weather observations, weather briefings, weather reports, and weather summaries; detailed operational and planning forecasts; and climatological information. The weather detachment (section) commander is the staff weather officer (SWO) and a member of the special staff, under the general staff supervision of the G2.

4-14. Target Acquisition

a. In addition to the reconnaissance and surveillance means within the division, there are elements

specifically organized and equipped for target acquisition. There is a target acquisition platoon in each 105-mm howitzer battalion and in the direct support 155-mm howitzer battalion of the mechanized and armored divisions. The division artillery headquarters battery has a target acquisition platoon and may be augmented by a visual airborne target locator section. The aerial surveillance and target acquisition platoon of the general support company of the aviation battalion is equipped with airborne visual, photo, and electronic surveillance equipment.

b. Targets result from information collected from all sources and agencies or may result from data supplied by a single source. Targets must be detected, identified, and located with sufficient accuracy and speed to permit effective delivery of fire.

c. The G2 has general staff responsibility for coordinating the target acquisition means available to the division.

4-15. Combat Surveillance

a. All weather, day and night surveillance of the battle area provides timely information to support tactical operations and involves the systematic observation of the battle area by visual, electronic, photographic, or other means. Without degrading the acquisition of detailed information required on enemy dispositions, surveillance coverage must include the accurate location of friendly units in the forward area, with emphasis on timely information which will permit friendly nuclear fire missions.

b. The G2 coordinates and exercises staff supervision over the activities of the division's surveillance means to insure complete coverage of the division's area of operations.

4-16. Counterintelligence

a. Effective counterintelligence increases the security of the division and aids in achieving surprise by denying information to the enemy by active and passive measures. Active counterintel-

ligence measures block the enemy's attempts to gain information or to engage in sabotage or subversion by counterreconnaissance, countersubversion, counterespionage, and countersabotage activities. Passive measures conceal information from the enemy and include censorship, security of classified documents and material, signal communications security, concealment, camouflage, electronic counter-countermeasures, and control of civil populations.

b. Counterintelligence specialists are not organic to the division. A counterintelligence section containing counterintelligence specialists is organic to the military intelligence detachment attached to the division. The senior officer of the counterintelligence section is usually designated chief of the counterintelligence branch of the G2 section.

4-17. Intelligence Support of Tactical Cover and Deception Operations

Tactical cover and deception operations are a G3 responsibility; the intelligence aspects of these operations must be coordinated with the G2. The division G2 must insure that the intelligence aspects of tactical cover and deception operations are consistent with intelligence operations of the next higher headquarters. See FM 31-40 for detailed information on tactical cover and deception.

4-18. Chemical Detection and Radiological Monitoring and Survey

a. Chemical detection and radiological monitoring and survey are an integral part of the overall intelligence effort. Collection of chemical and radiological data is planned and coordinated by the chemical, biological, and radiological element (CBRE) of the TOC.

b. Chemical detection and radiological monitoring and survey teams are trained by divisional units authorized monitoring and survey equipment. The division aviation battalion and the armored cavalry squadron are the principal division-level agencies which conduct radiological surveys. All units are responsible for monitoring.

Section V. ENGINEER SUPPORT

4-19. Division Engineer Battalion

a. The engineer battalion provides equipment and individual skills for the performance of engineer tasks. Projects are normally accomplished by companies or by platoons, reinforced when nec-

essary with engineer construction equipment and operators from headquarters and headquarters company. The river-crossing equipment is obtained from the bridge company (bridge platoon, airborne division), or from supporting corps units.

The companies or platoons normally will be employed in direct support of committed units of the division. Engineer units generally are not held in reserve. When it is necessary to commit engineer troops as infantry, it is preferable to maintain engineer unit integrity. When used in this manner, they should be provided forward observers and additional weapons and communications.

b. When the combat battalions or task force organizations are committed on independent or semi-independent missions, engineer support is provided to them.

4-20. Nondivisional Engineer Support

Engineer support is provided by the next higher echelon of command to the division, normally from corps engineer troops. Engineer groups or battalions may be placed in direct support of or attached to the division to provide additional combat support means. Attachment may be for such missions as hasty river crossings, use of atomic demolition munitions, assistance in emplacement of minefields, and improvement of terrain obstacles. All engineer support provided for the division is coordinated by the division engineer.

4-21. Atomic Demolition Munitions

a. Potential targets for atomic demolition munitions (ADM) are normally developed by G2 and the engineer and are recommended to G3 for integration with the tactical plan. The engineer will assist in target analyses by providing the following information :

- (1) General statement of the tactical application of ADM to the mission.
- (2) Target number, location, and description.
- (3) Type of ADM, yield, height or depth of burst, and location of ground zero.
- (4) Estimated results.
- (5) Security measures, if appropriate.
- (6) On-call detonation or times of burst and means of detonation.
- (7) Troop and civilian safety precautions.

b. The decision to employ an ADM rests with the commander to whom the weapon is allocated. The engineer is responsible for designating the emplacing and firing unit and for coordinating the supply and movement of equipment, materials, and personnel to support the mission.

c. The G3 coordinates tactical security and troop safety for ADM missions. The engineer battalion commander is responsible for the physical security of the munition including the time during which the ADM is en route from the special ammunition supply point (SASP). However, when the ADM team joins the tactical unit to which it is attached, responsibility for physical security of the ADM passes to the tactical unit commander. Command of an ADM operation normally is exercised by the tactical commander in whose area the emplacement is located. He is responsible for general area security, liaison, and communications, and gives the order to detonate the munition. The ADM team chief directs all technical operations at the emplacement site, detonates the ADM on order from the tactical commander, and conducts the necessary operations in the event of a change of the ADM mission.

Section VI. SIGNAL SUPPORT

4-22. Division Communications

a. Division communications (fig. 5) provide—

- (1) Communication services to widely dispersed units.
- (2) Responsiveness to changes in division organization for combat and relocation of units, command posts, and installations.
- (3) Common-user circuits for support of units in the division area and sole user circuits for weapons employment and similar special purposes.
- (4) For integration into the communication systems of corps and field army.

b. Division communications will normally consist of—

- (1) Signal centers at each echelon of the division headquarters (main, alternate, and rear), the support command headquarters, and three signal centers in the forward area of the division zone. These signal centers provide message center, messenger, cryptographic, teletype, telephone, and radio (excluding internal radio nets) service for all units in their vicinity supplemental to organic facilities. The signal center at division main

provides facsimile service to higher echelons.

- (2) Multichannel communication links (radio relay and/or spiral four cable and carrier) to interconnect the signal centers listed above, headquarters division artillery, and headquarters of each brigade. (See fig. 5.)
- (3) A daily scheduled division ground messenger service and air messenger service (aircraft provided by aviation battalion), linking echelons of the division headquarters with the major subordinate commands of the division.
- (4) Radio/wire integration stations at each signal center, except the one at division rear, capable of interconnecting mobile FM radio stations with the telephone system at signal centers.

c. Figure 5 illustrates a recommended type configuration for division communications. Final determination of communications employment must be made by the division signal officer based upon the tactical situation, frequencies and equipment available, and the desires of the division commander.

4-23. Division Signal Battalion Operations

a. The signal battalion headquarters is normally located in the vicinity of division main.

b. The headquarters and headquarters detachment provides the division:

- (1) A signal section for the division special staff.
- (2) Distribution of cryptographic material to organic elements of the division. Augmentation by "team NA" TOE 11-500 may be required to support attached units.

c. The command operations company normally provides:

- (1) Signal center service, radio/wire integration stations, and multichannel communication facilities at division main and division alternate.
- (2) Multichannel communication facilities to connect division artillery headquarters into the division communication system.
- (3) Facsimile service at division main.
- (4) An assigned portion of the division messenger service.

(5) Direct support cryptographic maintenance for all units in the vicinity of division main and division alternate.

(6) Net control stations for selected division AM and FM radio nets, and division terminal stations for selected corps, army, and other external AM radio nets.

d. The forward communications company normally provides:

- (1) Signal center service, radio/wire integration stations, and multichannel communication facilities at the three signal centers located in the forward area of the division zone.
- (2) Multichannel communication facilities to connect the headquarters of each brigade into the division communication system.
- (3) An assigned portion of the division messenger service.
- (4) Direct support cryptographic maintenance for all units in the forward area of the division zone.

e. The signal support operations company provides:

- (1) Signal center service, radio/wire integration stations, and multichannel communication facilities at the division support command.
- (2) Limited signal center service at division rear.
- (3) Multichannel communication facilities at division rear when division rear is located in the division zone. (Division rear is dependent upon field army communications for trunk circuits when located outside the division zone.)
- (4) Field cable construction and augmentation of radio relay and carrier terminals.
- (5) Radio relay and telephone repeater for the division.
- (6) Photography (except aerial photography) and photographic still picture laboratory service.
- (7) Direct support maintenance to cryptographic equipment for units in the vicinity of division rear and the division support command.
- (8) Radio teletypewriter stations in selected division radio nets, and a division terminal station (AM-RATT) in the Field Army Logistics Net.

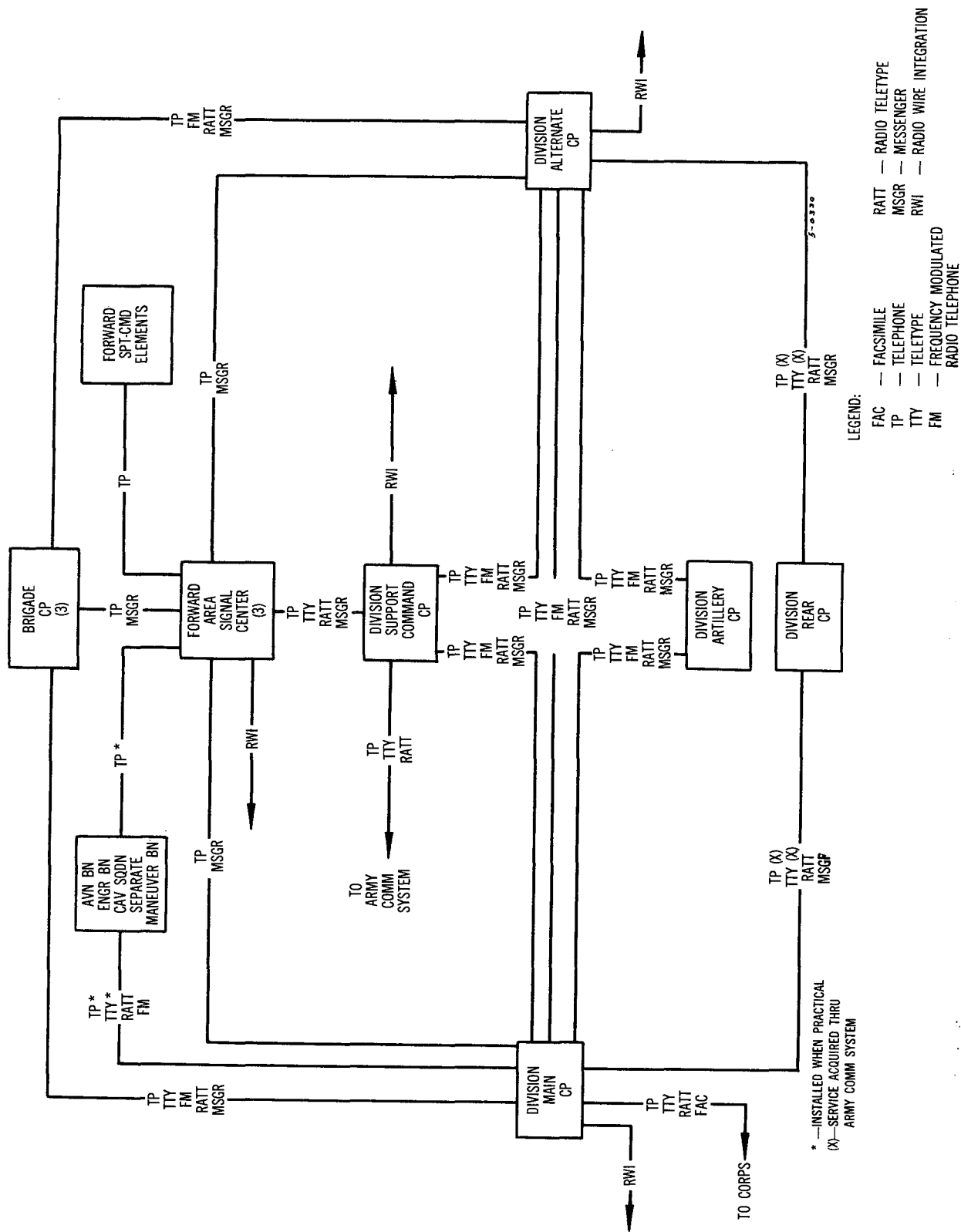


Figure 5. Type division communications system.

4-24. Communications Employment

a. Frequency Assignment. Radio frequencies for use within the division are assigned and allocated by the division signal officer.

b. Communications Centers. Communications centers are operated as components of each signal center within the division. Cryptographic, teletypewriter, and messenger facilities are associated with each communications center. A facsimile facility is provided only at the main signal center. The communications centers supporting division main, division alternate, brigade command posts, support command headquarters, and division rear serve not only these headquarters but also other units and installations in the vicinity.

c. Radio Relay. Radio relay is the primary means of providing trunking and direct circuits for communication between units in the division. It is also the primary means of telephone service between major headquarters in the division. Division terminal equipment and operating personnel for the radio relay circuits in the corps/army communication systems are provided by corps/army units.

d. Wire and Cable Installations. The signal battalion has a limited capability for installing field cable. When required, assistance from corps or army units may be requested. The amount of cable authorized by the TOE does not reflect the total cable the battalion may be expected to install.

e. Radio Nets. Radio communication requirements in the division have necessitated establishing a large number of stations in some nets. To insure maximum results from such communications, the commander must establish firm but flexible operational controls to meet changing requirements in the field. Recommended type division radio configurations are illustrated in figure 6. Final determination of radio net configurations must be made by the division signal officer based upon the tactical situation, availability of frequencies and equipment, and the desires of the division commander.

f. Radio/Wire Integration Stations. An FM-voice radio/wire integration station is operated at each signal center except at the division rear. These stations are used to establish communications between mobile FM radio stations and elements connected to the division by telephone. The stations may also be used for telephone service

from the signal center to using units until such time as local wire can be installed and FM radio relay stations established to communicate between FM stations operating beyond direct FM range.

4-25. Tactical Application of Communications

a. Communication Planning. The unit signal officer must be kept informed of plans for current or proposed operations, and assists in their formulation.

b. Signal Communication Support.

- (1) The mission assigned to a unit and the tactical situation dictate the means of communications to be used. Offensive operations rely primarily on radio. In a defensive mission, wire may be used extensively. In any case, the employment of multiple means will be considered, and more than one means normally will be used.
- (2) Terrain and weather will affect the various means of communications used. Plans should include the use of vehicles and army aircraft for messenger transport, radio relay, and cross-country wire laying. Equipment must be properly sited to take advantage of its potential.
- (3) Enemy capabilities may include jamming of radio frequencies, radio direction finding, radio deception, and direct action against wire and messenger communication. Supplementary and multiple means of communication should be used to counteract such interference.

c. Communications on Motor Marches.—Radio and messengers are the principal means of communication used during road marches. Army aircraft may be used to extend the messenger and FM-radio service.

d. Communications in Assembly and Bivouac Areas. The use of radio is held to a minimum in assembly and bivouac areas. Major reliance is placed upon messenger and, to a limited degree, upon wire communication depending upon the time spent in the area.

e. Communications During Offensive Operations.

- (1) *Preparation for offensive operations.* Plans for signal communication support of an offensive operation are based upon

UNITS	Division Command Net (FM Voice)	Division Warning Broadcast Net (AM Voice)	Division RATT Net #1 Operations Intelligence	Division RATT Net #2 Admin Logistics	Division RATT Net #3 General Purpose	Division Air Request Net AM (Voice-cw)	Air Force Spot Report Receiver System UHF Voice	Comps Command Operations Net (RATT)	Army Logistics Net (RATT)	Army Air Request Net (RATT)	LEGEND.
Division Main.	X NCS	X NCS (S)	X NCS (S)	X (S)	X NCS (S)			X (S)			NCS—Net Control Station (S)—Radio set provided by Signal Battalion (D)—Radio set provided by Support Operations Company, Division Signal Battalion when elements of support command operate separately from support command headquarters.
Division Alternate	X	X (S)	X ^m (S)		X (S)			X (S)			
Division Rear		X (S)			X (S)						
Division TOC		X (S)				X NCS (S)	X (S)			X (S)	
Division Artillery	X	X	X	X							
Brigades (3 each)	X	X	X			X	X				
Maneuver Battalions		X				X	X				
Cavalry Squadron	X	X	X	X		X	X				
Aviation Battalion	X	X			X						
Engineer Battalion	X	X			X						
Signal Battalion	X	X (S)									
Survl Plat Aviation Battalion					X						
Support Command	X	X		X NCS (S)	X (S)				X (S)		
Brigade Trains (3 each)				X							
Forward Area Signal Centers (3)		X (S)			X (S)						
Maintenance Battalion		X			X (D)						
Medical Battalion					X (D)						
Supply & Transport Battalion		X			X (D)						

Figure 6. Recommended type division radio net configuration.

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the unit operation plan. Organization for combat and mission will indicate the type and extent of signal support needed. The commander will indicate priority of support, and the operations officer will allocate portions of the available means upon the recommendations of the signal officer. Communication plans insure support in the event of changes in the plan of action or employment of an uncommitted portion of the force. Radio traffic will be held to a minimum during preparations for the offensive. However, if such preparations are made during a defensive operation, the amount of communication traffic that is normal in the defense must be maintained so that the enemy will not be warned of the attack. Signal orders, SOI extracts, and prearranged signals or codes are prepared and disseminated to all units concerned. A physical or map reconnaissance is made for probable wire routes to key control points and proposed headquarters locations.

(2) *Communications during attack.*

(a) Maximum use of radio is made during the attack. Listening silence, if in effect, will usually be lifted when units begin their attacks. In certain instances, however, the commander may continue listening silence until actual contact with the enemy is made. Wire may be used in some situations; however, it may be of limited value because of the speed of the attack, the distances covered, and the frequency of displacements.

(b) Messages containing warnings of enemy air or nuclear attack and the friendly employment of nuclear weapons must be given a high precedence.

(3) *Communications during passage of lines and relief in place.*

(a) Coordination of communications between all units concerned during a passage of lines is important. For security reasons, use of radios is kept to a minimum. SOI information is exchanged between units concerned. The

unit making the passage will use the existing communications of the unit through which it is passing wherever possible.

(b) During relief in place, wire lines of the relieved unit are taken over by the relieving unit. The relieved units may be directed to continue to operate their normal radio nets for a limited period of time as a deception measure.

(4) *Communications during exploitation and pursuit.* Maximum use of radio facilities and aircraft is necessary during exploitation and pursuit. Captured civilian and military wire circuits should be used to the maximum. Existing wire lines may be used during halts.

f. Communications During Defensive Operations.

(1) *General.* The time available to prepare the defense and the type of defense employed will determine the extent of the communications established. Although an extensive wire system may be established, radio nets will remain open for use when needed. Constant effort is made to improve the communications network.

(2) *Communications in mobile defense.* Communications used in mobile defense are similar to those used in the attack. Wire can often be used only by major unit headquarters. If possible, wire should be installed to strong points. Prior to enemy contact, the use of radio may be restricted.

(3) *Communications in area defense.* Wire communication is used extensively. Except during periods of enemy contact, use of radio nets is normally restricted.

g. Communications During Retrograde Movements. During retrograde movements, radio is the primary means of communication. Nets are operated consistent with the degree of security desired. Listening silence may be imposed upon units moving to the rear. Plans are made to augment signal equipment in the last elements to withdraw from a position so that normal radio traffic may be simulated. Maximum advantage will be taken of existing wire circuits. When positions are evacuated, wire is recovered or destroyed, if possible, to prevent its use by the enemy.

Frequent passage of lines requires that special consideration be given to communications between units involved. Communications in rearward positions should be established early.

h. Communications During Special Operations. Communications during special and airborne operations are covered in the appropriate manuals listed in appendix I.

Section VII. ARMY AVIATION SUPPORT

4-26. General

Army aviation enhances the mobility, versatility, and combat efficiency of ground combat forces. For details on Army aviation, refer to FM 1-5, FM 1-15, FM 1-100, and FM 57-35. For doctrine on control and use of airspace, see FM 1-60.

4-27. Division Aviation Battalion

a. General. The aviation battalion is normally employed in two echelons.

(1) One echelon usually consists of the headquarters and headquarters detachment and the aviation general support company. This element normally is located in the vicinity of the division instrumented airfield.

(a) The headquarters and headquarters detachment provides personnel and equipment for battalion command and staff functions, maintenance, administration for organic and attached units, and for the control and operation of the division airfield.

(b) The communication section of the headquarters and headquarters detachment provides internal communication support and equipment for operation in the division RATT net #3, General Purpose, and for monitoring the division warning/broadcast net (AM-voice). The section is also responsible for operating the terminal flight facilities at the division instrumented airfield.

(c) The aviation general support company provides aerial surveillance and target acquisition and furnishes aircraft for general support as follows:

1. The utility section can provide limited armed aerial escort for the airmobile company, limited reinforcement of the lift capability for the airmobile company, and limited aerial fire sup-

port or limited airlift support on a mission type basis for other units of the division.

2. The tactical support section of the general support platoon provides command and liaison aircraft for the division commander and staff, for daily scheduled divisional air messenger service, and for units without organic aircraft.

3. The aerial surveillance and target acquisition platoon contains the manned aircraft and drone systems. The drone system is employed from the forward battle area while the manned aircraft are employed from the division airfield.

(d) This battalion may be augmented by a pathfinder detachment. When so augmented, it provides:

1. Marking of air delivery and landing facilities with visual and electronic navigational aids to assure accurate delivery of air delivered or air landed personnel and materiel.

2. Assistance in navigation and control of army aircraft within its area of operation.

3. Establishment and operation of the following types and numbers of pioneer landing facilities:

(a) One airplane landing zone; or

(b) One helicopter landing zone containing eight helicopter landing sites; or

(c) Two drop zones.

4. Assistance on a reduced basis to two supported units operating over a wide area, when separated into two independent teams.

(2) The second echelon consists of the airmobile company which is normally dispersed by platoons. It is used for tactical troop movements and logistical support.

- (a) Positions for these platoons are selected so that the airmobile company can be made readily available to airlift elements of the division.
 - (b) The proximity of the airmobile company to a combat unit should provide security against ground attack.
- (3) The location of the division airfield is dependent upon the division mission, terrain, and location of division support command and the division main.
- (a) To support an attack, the division airfield may have to be moved forward. For security and logistical purposes, the area selected should be in close proximity to the division support command. When the aviation battalion is operating from the division support area, the maintenance battalion commander will, in coordination with the division aviation officer, place the transportation aircraft maintenance company in the vicinity of the division airfield.
 - (b) The division main can be supported by establishing a heliport in close proximity to it and by utilizing elements of the tactical support section of the general support platoon.

b. Operations.

- (1) The division artillery, the brigades, and the armored cavalry squadron may be augmented by aircraft from the aviation battalion. These aircraft may be attached to, or placed in support of, the unit requiring the augmentation.
- (2) The aerial surveillance and target acquisition platoon of the general support company provides aerial radar, infrared, visual, and photographic surveillance and target acquisition for the general support of the division. The aerial surveillance and target acquisition platoon normally is employed under the general staff supervision of the G2. The aerial infrared section and the aerial radar section normally will be positioned at the division airfield to provide general support for the division.
- (3) Aircraft provided by the aviation battalion may be used to supplement the aeromedical evacuation capability of the field

army air ambulance unit. When non-medical aircraft are used for medical evacuation functions, the division surgeon designates the patients to be transported and the pickup and delivery points.

4-28. Nondivision Army Aviation Support

a. Army transport aviation units are assigned to the field army and normally are attached to corps for tactical operations. They may be further attached to, or placed in support of, subordinate corps units for specific missions. Normally, they are not attached below division level, except for the conduct of airmobile operations which are under brigade control.

b. Plans for employing units using Army airlift can encompass operations up to and including the tactical airlift of battalions. Requests for Army transport aviation support for tactical operations are made through command channels.

4-29. Employment of Army Aviation

Army aviation can be employed to assist ground elements on the following missions:

- a.* Exploiting the effects of nuclear weapons.
- b.* Enveloping defended areas or traversing barriers.
- c.* Seizing key terrain features, particularly in pursuit, exploitation, and advance to contact.
- d.* Reinforcing or evacuating isolated units.
- e.* Movement of reserves.
- f.* Supply of critically needed items.
- g.* Concentrating dispersed forces for execution of a tactical operation.
- h.* Dispersing forces.
- i.* Combating guerrilla or other irregular forces.
- j.* Movement of reconnaissance forces and patrols.
- k.* Augmenting aeromedical evacuation of patients.
- l.* Ship-to-shore movement in amphibious operations.
- m.* Performing radiological monitoring and survey.
- n.* Providing limited aerial fire support.
- o.* Establishing aerial radio relays.
- p.* Assisting in traffic control.
- q.* Providing reconnaissance and surveillance.
- r.* Locating targets and adjusting artillery fire.

Section VIII. MILITARY POLICE SUPPORT

4-30. General

The military police company, under the operational control of the division provost marshal, provides military police support to the division.

4-31. Division Military Police Company

a. General. The division military police company is normally employed under centralized control. It can be tailored to the assigned mission. Employment of the subordinate elements of the company is as follows. See also chapters 5 through 10.

- (1) The security platoon provides local and internal ground protection for the division main and tactical command posts.
- (2) A military police platoon is normally employed in support of each of the two committed brigades to provide military police support on an area basis. Platoons may be attached to, or placed in support of, committed brigades as dictated by the tactical situation. Attachment is the normal employment in the case of a brigade operating independently.
- (3) One military police platoon is employed to operate a PW collecting point, a straggler collecting point, a civilian internee collecting point, and a temporary confinement facility for military prisoners. This platoon also evacuates PW from brigade to division as required.
- (4) One military police platoon is normally employed to provide general military police support on an area basis in the division rear area, including the division support command area. When three brigades are committed and a military police platoon is required in support of each, additional military police units are requested from corps or army to provide military police support in the division rear area.

b. Traffic Control. Traffic control operations are performed by the military police platoons in accordance with the division traffic control plan. Traffic control is accomplished through the operation of traffic control posts, traffic patrols, and information posts.

c. Circulation Control of Individuals.

- (1) The control of the circulation of individ-

uals is a basic function performed by all military police patrols and posts.

- (2) Each subordinate commander is responsible for straggler control within his own area. Commanders of units located within the division rear area assist in the control of stragglers who appear in their areas of responsibility.
- (3) The area in which military police straggler control is established extends from the rear of units in contact to the division rear boundary. All traffic control posts, information posts, and roving military police patrols perform the additional function of straggler control. Special straggler control posts, when required, are located at critical points on the main roads and other natural lines of drift within the division area. These posts perform the multiple functions of straggler control, traffic control, refugee control, and control of the circulation of individuals.
- (4) The military police company operates a division straggler collecting point at a central location. As stragglers are collected at the collecting point, they are screened and sorted for return to their units, evacuation to a medical facility, or other disposition as appropriate.

d. Confinement of Military Prisoners. Convicted military prisoners normally are not confined in the division area. The military police company operates a temporary confinement facility for U.S. military personnel. The military police company also provides escorts for the evacuation of military prisoners.

e. Prevention and Investigation of Crime.

- (1) Military police augment and extend the command crime prevention program. They conduct crime prevention surveys and other special operations in the area of crime prevention.
- (2) The division military police company has a limited capability to conduct criminal investigations. The division provost marshal supervises the criminal investigation program and arranges for the transfer of cases to nondivisional supporting units as necessary.

f. Escort and Security of Materiel, Installations, Personnel, and Movements. The military police company provides escorts and security personnel for sensitive materiel, key installations, designated personnel, and critical or sensitive movements. When the personnel requirements are beyond the capabilities of the company, additional military police may be requested from corps or army.

g. Discipline, Law, and Order. Each subordinate commander is responsible for the maintenance of discipline within his unit and for the enforcement of law and order within his area of responsibility. Division military police assist subordinate commanders as required.

h. Prisoner of War (PW).

(1) *Collection.* The military police company operates one or more division PW collecting points as required. In most tactical situations, one central PW collecting point is sufficient. This facility, normally operated by the military police platoons which also operates the division straggler collecting point and the temporary confinement facility for military prisoners, is centrally located and conveniently accessible from a main supply route (MSR). PW collecting points may be established in the rear of committed brigades by the supporting military police platoon.

(2) *Evacuation.* Enemy PW are evacuated by capturing units to the nearest division PW collecting point where limited proc-

essing, including interrogation for intelligence purposes, may be done. Division military police evacuate PW from forward collecting points to the division central collecting point. Wounded PW are evacuated through medical channels. Army military police units evacuate PW from the division PW collecting points as arranged by the division provost marshal.

i. Civilian Internees. The military police company establishes and operates a division civilian internee collecting point when required. This facility is normally operated by the same military police platoon that operates the division-central PW collecting point, the division straggler collecting point, and the temporary confinement facility for military prisoners. Civilian internees are evacuated from division by army military police as arranged by the division provost marshal.

j. Nondivisional Military Police Support. Military police support is regularly provided for the division by a higher echelon of command, normally from field army military police troops. When the PW capture rate exceeds the capabilities of the division military police company, additional units may be attached. These units may also be attached when there are extensive requirements for physical security, and when all three brigades are committed, each with a military police platoon in support. River crossings may also require the attachment of additional military police units. All military police support provided for the division is coordinated by the division provost marshal.

Section IX. CHEMICAL SUPPORT

4-32. General

Guidance for the employment of toxic chemical agents by the division will be received through command channels. There are no restrictions on the initial employment of nontoxic agents such as flame, smoke, and riot control agents. After use of toxic chemical agents is authorized, their employment will be planned and executed by the division subject to policy restrictions of higher headquarters. The division commander may then authorize subordinate units to employ toxic chemical agents. Operations involving the use of toxic

biological agents will normally be planned and executed by corps and higher units.

4-33. Dissemination of Toxic Chemical Agents, Smoke, and Flame

a. Artillery. Artillery is capable of firing concentrations of toxic chemical agents. It is also capable of establishing smoke screens, blinding enemy observation posts, and signaling by means of smoke ammunition.

b. Engineers. The division engineers furnish technical advice and assistance to the division in laying and clearing composite mine-fields which include toxic chemical land mines.

c. Tactical Units. Organic weapons of combat units are capable of delivering toxic chemical agents, flame, smoke, irritant chemical agents, and chemical land mines.

d. Other Delivery Means. Chemical agents may also be delivered by smoke generator units, by naval gunfire, or by Army, Air Force, or Navy aircraft.

Section X. GROUND TRANSPORTATION

4-34. General

The armored and mechanized infantry divisions have organic transport to move their personnel in one lift. Movement of the infantry and airborne divisions by motor transport for combat operations requires the attachment of truck companies from higher headquarters. Within the division, traffic control is a responsibility of the provost marshal and traffic regulation is a responsibility of the transportation officer. Both functions are discussed in FM 55-30.

4-35. Division Transportation

a. The transportation motor transport company of the supply and transport battalion has cargo

and tanker trucks for logistical support missions. The battalion has generally the same basic organization for all divisions. The supply requirements for each type division dictate the strength and number of vehicles in the transportation motor transport company organic to each division.

b. The supply and transport battalion moves and distributes supplies for the division. The battalion normally is retained under command of the support command commander, but elements may be attached or placed in support of units when they are operating on independent or semi-independent missions. For details see FM 10-50.

c. In some cases, it may be necessary to motorize infantry or airborne units with trucks of the supply and transport battalion.

Section XI. PSYCHOLOGICAL OPERATIONS

4-36. General

Cellular organizations specifically designated to provide psychological warfare support to the division are structured from current TOE 33-500. The number, type, and mix of operational teams is dependent upon the psychological objectives to be accomplished in support of the division mission. A command and control detachment may be attached to the division to provide administrative control and operational supervision of operational teams.

4-37. Planning

The G3 is responsible for planning and integrating psychological operations in support of division missions. Requests for support are submitted through the corps psychological operations officer. The psychological operations officer at division level is an officer within the G3 section who is assigned psychological operations responsibility as an additional duty. For details, see FM 31-15 and FM 33-5.

Section XII. MEDICAL SUPPORT

4-38. General

The medical battalion furnishes medical support to the entire division. The division surgeon prepares the medical plan. The support command

commander uses the medical battalion to execute the medical plan under the supervision of the division surgeon. For details, see FM 54-2 and FM 8-15.

Section XIII. PERSONNEL AND ADMINISTRATION

4-39. General

a. The G1 exercises general staff supervision over all personnel activities in the division. In addition to the combat and combat support unit

commanders, the special staff officers and commanders whose duties normally include personnel support activities, and who work in close coordination with the G1, are as follows:

- (1) Adjutant general.
- (2) Inspector general.
- (3) Staff judge advocate.
- (4) Chaplain.
- (5) Provost marshal.
- (6) Finance officer.
- (7) Information officer.
- (8) Surgeon.
- (9) Administration company commander.

b. The administration company serves as a carrier unit which provides support for certain elements of the division staff that furnish the personnel and administrative services needed to sustain the division. This includes replacement support and a centralized personnel service for all units assigned and attached to the division. For details on the employment of the administration company, see FM 12-11.

c. Personnel and administrative (P&A) services for the division and attached units are provided by the personnel service division in the adjutant general's section. During combat, most of the personnel of the personnel service division operate in the division rear echelon. When necessary, predesignated teams accompany any prolonged temporary or permanent detachment of organic units from the division. In a like manner, the unit personnel sections of nonorganic elements attached permanently or for prolonged periods of time are absorbed and used in the personnel service division. Unit personnel sections will be returned to their parent organizations upon detachment from the division.

4-40. Personnel Services

a. The adjutant general's section has the following principal functions and operates in accordance with doctrine contained in FM 101-5, FM 100-10, and FM 12-11:

- (1) Personnel services.
- (2) Administrative services.
- (3) Postal services.
- (4) Special services.
- (5) Replacements.

b. Electrical accounting machines (EAM) are integrated in the adjutant general's section to support personnel services and other applicable activities in the division.

c. Personnel administration at unit levels.

- (1) *At brigade level*, brigade commanders are responsible for effective overall management of their commands but normally

will not enter the P&A channel between division and the battalions attached to the brigade. The brigade S1, however, will maintain normal staff channel contact with battalion S1's and will keep the brigade commander informed of personnel problems, trends, and accomplishments. The brigade personnel staff non-commissioned officer will provide liaison for the brigade headquarters and headquarters company and assistance to his counterparts in the battalions.

- (2) *At battalion level*, battalion commanders are responsible for initiating P&A actions and for the effective overall personnel management of their commands. The approval, supervisory, and nonrecord keeping functions of battalion commanders are defined as battalion level P&A. P&A actions which the battalion commander has no need to influence will be handled directly between companies and division. The battalion personnel staff noncommissioned officer maintains continuous personal contact with all company clerks, first sergeants, and company commanders and the various special staff elements of the division rear echelon.
- (3) *At company level*, the company commander is the primary manager of Army personnel. His assistants for P&A are the executive officer, first sergeant, and company clerk. The actions which can be accomplished best within the company, battery, or troop are defined as company level P&A.

4-41. Replacements

a. The replacement detachment is under the control and supervision of the adjutant general. This detachment normally operates in the vicinity of the division rear echelon and processes all replacements received by the division. The normal capacity of the detachment is 300 replacements at one time which can be increased if additional control personnel and equipment are provided.

b. The replacement detachment receives and handles both unit and individual replacements. Incoming replacement units assigned to the division provide their own administration (e.g., messing, unit supply, and strength reporting). For individual replacements, these functions are per-

formed by the replacement detachment. For both unit and individual replacements, individual personnel records are processed by teams provided by the personnel service division of the division adjutant general section.

c. Replacements are assigned to the division on the basis of daily replacement status reports submitted to higher headquarters by the division adjutant general. These reports are based upon TOE position vacancies as shown in unit morning reports. Replacements are provided from personnel arriving from the zone of the interior, hospital returnees, personnel being rotated from other areas, and casualties being returned to duty from various sources. Replacement operations are covered in detail in FM 100-10 and FM 12-11.

d. The division commander, the staff, and higher headquarters are informed of currently effective strengths by means of the personnel daily summary.

4-42. Division Band

In addition to furnishing music, the band may be employed in combat, combat support, and combat service support roles when necessary. See FM 54-2.

4-43. Morale and Personal Services

a. The division support command operates the Army exchange functions within the division. Army exchange supplies are normally distributed by the divisions supply and transport battalion. Gratuitous issue items are normally distributed with Class I supplies.

b. The postal service, special services including establishment of rest camps, and awards and dec-

orations programs are administered by the adjutant general.

c. Procedures are established for rest and relaxation in order to maintain and refit men for combat and other military duties.

4-44. Legal Services

The staff judge advocate provides legal advice to the command. The legal services provided by the staff judge advocate section are:

a. Administration of military justice.

b. Claims operations.

c. Investigation and prosecution of war crimes.

d. Legal assistance.

e. Legal advice in international law, military affairs, civil affairs, and procurement matters.

4-45. Financial Service

The division finance section is a combined disbursing and staff finance section which is organic to the administration company. It is located in close proximity to the adjutant general's section. The disbursing portion of the section provides finance services to the division. The staff finance portion of the section advises the commander and his staff on financial matters.

4-46. Chaplain Coverage

Most of the chaplains authorized the division are designed to, and normally operate in, the subordinate units. Their collective efforts, however, are coordinated by the division chaplain to provide denominational coverage as required. Details on the employment of the chaplains of the division are presented in FM12-11 and FM 16-5.

Section XIV. GRAVES REGISTRATION

4-47. Concept

The dead are normally evacuated from the division area for interment. Details of graves registration service are covered in FM 10-63, FM 54-2, FM 101-5, and AR 638-30.

4-48. Collection, Evacuation, and Burials

a. In combat, the division is augmented by a graves registration platoon attached to the supply and transport battalion. This platoon is responsible for evacuation of the dead from division medical facilities. Collecting and evacuation sec-

tions of this platoon operate forward collecting points, normally one per brigade. Combat units are responsible for evacuation to these collecting points. The platoon also provides the division collection, identification, and evacuation section which operates the division graves registration collecting point.

b. The division graves registration collecting point is located a short distance from the MSR near the supply and transport battalion. It should be isolated from the view of other activities. Field army units evacuate the dead from the division graves registration collecting point.

c. The dead are identified as early and as fully as possible. Units normally evacuate their dead with their personal effects from forward areas in unit transportation returning from other tasks. In nuclear situations, special graves registration task groups may be formed, including sufficient transportation to evacuate the dead promptly or to take other appropriate measures.

d. Mass burials are used only as an emergency measure when necessitated by sanitary and morale considerations. They must be authorized by proper authority and reported through graves registration channels. Chaplains shall perform appropriate religious burial services.

e. Isolated burials are used only as an emergency measure and are fully documented and reported through graves registration channels.

Section XV. CIVIL AFFAIRS

4-49. General

During combat, the primary purpose of civil affairs (CA) activities is to support division operations, secure necessary civilian assistance, and fulfill the division commander's legal obligations. The division's CA operations further the CA objectives of the division and higher echelons and assist in the future conduct of military operations in the locality. Details of CA operations and policy are covered in FM's in the 41-, 100-, and 101-series.

4-50. Organization

a. The G5 exercises general staff supervision over civil affairs activities within the division. He is primarily concerned with planning, coordination, and supervision of civil affairs operations and the conduct of relations between the military and the civilian population.

b. Civil affairs support is provided by a civil affairs command support platoon assigned or attached to the division. Additional civil affairs units and functional teams are attached to the division when required to supplement civil affairs operations.

4-51. Operations

a. Activities During Combat.

- (1) Civil affairs during combat are limited to emergency activities directed toward the prevention of civilian interference with military operations and the discharge of the commander's legal obligations toward the civilian population. Priority is usually given to public order and safety at the expense of other civil affairs activities.

- (2) Civil affairs personnel discharge civilian duties until suitable civilian officials can be located or trained. Transfer to a civilian agency will be accomplished as soon as feasible.

- (3) Support for division operations may be secured from the local population in the form of intelligence, counterintelligence, operations against irregular forces, labor, supplies, housing, transport, medical facilities, and maintenance.

- (4) Supplies and equipment required in discharging civil affairs responsibilities to the civilian population are procured locally when possible. Resources provided for the support of combat operations are diverted to civil affairs activities only when the execution of the combat mission requires such action.

b. Activities Other Than Combat.

- (1) Noncombat civil affairs are directed toward the preparation of contingency plans to cover the conduct of potential activities such as civic action, counterinsurgency, unconventional warfare or joint contingency operations; civil emergencies resulting from disasters, epidemics, disorders, or conditions threatening the successful functioning of civil authority; and full or partial executive, legislative, and judicial authority over an assigned area of responsibility.
- (2) During periods of peace, or in areas where hostilities are not likely to occur, military relationships with the civilian population fall into the area of liaison and coordination to gain mutual support.

4-52. Applicable STANAGS

The material presented in this chapter agrees with applicable portions of the following STANAG's:

STANAG 2055—Civil Affairs/Military Government, Principles of Operation.

STANAG-2057 (SOLOG-40)—Civil Affairs/Military Government, Subjects for Instructions.

STANAG-2058 (SOLOG-41)—Civil Affairs/Military Government, Principles of Organization.

STANAG-2065—Civil Affairs/Military Government, Training Principles for NATO Armed Forces.

STANAG 2088—Battlefield Illumination, and with STANAG-2099—Troop Safety in the Nuclear Land/Air Battle.

CHAPTER 5

OFFENSE

Section I. GENERAL

5-1. General

This chapter provides guidance for employment of the division in offensive combat. Certain types of operations (i.e., guerrilla, amphibious, airborne, etc.) and certain conditions of climate or terrain (i.e., desert, arctic, jungle, mountains) will dictate modification of many techniques; however, principles will remain the same. Special types of offensive operations are discussed in chapter 9 and in the appropriate publications listed in appendix I.

5-2. Concept of the Offense

The division is organized for combat to make the best use of the capabilities of all its elements, and employs a combination of fire and maneuver to accomplish offensive missions.

a. Under conditions of active nuclear warfare, the division exploits the effects of friendly nuclear fires. Maneuver forces move through, over, or around the effects of nuclear fires in order to dominate, neutralize, or destroy enemy forces, to control terrain objectives, or to disrupt enemy rear areas.

b. Under conditions of nonactive nuclear warfare, the firepower available to the division is substantially reduced. The possibility, however, that the enemy may employ nuclear weapons dictates that the division avoid presenting lucrative targets. Against an enemy possessing an air arm capable of dominating the airspace for appreciable periods, the division avoids concentrations that will invite either nuclear or nonnuclear air strikes.

c. Under conditions of nonnuclear warfare, nonnuclear fires are used to support maneuver and to fix, interdict, or destroy enemy forces. Sufficient firepower is generated by massing nonnuclear fires in critical areas. Chemical fires may be used to increase combat power.

5-3. Fundamentals of Offensive Action

a. In the offense, combat power is attained by forming responsive combined arms forces which

can move rapidly, deliver accurate fire, and maintain continuous communications.

b. The attack is planned carefully and executed aggressively.

c. Once the attack is launched, the division attempts to gain its objective in the shortest possible time. To insure rapid execution, the commander exploits all means of combat power.

d. Every effort is made to disrupt and neutralize enemy support and reinforcement actions.

e. Offensive action requires the concentration of superior combat power at the decisive point and time. This is achieved by analyzing the mission and the terrain to select the decisive objective—that is, the objective the seizure of which best facilitates the accomplishment of the division mission. When the decisive objective has been determined, the main attack is directed against it. Priority of combat power—both units and fire—is given to the main attack.

f. Fire superiority must be gained early and maintained throughout the attack to permit freedom of maneuver without prohibitive loss. The effects of fire should be exploited by maneuver.

g. The attacker maneuvers to exploit the effects of his fire to close with and destroy the enemy by assault. Maneuver may also force the enemy to fight on unfavorable terrain or lure the enemy into a target for destruction by fire.

h. Plans must provide for the exploitation of any advantage accruing during the attack. This may require a reserve of troops and firepower which provides the commander with the means to exploit successes. When the opportunity for decisive action presents itself, the commander commits all necessary resources and demands the ultimate from his troops. Pressure applied day and night against a weakening enemy denies him respite from battle, the opportunity to recoup losses, or the opportunity to gain the initiative. Failure to capitalize on opportunities will result in slow, inconclusive attacks in which the attacker usually will suffer heavy losses.

i. Terrain is important in division offensive combat and provides advantages which can be exploited. Operations often are directed toward the early domination of key terrain features which give an advantage in observation, cover and concealment, and fields of fire; which enhance maneuver and support; which control routes required by friendly and enemy forces; which allow control without placing forces in static postures; or which afford additional security.

j. In the attack there are three principal tasks: holding the enemy in position, maneuvering against him to gain an advantage, and at the decisive time delivering an overwhelming attack to destroy him.

k. Surprise is always sought. It may be gained by choosing an unexpected time, place, direction, form of maneuver, or strength of attack. It is enhanced by cover and deception operations.

l. An aggressive attack inherently provides some security.

m. The commander insures that the attacks of his subordinate units are coordinated and contribute to the accomplishment of the division's mission by assigning missions, allocating means, and applying other necessary controls.

n. Dispersion is employed to reduce vulnerability but only to the extent that the accomplishment of the mission is not impaired.

o. The plan must provide for the combat service support required to sustain the attack.

5-4. Forms of Maneuver

a. *General.* The basic forms of offensive maneuver are the penetration and the envelopment. The frontal attack is a variation of the penetration; a double envelopment and a turning movement are variations of the envelopment. The distinction in the division form of maneuver exists primarily in the intent of the division commander since the subordinate elements of the division may use all the forms of maneuver in the attack. Infiltration is a technique of movement used in conjunction with the several forms of maneuver. The exploitation is an offensive operation which may follow a successful penetration or envelop-

ment. The pursuit is an extension of a successful exploitation. For details of the exploitation and the pursuit, see paragraphs 5-50 through 5-55.

b. *Penetration.* In the penetration, the attacking force ruptures the enemy's defensive position, destroys forces, installations, and control means; and seizes objectives which break the continuity of the defense. This action facilitates the destruction in detail of the divided forces and the movement of forces deep into the rear areas in exploitation. If sufficient preponderance of combat power is available, a multiple penetration or frontal attack may be launched. A frontal attack strikes the enemy all along the front. It is employed to overrun and destroy a weaker enemy. For details, see paragraphs 5-41 through 5-44.

c. *Envelopment.* In the envelopment, the attacking force avoids the enemy's main defensive strength by going around or over it to seize an objective in the rear which disrupts communications and support, cuts escape routes, and subjects the enemy to destruction in position. In the turning movement—a variation of the envelopment—the attacking force passes around or over the enemy's main force to seize an objective deep in the enemy's rear which will cause him to abandon the position or to divert major forces to meet the threat of the turning force and thus fight on the ground chosen by the attacker. For details, see paragraphs 5-45 through 5-49.

5-5. Choice of Maneuver

A higher commander seldom dictates the form of maneuver to be adopted by the division. However, the mission assigned, including the task derived from it, and the requirement for secrecy may impose limitations in time and direction of attack. The mission of the division, characteristics of the area of operations, disposition of opposing forces, and the relative combat power of the opposing forces are analyzed to determine the best form of maneuver to be adopted. Normally, terrain, the available time, own dispositions, ability to support the attack, and the enemy situation are the principal factors in choosing the form of maneuver to accomplish the mission.

Section II. BASIC CONSIDERATIONS OF OFFENSE

5-6. Mission

Accomplishment of the mission is the goal toward which the effort of the command is directed. At division and lower levels, the mission may en-

compass the seizure, domination, or neutralization of a terrain feature or a locality, or the destruction of an enemy force. Additional tasks may be derived from the stated mission received from higher

headquarters. This mission will normally state the objective to be seized. The objectives assigned subordinate elements of the division contribute to the accomplishment of the division's mission. Subordinate units normally are assigned only final objectives. Intermediate objectives are assigned only when their seizure or neutralization is essential to the division mission. Subordinate commanders must be fully informed of the purpose of their attacks and objectives. Commanders must kindle aggressiveness in subordinates and accord them full use of their initiative. Opportunities to destroy the enemy that could not possibly be foreseen by the higher commander may be presented to the subordinate. Procedures must allow such opportunities to be exploited without undue delay.

5-7. Terrain and Weather

(FM 30-51)

a. Observation. Aerial observers and surveillance equipment may reduce the importance of high ground for observation. Line of sight ground surveillance equipment, however, relies largely upon high ground for maximum effectiveness. When weather or other conditions prevent the use of aerial observers or aerial surveillance equipment, alternate means such as visual observation posts, listening posts, and patrols must supply essential information.

b. Obstacles.

- (1) Obstacles, both natural and artificial, must be considered in organizing the division for combat.
- (2) Small enemy forces determinedly defending obstacles can delay or cause attacking forces to mass. This may require the use of nuclear fires to destroy forces which might otherwise not be considered remunerative targets. Tracked vehicles, trucks, and aircraft are used to cross or bypass obstacles with maximum speed.
- (3) Nuclear fires may produce obstacles by induced radiation, fallout, fires, or blow-down. Close coordination between nuclear fires and maneuver is essential to minimize the impact of nuclear effects on maneuver. An otherwise acceptable scheme of maneuver may have to be rejected because of the probable effects of planned nuclear fires. Engineer support and additional means of mobility may be

required to overcome the obstacles so produced.

c. Cover and Concealment.

- (1) Skillful use of cover and concealment contributes materially to achieving surprise and reducing losses.
- (2) Concealment impairs the enemy's ability to locate targets; however, wooded or built-up areas and deep valleys or ravines may increase casualties if troops are inadequately protected from nuclear weapons. Certain areas offer good concealment as well as good cover from nuclear effects and favor tactical plans which use these areas. For example, areas containing numerous mineshafts, caves, and tunnel-type fortifications afford good protection from nuclear weapons and also provide concealment.
- (3) Areas containing numerous small patches of woods, underbrush, or small villages may provide good concealment for dispersed small units of the division.
- (4) Darkness, fog, snow, dust, smoke, and rain provide concealment. Movement and attack under these conditions are an integral part of the division's operations.
- (5) The basic principles of camouflage are covered in FM 5-20.

d. Fields of Fire. Good fields of fire enhance the effectiveness of the division's weapons. In the attack, the division seeks to avoid terrain over which the enemy has good fields of fire. If such defenses cannot be avoided, smoke, speed of movement, armor shielding, supporting fires, and deceptive measures reduce their effectiveness.

e. Key Terrain. The commander's plan is directed toward the early control or neutralization of terrain which is essential to accomplish the mission in the shortest possible time and to maintain the speed and momentum of the attack. Complete control of specific terrain is maintained when necessary to create favorable conditions for maneuver and use of fire.

f. Avenues of Approach. At division level, an avenue of approach is an area that provides a relatively easy route for a deployed brigade-size force to reach an objective.

- (1) Possible avenues of approach are analyzed based upon the availability of observation, cover and concealment, fields

of fire, space for dispersion and maneuver, obstacles, cross-country trafficability, road and trail network, the possible effect of adverse weather, and the length and directness of the avenue to the objective. Nuclear warfare increases requirements for dispersal area. The possible intensification of nuclear effects in valleys and the possible creation of obstacles by nuclear fires must also be considered.

- (2) Avenues of approach are used which provide for rapid movement to objectives and the space necessary for dispersion. Enemy defenses and capabilities along the better avenues of approach or the possibility of increasing surprise by the use of other less desirable avenues warrant careful consideration in the selection of an avenue of approach to be used by the attacking force. Fires may be used to neutralize forces occupying terrain that that dominates an avenue of approach.
- (3) In selecting flight routes for airmobile operations, the major concern is concealment. Routes are selected which provide defilade and are easy to follow. Heavily forested and swampy areas provide good routes that are concealed from ground observation. Ridges are avoided, when possible, to reduce the possibility of detection by radar. Steep defiles or canyons are avoided because of the possible effects of downdrafts on control of aircraft (para 9-9).

g. Weather.

- (1) *General.* Enemy tactics and the obvious advantages gained from offensive combat at night and under adverse weather conditions dictate that commanders not reduce the tempo of actions because of climatic or visibility conditions. Rather, they must take full advantage of these conditions to gain surprise, to shift dispositions, to resupply, and to press the attack.
- (2) *Effect of visibility on operations.*
 - (a) Poor visibility conditions present several advantages to attacking troops. In addition to surprising the enemy, attacking troops probably will suffer fewer losses than during clear visibility attacks. Night operations may cause

concern and disruption of enemy plans because of his uncertainty about the situation.

- (b) Ground resupply operations conducted during such conditions are less vulnerable to enemy action.
- (c) Though maintenance time will be at a premium, maintenance must be accomplished during darkness as well as in daylight.
- (d) The work of control and assessment teams and the evacuation of casualties must progress under all conditions.
- (e) The danger of daylight discovery or identification of critical installations may require frequent night displacements.
- (f) The coordination of movements is more difficult and traffic control operations must be carefully planned and executed.
- (3) *Use of smoke.*—Poor visibility conditions may frequently have to be produced artificially when the enemy has air superiority or good observation. In addition to the use of smoke to limit visibility, smoke may be used to attenuate the thermal effects of nuclear weapons.

5-8. Enemy

The enemy situation is studied to determine strengths, dispositions, capabilities, and tactics. Enemy weakness is exploited and strength is avoided. Knowledge of the enemy's dispositions influences the selection of the form of maneuver and the division organization for combat. Knowledge of the enemy's capabilities, tactics, and peculiarities permits the division commander to determine more accurately the advantages and disadvantages of each course of action. Operations must be continuously evaluated against the enemy nuclear capability. Operational planning considers the impact of enemy use of nuclear weapons and provides for contingency action to reduce the disruption caused by such enemy attack.

5-9. Fire Support

a. General. Fire and maneuver complement each other and can be used together in many combinations. Fire support planning in concurrent

and integrated with maneuver planning. Preparatory fires weaken the enemy physically and psychologically for the assault. Mobile firepower in support of the attack assists in maintaining momentum. Fires cover the reorganization of the force and assist in controlling the objective.

b. Nuclear Fires. Use of nuclear fires may permit adoption of courses of action which may otherwise be infeasible. In support of the attack, they promote the rupture of enemy positions with reduced requirements for maneuver units. Fallout may be employed to blanket areas of poorly defined targets, create obstacles, canalize enemy movement, disrupt enemy intentions, and force relocation of enemy support installations. The employment of tactical fallout must be based upon a consideration of the expected tactical advantage, troop safety, effect on adjacent commands, future use of the area which will be contaminated, and any restrictions imposed by higher headquarters. Nuclear fires may enable the attacking force to exploit immediately. Nuclear weapons held in reserve may reduce the requirements for troop reserves and provide the commander a powerful means of influencing the action. The decisiveness of nuclear fires may obviate the need for mutual support between widely separated units.

c. Chemical. A toxic chemical attack produces casualties without the destructive effect of nuclear fires. Toxic chemical concentrations for persistent effect can retard enemy movement or restrict enemy occupation of terrain areas. Toxic chemicals, in conjunction with nuclear fires, increase the casualties inflicted upon the enemy and retard his efforts to organize his defense.

d. Air. Tactical air is capable of delivering various munitions against enemy forces and positions. Armed helicopters organic to or supporting the division may be used to attack appropriate targets.

e. Artillery. Artillery provides close continuous support. It is suited to the neutralization and destruction of enemy units during the movement of attacking forces to assault positions. Artillery furnishes the bulk of the division's preparatory fires, supports the attack, and covers reorganization of the force whenever the latter becomes necessary.

5-10. Mobility

The distance to an objective, the time available for its destruction or seizure, the terrain along the

avenues of approach, and the capabilities of the defending force affect the manner in which the attacking force must move. The division organization for combat must reflect these considerations.

5-11. Frontages and Formations

a. Frontage. The division's mission and the forces available will be major considerations in determining the frontage to be assigned an attacking unit. Other factors include:

- (1) Anticipated enemy resistance.
- (2) Terrain.
- (3) Space needed by the unit for maneuver and dispersion.
- (4) Road net.
- (5) Unit mobility and that of the enemy.
- (6) Available fire support.
- (7) Range of the unit's weapons and the need for its subordinate elements to be mutually supporting.
- (8) Unit signal communication capability.
- (9) Unit surveillance capability.

b. Formations.

- (1) *General.* The mission, enemy situation, terrain and weather, and the troops available will indicate the most suitable division attack formation to be used. The formation selected must provide the combat forces required for the conduct of the attack and the flexibility to react promptly to developing situations.
- (2) *Column of brigades.* This formation may be adopted when the division attacks on a relatively narrow front. By providing the maximum depth to the attack, the column of brigades facilitates retention of the initiative, provides versatility, and enhances security. Following brigades can move through or around the leading brigade to maintain the momentum of the attack or to meet threats to either flank; however, deployment of forces is slow.
- (3) *Two brigades abreast.* This formation may be adopted when the division attacks on a wide front when great depth is not required. The uncommitted brigade, as the division reserve, provides versatility and security.
- (4) *Three brigades abreast.* This formation lacks depth but may be used when it is

desirable to have the maximum combat power forward on a broad front and when little or no reserve is needed. It is also used when considerable information about the enemy is available and speed is essential.

- (5) *Brigades in echelon.* This formation furnishes security in depth toward a threatened flank.

c. Frontages and Formations Within the Brigade. The factors considered in determining frontages and formations at division level apply also at brigade level.

5-12. Deployment of Forces

a. General. The division's forces may be distributed as a main attack, a supporting attack, and a reserve. One brigade may be assigned to accomplish each of these tasks. When two or more brigades are given tasks of equal importance, there will not be a main and supporting attack as such. The division commander may at any time exploit success in a particular area by shifting the weight of his combat power.

b. Main Attack. The main attack is directed against that objective which best contributes to the accomplishment of the division's mission. The commander must practice flexibility in assigning objectives. Although one objective may appear to offer the best contribution to the success of his mission, another may develop suddenly. The main attack is accorded first priority in the allocation of combat power. It must be provided the means with which to gain decisive superiority over the enemy.

c. Supporting Attack.

- (1) A supporting attack should contribute to the success of the main attack by accomplishing one or more of the following:
 - (a) Control terrain which enhances, or destroy forces which hinder, the maneuver of the main attack.
 - (b) Pin the enemy down to a terrain feature.
 - (c) Deceive the enemy as to location of the main attack.
 - (d) Force the enemy to commit reserves prematurely or in an indecisive area.
 - (e) Prevent reinforcement against the main attack.
- (2) Sufficient combat power is allocated for the accomplishment of these tasks. Nu-

clear and chemical weapons may be used to accomplish tasks which might otherwise require the commitment of large bodies of troops.

d. Reserve.

- (1) *General.* The division normally retains a reserve to be committed at a decisive time and place to exploit success and complete the accomplishment of the mission. A reserve also provides the commander with a means of dealing with unforeseen contingencies. It adds to security, although this is not the principal reason for its retention. Reserves may consist of nuclear weapons, troops, or both. A highly mobile reserve is desired. The reserve may be used to—

- (a) Exploit success of the attack.
 - (b) Reinforce the attack.
 - (c) Defeat enemy counterattacks.
 - (d) Provide security.
- (2) *Size of reserve.* A deep objective, limited knowledge of the enemy situation, limited combat power, or the inability to visualize the attack to its final objective require the retention of a stronger reserve than in situations where these conditions do not exist. When attacking an enemy known to have inferior mobility, the reserve may be smaller than when attacking one of equal or superior mobility.
- (3) *Location of the reserve.* Dispersal of the reserve by combined arms teams into multiple assembly areas or march columns provides protection from nuclear attack. The reserve is located—
- (a) To permit rapid movement to points of probable employment. Availability of the reserve for employment is based upon time rather than distance from the point of employment.
 - (b) To favor the main attack.
 - (c) To provide security to the command.
 - (d) To provide maximum protection from hostile observation and fire.
- (4) *Nuclear weapons.* The commander normally holds a portion of his nuclear weapons in reserve. Nuclear weapons in reserve may reduce the requirement for a large troop reserve.
- (5) *Reconstitution of reserve.* Plans should be made prior to the attack to reconstitute

a reserve at the earliest opportunity after the reserve is committed.

5-13. Division Organization for Combat

a. General. The general considerations discussed in chapter 3 for organizing the division for combat are applicable to offensive operations.

b. Tanks. A brigade is tailored strong in tanks when—

- (1) The terrain permits tank employment in substantial numbers.
- (2) Shock effect and speed are desired.
- (3) The enemy is strong in tanks.
- (4) Armor shielding against small arms, artillery, and nuclear effects is required.

c. Infantry. A brigade is tailored strong in infantry when—

- (1) The enemy positions are organized strongly with antitank defenses.
- (2) The terrain precludes employment of substantial numbers of tanks.
- (3) An obstacle must be breached.
- (4) A large built-up area must be controlled or neutralized.

d. Mechanized Infantry. A brigade is tailored strong in mechanized infantry under the conditions listed in *c* above, when it is necessary that infantry and tank elements have comparable mobility.

e. Airborne. A brigade will contain airborne infantry when its mission includes parachute assault.

f. Armored Cavalry. The squadron is normally used under division control on reconnaissance and security missions. However, the squadron or its armored cavalry troops or the air cavalry troop may be attached to brigades. The squadron will be appropriately reinforced as required by its mission. If it is required to control terrain or destroy large enemy forces, the squadron may require the attachment of infantry and tank elements and suitable artillery and engineer support. The squadron may be used as the nucleus of a task force.

g. Artillery. Normally, a battalion of artillery is assigned the mission of direct support of each committed brigade. When a brigade is not committed, the battalion which normally supports it is given a reinforcing, general support, or a general support reinforcing mission. The 155-mm/8-inch FA battalion and the Honest John battalion are given general support or general support reinforcing missions. If a brigade is making the division

main attack, its firepower is weighted by reinforcing its direct support artillery battalion. If conditions preclude centralized control, artillery may be attached to a committed brigade. All artillery attached to a brigade is normally placed under a designated artillery commander who acts as artillery officer for the brigade.

h. Engineers. Engineer units may be attached or placed in direct support of brigades in the offense as the situation dictates, although some situations may require centralized control of all engineer effort at division level. When early commitment of the reserve is anticipated, appropriate engineer elements are designated for attachment to or in direct support of it.

i. Signal. The signal battalion provides communication support for division headquarters and the brigades. See chapter 4.

j. Medical, Supply, Transportation, and Maintenance. The brigades' requirements for medical, supply, transportation, and maintenance support can be met by attachment of appropriate units or by support under centralized control. See FM 54-2.

k. Military Police. The military police company provides military police support and services to the division headquarters and the brigades on a divisionwide basis. (See also chapter 4.)

5-14. Security

a. The purpose of security in the offense is to avoid unexpected interference by the enemy, to maintain the integrity of the formation, and to gain and maintain freedom of action. The violence and speed of the attack frequently offer the best security by keeping the enemy so heavily involved that he has neither time nor means to endanger the success of the attack. The retention of a reserve enhances the security of the command.

b. Widely dispersed attack formations tend to bypass enemy strong points and to expose friendly flanks. Bypassed enemy forces must be contained if they constitute a significant threat or must be reported to higher headquarters or to follow and support units. Flanks and gaps between units are secured by patrols, flank guards, and echeloned reserves, or by surveillance and fire. Combat service support and combat support units may require protection from ground attack, but these considerations must not slow or divert the momentum of the attack.

c. Early warning of impending enemy countermeasures and the collection of timely and accurate information are essential to security. Reconnaissance forces such as the armored cavalry squadron and aviation battalion are used extensively in this role. In addition, the reconnaissance and other intelligence capabilities of committed units are exploited for this purpose.

d. The division adopts passive measures to protect itself from nuclear and chemical attacks by speed of movement; cover and concealment including that offered by darkness; dispersion; deception; and the protection of armored vehicles, protective clothing, and fortifications including foxholes.

5-15. Tactical Cover and Deception

a. Tactical cover and deception is an operation intended to cause the enemy to derive and accept a particular predetermined estimate of our dispositions, capabilities, and intentions so that he will react in a specific predicted manner disadvantageous to himself and advantageous to our forces. The tactical cover and deception plan supports the operation plan.

b. Active and passive deception measures may be limited by the time available to develop the deception story, the time to inject it into the enemy's intelligence channels, and the time required for the enemy to evaluate the information and react to it. Active measures must be authorized by the next higher headquarters.

c. Supporting attacks, feints, ruses, raids, and demonstrations, including the use of nuclear fires, mislead the enemy as to the location of the main attack. Limiting the use of radio communication may aid in concealing the time of attack; however, it must be recognized that, in many instances, radio silence will alert the enemy to the attack. Use of dummy equipment and simulation devices mislead the enemy as to the size, type, and intentions of attacking units. Camouflage conceals the existence of units, and decoys draw enemy fires away from actual units.

d. See FM 31-40 for detailed information on tactical cover and deception measures and planning.

5-16. Combat Service Support

Adequate combat service support is provided to maintain the momentum of the attack without interruption through the attainment or destruction

of the final objective. Maximum use is made of external logistical support agencies to reduce the load on division elements. Division combat service support means are kept forward to insure timely supply and evacuation and to relieve tactical commanders of such combat service support matters as CA and PW. During fast-moving actions such as the exploitation, captured enemy supplies and materiel—particularly transportation and fuel—may ease the burden on the supply system and increase the division's mobility.

5-17. Preliminary Operations

a. Movement to the Area of the Attack. The division may reach the area in which the attack will be conducted either in a covered movement protected by friendly forces in contact with the enemy or in a movement to contact as discussed in paragraphs 5-31 through 5-40.

b. Relief in Place and Passage of Lines. When the attack is preceded by a relief in place or passage of lines by all or part of the division, liaison with the units to be passed through or relieved must be established. Relief operations are discussed in chapter 8.

c. Developing the Enemy Position. Inasmuch as the defender attempts to screen his defensive position with covering forces, a thorough and aggressive reconnaissance by advance security forces is employed to determine the strength and location of the enemy's main position. If the situation is such that this action fails to develop the position, initiation of the attack may take the form of a reconnaissance in force. The command exploits opportunities which occur during the development of the enemy's position.

d. Intelligence. All intelligence means are used to generate detailed intelligence which will provide the basis for sound plans. Emphasis is directed toward the identification, size, and composition of targets—especially suitable nuclear targets—and the rapid dissemination of target intelligence to the FSE. In addition, knowledge of the exact location of all friendly elements is of prime importance. Information sought also includes the hostile organization of the ground, unit identification, the location and extent of obstacles, artillery and mortar positions, nuclear storage and delivery sites, locations of headquarters installations and reserves, and avenues of approach into and within the position. Information available

from other units in contact with the enemy is most valuable.

e. Final Preparation of the Attacking Force. The division may launch coordinated attacks from assembly areas or from march formations. If rapid action is required, the division attacks piecemeal, committing units as they become available.

5-18. Conduct of the Attack

a. Considerations affecting the conduct of the attack include the mission, weather, terrain, enemy situation, and forces available. The following discussion is general in nature; conduct of the attack applicable to specific forms of maneuver is discussed in succeeding sections.

b. Immediately preceding the attack, a preparation of nuclear, nonnuclear, and/or chemical fires may be fired. The preparation is coordinated with the movement of attacking units. All units are employed to make the best use of their combat power.

c. Attacking units move rapidly from dispersed locations under cover of preparatory fires and fires in support of the attack. In nuclear warfare, these units maintain their dispersed formations until required to mass to achieve sufficient combat power to overcome enemy resistance; once the mission which required the concentration of the force is completed, they again take up dispersed formations.

d. The attack plan is vigorously executed and all favorable developments exploited. If the attack lags in one portion of the zone, the weight of the attack is shifted to the area offering the greatest opportunity for success. The progress of the attack is not delayed to preserve the alignment of units or to adhere to the original plan of attack. Attacking units do not become involved in indecisive action. Follow-on units reduce isolated enemy resistance and mop up as necessary or within their capability.

e. The attack may be a single rapid advance and assault until the division objective is seized, neutralized, destroyed, or overrun, or it may be a series of rapid advances and assaults to obtain the same results. Between areas of opposition, attacking forces move rapidly in a partly deployed formation; infantry and tanks may move forward separately, together, or one may lead the other; mechanized infantry may remain in their carriers until forced to dismount. As enemy resistance is

encountered, the attacking echelons converge, following closely their supporting fires, until they are within assaulting distance of the hostile position. If these fires have neutralized effective anti-tank opposition, the tanks normally lead the assault, overrun the objective, and take up overwatching positions on the perimeter while the following infantry mops up. If antitank opposition remains strong, the infantry leads the final assault with the tanks supporting by direct fire until their fires are masked. Nuclear fires may make the assault unnecessary or reduce greatly the casualties which could be received during the assault. The assault is a short, well-coordinated effort which overruns or destroys the objective. Supporting fires continue to the last possible moment and then are shifted to the flanks and rear of the enemy position. Following the assault, attacking units disperse as rapidly as possible to preclude forming lucrative targets and continue the attack or prepare for other operations.

f. The reserve is kept dispersed but ready for instant employment. Its vulnerability must be evaluated against the requirement for immediate availability. Dispersed locations and the organization of the reserve for anticipated combat reduce its vulnerability and expedite its commitment. When conditions dictate its use, the reserve is committed without hesitation. The decision to commit the entire reserve or a portion thereof will depend upon the situation. With the compression of time and distance factors inherent in the mobility of mechanized and armored divisions, combined arms teams of the reserve can be assigned specific short-term missions and the reserve quickly reconstituted. Displacement of fire support means is executed in a manner designed to maintain continuous fire capabilities throughout the attack.

g. The division commander keeps himself intimately informed of the progress of the attack, the status of his units, and the enemy situation. Depending upon the battle, he is prepared to alter the organization for combat, maneuver his forces, reallocate and shift fires, or use his reserve. Decentralization and mission-type orders are normal. During the attack, the division commander moves where he can best control and influence his forces.

h. During continuous day and night operations, leading elements are rotated to provide time for

rest and maintenance. This rotation may be accomplished by changing the division organization for combat and by SOP within brigades.

5-19. Continuation of the Attack

a. Upon attainment or destruction of the division objective, all means are used to continue the attack if so ordered. Maximum use of supporting fire is made during this critical period. Minimum forces retain control of objectives, if required. Ground mobile and/or airmobile units maintain contact with the enemy, keep him off balance, and obtain information.

b. Continuation of the attack with fresh troops, a new direction of attack, or exploitation by the reserve may require a passage of lines or a relief in place.

c. The continuation of the attack is frequently dependent upon the resupply of attacking forces. During the attack, large quantities of ammunition, POL, and equipment will have been expended. These must be replenished. Provision for this logistical support must be an integral part of the attack plan.

5-20. Discontinuance of the Attack

a. Contingencies may require the attack to be halted. The commander must anticipate halts and prepare orders to include the time or circumstances of the halt, missions and locations of subordinate units, and command and control measures. To prevent congestion, some units may be diverted into assembly areas prior to the halt of the entire division.

b. The division commander may have freedom of choice in discontinuing the attack. In this event, rear positions are planned to aid defense, to minimize vulnerability to attack, and to facilitate renewal of the attack.

c. Actions taken by the division when discontinuing the attack include—

- (1) Establishing a counterreconnaissance screen and necessary local security.
- (2) Maintaining contact with the enemy and developing information required to plan future actions.
- (3) Redeploying forces based upon probable future employment.
- (4) Maintaining contact with adjacent units.
- (5) Accomplishing reorganization and supply concurrently with the above.

Section III. PLANNING THE ATTACK

5-21. Mission

The mission is normally assigned by higher headquarters but may, in some situations, be developed by the division commander. The assigned mission will frequently be general in nature, thus requiring careful analysis to determine tasks to be accomplished. When the mission is not clearly understood, clarification must be requested from the issuing headquarters.

5-22. Sequence of Commander and Staff Actions

The planning sequence begins with the receipt of a mission. Based upon information available to him from his staff and from higher, lower, and adjacent units, the commander initiates his estimate by analyzing and restating the mission and issuing his planning guidance. Based upon this guidance, the staff prepares and presents estimates and recommendations. The commander then completes his estimate by analyzing the opposing

courses of action. He then compares the advantages and disadvantages of the various courses of action and makes his decision. He states his decision in terms of who, what, when, where, how, and why. During the process of analysis and comparison of courses of action, the commander will develop his concept of operation which provides the staff with sufficient guidance to translate the decision into plans and orders. At division level, oral orders will usually be issued first, followed by written orders as soon as feasible. The commander and the staff will supervise the execution of the orders as required.

5-23. Planning Guidance

Planning guidance assists the staff in preparing or revising staff estimates. It may include the commander's analysis of the mission, any factors and aspects of the situation the commander considers important or unusual, including the use of nuclear and chemical weapons, and any courses of action he may wish developed. Guidance in the

employment of nuclear weapons is normally confined to the type of targets to be attacked and the weapon reserve desired (see also FM 101-31-1). Damage criteria and troop safety considerations are SOP matters. Command guidance in these respects is appropriate only when departure from the SOP is desired.

5-24. Estimate of the Situation and Decision

For additional discussion of the estimate of the situation and the decision, see FM 101-5.

5-25. Commander's Concept

After stating his decision, the commander may provide the staff with his concept of how the operation will be conducted. In doing so, he may elaborate on his decision explaining any aspects deemed necessary, and in addition may provide guidance and instructions that will permit issuance of oral orders and, when time permits, preparation of written orders. This concept may include, as appropriate:

- a. Development and phasing of the operation.
- b. Scheme of maneuver.
- c. Use of supporting fires to include nuclear fires.
- d. General control measures to be used.
- e. Any other measures he may consider of broad significance to the command.

5-26. Development of Implementing Plans

Based upon the commander's decision and concept, the operation plan and supporting plans are prepared for his approval.

5-27. Phasing

a. A phase is a distinct period of an operation at the conclusion of which the nature and characteristics of the action change and another type of action is initiated. Phasing is a help in planning and controlling an operation. It is normal at corps and army level. At division level, it may be used to simplify a lengthy operation or when the commander is unable to visualize the operation to the final objective.

b. The enemy situation, the terrain, requirements for major reorganization of the division during the attack, or the friendly situation may necessitate phasing the operation to the final objective.

c. Phasing of an operation may be described in terms of time (e.g., preparatory fire phase), distance (e.g., intermediate objective or phase line), terrain (e.g., crossing of obstacles), or on the occurrence of a particular event (e.g., commitment of reserve).

5-28. Fire Planning

a. *General.* Planned fires include preparatory fires, countermortar and counterbattery fires, interdiction and harassing fires, fires in support of the attack, and defensive fires to repulse counterattacks. All nuclear and nonnuclear fires are integrated. The nonnuclear fires, including chemical, attack targets that escape damage from nuclear fires or on which nuclear fires cannot be used, block reinforcement, and serve as an economy of force measure in areas not attacked by ground forces or nuclear fires. Normal fires are maintained prior to the preparation to preserve secrecy.

b. *Nonnuclear Preparation.*

- (1) *General.* Considerations in determining whether or not a nonnuclear preparation should be fired include fire support means available, target information, requirements for secrecy, and firing of a nuclear preparation and its expected results. For toxic chemical fires, consideration should be given to the effects of maximum surprise and to the requirements for troop safety.
- (2) *Effect of nuclear preparation.* Even though a nuclear preparation is fired, troop safety or other limitations may result in some areas being unaffected. This, together with the attendant loss of surprise, will probably dictate the firing of a nonnuclear preparation to supplement nuclear fires.

c. *Nuclear Preparation.*

- (1) *General.* Considerations involved in determining whether or not a nuclear preparation should be fired include policy of higher headquarters on the use of nuclear weapons, means available, existence of suitable targets, effect upon surprise, requirements for troop safety, relative combat power of opposing forces, and creation of obstacles.
- (2) *Relative strength of opposing forces.* The enemy's strength may be so great

compared with that of the friendly force as to jeopardize success. The nuclear preparation may bring this ratio into more favorable balance.

- (3) *Obstacles.* The creation of obstacles by nuclear weapons and the effect of these obstacles on maneuver must be considered. The difficulty of traversing physical obstacles is considerably greater at night. Large, thick dust clouds which reduce visibility and impair control may occur from nuclear bursts. Extensive fires caused by nuclear bursts may restrict maneuver; smoke produced by mass fires may reduce visibility.
- (4) *Alteration of terrain features.* Nuclear fires may destroy or change the appearance of prominent terrain features. This may be significant in night combat when certain landmarks may be used as control measures.

5-29. Coordination and Control

a. General. Unity of effort is achieved in the attack by using appropriate control measures. Care must be taken to avoid overcontrol or restricting the ability of subordinate commands to react to unforeseen situations.

b. Orders. Subordinate commanders must be fully aware of the division commander's concept and the part their units play in accomplishment of the division's mission. Issuance of warning and fragmentary orders permit subordinate commanders time for their planning and preparation (FM 101-5).

c. Objectives.

- (1) Objectives may be used to provide unity of effort, to phase the attack, or to facilitate a change in direction.
- (2) An objective should be easily identified. Its destruction or capture must be possible within the time and space limitation imposed and must be within the capability of the force to which it is assigned.
- (3) It is preferable that subordinate units of the division be assigned only final objectives. Intermediate objectives are designated only when essential to the accomplishment of the division's mission. The assignment of an objective may require that the unit seize that objective and

maintain control over it until relieved. The commander's desires in this respect should be specified in orders.

d. Line of Departure (LD).

- (1) When units are in contact, the line of contact may be designated as the LD. For units not in contact, a LD may be prescribed by division based upon terrain or, as in a passage of lines, the anticipated line of contact.
- (2) A LD should be generally perpendicular to the direction of advance, easily recognizable on the ground, and as close to the enemy as possible. For unarmored units it should be protected from small-arms and other flat-trajectory fire. It should be under control of friendly forces. If nuclear weapons are used, its location should conform to the commander's guidance on troop safety.
- (3) The dispersion of the division laterally and in depth may make it desirable to assign separate LD's and times of attack to the various attacking units.

e. Time of Attack.

- (1) In selecting the time of attack, consideration is given to requirements imposed by higher headquarters; the time required for subordinate units to reconnoiter, prepare and coordinate plans, issue orders, organize the attacking units, and move to the attack; and the possibility of taking advantage of an enemy weakness before he can rectify it.
- (2) Stereotyped times of attack are avoided to permit surprise and to prevent prior preparation by the enemy. Attacks by subordinate units may be echeloned in time to mislead the enemy and to allow the shifting of supporting fires to the successive attacks. However, simultaneous attacks reduce the enemy's ability to concentrate his fires.
- (3) Nuclear fires affect the time of attack. Time may be required for tactical damage evaluation and the issuance of necessary modifying orders. Normally, it is desirable that the attack follow the nuclear preparation as soon as possible. Under some conditions, however, dust and smoke may delay the attack until adequate visibility exists. A habitual rela-

tionship of time of attack to the time of nuclear preparation must be avoided.

- (4) Units, particularly those with mission type orders, continuing the attack or entering the exploitation may be assigned a general rather than an exact time of attack, e.g., "at once," "without delay," or "continue."

f. Boundaries.

- (1) Boundaries are prescribed by division to guide the forward advance of units in the attack and to control the fires and maneuver of two adjacent units. Boundaries are normally assigned along terrain features easily recognizable on the ground and are situated so that key terrain features and avenues of approach are completely included in the area assigned to one unit. A boundary should extend forward beyond the objective at least to the depth necessary for coordination of fires in the seizure and consolidation of the objective. Boundaries are extended rearward from the FEBA to the extent necessary to insure that sufficient space is provided for the force concerned, including its command and logistical installations. The rearward projection of the boundaries defines the rear limit of the unit's area of responsibility.
- (2) Units may move and fire temporarily across boundaries only after coordination with the adjacent unit and after notification of the next higher commander.
- (3) Boundaries should delineate a zone of action that will provide adequate maneuver space for the unit to which it is assigned.
- (4) In certain operations, boundaries may be used only at the line of departure and in the objective area.
- (5) Boundaries do not require a subordinate unit to clear the zone of enemy forces. However, the unit must destroy or contain those enemy forces in zones which pose a threat to the accomplishment of its mission or which pose a threat to the continued operations of the division. Forces so contained may be destroyed later by the unit or by other forces designated by the division. If clearance of zone is de-

sired, the division operation order must clearly specify. Corps may designate a follow and support unit to accomplish this task.

g. Axis of Advance. This is the principal direction of movement assigned by division for the purpose of control. Normally, it follows well-defined terrain features such as a series of roads, ridge lines, or valleys extending to the objective area. By the axis(es) of advance, the commander indicates to his subordinate commanders the general scheme of maneuver which he desires in the movement of subordinate elements to the objective area. A commander assigned an axis of advance may maneuver his troops and supporting fires freely to either side of his assigned axis to bypass obstacles, or to engage or bypass enemy units providing such maneuver does not interfere with adjacent units and the unit remains oriented on its objective. When a deviation is required under the circumstances noted above, the subordinate command must inform higher headquarters of the deviation.

h. Direction of Attack. A direction of attack indicates the route along which the commander issuing the order wants a subordinate commander to center his main attack. The direction of attack is a very restrictive control measure and should be used only when necessary. The direction of attack is used primarily in counterattacks or to insure that a supporting attack makes the maximum contribution to the main attack.

i. Phase Lines. Phase lines are established as required to indicate progress of units, to coordinate the attack, and to assist in executing contingency plans. Attacking units report when they cross a phase line but do not stop unless ordered to do so. Phase lines do not necessarily indicate a phased operation.

j. Checkpoints. Checkpoints are useful for orientation, for requesting supporting fires, and for making situation reports in the clear. Checkpoints may be used to supplement phase lines or in lieu of phase lines.

k. Assembly Area.

- (1) An assembly area is an area in which a command assemblies preparatory to further action. Division indicates the general location of subordinate assembly areas. In the assembly area, orders are issued, maintenance and supply are ac-

completed, and the organization for combat is completed.

- (2) The mobility of the force is a consideration in the location of an assembly area. A tank, motorized, mechanized, or air-mobile unit can attack from an assembly area farther to the rear than a unit on foot. To reduce nuclear vulnerability, multiple, dispersed assembly areas are used. The designation of areas near units in contact or large troop concentrations is avoided.
- (3) Assembly areas may be so far to the rear as to require refueling prior to attacking. Areas are designated along the routes where units halt for refueling. Final coordination may be conducted concurrently with the refueling operation. Units then proceed directly to the line of departure.
- (4) Assembly areas should afford concealment from air and ground observation and be of such size as to avoid presentation of lucrative targets to artillery, air, or nuclear attack. Suitable routes forward should be available. Ground observa-

tion and natural protection from tank attack are desirable. When possible, assembly areas should be beyond the effective range of the bulk of enemy artillery.

- (5) Assembly areas may be designated for dispersal units following the attack.

l. Attack Position. The division does not use an attack position nor does it assign attack positions to its subordinate elements except in the case of attack by infiltration.

5-30. Combat Service Support

a. The division plan of attack must be within the capability of logistic support. The combat power available to the division may enable it to seize or destroy objectives which exceed its organic logistical support capability. In such cases, assistance from higher headquarters must be obtained.

b. During the attack, combat service support installations and units are located to sustain the attacking units. Centralized control of logistical support is desirable. However, control may be decentralized or combat service support elements may be attached to supported units when required.

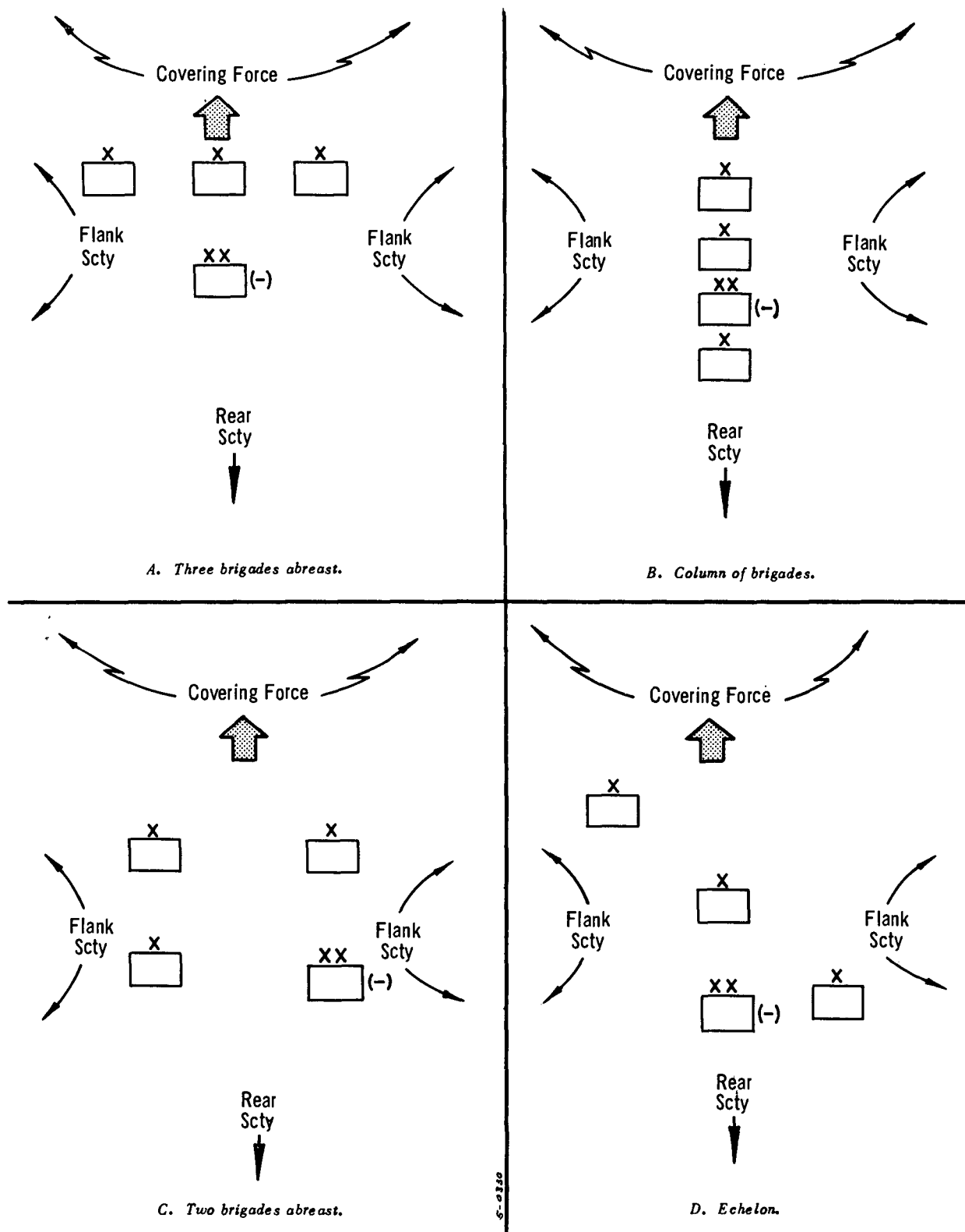


Figure 7. Combat formations.

Section IV. MOVEMENT TO CONTACT

5-31. General

a. Movement to contact is a means of gaining contact or of reestablishing lost contact with the enemy. Its purpose is the early development of the situation to provide an advantage prior to decisive engagement.

b. The advance is conducted on a broad front using the techniques of the tactical column and approach march (fig. 8). The movement to contact is characterized by decentralized control and piecemeal commitment of forces. It terminates when determined enemy resistance requires the deployment and coordinated effort of the division.

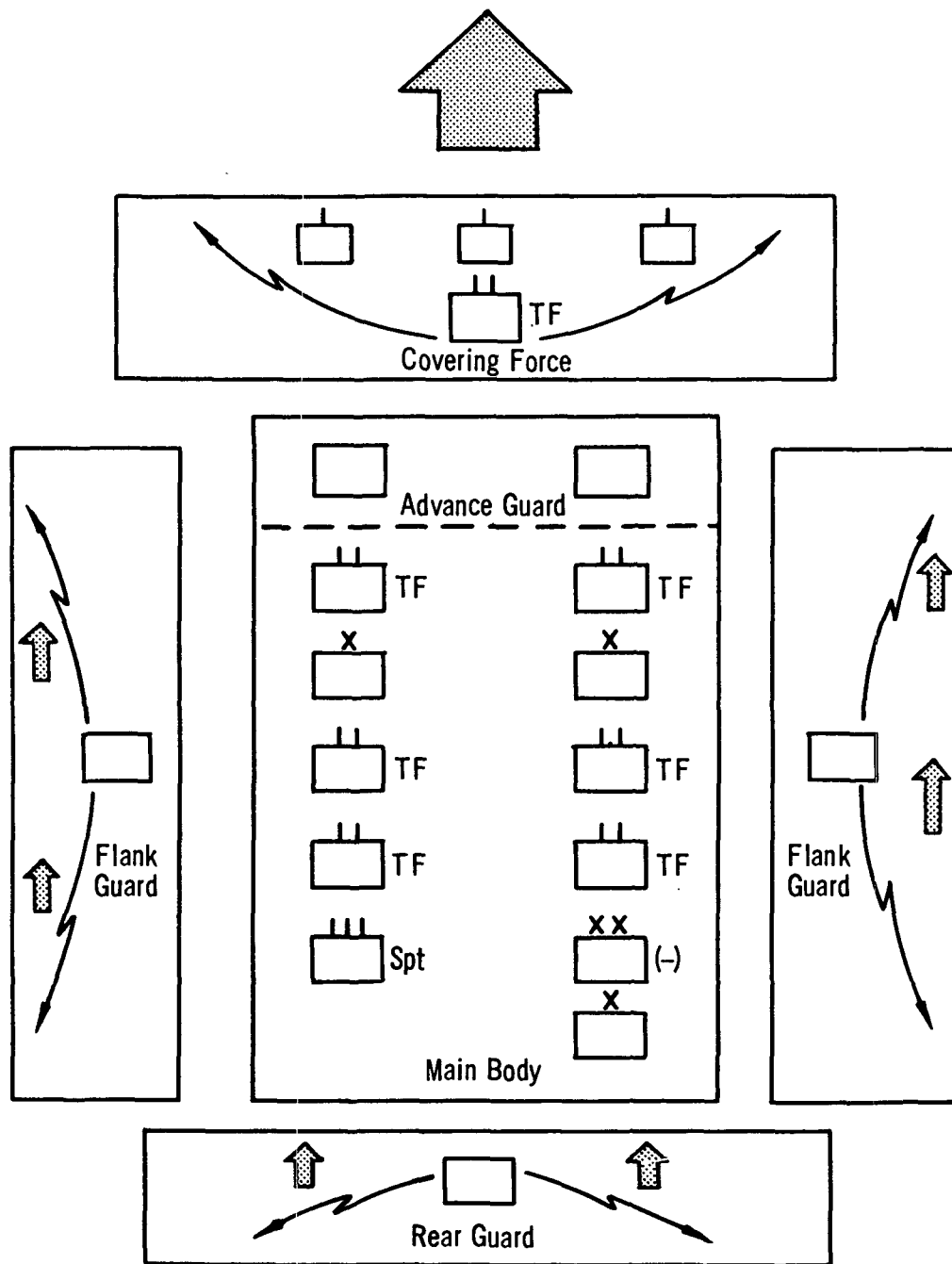


Figure 8. An organization for movement to contact (multiple columns).

5-32. Basic Considerations

a. Primary emphasis is placed on the best use of the road net and terrain. Provisions are made to overcome obstacles and for rapid passage of defiles. See paragraphs 9-26 through 9-33.

b. Primary components are the covering force, advance guards, flank and rear security forces, and the main body. These groupings provide for—

- (1) Rapid and uninterrupted advance of the division.
- (2) Adequate all-round security and the early development of the situation.
- (3) Retention of the bulk of the combat power uncommitted during movement for rapid employment upon contact with enemy forces.

c. The basic formations are the column of brigades, three brigades abreast, two brigades abreast, and brigades in echelon. Normally the movement is conducted in multiple columns. Subordinate combat units adopt formations or variations of these formations which facilitate the accomplishment of their assigned missions, i.e., battalions abreast or in echelon.

d. Imminence of contact and the terrain largely determine the degree of control required. Control must permit rapid response by subordinate units to changes in mission, march procedures, organization, and control measures.

e. Nuclear weapons increase the speed of movement because, in conjunction with relatively small forces, they can eliminate enemy resistance which might otherwise require the deployment of sizable elements. Nuclear fires, to include use of fall-out, can provide security by blocking enemy avenues of approach or by restricting the enemy access to terrain essential to the advance. Toxic chemicals in highly persistent concentrations can be used in a similar manner. The vagueness of the enemy situation normally requires that the bulk of nuclear fires be held on an oncall basis.

f. Tactical Air Force aircraft in day and night, visual, photo, and electronic reconnaissance missions augment the efforts of Army aircraft to detect enemy units or movement into the area and to provide information on the nature of the terrain to be traversed. Tactical aircraft reinforce frontal and flank security efforts. The use of column cover or air alert aircraft is habitual when contact is imminent.

g. Airmobile forces greatly increase security. They can seize key terrain essential to the uninterrupted advance of the command. Provision of airmobility increases the responsiveness of the reserve to varying situations.

5-33. Planning the Movement

The commander follows the procedures in paragraphs 5-21 through 5-30 to determine the best organization and distribution of forces to be used initially. Primary consideration is directed toward the anticipated action during the movement and the subsequent employment of forces. During the advance, the commander continually analyzes the situation based upon the latest developments. He shifts forces and alters his plan of movement as required. Upon gaining contact, he again employs the procedures in paragraphs 5-21 through 5-30.

5-34. Organization for the Movement

a. General. Organization for the movement depends upon the mission, available intelligence, probable order of commitment of units, and relative mobility of units.

- (1) The position of infantry, tank, artillery, and engineer units throughout the formation is as dictated by the situation, particularly the anticipated employment of the units.
- (2) Combat service support units and installations are located to provide the required support but not to interfere with tactical movements. Normally, these units follow combat echelons.

b. The Covering Force.

- (1) Missions assigned the covering force are broad in nature. They may include development of the situation, destruction of enemy resistance, seizure of key terrain, or containment of enemy forces.
- (2) The covering force is tailored to accomplish its mission. It normally operates at a considerable distance in front of the main body. A highly mobile force such as the armored cavalry squadron or a battalion task force provides the basic element of the covering force. It is appropriately reinforced with aviation, artil-

lery, and engineers. The covering force is supported by tactical Air Force aircraft for long-range reconnaissance and offensive strikes and by Army aircraft for short-range surveillance, limited fire support, and control. Nuclear and chemical fires support the covering force as required. Airmobile forces make excellent reserves for the covering force.

- (3) The covering force normally operates under division control. However, when the the division is advancing on multiple routes, terrain and distance may require subordinate commanders to command their own covering forces.
- (4) When the division is marching as part of a large force, the covering force may be furnished and controlled by the higher headquarters. The division advance guard is then the contact force between the division and the covering forces.
- (5) Operations of the division acting as a covering force are covered in paragraphs 5-66 through 5-68.

c. The Advance Guard. The advance guard is organized for the mission and may include armored cavalry, tank, mechanized infantry, airmobile infantry, or motorized infantry units in the proper proportion required to expedite the movement of the main body following it. Necessary combat support such as engineer and artillery is integrated into the advance guard.

d. Flank and Rear Security Forces.

- (1) Flank and rear security forces protect the main body from ground observation and surprise attack. These forces must be strong enough to defeat minor enemy forces or to delay strong enemy attack until the main body can deploy.
- (2) The flank guard travels on routes parallel to that of the main body or moves by bounds to occupy key positions. The rear guard follows the main body.
- (3) The strength and composition of the rear and flank guards are similar to the advance guard. Airmobile forces may be used as flank or rear guards. Elements of the armored cavalry squadron are well suited to flank and rear guard missions. Should the flanks or rear of the division be secured by the presence of adjacent or

following units, security forces may be appropriately reduced.

- (4) Flank and rear security forces operate either under control of the division or of elements of the main body marching in proximity to them.

e. The Main Body.

- (1) The main body comprises the bulk of the division's combat power. It is immediately available to attack major enemy forces or the division objective.
- (2) Unit of the main body are organized for combat and are positioned in the advancing columns to permit maximum versatility for employment during the movement or after contact with the main enemy force has been made.

5-35. Command

a. A division command element marches well forward in the main body.

b. The movement is carefully planned and the division commander's concept of the advance and anticipated subsequent action is known by all subordinate commanders. Minimum tactical control measures are used. These may consist of boundaries axes of advance, phase lines, check-points, march objectives, and fire coordination measures, as required. Execution of the movement is based upon aggressive action by subordinate commanders acting on their initiative in accordance with the commander's concept. As the situation progresses and the advance develops into an attack, the division commander resumes more centralized control of the division.

c. Maximum, rapid dissemination of all information obtained is essential. When security is required, this is accomplished by transmission of information from the security forces to the division, with other stations maintaining listening silence.

5-36. Security

Security is obtained by the use of the security and covering forces. Security is enhanced by rapid, aggressive movement. The use of dispersed formations provides protection against nuclear attack but may increase the difficulty of maintaining adequate mutual support between the various tactical groupings. This difficulty may be overcome

in part by the use of nuclear and chemical fires and reconnaissance.

5-37. Combat Service Support

a. The movement to contact is characterized by the high rate of consumption of class III supplies, increased vehicular maintenance, low rates of ammunition expenditure, and relatively low casualty rates. It is complicated by the dispersed nature of the operation, the speed of forward movement, and variables injected by the enemy and terrain. The fast-moving nature of the operation and the high class III consumption require careful planning of combat service support. Adequate combat service support must be provided to enable the division to move without delay. Mobile distributing points and Army aircraft are useful to accomplish this. Augmentation of organic combat service support means by higher headquarters may be required.

b. Of particular significance is the need for maintenance and traffic control on routes forward. This may conflict with the requirements of combat units for engineers and military police and may require that additional support be furnished by higher headquarters.

5-38. Conduct of the Movement

The movement to contact is marked by rapid, aggressive action. Local situations are rapidly developed by the covering force. Within its capability, it destroys enemy forces which will interfere with the movement of the main body and contains those it cannot destroy. The main body commits elements to reduce pockets of resistance bypassed by the covering force or, when required by the mission, leaves them for engagement by follow and support units. The division commander is apprised of the progress of the various combat units and their anticipated actions. He commits forces as they become available to maintain the momentum of the advance. Nuclear weapons are used against targets of opportunity to destroy enemy forces, to prevent their movement against the division, or to deny key terrain to the enemy. All efforts are directed toward keeping the enemy off balance and preventing small elements from establishing an effective defense or unified action against the division.

5-39. Meeting Engagements

a. A meeting engagement is the combat action that occurs when a moving force, incompletely deployed for battle, engages an enemy force, static or in motion, concerning which it has inadequate intelligence. The action ceases to be a meeting engagement when the enemy's situation has been developed and subsequent planned and coordinated operations are undertaken.

b. Meeting engagements may occur frequently at lower echelons of the division in both offensive and defensive situations.

c. The principal characteristics of meeting engagements are a limited knowledge of the enemy, and minimum time available for the commander to develop the situation and formulate and execute plans.

5-40. Conduct of Meeting Engagements

a. The basic principle in the conduct of a meeting engagement is that of seizing and retaining the initiative. By retaining the initiative a commander can subsequently adopt that course of action which will contribute most effectively to the accomplishment of his mission.

b. The following actions contribute to the commander's ability to retain the initiative:

- (1) Rapid estimate of the situation and issuance of fragmentary orders.
- (2) Commitment of units from march column.
- (3) Organization of the advance guard with mobile forces capable of reconnaissance by fire, rapid deployment, and speed in the attack.
- (4) Interspersing of artillery throughout the column to insure availability of supporting fires in the early stages of the action.

c. The enemy situation is developed vigorously and aggressively. Flanking attacks will generally disclose the enemy's configuration more rapidly than will frontal attacks, and will give more opportunity for tactical surprise and decisive results.

d. Commanders at each echelon furnish adjacent and higher headquarters with rapid and continuous information concerning the situation and their general plan of action. Brigade and division commanders must be continuously aware of the disposition of their commands and be prepared to react rapidly to any situation.

Section V. THE PENETRATION

5-41. General

a. In the penetration, the attack passes through the enemy's principal defensive position, ruptures it completely, and neutralizes or destroys enemy forces in order to break up the continuity of his defense and facilitate future offensive operations.

The divided enemy forces are then destroyed in detail, and mobile forces exploit through his vital rear areas (fig. 9).

b. The penetration consists of three stages: rupture of the enemy's defensive position, widening of the gap, and overrunning or seizure of objectives which destroy the continuity of the enemy's de-

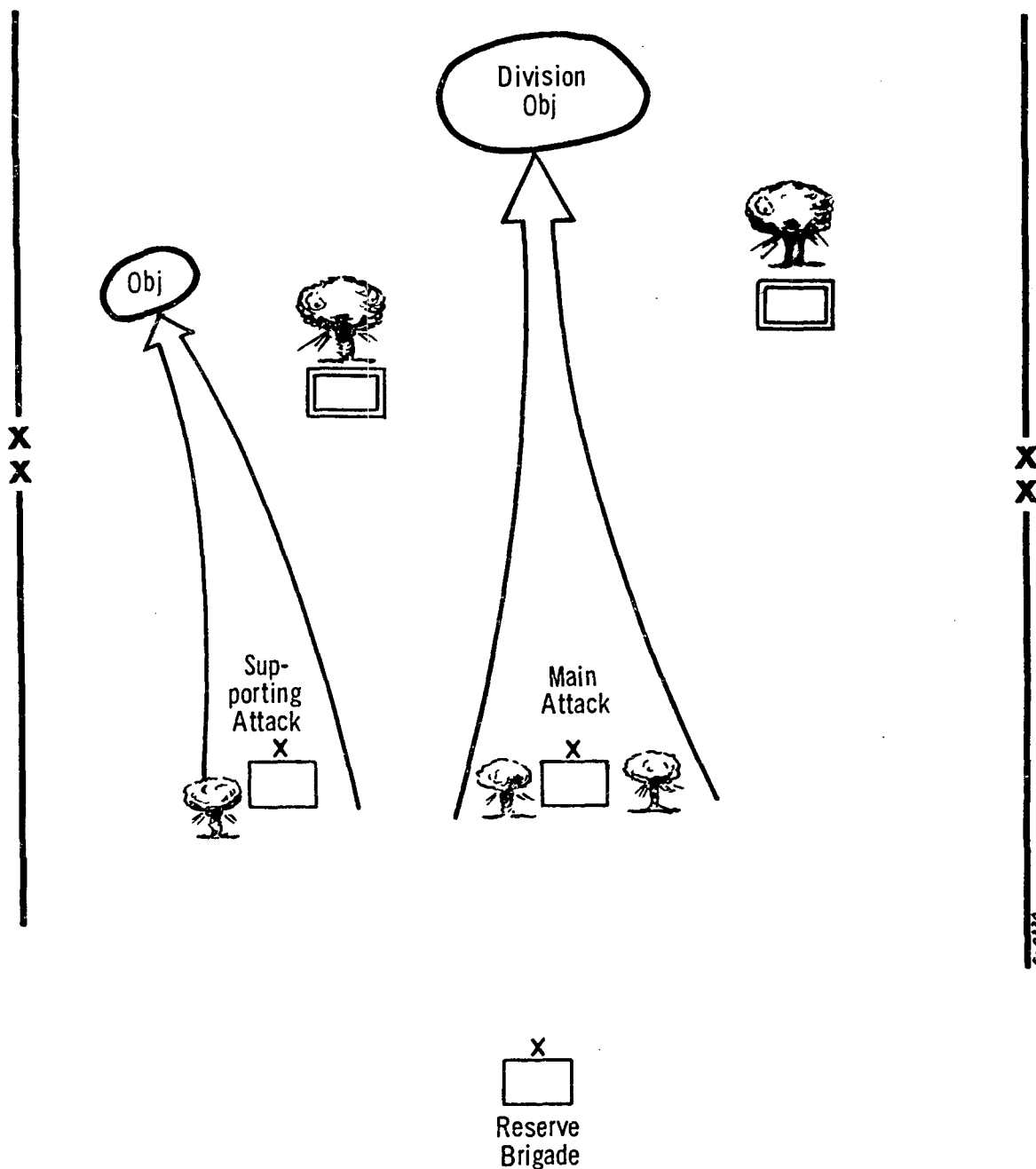


Figure 9. Division conducting a penetration.

fense. These stages may be followed by the exploitation. The stages of the penetration and the subsequent exploitation blend into a continuous operation, frequently overlapping one another. When overwhelming fire support is applied and the division is sufficiently mobile, the phases may be so condensed in time as not to be distinguishable during execution.

c. The division may penetrate an enemy position and conduct the exploitation, or it may rupture a position and be passed through by an exploiting force. In conjunction with other forms of maneuver, the division may assign subordinate elements tasks requiring penetration, e.g., a supporting attack during an envelopment by the division.

5-42. Basic Considerations

a. A penetration is demanded when enemy flanks are unassailable or when time does not permit another form of maneuver. A penetration is favored when the enemy is overextended, when weak spots are detected in his position, when terrain and observation are favorable, or when strong fire support, especially nuclear fire support, is available.

b. The penetration of a well-organized position requires a preponderance of combat power and continued momentum of the attack. The attack must move rapidly to destroy the continuity of the defense. If the attack is slowed or delayed, the enemy is given time to react. If the rupture is not made sharply and the seizure of the objectives is not accomplished quickly, the penetration is likely to resemble a frontal attack. This may result in high casualties and affords the enemy an opportunity to fall back to secondary defensive positions or along his routes of communication, thereby avoiding destruction.

c. Selection of the location of the penetration depends upon—

- (1) *Terrain.* Terrain must support the mobility of the division. This requires evaluation of terrain trafficability, nature and extent of obstacles, and the road net. Fields of fire and observation for the control of fire are necessary.
- (2) *Strength and depth of the enemy position.*
- (3) *Maneuver room.* The attacking force should not be unduly restricted by boundaries or lateral obstacles.

(4) *Distance to the objective.* A short direct route to the division objective is desirable.

(5) *Surprise.* Surprise obtained by penetrating in a particular area affords more rapid and decisive results.

(6) *Plans of the higher echelon.* The location selected must be in conformance with the plan of the higher headquarters.

d. The main attack is on a relatively narrow front and is directed toward the division objective. The supporting attack(s) widen the gap or prevent the enemy from disengaging. Reserves are held ready to reinforce success or to exploit. The distance to the division objective may require that the reserve pass through the main attack forces after rupture of the position to seize or destroy the objective.

e. The width and depth of the penetration depend upon the depth of the enemy position and the combat power available to the division. The wider the penetration, the more difficult it is for the enemy to close it, but the greater the resources required to accomplish it. The deeper it is, the more effective is the "rolling up" action against the hostile flanks and the more difficult it is for the enemy to reestablish his defense by withdrawing to a new location. However, it is easier for the enemy to close such a penetration.

f. The division commander will not normally assign intermediate objectives to the main attack. He may assign objectives to supporting attacks to insure adequate width in the area of rupture to protect the flanks and prevent the enemy from disengaging. Subordinate commanders may designate close-in objectives to coordinate their attacks through the defensive position and to insure that their units generate maximum combat power in the desired areas.

g. When the division is attacking against a weak enemy or attempting to isolate an extremely strong minor defensive position, it may execute a multiple penetration. This is an attack consisting of two or more penetrations against weak localities or against a relatively small, strong defensive position. Strong enemy defenses are contained by supporting attacks. When the penetrations reach a suitable depth, the bypassed forces are reduced and the attacks are combined into a single attack.

h. The division may be given a mission of making the corps penetration (fig. 10). Other divisions may follow to roll back the enemy flanks and

complete the rupture of enemy positions all along the corps front.

i. When other attacking units of the corps make slow progress, the division may be committed to attack through them to hasten the penetration. It is essential that close liaison be maintained between the units in contact and the division being used to hasten the penetration.

attack, and cover the movement of attacking units. Suitable targets include defensive positions, fire support means, command and control installations, and reserve. Smoke may be employed to reduce the effectiveness of enemy observation.

b. Nuclear fires must be carefully planned and integrated with the scheme of maneuver since their effects may create obstacles to the penetration. It may be necessary to use these weapons on the flanks rather than in the area of the main attack. They can be used against reserves or to widen the gap, thereby reducing the requirement for troops in this role.

5-43. Fire Support

a. The penetration is normally preceded by a preparation delivered to demoralize and weaken the defender, limit his ability to react against the

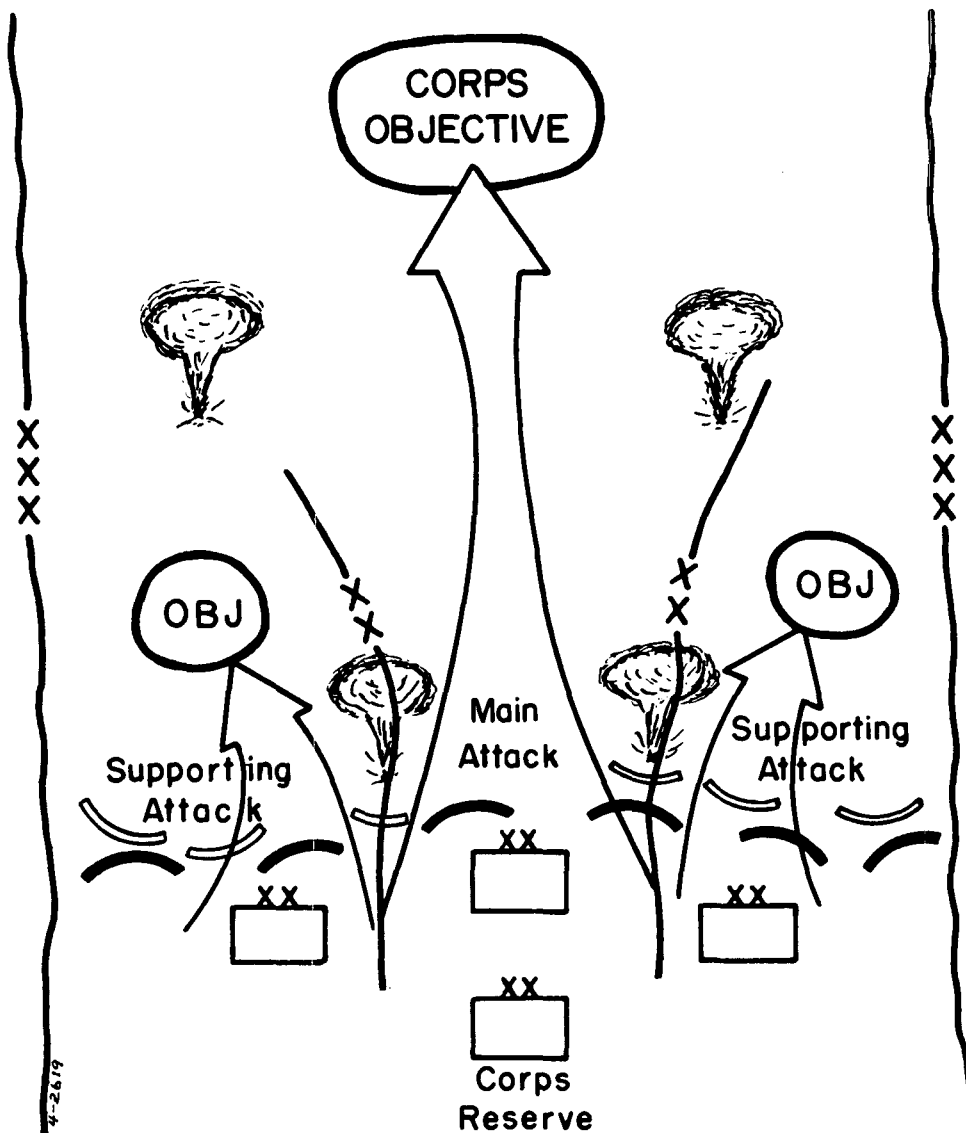


Figure 10. Division making the corps penetration.

c. Toxic chemicals in nonpersistent concentrations are a rapid, effective method of expediting rupture of the position. They increase the friendly combat superiority in the area without producing obstacles.

d. Fires are planned to neutralize enemy reserves, to prevent movement into or out of the area of operations, and to destroy any targets that seriously threaten the accomplishment of the mission.

e. Enemy forces isolated during the rupture of the position may be neutralized by fire. Nuclear and chemical fires are suited to this task.

5-44. Conduct of the Penetration

a. Following the preparation, assault units attack through the enemy's defensive positions.

b. Supporting attacks by infiltration may neutralize enemy fire support means and command facilities. They may also seize terrain which blocks the movement of reserves against the main attack or which promotes continuous movement of the attack.

c. As the attack progresses, units of the supporting attack secure the flanks of the main attack or widen the gap. The reserve is used to exploit success or to assist the main attack in the accomplish-

ment of the division mission. Enemy counterattacks are rapidly engaged using the reserve or supporting fires. Troop safety considerations require judicious application of nuclear fires in these cases.

d. As the attack breaks out of the area of enemy defenses, it increases its speed and momentum to overrun, destroy, or seize the objective. If the objective is at a depth beyond the capability of the main attack force or if its strength has been depleted, the main attack force is reinforced or passed through by the reserve which continues to or beyond the objective. A suitable reserve is reconstituted as soon as practicable from forces available such as the original main attack force.

e. Upon seizing the objective of the penetration, the division exploits to destroy command installations, logistical support installations, fire support means, and enemy units attempting to escape. Security forces are promptly deployed to give warning of and delay enemy countermeasures.

f. Enemy forces which have been divided by the penetration and contained by action of the supporting attacks are rapidly destroyed or are destroyed by follow and support units.

g. Throughout the penetration, all efforts are devoted to maintaining the violence and momentum of the attack.

Section VI. THE ENVELOPMENT

5-45. General

a. In the envelopment, the main or enveloping attack passes around or over the enemy's principal defensive positions to seize objectives which cut his escape routes and subject him to destruction in position from the flank or rear. Supporting attacks hold the enemy in position during the advance of the enveloping attack. The envelopment forces the enemy to fight in two or more directions simultaneously to meet the converging attacks (fig. 11).

b. The division may be the holding force or it may conduct the envelopment (fig. 12). The division may use the envelopment for its main attack or it may assign missions to subordinate units which require them to envelop.

5-46. Basic Considerations

a. The envelopment by ground attack requires that the enemy have an assailable flank. An as-

sailable flank is one which can be circumvented without fighting a major engagement.

b. An envelopment by air requires that adequate suppressive fires be available, or that the enemy's dispositions or capabilities not interfere materially with the flights of large numbers of aircraft. Ground patrols and infiltrating forces may be used to reconnoiter and secure the flight routes to be used. Direct airmobile assault landings against occupied objectives normally are not deliberately attempted. Plans for the use of airmobile, airborne, or airlanded forces should include provisions for linkup with ground attack forces.

c. The success of the envelopment depends largely upon surprise, mobility, and the ability of supporting attacks and deception to hold the enemy in place. Surprise is gained by secrecy, deception, unexpected maneuver, and speed. Mobility is increased by the use of armored cavalry, airmobile, tank, mechanized, and motorized units and the skillful use of terrain.

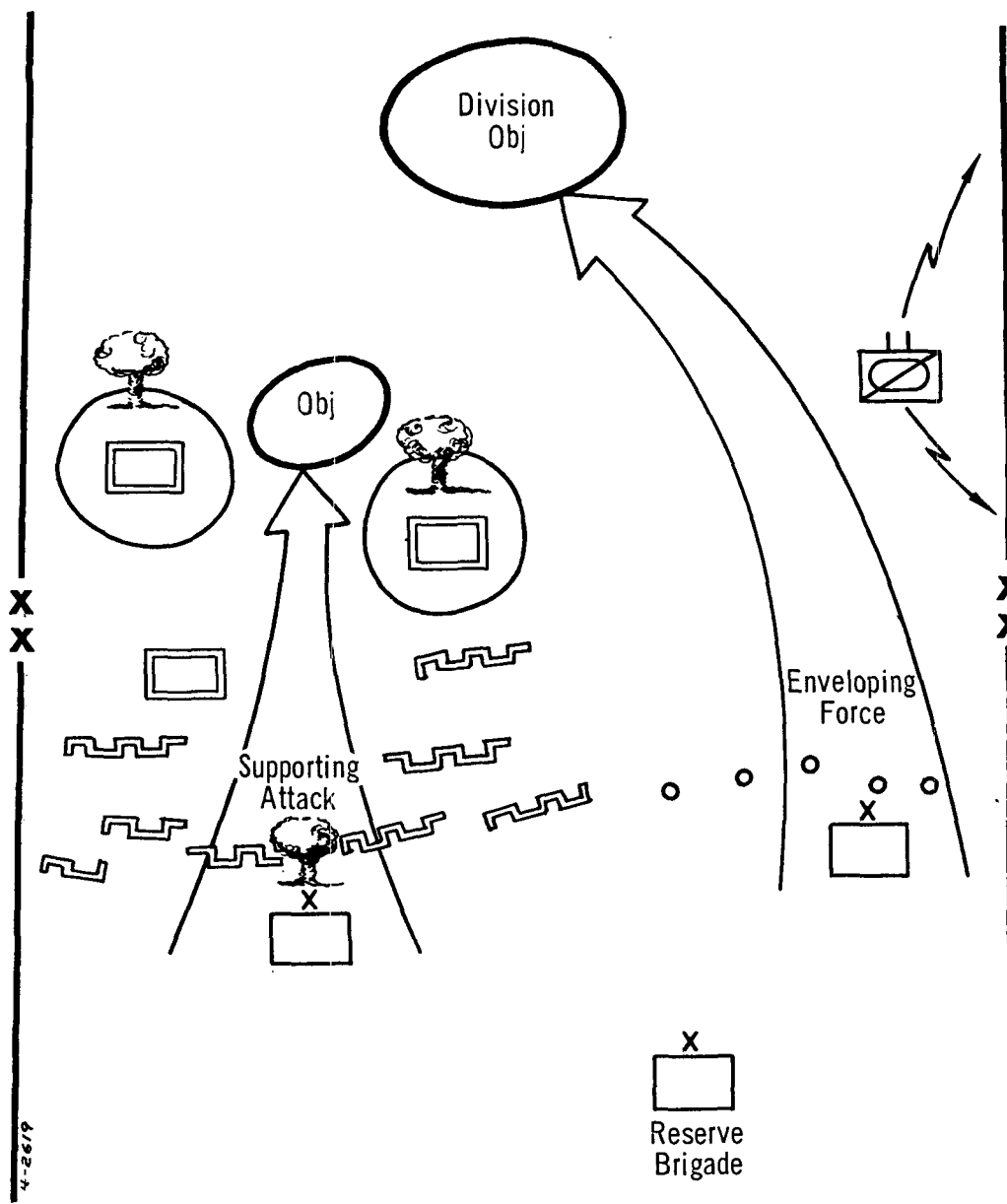


Figure 11. Division conducting an envelopment.

d. Rapid movement of the enveloping force to its objective is essential to prevent the enemy's movement of reserves to counter it or to occupy previously prepared positions. Vigorous supporting attacks prevent the enemy from reconstituting reserves from other portions of his front.

e. The commander executing an envelopment must be alert that the weakly defended area through which he is attacking is not a trap. Analysis of the terrain and the enemy's capabilities contribute to the security of the command. Mobile forces and nuclear weapons in reserve, continual

reconnaissance, and the careful selection of objectives for supporting attack forces increase the security of the main attack.

f. Envelopments may be close or wide based upon the initial distances between attacking elements. In a close envelopment, fire support of the supporting attack force, as well as other fire support elements of the division, support the enveloping force to its objective. In a wide envelopment, the enveloping force moves at a greater distance from the supporting attack, making fire support

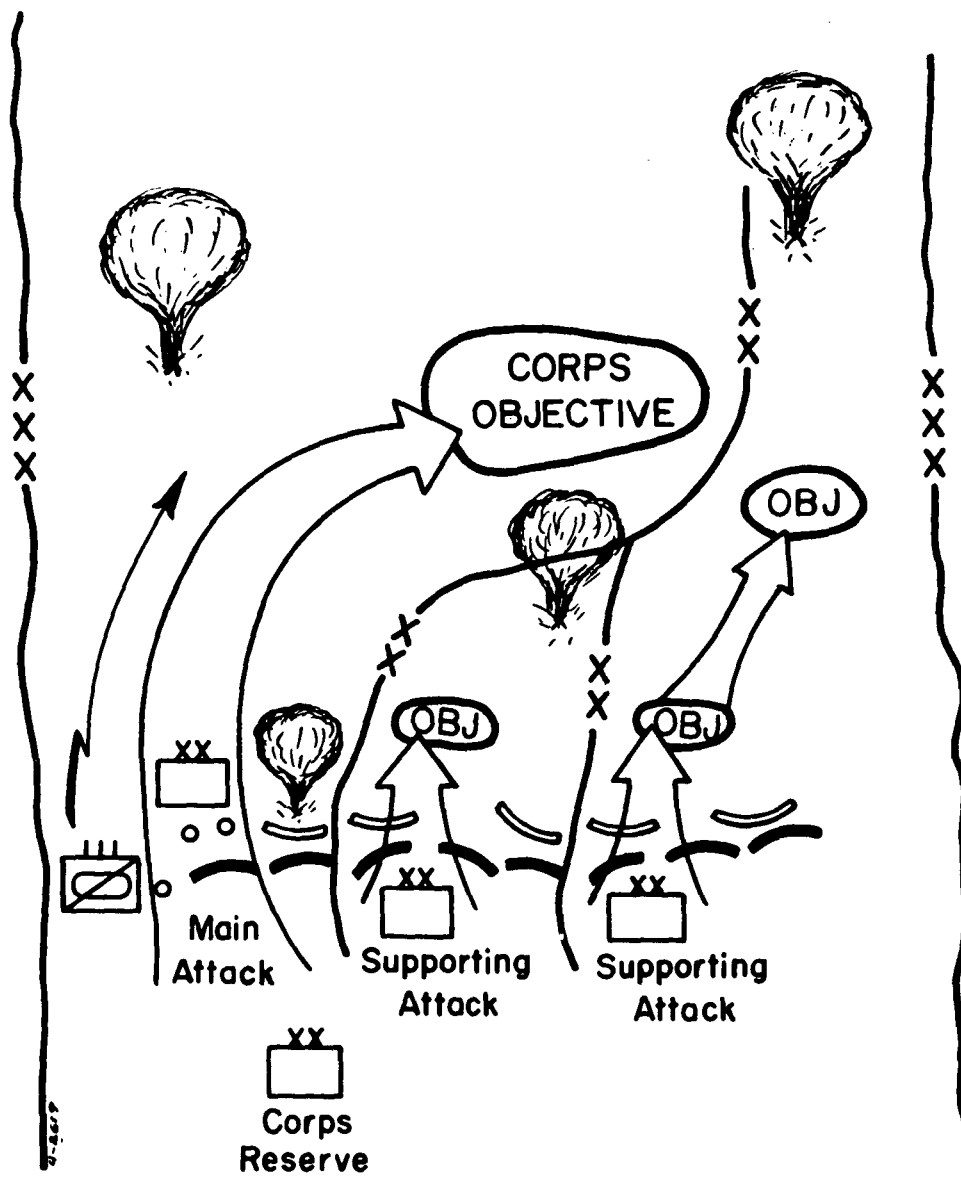


Figure 12. Division making an envelopment.

more difficult. In this situation, artillery may be attached to the enveloping force.

g. Minimum control measures are assigned to the enveloping force. The use of a zone of action may simplify control and coordination with an adjacent supporting attack. In some situations, an axis of advance may be necessary to implement the commander's scheme of maneuver.

h. In the envelopment, the division's organization for combat takes into consideration the mobility, firepower, and security needed by the enveloping force. Normally a brigade, heavy in tanks, will be the enveloping force.

5-47. Conduct of the Envelopment

a. The enveloping force moves rapidly into the attack. Diversionary actions may be employed to mask the noise and direction of its movement.

b. The attack may be launched simultaneously across the front or the times of the supporting and enveloping attack may be staggered; the supporting attacks normally will be launched earlier to increase deception.

c. Because of the requirement for secrecy, limited targets, and inability of local forces to impede the attack in the area of the enveloping force, a preparation might not be fired in support of

the enveloping force. If fired, it is violent but of short duration. The supporting attack(s) may be preceded by a preparation.

d. The enveloping force moves rapidly and directly to its objective, bypassing enemy forces which might delay it. These forces are reduced by fires or by follow and support units. Security forces protect its exposed flanks.

e. Supporting attacks and fires hold the enemy in position and prevent his use of reserves against the enveloping force. Infiltrated forces may block the movement of enemy reserves, attack his fire support and command control means, or seize terrain which assists the enveloping force.

f. If the enemy attempts to cut off the enveloping force or extend his flank beyond it, the division commander may elect to penetrate the enemy's overextended front. This takes advantage of the weakness offered by the enemy in reacting against the envelopment. An attempt to outflank the enemy's extension may lead to overextension of the division or a dangerous separation of the enveloping force from the supporting attack.

g. The division commander is alert to detect opportunities to exploit success with his reserve. These opportunities may be either in the area of the enveloping or supporting attacks. When the reserve is committed, another is constituted as soon as practicable.

5-48. Double Envelopment

a. A double envelopment is executed by two enveloping forces and a supporting attack force. It requires a great preponderance of combat power and may be difficult to control. Nuclear weapons contribute greatly to the combat power required. The force executing a double enveloping must be capable of deploying on a broad front against an enemy who is on a narrower front or who has limited maneuver capability.

b. The amount of combat power required to provide for two enveloping forces, a supporting attack force, and the reserve may prevent the division from executing this type of maneuver unless it has strong nuclear support or is opposed by a substantially inferior enemy. Frequently the supporting attack will necessarily be frontal in nature. Nuclear fires may be used with a supporting attack to reduce the requirement for troops.

c. Dependent upon mutual support considerations, simultaneous envelopments by ground attack and airborne forces offset the undesirable

aspects of a double surface envelopment and may not require so great a preponderance of force.

d. An initial envelopment of one flank may create favorable conditions for passing to the double envelopment by committing the division reserve around the other flank.

e. In order to control the double envelopment and still maintain a reserve, one of the combat battalions may be used as a control headquarters in addition to the three brigades.

5-49. The Turning Movement

a. In the turning movement—a variation of the envelopment—the attacking force passes around or over the enemy's main force to seize objectives deep in his rear, forcing him to abandon his position or to divert major forces to meet the turning threat. The enemy is then destroyed on ground of the attacker's choosing. The turning force normally is out of supporting distance of any other ground attacking force (fig. 13).

b. The turning movement differs from the envelopment in that it is not directed at the destruction of the enemy position. It avoids attacking the flanks and rear of the enemy's main defensive position. It seizes vital areas deep in the hostile rear which prevent the escape, support, or reinforcement of the enemy's main force. It is used when an opportunity exists to seize vital areas in the enemy's rear before his main force can escape or be reinforced. When the enemy occupies a strong defensive position, the turning movement offers a means of causing him to abandon the position and to fight on ground more favorable to the attacker.

c. The division may be the turning force for a higher echelon. Under certain conditions, the division may execute a turning movement within its own resources.

d. Under most conditions, infantry battalions will require ground or air mobility when acting as part of a turning force. The cross attachment of tanks is desirable.

e. Sufficient combat power must be applied by a holding force against the enemy force to prevent its interference with the turning force. The application of this combat power may be in the form of a supporting attack. Because the turning force and the holding force frequently operate beyond mutually supporting distance, each force must have sufficient combat power and mobility to avoid defeat in detail. The turning movement requires secrecy, mobility, and deception.

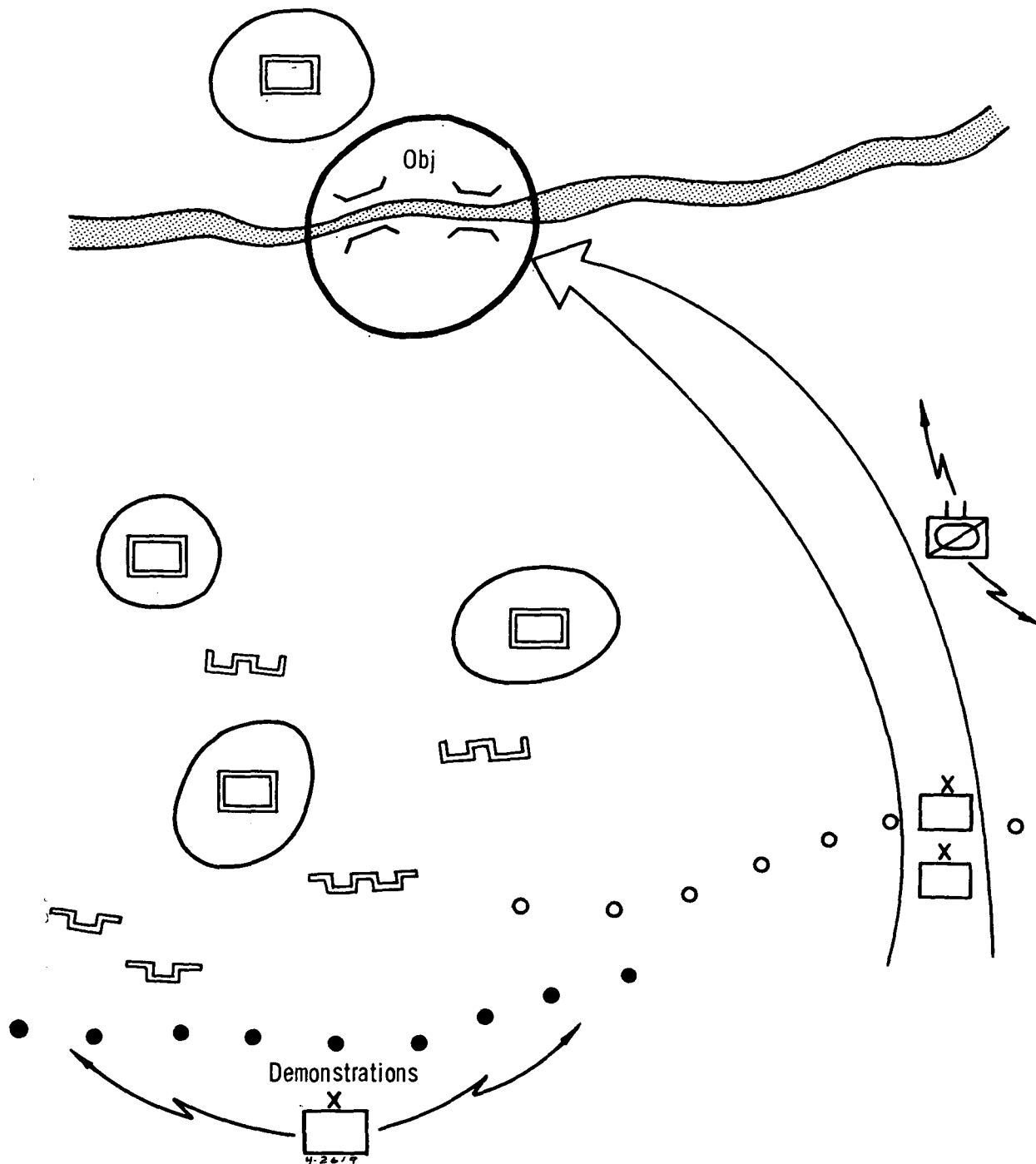


Figure 13. Division conducting a turning movement.

Section VII. EXPLOITATION

5-50. General

a. Exploitation is the following up of gains to take full advantage of success in battle. It is a phase of the offensive that destroys the enemy's ability to reconstitute an organized defense or to

withdraw in good order in the face of threatened disaster.

b. Exploitation ranges from that of pursuing small local forces to the pursuit of large enemy forces. While individual local exploitations may

appear insignificant, their cumulative effects may be decisive.

c. The division may exploit its own success; it may be the exploiting force for a higher echelon; or it may follow and support another exploiting force.

5-51. Basic Considerations

a. Exploiting forces may be given the mission of seizing objectives deep in the enemy rear, cutting lines of communication, surrounding and destroying enemy forces, denying escape routes to an encircled force, and destroying enemy reserves.

b. Speed and combat power are required in exploiting forces. Tanks, mechanized or motorized infantry, and armored cavalry normally make up the forward elements. Army aircraft can be used to provide mobility to foot elements. Provisions are made for engineer support to overcome obstacles. Adequate signal communications must be furnished.

c. Preparation for the exploitation entails planning, warning orders, grouping of exploiting forces, provision of combat services support, and establishment of communications.

d. The commander must be ready at all times to exploit opportunities afforded by the enemy. Opportunities for major exploitations are indicated by an increase in prisoners captured, an increase in abandoned materiel, and the overrunning of artillery, command facilities, signal installations, and supply dumps. The transition from the attack to the exploitation may be so gradual as to be hardly distinguishable, or it may be abrupt. The latter occurs most frequently when nuclear weapons are used.

e. When nuclear fires are not available or are limited, the exploitation normally occurs after the seizure of the division objective. With adequate nuclear support, however, the exploitation may be launched in conjunction with the initial assault or at any time thereafter depending upon the effects of the fires and the desires of the commander.

f. Once the exploitation is begun, it is carried out without letup to the final objective. The enemy is given no relief from offensive pressure.

g. Decentralized execution is characteristic of the exploitation. However, the commander maintains sufficient control to prevent overextension of the command. Minimum control measures are

used. Combat service support and combat support plans are flexible. Combat service support operations are normally decentralized.

h. In the exploitation, nuclear, conventional, and chemical weapons are used principally on targets of opportunity. These weapons are used to eliminate pockets of resistance, destroy hostile reserves, seal enemy escape routes, and destroy enemy nuclear delivery means.

i. Tactical reconnaissance aviation and Army aircraft maintain contact with the enemy, locate enemy movements, and keep the command advised of enemy activities.

j. Tactical aircraft inflict maximum damage by attacking enemy reserves and withdrawing columns.

k. Class III consumption rates are high, and provision for rapid supply is essential. Security of ground supply columns must be considered since forward elements may be operating behind bypassed enemy forces. Aerial supply may be necessary.

5-52. Conduct of the Exploitation

a. Employment of forces in the exploitation is similar in many respects to the movement to contact. Attack from march column is normal.

b. Exploiting forces advance rapidly and arrive at their objectives with maximum strength. The exploiting force clears only as much of its zone as is necessary to permit its advance to continue. Commanders avoid dissipation of forces to achieve minor tactical success. Enemy forces that interfere, or can interfere, with accomplishment of the mission are contained or destroyed. Exploiting forces bypass or contain, with minimum forces, enemy resistance of insufficient strength to jeopardize the accomplishment of the mission. Bypassed enemy forces are reported to the high headquarters or the follow and support unit.

c. When the leading elements of a march column make contact with enemy forces, they deploy and attempt to bypass or to continue to advance. If the resistance is too heavy for the leading elements, yet cannot be bypassed, the leading elements develop the enemy position, reporting to the main body. Succeeding elements in the column are employed to strengthen the leading elements or execute a coordinated attack or both in accordance with the principles of the penetration or the envelopment.

d. Commanders use all means and weapons to overrun enemy forces that cannot be bypassed or contained. Exploitation continues day and night without regard to weather. Reconnaissance elements—both ground and air—keep commanders informed of enemy action. Rapid advance of exploiting forces reduces their vulnerability to enemy counteraction.

e. As enemy demoralization begins and enemy forces disintegrate under pressure, exploitation may develop into pursuit.

f. Follow and support units initially prevent the enemy from closing the gap in a penetration, and they secure key terrain gained during the penetration or envelopment. As the exploiting force advances, the follow and support units secure lines of communication, mop up, destroy bypassed pockets of resistance, expand the area of exploita-

tion from the axis of advance of the exploiting force, and block the movement of enemy reinforcements into the area. Follow and support units relieve elements of the exploiting force, which have been left to block or contain enemy forces or to protect areas or installations. Within their capability, follow and support units assist the exploiting force by furnishing combat service support. They may assist the exploiting force in handling CA activities and PW's.

g. Follow and support units must be capable of keeping up with exploiting forces. They may employ nuclear and chemical fires in the accomplishment of their missions. Close liaison is established between commanders of the follow and support unit and the exploiting force. Elements of the follow and support unit may be attached to the exploiting force.

Section VIII. PURSUIT

5-53. General

a. The pursuit may follow the exploitation. It differs from the exploitation in that its primary function is to complete the destruction of the enemy force which is in the process of disengagement. While a terrain objective may be designated, the enemy force itself is the primary objective.

b. The pursuit usually consists of direct pressure and encircling forces.

- (1) The mission of a direct pressure force is to prevent enemy disengagement and subsequent reconstitution of the defense and to inflict maximum casualties. It does this by attacking constantly, day and night. The enemy is not allowed to break contact. He is denied the opportunity to reorganize and reestablish his defense. Leading elements of the direct pressure forces move rapidly along all available roads, containing or bypassing small enemy pockets of resistance which are reduced by follow and support units. At every opportunity, the direct pressure force envelops to cut off and destroy enemy elements, provided such actions do not interfere with its primary mission.
- (2) The mission of the encircling force is to get in rear of the enemy and block his

escape so that he will be destroyed between the direct pressure and encircling forces. It advances along or flies over routes paralleling the enemy's line of retreat to reach defiles, communications centers, bridges, and other key terrain ahead of the enemy main force. Airborne, armored, and mechanized infantry units are particularly effective as encircling forces. If the encircling force cannot outdistance the enemy, it attacks the enemy main body on its flank.

- (3) The division may conduct local pursuits or may be used as the direct pressure or encircling forces of a higher echelon in pursuit.

5-54. Basic Considerations

a. A force in the exploitation is alert to indications of enemy collapse which enable pursuit. It makes prior preparations for pursuit including issuance of warning orders, regrouping of forces, and provision of logistical support.

b. The attacker uses all possible means to maintain the continuity of the attack. When the enemy can no longer maintain his positions and seeks to escape, the pursuit is launched. Destruction of the enemy force is the primary objective of the attacking forces. Prompt exploitation of nuclear fires may permit pursuit to be launched during the initial assault.

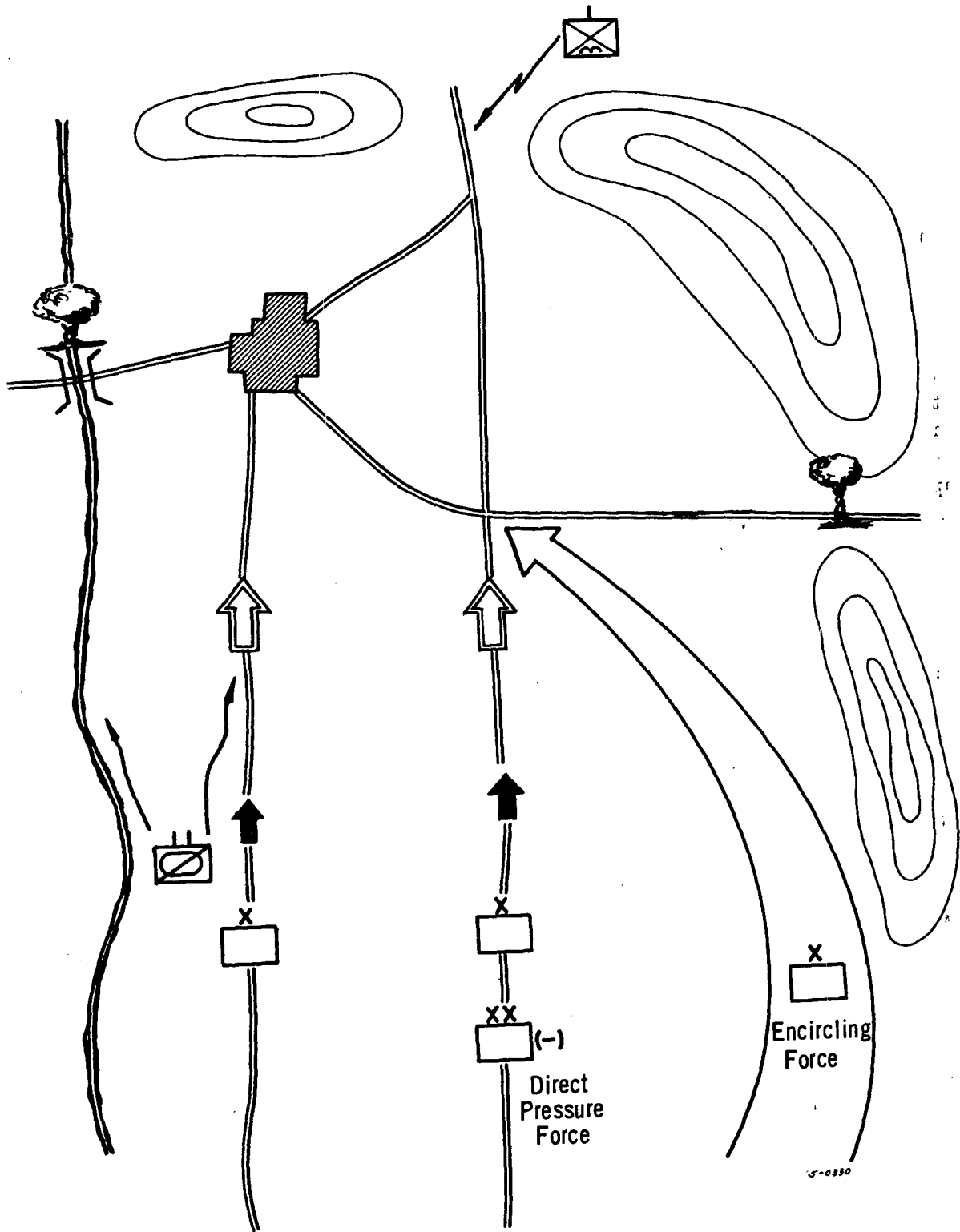


Figure 14. Division conducting a pursuit.

c. Successful pursuit requires unrelenting pressure against the enemy to prevent reorganization and preparation of defenses. This requires that troops and equipment be pushed to the limit of their endurance. Commanders are located well forward to insure the impetus of advance. Greater risks may be taken to achieve decisive results.

d. When the division conducts local pursuit operations, organization for combat provides a direct pressure force of sufficient size and composition to maintain continuous pressure. The encircling force must have mobility equal to or superior to the enemy and must be organized for a semi-independent operation. The enemy's inability to react effectively reduces the need for mutual support. Engineer units are required in both forces to clear obstacles and enable advancing columns to move rapidly. Adequate signal communication support must be provided.

e. Infantry and airborne units normally require additional mobility for pursuit operations.

f. Adequate preparation is made for logistical support. Class III consumption is particularly high. Air transportation may be used for prompt delivery of supplies to forward units. Maximum use is made of captured enemy materiel—particularly transportation—and stocks of supplies.

g. Security is increased by the speed of advance, the enemy's inability to react effectively, and the dispersion of forces.

5-55. Conduct of the Pursuit

a. The pursuit is conducted on as broad a front as possible. Forces engaged in direct pressure and encircling maneuvers are given deep objectives, mission type orders, and minimum controls. Maximum latitude is given subordinate commanders for exercise of their initiative. Decentralization of fire support and combat service support means is usually necessary.

b. Direct pressure forces advance relentlessly while the encircling force cuts the enemy's lines of retreat. Double envelopment of the retreating main force or its elements is accomplished when conditions permit. Hostile rear guards or forces on flank positions are not permitted to divert the main force from its mission. Airmobile units are used to envelop enemy rear guards expediting their destruction and speeding the movement of the force. If the enemy's main force establishes itself on a position from which it cannot be quickly dislodged, the commander immediately attacks.

c. If the attempt to cut the enemy's escape routes fails, a new encircling force is immediately dispatched.

d. Air support is desirable in the pursuit. Reconnaissance aircraft keep commanders informed of locations and activities of enemy forces. Tactical aircraft inflict maximum damage on the retreating enemy, concentrating on his lines of withdrawal, on his columns, and on his reserves.

e. Figure 14 depicts the division conducting a pursuit.

Section IX. NIGHT COMBAT

5-56. General

a. Night combat is an integral part of all operations, because the division operates under all environmental conditions to accomplish its mission. The principles of night operations are the same as those for daylight operations. However, certain techniques require special emphasis to exploit the opportunities and overcome difficulties of night operations. The effects of night on the division's relative combat power are considered when making a night attack to insure exploitation of opportunities and planning for special difficulties.

b. Night operations are characterized by reduced visibility. This affords increased concealment to both friendly and enemy forces. It also

complicates the problem of control and coordination in the maneuver of combat forces.

c. Operations in smoke, fog, haze, thick jungle, and other conditions of reduced visibility use the special techniques of night operations.

d. Night airmobile operations are feasible and are considered a normal part of night attack operations.

5-57. Basic Considerations

a. Night combat is characterized by a decrease in the effectiveness of aimed fire and a corresponding increase in the importance of close combat and supporting fires.

b. Morale of troops—both friendly and enemy—is highly sensitive to physical and psychological

factors. Reverses and failures at night generally affect troops more than the same reverses would in daylight. Well-trained troops, confident of their ability to fight at night, can use these psychological factors in their favor.

c. Darkness increases difficulty of movement, maintenance of direction, and control. The time required to execute movements and emplace weapons is greater at night than in daylight. Simple schemes of maneuver with well-defined objectives and routes simplify control. Leaders must be well forward in attacking echelons. Full use is made of navigational aids to assist in maintenance of direction.

d. Subordinate commanders should have adequate time for reconnaissance. They should be able to observe, during daylight, terrain over which their units will move in order to fix terrain features which will aid maintenance of direction.

e. Coordination of nuclear fires with maneuver at night is difficult. Darkness increases troop safety considerations because of loss of night vision (adaptation). Obstacles created by nuclear fires are difficult to traverse at night. Nuclear fires may destroy landmarks which were to be used as control measures.

f. Enemy use of nuclear weapons may affect the vision of attacking or defending troops, rendering them temporarily less effective. Fires created by nuclear weapons may assist in identification of objectives and maintaining direction but may also silhouette forces of either side.

g. All combat and combat support units can be used at night. The effectiveness of armor is increased by the use of illumination, including tank-mounted infrared devices and searchlights. Illumination also facilitates the adjustment of artillery fire.

h. Illumination by diffused lighting in rear areas assists in troop movements, logistical operations, and the operation of supporting weapons.

5-58. The Night Attack

a. General.

- (1) The same considerations of planning, preparation, and conduct that apply to night attacks apply also to daylight attacks. The same forms of maneuver may be used. Night attack plans, however, are usually less flexible than those of daylight attacks.

- (2) The division attacks at night to continue an attack started in daylight; to achieve surprise and psychological superiority; to gain important terrain for further operations; and to use concealment afforded by darkness to avoid heavy losses, to exploit, or to compensate for friendly air and armor inferiority.

b. Planning.

- (1) The procedures involved in planning attacks at night are the same as for daylight attacks.
- (2) The decision to make a night attack is made far enough in advance to provide time for reconnaissance, detailed planning, and coordination. The use of warning and fragmentary orders and concurrent planning is habitual. Successful attacks can be made at night on an impromptu basis, but the risk of failure is greater. Attacks in progress are not discontinued merely because of nightfall. Subordinate units in the attack plan to continue the attack through the night unless ordered otherwise.
- (3) The concept for the night attack must be simple and planned in detail. The scheme of maneuver, fire support plan, and control measures are carefully specified.
- (4) If the attack is to seize favorable terrain for a succeeding daylight attack, it is usually launched during the final hours of darkness to give the enemy minimum time in which to interfere with the subsequent attack. Attacks launched during early darkness, however, permit the attacker to take maximum advantage of a long period of darkness and exploit the enemy's confusion and loss of control. Attacks may be initiated during darkness and continued without pause during daylight. Infiltration may be employed at night followed up by an attack at daylight or during the remaining darkness.
- (5) Secrecy is stressed during preparations for the attack. Reconnaissance, noise, and light are carefully controlled. Deception measures include sounds to cover the movement of vehicles.

- (6) Although it is desirable that night attacks be made with fresh troops, the paramount consideration is that the attacking troops be as familiar as possible with the terrain over which they will attack.
- (7) If conditions permit, a rehearsal of the attack is conducted over similar terrain and under similar conditions of light.

c. Coordination and Control.

- (1) Highly restrictive control measures are used to prevent collision between attacking units. These may include objectives, a line of departure, boundaries, phase lines, and directions of attack.
- (2) Deep division objectives require that a series of intermediate objectives be assigned to assaulting units to facilitate control. Battlefield illumination assists in movement and control. It enables a command to seize deeper objectives than would otherwise be possible.
- (3) Provisions are made for indicating direction by firing tracers, by use of incendiaries, or by other improvisations.
- (4) Provisions are made for mutual identification of troops.

. Battlefield Illumination.

- (1) The use of battlefield illumination assists in coordination and control and increases the effectiveness of aimed and observed fires. It may, however, be of some assistance to the enemy and cause reduced surprise. Its use must be carefully coordinated to avoid detrimental effects in adjacent areas.
- (2) Searchlights, illuminating shells, and aerial flares are the principal means of illuminating the battlefield. The decision to employ illumination depends upon—
 - (a) *Natural light conditions.*
 - (b) *Availability of means.*
 - (c) *Surprise.* Surprise is attained by withholding illumination until the critical moment of attack. The illumination then serves to blind the enemy while assisting friendly troops. Prior employment patterns of friendly illumination may have a decided influence on surprise.

(d) *Enemy's use of illumination.*

- (e) *Coordination and control.* The use of illumination may overcome disadvantages resulting from lack of time for reconnaissance, deep objectives, and difficult terrain. It may permit accelerated cross-country movement and thus further the rapid exploitation of nuclear fires.

- (3) Searchlights in a direct role can be used to dazzle enemy observers and gunners.
- (4) If the attack is not to be illuminated initially, plans for on-call illumination are prepared. Such action facilitates its subsequent employment in the execution of the attack.
- (5) Terrain, vegetation, structures, weather and atmospheric conditions, and the vulnerability of illuminating means to enemy countermeasures are technical considerations in the selection of means to be used and the method of their employment. See FM 20-60 for details of illumination.

e. Fire Support.

- (1) In determining whether a preparation will be fired, its probable effects on maneuver must be weighed against the effect of greater surprise stemming from an attack by stealth. If a preparation is not fired, on-call fires are planned to be used in the event surprise is lost.
- (2) In addition to normal fires, fires are planned to cover the withdrawal of the attacking force and, if possible, to isolate the area of the attack.
- (3) Careful consideration is given to the use of on-call nuclear fires because of the difficulty of providing effective warning. When on-call nuclear fires are used, normal troop safety warnings are augmented to insure protection against loss of night vision.
- (4) Smoke may reduce the effectiveness of enemy illumination; however, searchlights beamed on low lying cloudbanks or smoke provide effective illumination.

f. Conduct of the Attack.

- (1) Simple formations are used at all echelons. Column formations are held as long as possible and deployment occurs at the last possible moment. Each attack-

ing unit is given a direction and objective. Contact is maintained between columns, and every precaution is taken to prevent their collision.

- (2) Enemy sentinels and listening posts are quietly and rapidly silenced. At a time coordinated with the main effort, infiltrators may attack command installations and communications to increase enemy reaction time. Attacks on enemy reserves and fire support means further confuse his efforts.

- (3) Leaders are well forward to insure rapid aggressive movement of their units, maintenance of direction, avoidance of collision, and coordination with other units and fire support.
- (4) The division reserve is located where it is available to exploit success, replace a unit in the attack, or cover a withdrawal. At night, the reserve is committed only in an area where the possibility of collision with friendly troops is remote or when illumination is used.

Section X. INFILTRATION

5-59. General

a. Infiltration is a technique of movement used in conjunction with offensive operations. The division can attack by infiltration or use infiltration as a means of obtaining intelligence and of harassing the enemy. Though it is not necessarily restricted to small unit or dismounted actions, the division normally employs infiltration techniques with a portion of the division in conjunction with offensive maneuver by the remainder of the division.

b. Because of the interspersed deployment of friendly and enemy units during infiltration, the nuclear vulnerability of both is high, and use of any but the smallest nuclear weapons is normally precluded.

c. An attack preceded by infiltration may permit the destruction of enemy units and installations without recourse to nuclear fires and may curtail the enemy's use of nuclear fires because of the absence of remunerative targets.

5-60. Basic Considerations

a. An infiltration prior to an attack is a difficult operation. Planning must be detailed and troops must be carefully briefed. The movement by stealth through enemy positions and the assembly of infiltrating groups prior to decisive action are slow. The use of airmobile units can increase the rate of movement considerably.

b. Infiltration is aided by use of terrain which limits the enemy's observation and surveillance of

the routes to be used. Woods, swamps, and broken ground are examples of the areas suited to infiltration. Within an area of infiltration, suitable routes for the movement of small groups are selected by the infiltrating unit. In contrast to other offensive action, avenues of approach in the traditional sense are not used. Frequently, the avoidance of the best avenues of approach increases the probability of success. Conditions of reduced visibility, such as darkness, fog, and falling snow, assist the undetected movement of infiltrating groups. Such conditions, however, cause an alert enemy to increase his surveillance.

c. A widely dispersed enemy force with gaps existing between his defensive positions invites infiltration. Infiltration against an alert enemy equipped with means of detecting movement, requires the careful use of deception and diversionary measures, electronic countermeasures, and passive security measures. Widespread enemy use of illumination deters infiltration unless the illumination can be neutralized.

d. Suitable objectives for attack subsequent to infiltration are key terrain features, especially those which restrict the movement of enemy reserves or isolate his defensive positions, reserves, fire support means, command and communication installations, and critical logistical installations. The objectives must contribute directly to the accomplishment of the division's mission and should not result in dissipation of strength.

e. Small infiltrating groups can be assigned missions of target acquisition and of obtaining other

intelligence, of harassing enemy units and installations, or of interdicting enemy routes. The effect of such missions on coordination of friendly fire support must be considered.

f. Infiltration is difficult to coordinate and control. Deviation from plans is difficult to coordinate after elements have begun to move. Coordination of the movement of the infiltrating groups with the division's fires is essential. Arrangements for the linkup with other attacking forces or for exfiltration, evacuation, rescue, or for overt continuation of the attack are necessary.

g. An infiltrating unit may be controlled by the division, or control can be decentralized to a unit which is operating in the area of infiltration. If the infiltrating unit is under division control, link-up plans are made at division level to facilitate this phase. Unity of command normally dictates that at the time of juncture, control of the infiltrating units pass to the unit linking up.

h. Within the area of infiltration, a series of infiltration lanes wide enough to permit the infiltrating groups to move by stealth is designated. Infiltration lanes, in conjunction with the coded designation of infiltrating groups and their probable sequence of movement, checkpoints, and phase lines, provide a means of reporting the progress of the operation and of coordinating fires with movement of the groups. Other control measures used are attack positions, objectives, and rallying points or areas.

i. Adequate communications are provided for use within the infiltrating unit and for use between that unit and the controlling headquarters.

j. Infiltrating groups moving on foot generally are limited to hand-carried weapons. Consequently, they are provided additional fire support from division means. This requires good observation, reliable communications, and a responsive system of obtaining the fires. Although groups traveling by air can carry more and larger weapons, they frequently will also require additional fire support.

k. Because of the nature of the operation and the hazards encountered during movement, it is essential that maximum dissemination of the plan be made including the action to be taken in the area of decisive action.

l. Suitable recognition signals, both visual and sound, are provided all units operating in the area

of likely linkup to prevent fire fights between friendly elements.

m. Figure 15 depicts the division attacking subsequent to infiltration.

5-61. Conduct of the Infiltration

a. The infiltrating elements subdivided into small groups pass through, over, or around the enemy forward defensive positions avoiding detection where possible, and, if detected, avoiding decisive engagement. They normally move through multiple lanes to attack positions in the area of decisive action. The passage of the groups through the enemy position and their movement to their attack positions may be accompanied by demonstrations, including preparatory fires and feints, in areas not included in the infiltration. Preparatory fires may be placed on the enemy positions in the area of infiltration to reduce the enemy's surveillance capability.

b. Upon arrival in their attack positions, the infiltrating groups move into their attack formations and prepare for action. At a specified time, the infiltrating force executes its mission and prepares for subsequent planned actions.

c. Groups which lose direction or are unable to reach the attack position proceed to rallying points or areas. Contingency plans cover their subsequent actions including their evacuation.

d. If airborne or airmobile forces are being used for infiltration, the aircraft flying individually or in small groups pass through the enemy forward defense area. This passage, where possible, is over unoccupied areas and may follow routes which ground patrols have found to be clear of enemy units. During and after movement to the attack position, aircraft simulate landing at other locations as a deception measure. Infiltrating groups may land at various points in the enemy's rear and proceed on foot to the designated attack position. Other aspects of the operation are similar to those of surface infiltration.

e. A widely dispersed enemy, suitable trafficability of terrain, and concealment may enable infiltrating units to use vehicles during the operation. Similarly, infiltrating groups may use small watercraft.

f. Infiltrating forces proceeding to great depths or remaining in the enemy's rear for extended periods require supply which sometimes can only be accomplished by air. Maximum use should be

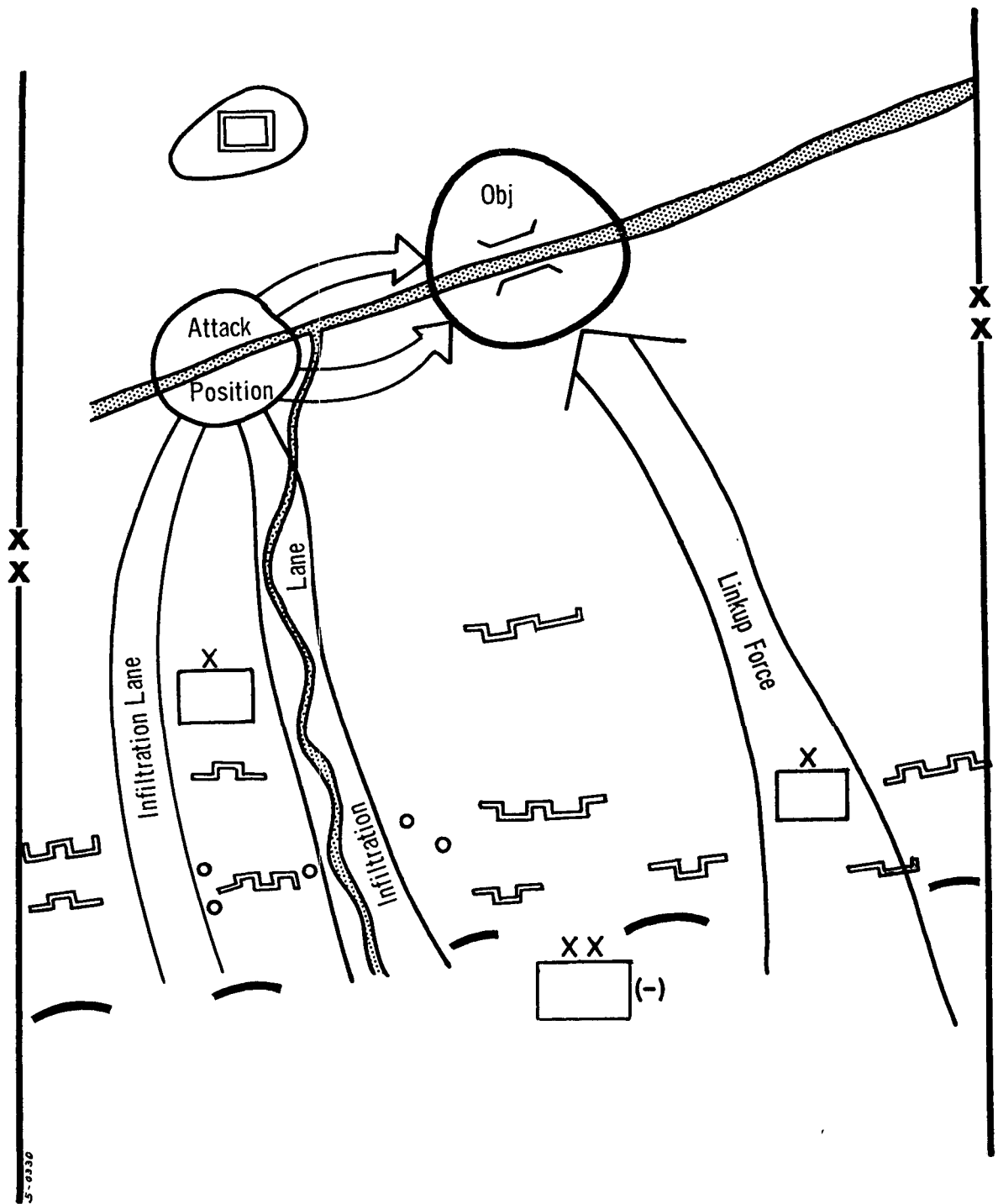


Figure 15. Division attacking subsequent to infiltration.

made of captured enemy stocks, but the success of the operation must not be jeopardized by sole reliance upon the seizure of such stocks.

g. Friendly units bypassed during defensive operations can be used in a manner similar to those which have infiltrated enemy positions.

Section XI. RECONNAISSANCE IN FORCE

5-62. General

The reconnaissance in force is an attack to discover and test the enemy's position and strength or to develop other intelligence. Although its primary aim is reconnaissance, it may discover weaknesses in the enemy dispositions which, if promptly exploited, may permit tactical success.

5-63. Basic Considerations

a. The reconnaissance in force normally develops information more rapidly and in more detail than other reconnaissance methods. In arriving at a decision to reconnoiter in force, the commander considers the—

- (1) Extent of his present knowledge of the enemy situation and the urgency and importance of the additional information sought.
- (2) Efficiency and speed of other intelligence collection agencies.
- (3) Extent to which his plan of action may be divulged by the reconnaissance in force.
- (4) Possibility that the reconnaissance may lead to a general engagement under unfavorable conditions.

b. When information is sought regarding a particular area, the reconnaissance in force is planned and executed as an attack with a limited objective. The objective should be of such importance that, when threatened, it will force the enemy to react. If the enemy situation along a front is to be developed, the reconnaissance in force is an advance employing strong aggressive probes to determine the enemy situation at critical points.

c. The reconnoitering force must be of size and composition to cause the enemy to react strongly and definitely to the attack, thus disclosing his locations, dispositions, strength, planned fires, and planned use of reserves. The size of the force depends upon the mission of the division and the situation. The division commander may use a battalion task force or he may use the bulk of the division, retaining sufficient reserves to exploit enemy weakness. If the situation permits, the task force should include tanks.

d. The division may employ several task forces on reconnaissances in force staggered in time and at widely separated points. Such action keeps the enemy off balance, discloses his dispositions over a broad area, and may develop the location and planned use of his reserve. If the reconnoitering force makes a penetration, it disrupts and destroys all possible enemy rear installations. Multiple reconnaissances in force are favored by operations on a wide front, friendly superiority in armor and mobility, and an inexperienced enemy or an enemy who is weak in control and communication means.

5-64. Organization for Combat

Units designated to make the reconnaissance in force should have sufficient combat power to uncover main enemy positions. Tanks offer a means of furnishing added combat power and, when appropriate, should be provided.

5-65. Conduct of the Reconnaissance in Force

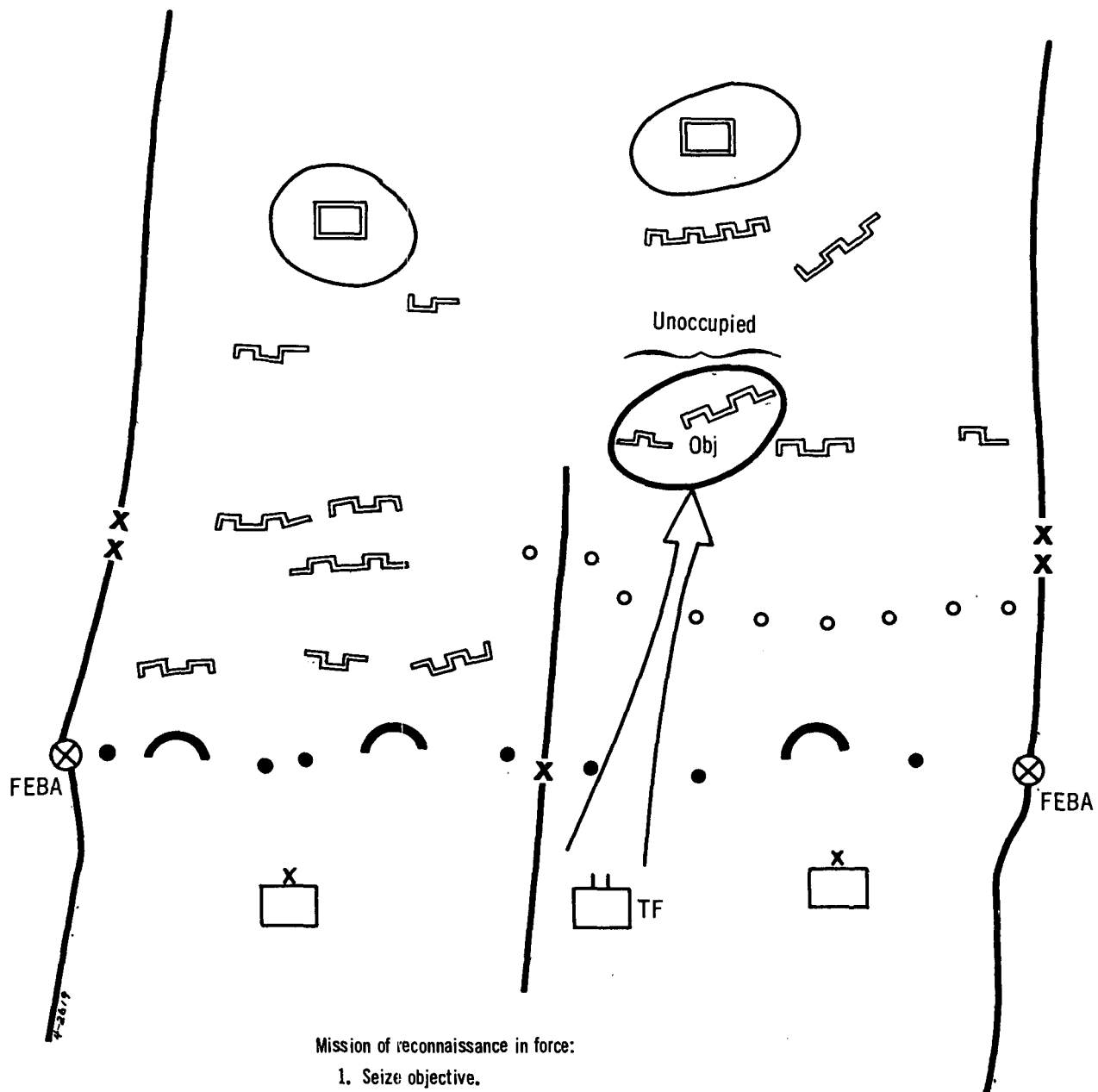
a. Although reconnaissance in force is a form of attack, restrictions may be placed upon the commander of the force to avoid actions which might precipitate a general engagement.

b. The division commander is alert to exploit success gained by the reconnaissance in force. Such actions include continuation of the attack or control of terrain seized by the force. Suitable targets discovered by the forces are attacked by nuclear weapons, and their destruction is completed by local exploitation by the reconnoitering force.

c. The division commander prepares to assist in the extrication of the force if it becomes closely engaged.

d. Upon completion of its reconnaissance, the force may remain in contact with the enemy or it may withdraw. If the reconnaissance is to be followed by further attack, other units pass through the reconnoitering force in the attack, or it may itself continue the attack.

e. Figure 16 depicts a division conducting a reconnaissance in force.



Mission of reconnaissance in force:

1. Seize objective.
2. Withdraw on division order.

Purpose of reconnaissance in force:

1. Determine nature of enemy positions in objective area.
2. Determine enemy plans for employment of reserves and reaction times.
3. Determine enemy defensive fires.

Figure 16. Division conducting a reconnaissance in force.

Section XII. THE DIVISION AS A COVERING FORCE**5-66. General**

a. The division may be assigned a mission as a covering force for a large force, normally a corps. Since mobility is essential, an armored or mechanized division is normally employed.

b. The purpose of the covering force is the early development of the situation, the provision of security for the main body, and the prevention of unnecessary delay of the main body. Covering force missions may be broad and may include attacks to destroy enemy resistance, seize and control key terrain, or contain large enemy units.

5-67. Control

Since the division will operate on a broad front, usually covering the entire zone of action of the corps, a well-prepared, coordinated operation plan is required. Measures by which the rate and direction of movement of the covering force are correlated with the remainder of the force are required. These measures may include successive march objectives; checkpoints and/or phase lines; boundaries between brigades; and coordinated use of radio, aircraft, and ground messenger communications.

5-68. Conduct of Covering Force Action

The division acting as a covering force operates at a considerable distance from the main force. Normally, the division advances with the bulk of its combat battalions forward. Where terrain permits, tank heavy forces usually lead the advance. Engineers and artillery, to include nuclear fire support, are usually attached to brigades. Nuclear and chemical weapons are employed against targets of opportunity to block enemy avenues of approach and to restrict the enemy use of key terrain. Covering force actions are characterized by speed and aggressiveness, by developing situations rapidly with strength, by unhesitating commitment of reserves to eliminate enemy resistance, and by keeping the enemy off balance. The division concentrates its attention against enemy forces which are of sufficient size to threaten the movement of the main body while bypassing and reporting minor resistance. Every action is directed toward insuring the uninterrupted movement of the main force.

5-69. Applicable STANAG

The material presented in this chapter agrees with applicable portions of STANAG-2029 (SOLOG-34R)—Methods of Describing Ground Locations, Areas, and Boundaries.

CHAPTER 6

DEFENSE

Section I. GENERAL

6-1. Introduction

Defensive operations are actions to prevent, resist, repulse, or destroy enemy attack. The defense is undertaken to develop more favorable conditions for subsequent offensive operations, economize forces in one area in order to apply decisive force elsewhere, destroy or trap a hostile force, deny an enemy entrance to an area, or reduce enemy capability with minimum losses to friendly forces.

6-2. Concept of Defense

In the defense, the defender takes every opportunity to seize the initiative and destroy the enemy. The defender seizes the initiative by—

- a. Selecting the battle area.
- b. Forcing the enemy to react in conformity with the defensive plan.
- c. Exploiting enemy weaknesses and errors by offensive operations.
- d. Counterattacking enemy successes.

6-3. Fundamental Considerations

The planning, organization, and conduct of the defense are based on certain fundamental considerations which include:

a. *Proper Use of Terrain.* Terrain is a major factor in the selection of the defensive area and the location and distribution of defending forces. The defender retains control of those terrain features essential to observation, communications, and maneuver of reserves; he denies the enemy the use of terrain which might jeopardize the success of the defense. The natural strength of the area is increased by the use of field fortifications and barriers. Advantage is also taken of these obstacles to divert the enemy into areas suitable for counterattack or nuclear attack. Obstacles in the area have a strong bearing on the general defensive scheme, including the distribution of forces and the positioning of reserves. All probable enemy avenues of approach into the area should be visualized. An evaluation of the avenues of approach

in conjunction with key terrain features serves as the basis for positioning forces as well as the use of surveillance means, fire planning, and security forces. Normally, at division level these are avenues which will accommodate at a minimum an enemy regiment. The selected area should afford good observation and fields of fire and adequate cover and concealment to the defending forces.

b. *Security.* Necessary steps must be taken to avoid tactical surprise. Means are provided to insure early warning and reliable information of approaching enemy forces. Security measures include placing security elements to the front in the direction of anticipated enemy approach and providing necessary security for the protection of division flanks and rear. All-round security is essential.

c. *All-round Defense.* Although the defense is designed primarily to combat an enemy attack along the most probable avenues of approach, the possibility exists that the enemy may attack from a direction other than that expected or considered likely. Also, the enemy may attack the division rear by ground envelopment, airmobile or airborne attack, or large-scale guerrilla action. The enemy should not be permitted to gain a decisive advantage by surprise as to direction or location of the attack. The division prepares for all-round defense by the careful initial disposition of forces, by the planned redistribution of troops and shifting of fires to meet contingencies, and by insuring that all subordinate units are prepared for all-round defense.

d. *Defense in Depth.* Adequate depth to the defense is essential. A strong attack supported by nuclear weapons may permit the enemy to penetrate into the forward defense area. Therefore, there must be sufficient depth to the defense to contain or canalize the enemy and permit execution of counterattacks. Shallow defenses are inherently vulnerable since the enemy may breach such defenses before he can be contained or effective counteraction can be taken. Depth to the defense is

achieved by proper deployment and maneuver of forces, use of blocking positions, use of field fortifications and barriers, and use of fires and reserves.

e. Responsiveness. The defense is organized to permit the shifting of forces and fires to counter the attack as it develops. Mobile reserves and nuclear weapons provide the division commander greater freedom to conduct the defensive battle.

f. Dispersion. The defender disperses units in consonance with the requirements of the mission to reduce vulnerability to nuclear attack. For example, the retention of specific terrain may oppose maximum dispersion. In such cases, the mission is paramount, and the degree of risk in accepting less dispersion is secondary. Dispersion in depth is preferable to purely lateral dispersions since it avoids frontages that overextend the defender, provides a larger percentage of a given force as a reserve, avoids lateral movements in the face of an enemy attack, facilitates detection and destruction of infiltrators, and provides a better posture from which to launch the counterattack.

g. Maximum Use of Offensive Action. In the defense, every opportunity is taken to regain the initiative from the enemy and destroy enemy forces. The division must be prepared to take offensive action whenever the opportunity presents itself. The counterattack, or a spoiling attack, is often the key to success in the defense. By such action, the enemy may be kept off balance and prevented from massing forces; decisive results can thereby be achieved.

h. Integration and Coordination of Defensive Measures. The overall defense plan involves the careful integration and coordination of all defensive measures.

- (1) Fire plans, including use of nuclear and nonnuclear fires, are prepared to directly support forward defense elements, to control unoccupied areas or to cover barriers, and to support offensive action such as counterattacks. Planned fires are integrated into the overall defensive scheme, and fires of all units are closely coordinated.
- (2) Natural terrain features are supplemented by the use of planned barriers to include minefields and other artificial obstacles and, when authorized, chemical agents and residual nuclear effects. Such barriers are designed to restrict the movement of the enemy without restricting the planned maneuver of our own forces. The division barrier plan is integrated with the requirements of the next higher echelon and is designed to support the scheme of defense. It is carefully coordinated to insure that it will accommodate planned maneuver, particularly the movement of reserves.
- (3) In the disposition, maneuver, and fire planning of combat elements, consideration is given to mutual support.

Section II. FORMS OF DEFENSE

6-4. General

The fundamental forms of defense are the mobile defense and the area defense. Most defensive postures for a given situation will be some variation of either the mobile or area defense, and will incorporate characteristics of each. The defense established is that which best meets the requirements of the particular situation.

6-5. Mobile Defense

a. The mobile defense is that form of defense in which minimum forces are deployed forward and priority is given to use of mobile combat elements and fires concentrated in the reserve. Pri-

mary reliance is placed upon the use of offensive action by the reserve to destroy enemy forces.

b. In the mobile defense, the defender plans to accept decisive engagement and to accomplish his mission primarily by executing offensive action against the attacking enemy forces. Control of the forward defense area and the retention of terrain are not primary objectives of the counterattack. The fixing forces—those minimum necessary forces committed initially in the forward defense area—conduct defensive, delaying, screening, or limited offensive operations in any combination required to make the attacker vulnerable to the counterattack. Mobility equal or superior to that of the enemy is essential for all elements of the defensive force.

c. Normally, the division is the smallest element capable of conducting a mobile defense because of the need for a strong reserve capable of executing a decisive counterattack (fig. 20).

6-6. Area Defense

a. The area defense is that form of defense in which emphasis is placed upon retention of or control over specific terrain. Reliance is placed upon the ability of fires and forces deployed on position in the forward defense area to stop and repulse the attacker. The forward defense area

has a higher priority for combat power than does the reserves.

b. In the area defense, the defender plans to accept decisive engagement and to accomplish his mission primarily by engaging the attacker along the forward edge of the battle area with a large volume and variety of fires. Counterattacks are conducted primarily to eject or destroy enemy forces that penetrate the position and so to regain control of the forward defense area and terrain which the defense has been designed to retain (fig. 21).

Section III. DEFENSIVE AREAS

6-7. General

Defensive areas include the security area, the forward defense area, and the reserve area. Each of these areas is allocated forces and fires as part of the overall defense plan.

6-8. Security Area

The division security area begins at the forward edge of the battle area (FEBA) and extends as far to the front and the flanks as security elements are employed. Forces in the security area furnish information of the enemy; delay, deceive, and disrupt him as much as possible; and provide a counterreconnaissance screen. The security echelon also may have the mission of locating and developing nuclear targets. Forces operating in the security area may include elements from higher echelons, such as covering forces and units to provide aerial surveillance and flank security. Division forces in the security area will consist of the general outpost (GOP), combat outposts, flank secu-

rity forces, division aerial surveillance elements, and patrols. For a discussion of rear area security, see paragraph 6-33.

6-9. Forward Defense Area

The forward defense area (FDA) extends rearward from the forward edge of the battle area (FEBA) to include that area organized by the forward committed units. The composition of the forward defense echelon depends upon the form of defense employed.

6-10. Reserve Area

The reserve area extends rearward from the forward defense area to the division rear boundary. The reserve echelon mans the reserve area, consists of those uncommitted forces held under division control, and is the principal means by which the commander influences the defensive battle and regains the initiative. The combat power of the reserve may consist of nuclear weapons, maneuver elements, or both.

Section IV. PLANNING THE DEFENSE

6-11. General

a. The plan for the defense is developed as a result of a careful estimate of the situation. The defender has an advantage since he can normally reconnoiter and select the area within which the defense is to be organized.

b. After the basic form of defense has been determined, the plan is developed in detail to include organization of the ground, designation of control measures, organization for combat, mis-

sions of subordinate units, fire support plans, logistical support plans, and counterattack plans.

c. The plan is developed from a detailed reconnaissance of the area and an estimate of the situation to determine the most effective way to use the terrain and available resources. It provides for security forces, forward defensive forces, and a reserve. It indicates the location of the forward defense area, provides fire support to all defensive echelons, and provides for additional artificial

obstacles and barriers to improve the natural defensive strength of the terrain.

d. The operation plan (order) will include the following:

- (1) Location of division security forces.
- (2) Location of FEBA and FDA.
- (3) Location of reserve.
- (4) Boundaries and coordinating points.
- (5) Organization for combat.
- (6) Missions to major subordinate units.
- (7) Fire support plan (normally issued as an annex to the operation plan).
- (8) Barrier plan (normally issued as an annex to the operation plan).
- (9) Counterattack plans (normally issued as separate plans but referenced to the basic operation plan).
- (10) Additional annexes as necessary, such as a communications plan or an administrative annex.

6-12. Selection of the Form of Defense

a. In the initial stages of planning, determination is made as to the basic form of defense to be used. The form of defense may be specified by higher headquarters, or the decision may be left to the division commander.

b. Considerations which affect the commander's choice of the form of defense include the mission, the enemy, the terrain, and troops available (METT). Further, additional considerations which have been derived from METT are analyzed by the division G3 when he recommends the form of defense to be adopted. These considerations are mission, terrain, mobility, nuclear weapons, air situation, time, and enemy.

(1) *Mission.* The mission may prescribe the form of defense, or an analysis of the mission may identify conditions that require the adoption of a particular form. The mission may impose restrictions that prevent maneuver to the depth required for a mobile defense. Such restrictions may dictate the adoption of an area defense. If the mission assigns a frontage that exceeds the defender's capability to establish an effective defense along the FEBA together with an effective reserve, the adoption of a mobile defense may be indicated.

(2) *Terrain.* The collective effect of observation and fire, cover and concealment, ob-

stacles, key terrain features, and avenues of approach is assessed. Weather may have an influence on these considerations, and its effects should be included in the assessment.

- (a) Good defensive terrain situated well forward in the sector favors the area defense. Such terrain can generally be described as dominant ground that provides good observation and fields of fire over enemy avenues of approach and offers the defender cover and concealment.
 - (b) On the other hand, terrain which has good trafficability and which lacks significant obstacles and good defensive features well forward favors a mobile defense.
 - (c) A major obstacle such as an unfordable river extending across the front of the sector offers the defender an advantage in organizing the ground for either form of defense.
- (3) *Mobility.* The relative ability of opposing forces for ground movement throughout the defended area is considered. If the defender has a significant mobility advantage, this favors a mobile defense. If the attacker has a significant advantage, it favors an area defense. The collective effect of transportation, terrain, weather, and the air situation is assessed.
- (a) The transportation aspect of mobility considers the quantities and capabilities of combat vehicles and other tactical transportation available to the opposing forces.
 - (b) Terrain obstacles and relief are evaluated individually and then collectively to determine their effect on mobility.
 - (c) The influence of weather on trafficability and movement is also assessed.
 - (d) The air situation is assessed as it relates to the ability of a force to move without effective interference from the air.
- (4) *Nuclear weapons.* The dispersion desired under nuclear conditions or under the threat of the use of nuclear weapons favors the adoption of a mobile defense.
- (5) *Air situation.* The air situation as it relates to movement on the ground is considered under mobility. Except in that

(1) Width
(2) Depth
(3) Forces available

regard, the air situation usually has no influence on the choice of the form of defense.

- (6) *Time.* An assessment is made as to how the time available affects planning the defense, deployment of forces, and organization of the ground. A more thorough organization of the ground in the FDA is usually required in an area defense. For this reason, when time is short (less than one day), a mobile defense is generally favored. If more time is available, this factor alone usually has no influence on the choice of the form of defense.
- (7) *Enemy.* Enemy capabilities relating to nuclear weapons, air power, and mobility have previously been considered. Thus, in appraising the enemy, the effects of other capabilities are considered. This appraisal is made chiefly in terms of the enemy's attack capability. To assess this capability, an evaluation is made of enemy strength, dispositions, tactical doctrine, and avenues of approach.
- (a) A significant airmobile capability favors the mobile defense.
- (b) Should the lack of intelligence preclude an assessment as to where and in what strength the enemy will attack, this favors a mobile defense.
- (c) An assessment of enemy capabilities is usually less significant as an aid in determining the form of defense to be adopted than are such considerations as mission, mobility, or terrain.
- (8) *Summary.* When the mission permits the choice of either form of defense, the collective effect of all considerations must be evaluated. In some situations, one or more may clearly govern the choice; in others, a careful analysis of each consideration must be made.

6-13. Organization of the Ground

a. As a prerequisite to detailed planning for the organization of the defense, it is necessary to know the specific mission of the defense force including the time the operation is to start and any special requirements that are imposed, the area to be defended, the enemy situation, and the form or variation of defense to be used.

b. Detailed reconnaissance of the area is necessary to determine the major avenues of approach into the area, key terrain features which control these avenues of approach, natural obstacles, and routes for the movement of forces within the area. Selection is made of areas to be occupied and organized by the forward defense forces. Also, the location of security forces and the location of the reserve are designated.

c. Once determination is made of the specific location of the forward defense area, the division area is divided into sectors designating responsibility for major subordinate units. Boundaries between these major subordinate units are located so as not to split responsibility for major avenues of approach or key terrain features which control them.

d. Organization of the ground involves use of the natural defensive qualities of the terrain and improvement of the natural terrain to the fullest extent possible with the men, materiel, and time available. In addition to the preparation of the initial defensive and blocking positions, this includes the laying of mines, erection of artificial obstacles, camouflage, protective construction, and improvement of observation and fields of fire. Barriers are integrated into the defensive scheme to hold the enemy under fire or to divert him into areas where he can be destroyed by fires and offensive maneuver. The barrier plan is designed to take maximum advantage of natural obstacles. When their use is authorized, chemical agents and nuclear fires may be used effectively to contaminate barriers, obstacles, and defiles to further impede enemy movement and canalize his advance.

e. Detailed coordination is necessary to insure that plans for the organization of the ground are carefully integrated with detailed fire plans and plans for the maneuver of forces, particularly the reserve. For maximum effectiveness, obstacles and barriers are covered by fire. Also, the construction of obstacles and minefields must not interfere with the freedom of maneuver of defensive forces.

6-14. Control Measures

a. Control measures used in defensive operations include boundaries, coordinating points, fire control measures, and designated assembly areas. Control measures in the counterattack are discussed in paragraph 6.18.

b. The FEBA is designated by coordinating points established by corps. When the FEBA is not defined by a terrain feature, it may be shown on the map or overlay as a dashed line connecting coordinating points and representing the general trace of the FEBA. The FEBA should be located to take advantage of natural obstacles in the area and frequently is located along a suitable barrier such as a river line.

c. The division commander designates boundaries to define terrain responsibility for major subordinate units. Lateral boundaries are extended forward to the range of direct support fires or limits of ground observation, whichever is greater, and indicate the foremost limit of territorial responsibility. Lateral boundaries also serve as a fire control measure. When the division commander desires to indicate an area responsibility for the forces in the FDA, rear boundaries will be designated. Rear boundaries, when designated, must provide sufficient area to permit adequate maneuver and dispersion of the forward defense forces. Boundaries between major subordinate units are located so as not to split responsibility for major avenues of approach.

d. Coordinating points are designated on boundaries as specific points for coordination of fires and maneuver between adjacent units. Coordinating points are indicated whenever a boundary crosses the FEBA and the trace of the security force.

e. The division controls the general location of the reserve by designating assembly areas or blocking positions.

6-15. Organization for Combat

a. The division plan for the defense includes a detailed organization for combat to implement the scheme of defense. The allocation of forces to the major tactical groupings may be shown in the task organization portion of the operation plan (order).

b. The commander attaches combat elements to the major subordinate commands in the proportion best suited for accomplishment of the mission. Combat support and combat service support elements are then placed in support or attached as necessary. Elements are provided to the security forces, to units in the forward defense area, and to the reserve. Forces not so allocated are placed under the control of the division support command or are retained directly under division control, as appropriate.

- (1) In the mobile defense, minimum essential forces are allocated to units in the forward defense area. These forces may be primarily infantry heavy. The reserve as the principal element of the defense, is normally given priority in allocation of armor.
- (2) In the area defense, priority is given to forces for the forward defense area. The reserve is provided sufficient strength to insure continuity of the defense.

c. The division may be involved in another operation when given the mission to defend and will, consequently, have to reorganize. Time to establish the defense is usually limited. To avoid unnecessary changes and shifting of units, only essential changes should be made to the existing organization of major subordinate units. Shifts of tank and infantry elements between brigades should normally be by battalion task force.

d. Security forces used in the defense may include the GOP, combat outpost, observation posts, listening posts, patrols, flank guard, and rear area security forces.

- (1) *General Outpost.* The GOP is organized and controlled by the division to intercept, engage, delay, disorganize, and deceive the enemy before he can attack. It provides security for the division by observation, reconnaissance, attack or defense, or by any combination of these methods. The GOP force may be provided from the division reserve. The GOP may be a brigade or elements thereof, the armored cavalry squadron, or a battalion task force as required. Within the division, the armored cavalry squadron is particularly well suited to this type mission but may require additional aviation support as well as artillery and engineer support. The corps commander prescribes the general location of the division GOP to coordinate security measures across the corps front.
- (2) *Combat Outpost.* The combat outpost is a security element provided and controlled by the brigade or major subordinate unit assigned a sector in the forward defense area. It is located to provide timely warning of the enemy's approach and to deny the enemy close ground ob-

servation and direct fires into the forward defense area. Its location permits support by fire from within the brigade. It will normally consist of reinforced platoon-sized elements from each front-line battalion. The division commander prescribes the general location of combat outposts to the extent necessary to insure the provision of security across the division front.

e. The forward defense area forces are organized to carry out their basic mission of defense or delay. Division designates the trace of the FEBA and responsibility for major subordinate units along the FEBA by specifying the location of brigade boundaries and coordinating points.

- (1) The division usually uses two brigade headquarters to control these forces. However, more than two control headquarters in the FDA may be required when the division sector is unusually wide or when the existence of widely separated avenues of approach or extensive lateral obstacles would overtax the capabilities of two headquarters to effectively control the FDA.
- (2) In the mobile defense, the fixing force commanders organize their areas by establishing defensive positions augmented by observation and listening posts and patrols. The positions are areas organized for all-round defense by elements varying in size from a company to a battalion task force. They are located to control terrain that dominates avenues of approach and to repel, delay, or canalize attacking forces. Alternate or successive positions are designated in depth. Because of the limited forces in the forward area, these positions cannot be initially occupied in depth. The forward defense force is allocated in the minimum essential forces to carry out its mission. It is normally infantry heavy.
- (3) In the area defense, the forward defense area is organized into defensive positions which provide good fields of fire, observation, and natural defensive strength. Positions are prepared to block avenues of approach at the FEBA and in depth to control the area. The natural defen-

sive strength of the terrain is increased as time permits by the use of artificial obstacles, fortifications, and barriers.

f. The reserve is organized to destroy or repulse the enemy by offensive action and must be prepared for timely commitment on division order. Should it be infeasible for the division to counter-attack, the reserve may be employed in a blocking role to assist in containing the enemy penetration prior to the launching of the corps counter-attack. One brigade headquarters is normally designated to control the reserve. However, in some situations, the reserve may be controlled by a provisional task force headquarters or placed under division control.

g. The armored cavalry squadron may be used in the security echelon, along the FEBA as part of the forward defense forces, to provide security for the division flanks or within the division area; or it may be used as part of the reserve. When the squadron is committed along the FEBA, it may be attached to one of the brigades in the forward defense area; however, it is capable of occupying a sector independently as an economy of force measure.

h. Engineers may be attached to or placed in direct support of the brigades. Normal support is one engineer company for each brigade, although this is varied to meet specific requirements. Engineers with the security force are normally attached. The engineer battalion, less elements attached to major subordinate units, is kept under division control.

i. Artillery is normally retained under division control with direct support artillery provided to major subordinate units in the FDA. Artillery units are attached to combat elements when distances and communications are so extended that attachment is preferable to centralized control. It is desirable to support the division GOP with artillery fires that are representative of all calibers available to the division to provide the necessary fire support and to aid in deceiving the enemy. Direct support artillery is normally attached to the GOP. Medium and heavy artillery support is provided the division GOP by the assignment of an appropriate tactical mission or by attachment. Nuclear delivery means furnish general support to the division as a whole, although elements may be attached to the division GOP. Provision is made for artillery support to the reserve when committed.

j. For organization of combat service support units, see FM 54-2.

6-16. Combat Support

a. Fire Support.

- (1) The division prepares fire plans to support the scheme of defense to include provision for long-range fires to engage the enemy as early as possible and fires in direct support of the defending forces. Specific provision is made to furnish close fire support to the security forces, the forward defense forces, and the reserve in the execution of counterattacks. Field artillery units are located within the defense area so that fires may be massed on likely avenues of approach and areas to be denied the enemy.
- (2) In planning for use of nuclear weapons, it is necessary to determine early in the planning stage the number of weapons to be employed on targets of opportunity or preplanned targets forward of the FEBA and the number of weapons to be retained to support counterattacks. Delivery means must be available and properly located to deliver these fires as needed. In the mobile defense, the bulk of the weapons are normally held for the support of counterattacks.

b. Air Defense.

- (1) The division may be provided with air defense units by army or corps or may derive protection by air defense weapons in or near the division area.
- (2) When attacked, air defense artillery is normally retained under division control and used to provide defense of the division area. Priorities for the protection of installations or areas such as nuclear delivery means, division reserve, support command, and critical areas are established.

c. Engineer Support.

- (1) The primary combat support missions of the division engineers in the defense are to increase the defensive capabilities of combat troops by assisting in the organization of the ground and the preparation of defensive positions, and to assist the movement of reserves in the counterat-

tack. Engineers may prepare demolitions, lay minefields, and prepare and maintain routes. The division engineer assists in the formulation of the overall barrier plan and its implementation.

- (2) When authorized, ADM may be used to deny specific areas and strengthen the position. Engineer responsibilities for ADM are indicated in paragraphs 4-19 through 4-21.
- (3) When the requirements for engineer support within the division exceed the capability of the organic engineer battalion, additional engineer support must be requested from the next higher headquarters. In the defense, such nondivisional engineers are normally placed in support of the division rather than attached and are under the supervision of the division engineer.
- (4) For more detailed information, see FM 5-26, FM 5-135, and FM 5-136.

d. *Signal Support.* See paragraphs 4-22 through 4-25.

e. Chemical Support.

- (1) Detailed plans are prepared to insure that the use of chemical agents is closely integrated with other fire plans, barrier plans, and the scheme of defense.
- (2) Toxic chemicals may be used in support of forces along the FEBA, on enemy forces concentrating for an attack, and to support the reserve in the execution of counterattacks. Chemical concentrations can be used effectively to assist in destroying, canalizing, or containing the enemy along major avenues of approach or to contaminate key terrain or likely enemy assembly areas. When toxic chemicals are authorized, it is normal to integrate chemical mines into high explosive minefields to increase their obstacle value and to make clearance more difficult.
- (3) Smoke can be used to obscure operations from the enemy by blinding enemy observation posts and by hindering enemy aerial observation and tactical air operations within the defense area. Smoke must be used with caution, however, so as not to block essential observation by the defending forces.

- (4) Since the division has no organic chemical units, large-scale use of toxic chemical agents by the enemy may require additional decontamination support from higher headquarters.
- (5) For more detailed discussion on chemical support, see paragraphs 4-32 and 4-33; FM 3-5; FM 3-10; and FM 101-40.

f. Army Aviation.

- (1) Use of organic aviation in the defense is similar to its use in other types of operations. (See para. 4-26 through 4-29.) The division aviation battalion provides general support to the division for aerial observation, reconnaissance, and surveillance; aerial photograph; radiological monitoring and survey; limited transportation and air movement of patients; limited aerial suppressive fires; and command liaison.
- (2) The division aviation battalion normally remains under division control. Flight elements may be placed in support of subordinate units. Flight elements with the security forces may be attached.
- (3) The reconnaissance and surveillance function is particularly important in the defense. Constant surveillance of the battle area is essential to obtain early and continuous information of the enemy, target acquisition, and verification and evaluation of potential targets.

6-17. Combat Service Support

a. Particular consideration is given to the location and security of the division support area, supply and evacuation of combat elements, and traffic control within the division area.

b. Military Police. In the defense, the division military police company normally operates under division control. The greater part of the military police effort must be devoted to planning and enforcing traffic control measures. PW normally are not as great a problem as they are in offensive operations, and one central PW collecting point is usually sufficient.

c. In the defense, combat service support facilities are usually located farther to the rear than in offensive operations. This avoids possible interference with tactical operations and undue congestion in the forward areas. It also offers less

chance of damage or destruction of the combat service support facilities in event of an enemy penetration. Nevertheless, the support command units must be located close enough to the combat elements to provide proper support. The location must provide sufficient space for operations and dispersion and permit a reasonable degree of security.

d. Defensive operations are usually characterized by relatively heavy expenditures of ammunition (class V) and relatively light expenditures of fuel and lubricants (class III). In the mobile defense, however, the expenditure of class III supply may become heavy because of the maneuvering of both the forward defense forces and the reserve.

e. Plans are made for supply and evacuation routes including alternate supply routes. Measures are taken to regulate and control traffic within the division area, particularly traffic entering the forward defense area.

f. Normally, a forward support company from the maintenance battalion, a medical company, and elements of the supply and transport battalion are placed in support of each brigade. These units are normally located in the brigade trains area but provide combat service support on an area basis. The support command units normally perform their functions under control of their parent organization rather than by attachment to brigades. Division support command units, with the exception of those elements located in the brigade trains areas, are located in the division support area.

g. For further discussion of combat service support, see chapter 4 and FM 54-2.

6-18. Counterattack Plans

a. The counterattack is a basic and essential part of the defense. Counterattack planning is started early and developed concurrently with other phases of defense planning. The conduct of the counterattack varies somewhat with the form of defense being conducted, but planning techniques in both the mobile and area defense are essentially the same.

b. Counterattack plans are prepared, as a minimum, to counter an assumed major penetration on each principal enemy avenue of approach. Major factors involved in visualizing an assumed enemy penetration are the force the enemy may employ on the avenue of approach; the use of terrain in the area of the penetration; the capability of the forward defense force to control the limits of the

penetration; and the responsiveness, strength, and composition of the reserve. The priority for the preparation of these plans is based upon the effect each penetration will have on the division mission.

c. Basic counterattack plans are prepared by division and disseminated to all lower echelons in sufficient time to permit detailed planning by subordinate commanders. Detailed counterattack planning is the responsibility of the reserve commander to include reconnaissance, selection of routes, determination of time and space factors, and coordination with elements of the forward defense forces.

d. The division counterattack plan will normally include:

- (1) *Mission.* A brief statement of the mission assigned by the next higher headquarters.
- (2) *Assumptions.* The following should be considered:
 - (a) The size and shape of the assumed penetration.
 - (b) The strength and composition of the enemy forces in the penetrated area.
 - (c) The status of the forces in the FDA including their capability to contain the penetration.
 - (d) The strength and responsiveness of the division reserve at the time the counterattack is to be executed.
 - (e) The availability and capabilities of nuclear weapons and delivery means.
 - (f) Other assumptions pertinent to the existing situation.
- (3) *Concept of the operation.* The overall objective of the counterattack is the destruction of the enemy in the penetration or the restoration of the forward defense area. After making assumptions on which the counterattack plan is based, a scheme of maneuver to accomplish the overall objective of the counterattack is determined. Consideration of the mission, the division organization, the terrain, and the enemy capabilities will assist in determining whether the scheme of maneuver will essentially be a penetration or an envelopment. The scheme of maneuver and provisions for fire support are included in the concept of operation.
- (4) *Control measures (fig. 17 and 18).*
 - (a) *Objective.* Normally, the division assigns a single terrain objective to the

counterattacking force. The objective should be within the capabilities of the counterattacking force to seize, and should contribute to the overall objective of the counterattack.

- (b) *Direction of attack.* A direction of attack is used to orient the main effort of the counterattack force. The direction of attack arrow is drawn from the line of departure into the objective.
- (c) *Line of departure (LD).* A line of departure is prescribed for planning and rehearsal purposes. It is selected on the basis of assumed locations of the forces in the FDA and the location of easily identifiable terrain features. Upon execution, the LD may be designated as the line of contact (LC).
- (d) *Boundaries.* Boundaries may be used in the counterattack when additional control is needed. It is desirable to make as few changes as possible in existing boundaries. Boundaries are adjusted, as necessary, to control the passage and maneuver of the counterattacking force and to assist in the control of fires during the counterattack. Figure 17 illustrates a situation in which the counterattacking brigade has no territorial responsibility outside the penetration, nor any command control over the FDA force. The trace of the assumed penetration serves as a boundary between the 1st and 3d Bde. Figure 18 illustrates a situation that dictates a realignment of boundaries and the assignment of territorial responsibility to the counterattacking brigade. The FDA forces are placed under the counterattacking force commander when it is necessary to assign territorial responsibility outside the limits of the penetration to the counterattacking force.
- (5) *Orders to major subordinate units.* Orders to the major unit commanders should be in sufficient detail to insure that the division commander's concept of the operation is carried out. Command relations between the FDA force and counterattack force should be clearly defined.

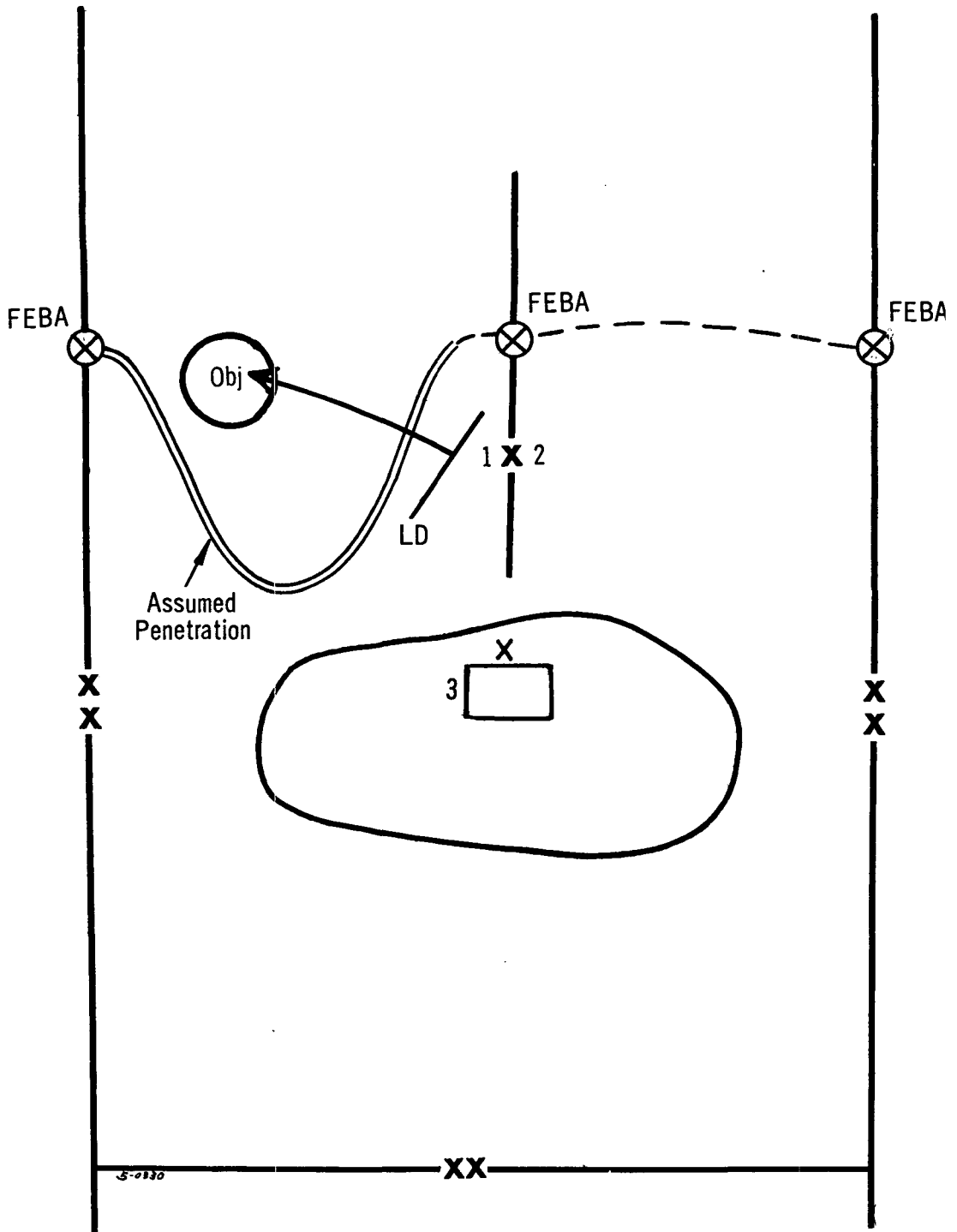


Figure 17. Division Counterattack Plan.

(6) *Fire support.* Detailed fire support plans, including the use of nuclear weapons, are prepared for each counterattack plan. The number of nuclear weapons tentatively allocated to support each

counterattack is normally specified in the plan.

e. The success of a counterattack depends upon the ability of the commander and staff to visualize situations that might exist and, when the enemy

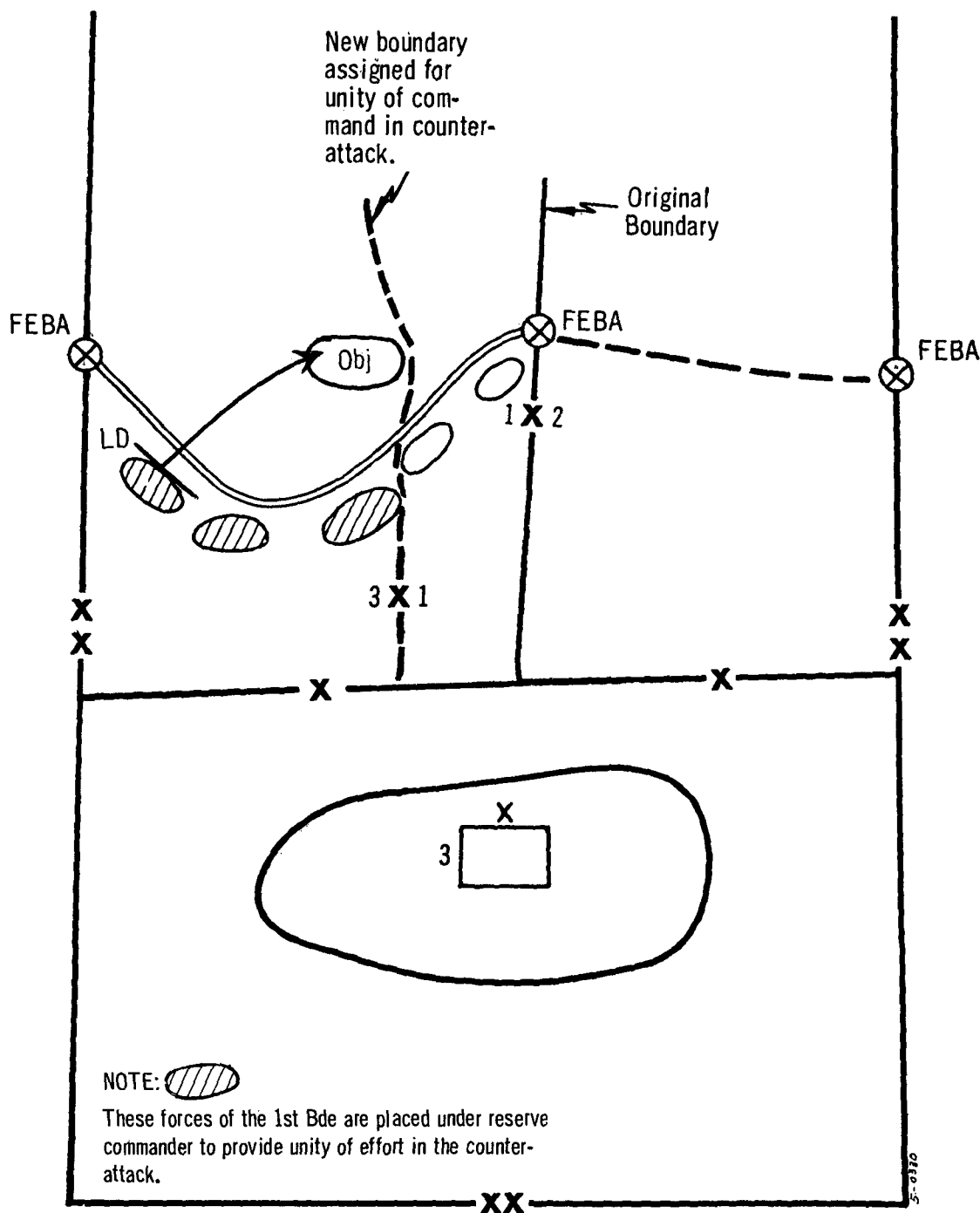


Figure 18. Division Counterattack Plan.

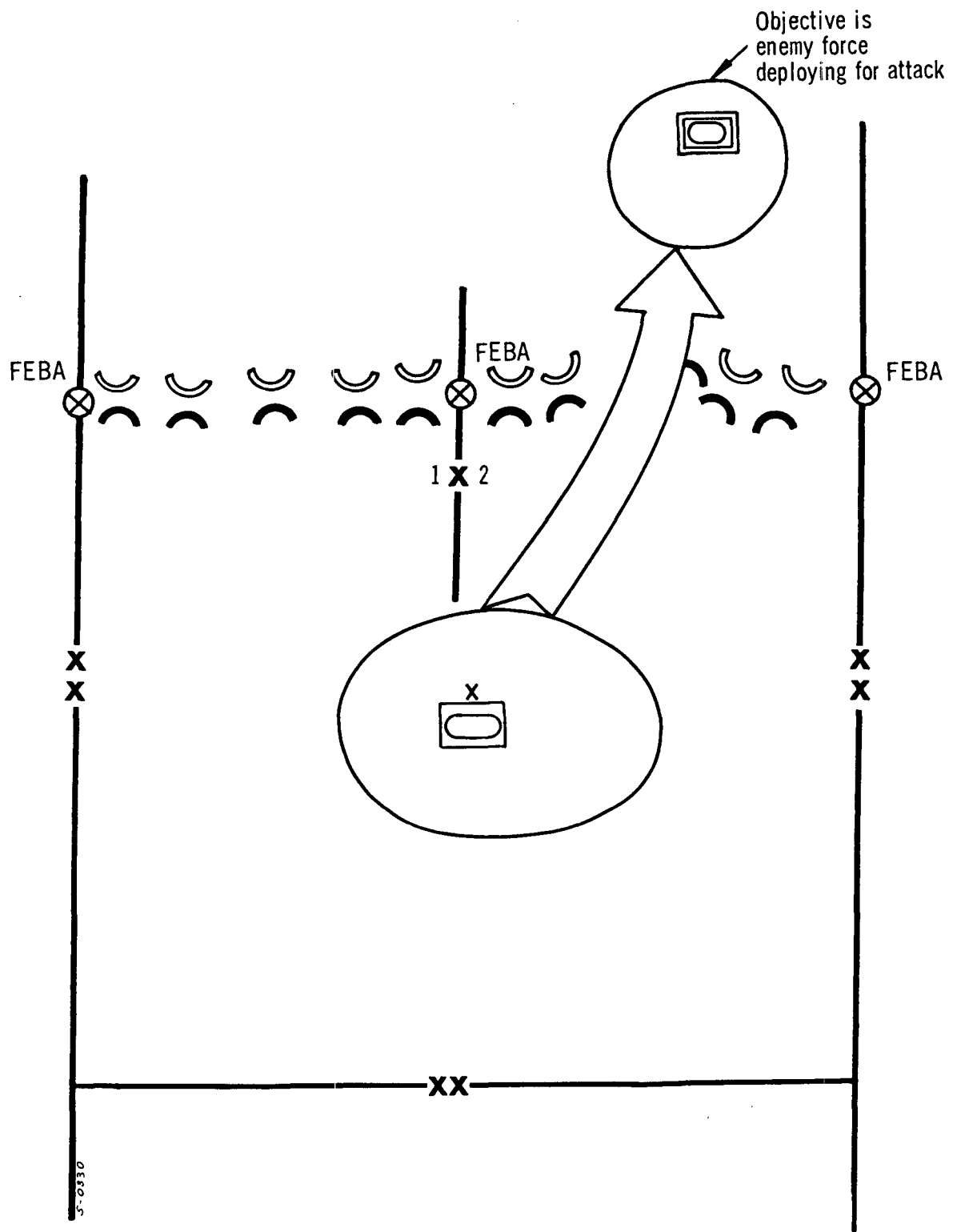


Figure 19. Division spoiling attack, armored division.

attack occurs, to select a suitable course of action to defeat it. Basic counterattack plans must be highly flexible so that they can be modified to meet the actual situation. The actual counterattack will probably be a variation of one of the counterattack plans.

6-19. Spoiling Attack

a. Plans for defense may include spoiling attacks to prevent or delay enemy attacks. The spoiling attack is normally launched against enemy forces which are forming or assembling for an attack (fig. 19).

b. Plans for the spoiling attack are made and coordinated with the same degree of care and coordination as for the normal attack discussed in chapter 5.

c. The following considerations affect the use of the spoiling attack:

- (1) The spoiling attack is used to delay, disrupt, or destroy the enemy capability to launch an offensive.
- (2) The objective of the spoiling attack is destruction of enemy personnel and equipment, not the seizure of terrain or other physical objectives.
- (3) The objective selected must facilitate the accomplishment of the defensive mission of the unit.
- (4) The next higher commander may limit the size of the force that may be used for a spoiling attack.
- (5) The spoiling attack should not be used if the loss or destruction of the force will jeopardize the ability of the command to accomplish its defensive mission.

Section V. CONDUCT OF THE DEFENSE

6-20. General

a. A successful defense depends largely upon timely and accurate information of the enemy and the ability of forces within the defensive area to react rapidly. A continuous and aggressive intelligence collection effort is essential in determining the probable strength, composition, direction, and time of an enemy attack. Effective communications must exist throughout the division so that information and instructions can be transmitted without delay. All units must be constantly prepared to move rapidly to support the scheme of defense.

b. Other than aerial reconnaissance, the security force is normally the first element of the division to gain contact with advancing enemy forces. The security force reconnoiters to establish and maintain contact, and once contact is gained, a continuous flow of information is provided the division commander. As enemy strength is developed, the GOP conducts a delaying action to inflict casualties, delay, deceive, and disorganize the enemy. The GOP avoids decisive engagement with the enemy but maintains contact until it is withdrawn through the COP (if established) or the FEBA. The elements of the GOP then accomplish other assigned missions, as appropriate.

c. Once the security force has been withdrawn through the FEBA, the attacker is engaged by the forward defense forces. As the enemy comes

within range, maximum supporting fires are delivered to slow and disrupt his attack. As contact is gained, the commanders of the forward defense force initiate action to stop, repel, contain, or disorganize the enemy. If the attack cannot be effectively stopped or contained, then action is taken to control the enemy in a manner which permits effective counterattack by the reserve. The forward defense force must prevent an enemy breakthrough and must prevent his consolidation of the penetrated area. This sets the stage for the counterattack.

d. Successful accomplishment of the forward defense force mission requires a combination of holding ground, delaying, and containing. The forward defense force commander must retain flexibility and must carefully control the operation in the forward area. In general, units in danger of being overrun are ordered to move to alternate or successive positions. As the enemy pressure increases, the forward defense units may be forced into a delaying action using alternate or successive positions selected in depth. However, some units may be ordered to hold on specific terrain, being bypassed if necessary, to cause canalization of the attacking forces.

6-21. Mobile Defense

With the relatively light fixing forces in the mobile defense, it is anticipated that a strong and de-

terminated enemy can penetrate the FDA. At the appropriate time, the division launches a strong counterattack using the reserve supported by nuclear weapons and all other available fires to destroy the penetration (fig. 20).

6-22. Area Defense

In the area defense, emphasis is placed upon blocking avenues of approach at the FEBA and defending in depth to hold the terrain. Penetrations that cannot be eliminated by the forces assigned to the FDA are contained to permit restoration of the FEBA by division counterattack. See figure 21.

6-23. Counterattack

a. When the division commander commits the reserve, it is with the knowledge that the division is decisively engaged and, for a period of time, he will not possess a major troop reserve. Therefore, the decision to execute a division counterattack must be based on a reasonable chance for success. Once the reserve is completely committed, the division commander will reconstitute the reserve.

b. Although penetrations are expected and planned for in the overall defense planning, it is unlikely that the development of the action will correspond to the prepared counterattack plans. However, as the situation develops, the basic questions the division commander must answer are these:

- (1) Is a counterattack feasible or should the reserve be employed to contain?
- (2) When and where to counterattack?
- (3) In the event of more than one penetration, which should be attacked and which should be blocked or contained?

c. If a counterattack is considered feasible, it is launched with the full power of all available resources necessary to insure success. Piecemeal commitment of the reserve is avoided. Among other things, success depends upon surprise, speed, and boldness. The entire resources of the commander may be committed to include all available nuclear weapons.

d. The most difficult decision to make is when to execute the counterattack.

- (1) It is not launched as an automatic reaction to an enemy penetration, nor is the reserve committed solely by virtue of the enemy reaching a certain phase line or area. It may be launched when the

enemy presents his flanks or rear, when he has become overextended, or when his momentum is dissipated. The commander must have a continuous flow of accurate information on the current situation and enemy forces. He must know the condition of the FDA forces, whether or not they can contain enemy forces in the penetration, and for how long. He must know how long it will take the reserve to attack. He must know the power and rate of the enemy advance, and the enemy reinforcing capability. To this, he must add his knowledge of enemy tactical doctrine and procedures.

- (2) Ideally, the counterattack is made when the enemy attack has been slowed, stopped, or disorganized. However, these conditions are not essential prerequisites for the counterattack. A counterattack should be launched prior to the time that the attacking enemy can consolidate his gains and reorganize or regroup his forces.

e. If multiple penetrations have occurred, it may be necessary to deal with these penetrations simultaneously. On such a case, determination is made as to which penetration poses the greatest threat to the division. The reserve is committed to destroy the major threat, while sufficient force is applied to contain the other threats. It may be necessary to detach a portion of the reserve and attach it to the FDA force, or to allocate nuclear weapons, or a combination of both to assist in containing secondary threats.

f. The penetration is preferably attacked on the shoulder or flank. This will usually strike the enemy at his most vulnerable point and offers the best chance of cutting off the enemy, disrupting his attack, and destroying him in place. However, considerations of time and space, terrain, maneuver room, and the enemy capability of striking the division counterattack force on the flank with second echelon assault forces may make it more desirable to attack the penetration on the nose. Employment of nuclear weapons assists in overcoming enemy resistance and increases the feasibility of a head-on direction of attack. The counterattack normally will be based on one of the existing counterattack plans modified as necessary to fit the actual situation.

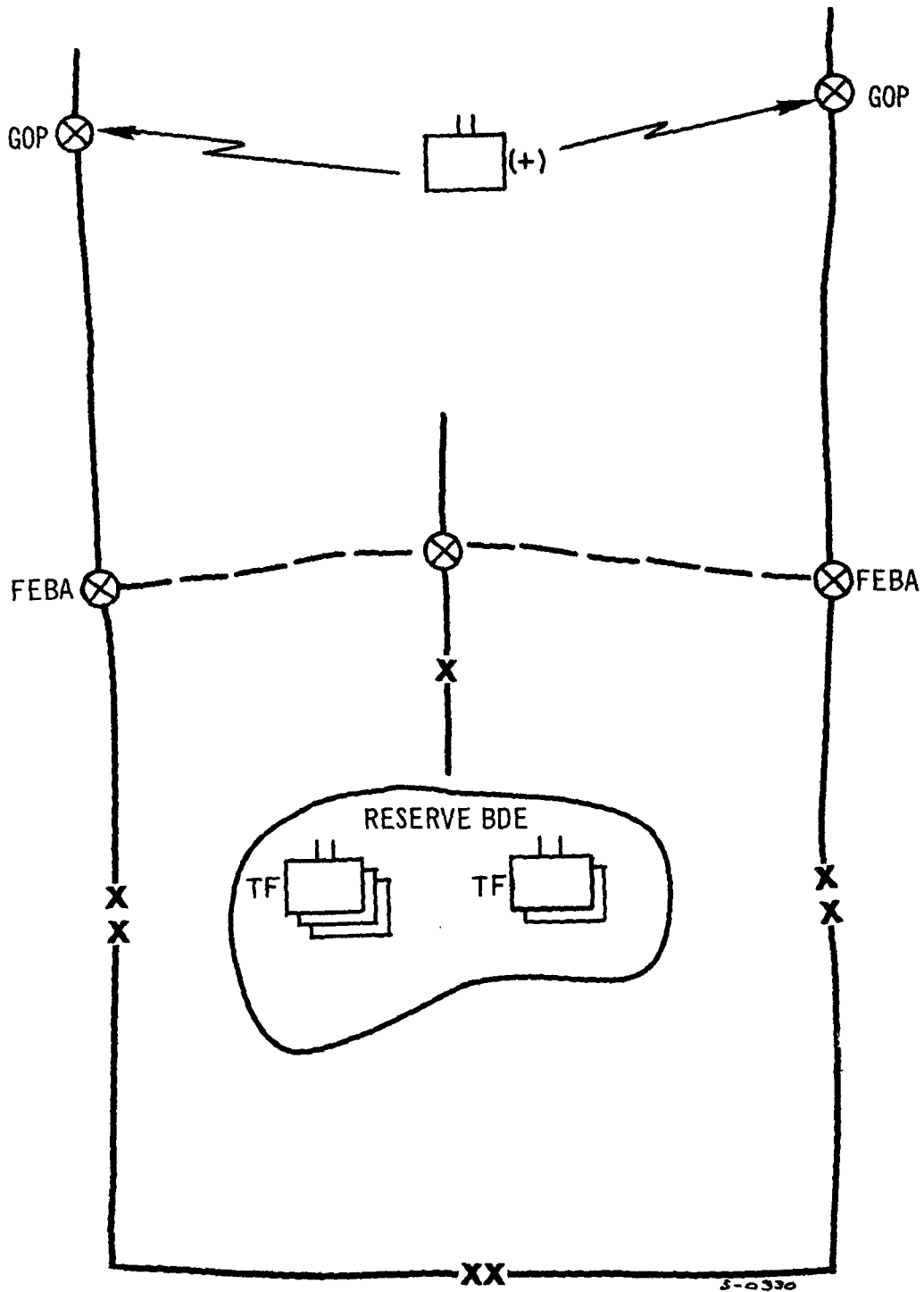


Figure 20. Example of mobile defense.

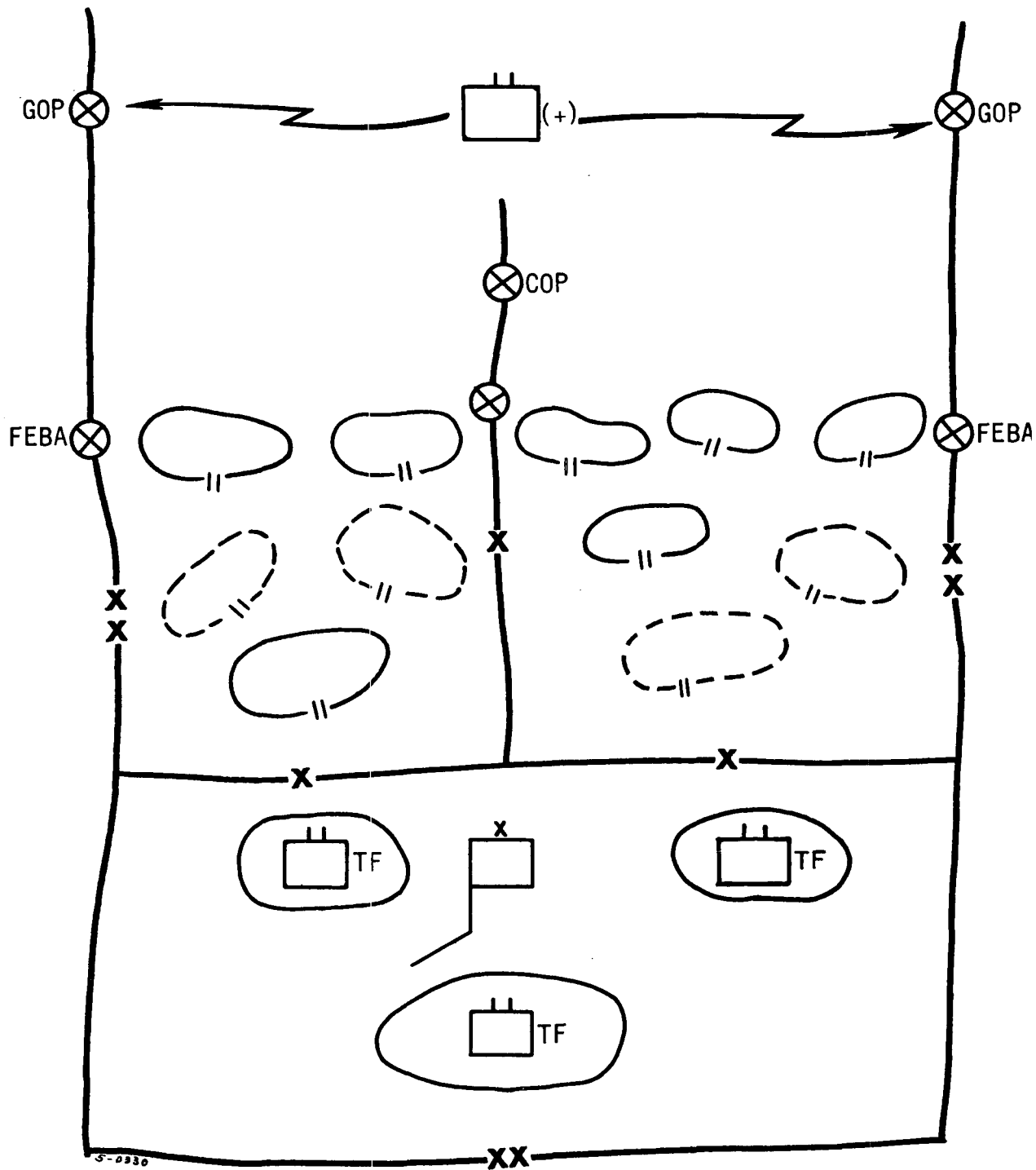


Figure 21. Example of area defense.

g. The mission of the FDA force is to block, delay, and canalize the enemy. As a minimum, the fixing force will support the passage of the counterattack force. Any additional support required and the command relations between the fixing force and the counterattack force will be included in the operations order.

h. Tactical air support is important in insuring freedom of movement for the reserve. Ideally, local air superiority should be achieved to prevent enemy air interference with the counterattacking force and to disrupt and delay any additional movement of enemy reinforcements into the penetration.

i. Nuclear support should be provided for the counterattack. The use of nuclear means is part of the basic decision by the commander on the employment of his forces. Nuclear fires should be used to facilitate the action of the reserve in destroying the enemy in the penetration; they may be used to protect the flank of the reserve and to prevent enemy reinforcement of the penetration during the counterattack; they may be used to help contain a secondary penetration. Nuclear weapons not employed to support the counterattack pro-

vide an additional division reserve to meet contingencies.

j. In some situations, the division commander may determine that a counterattack cannot be executed with a reasonable chance of success. This may be the case when the enemy force in a single penetration is too strong to counterattack without dissipating the strength of the division with little or no chance of decisive results; or when there are two or more penetrations, none of which can be contained while the other is reduced. When the division cannot successfully counterattack, the resources of the division are more effectively used to contain or to delay so as to gain time for employment of reserves of a higher echelon. Once the division has lost its power to counterattack, this fact must be reported to the higher commander immediately.

k. Once launched, the counterattack is provided priority of all available resources. When the enemy force in the penetration has been destroyed, the counter attacking force may return to its original or alternate positions as division reserve, be given the mission of occupying and defending the restored area, or exploit the success created by the elimination of the penetration.

Section VI. THE DIVISION IN THE CORPS DEFENSE

6-24. General

a. The same fundamentals apply to the corps in the defense as apply at lower echelons. The corps commander's principal concern in organizing the defense includes provision for security of the defensive area, organization of the battle area, composition and disposition of reserves, plans for counterattacks, and allocation of available resources. The corps may conduct a mobile or area defense. The form of defense conducted by the corps, however, does not necessarily dictate the form of defense to be adopted by the division.

b. In the defense, the division may be used in one of three ways: As the principal element of the corps covering force, as the corps reserve, or to organize an assigned sector of the corps FDA (fig. 22).

6-25. The Armored or Mechanized Division as Corps Covering Force

a. The corps commander recommends the location of the initial coordinating points to the field

army commander who designates such points. Corps prescribes the composition of the covering force. This covering force has the mission of delaying the enemy forward of the division security force or in a designated area for a specified period to provide time for the preparation of defensive positions, disorganizing attacking enemy forces as much as possible, and deceiving the enemy as to the location of the FEBA.

b. The ability of the armored and mechanized divisions to cover a wide area and conduct continuous delay makes them the most suitable division-size units for the corps covering force in the defense, and, when available, they are normally given this mission. As the covering force, these divisions should be given additional long-range fire support means and an allocation of nuclear weapons, as appropriate.

c. The covering force carries out its mission primarily by means of delaying action. Upon withdrawal of the covering force, the division normally is designated as corps reserve.

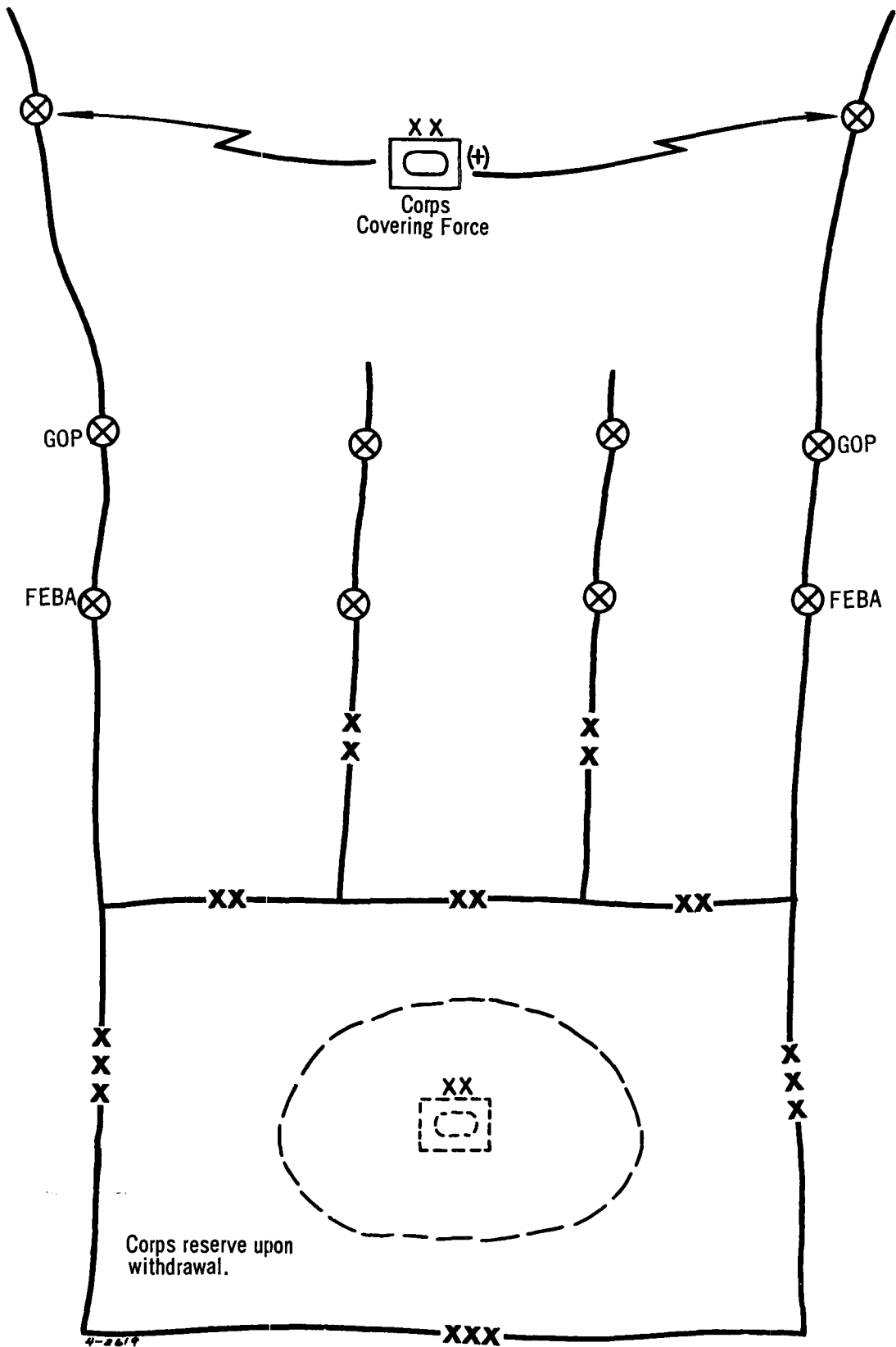


Figure 22. Example of corps in the defense.

6-26. The Armored or Mechanized Division Assigned a Sector of the Corps Forward Defense Area

a. The armored division may be given the mission of organizing and defending a sector of the FEBA. This is not considered a normal mission for the armored division in the corps defense, however, as it is generally employed to provide the corps reserve. The armored division may be used in defending a sector when the corps is forced to go into the defense directly from an attack against enemy opposition. In this case, an armored division being employed forward in the attack could be given a sector of the FEBA. This would facilitate the organization of the forward defense area and avoid the relief of a major unit in contact with the enemy.

b. When the armored division defends a sector, it generally uses the mobile defense, although it may use an area defense to conform to the corps defensive scheme.

c. The mechanized division is particularly effective as the fixing force for the corps mobile defense. It may be used in corps reserve.

6-27. The Division as Corps Reserve

a. In the defense, the corps must provide for a suitable reserve. This is normally a combination of mobile combat forces and nuclear weapons.

The armored and mechanized divisions are well suited to the mission of corps reserve.

b. As the corps reserve, the division is located in positions from which it can execute planned counterattacks. The same general criteria apply as for the location of the reserve at lower levels. It must be far enough to the rear so as not to interfere with the maneuver of the divisions in forward defense positions and not become involved in the battle until the desired time of commitment; it must be located for possible commitment to any portion of the corps area; and it must be provided with sufficient area for dispersion to avoid undue vulnerability to nuclear attack.

c. Counterattack plans are developed in detail by the counterattack force based on the corps counterattack plan. In the mobile defense, the bulk of the nuclear weapons allocated to corps are normally used to support the reserve in the execution of counterattacks.

d. Counterattacks are executed under corps control. The counterattack is launched when it will prove the decisive move in the engagement and must be based on a reasonable chance of success. Once the counterattack is initiated, it is carried out rapidly and violently, employing all combat power necessary to achieve success. The division executing the corps counterattack employs the principles of the attack as discussed in chapter 5.

Section VII. SPECIAL DEFENSIVE CONSIDERATIONS

6-28. General

There is a constant threat of enemy armor, air-mobile, airborne, guerrilla, or infiltration actions within the division area, and plans must be prepared to counter this threat. The nature of the threat will often require locating or organizing mobile combat forces in the rear. Enemy action of this nature may be undertaken to harass the division and reduce its combat capability or may be used in conjunction with a major enemy attack. If the threat is of sufficient magnitude, it may endanger the accomplishment of the division mission and require the employment of major combat units. Effective security within the division area requires each unit and installation to plan, prepare, and rehearse for its own defense.

6-29. Defense Against Armor

a. Antitank defenses are planned to cover likely avenues of armor approach. No area can be overlooked, however, as an aggressive enemy will employ armor over other than ideal terrain.

b. Early detection of enemy tank units is essential. Warning systems are established to insure that antitank weapons can be brought to bear on enemy armor and destroy it outside the area of friendly troop dispositions, preferably in the enemy tank unit assembly areas.

c. Maximum use is made of natural obstacles and antitank minefields to facilitate the destruction of enemy armor by canalizing it into the fields of fire of antitank weapons. All antitank weapons systems are used including individual weapons, mines, tanks, artillery, and nuclear

weapons. The antitank defense is established in depth throughout the defended area. Artillery fires, including chemicals, may be used on tanks to destroy the crews and separate or destroy any accompanying infantry.

d. If enemy armor succeeds in overrunning forward areas, antitank weapons located in depth seek to stop further advance. Forces in forward areas may remain in position to prevent enemy infantry from accompanying its armor and to destroy the enemy tanks. Reserve forces are then committed to destroy enemy forces in the penetration.

6-30. Defense Against Airborne and Airmobile Attack

a. Defense against airborne and airmobile attack includes air defense measures, a warning system, troops available to defend likely objectives, and mobile reserves.

b. Attacking airborne or airmobile elements are normally dispersed during the initial phases and can be dealt with most effectively during the period before they consolidate. To insure rapid reaction to such an attack, prior planning, including detailed reconnaissance of the area to locate probable drop and landing zones, is necessary. Mobile reserves should be located within striking distance of these areas. Armor elements are especially effective against airborne and airmobile forces, particularly during the early stages of their operation on the ground. A major problem is obtaining accurate information of the exact location and extent of the landings. To solve this, good observation throughout the area, an effective warning system, and good communications are essential.

c. Small-scale enemy airborne and airmobile operations may be handled by units or forces located in the rear area. Small-scale attacks that threaten the security of the combat service support activities of the division are the responsibility of the support command commander as a part of rear area security. Combat elements, if available, may be provided to the support command commander to allow him to contain or destroy the enemy airborne or airmobile units. If local forces are not able to defeat the attacker, they form a base for counterattack by stronger reserves.

d. A large airborne or airmobile attack must be considered a part of the main battle, and major

combat forces are committed against it under direct control of division.

6-31. Defense Against Infiltration

a. Enemy infiltration is a constant threat, particularly when forces in the forward defense area are dispersed. Infiltration may be attempted as a means of disrupting operations and harassing installations in the rear area, or the enemy may attempt massive infiltration as a basic form of attack. Specific measures to aid in controlling infiltration include extensive counterreconnaissance, combat patrols, antipersonnel obstacles, warning devices, and electronic surveillance devices.

b. The danger of infiltration is particularly critical during execution of the mobile defense because of the relatively light forces in the forward defense area and the distances between defensive positions. To minimize this threat, constant surveillance is required. This will include the use of listening posts, observation posts, roadblocks, mounted and dismounted patrols between defensive positions, aerial reconnaissance, and electronic surveillance devices.

c. If the threat of attack by infiltration exists, it may be necessary to give a mobile combat force, such as the armored cavalry squadron, a primary mission of combating infiltrating forces within the division area. Such forces maintain ground and aerial surveillance of likely enemy infiltration lanes into the area and of likely assembly or rallying points.

6-32. Defense Against Guerrillas

a. Guerrilla warfare refers generally to combat activities carried out by irregular forces, frequently in small groups. The purpose of such enemy activity in the division area might be to interfere with the movement of troops and supplies, to disrupt communications, or to divert attention and forces from the main battle.

b. Plans for defense against guerrilla activity are part of the division's overall plan for defense. Small-scale attacks may be handled by units in the rear area with their own resources. Operations against small-scale attacks that threaten combat service support activities are included as part of rear area security and are the responsibility of the support command commander. If the threat is of sufficient magnitude, combat forces may be

provided the support command commander for protection of the division support area and supply lines including escort of convoys.

c. Although it is seldom possible to divert major combat elements for protection within the division area, a serious guerrilla threat may require the use of mobile combat elements under division control to combat guerrilla activities. The division reserve may be alerted for possible employment in the event of a large-scale attack in the division rear.

d. For additional information on defense against guerrilla action, see FM 31-15, FM 31-16, and FM 31-21.

6-33. Rear Area Security

a. The term "rear area security" refers to measures, except for active air defense, taken to neutralize or destroy localized enemy forces which constitute threats to units, activities, and installations in the rear areas.

b. The division rear area extends from the division rear boundary forward to the area of responsibility of the committed combat units of the division. Overall area responsibility rests with the division commander for the territory within his assigned boundaries. The G3 has general staff supervision for rear area security and coordinates the assignment of definite responsibilities to major subordinate commanders.

c. Security of those portions of the rear area in which the combat service support functions of the division are conducted is the responsibility of the support command commander. Security of support command elements operating in a brigade trains area is coordinated by the brigade S4. Support command units train their own personnel for local security. Communication and warning systems are established, and standing operating procedures are developed and practiced. Protection is provided for personnel and key activities. Operations are dispersed as necessary, and defensive positions are prepared consistent with the effective execution of unit missions. If rear area security requirements are beyond the capability of support command units, combat units may be provided. If provided, combat units may be used to maintain surveillance over crucial areas, patrol routes, and escort convoys. They may be used to reinforce units under attack or to destroy the enemy.

d. Areas occupied by combat and combat support units as well as combat service support units or installations not under the control of division support command are the responsibility of the unit or installation commander concerned.

e. Depending upon the threat to security and availability of combat forces, a separate combat unit or the reserve may be assigned rear area security tasks or full responsibility for rear area security of the division. In the latter event, responsibilities of the force commander would include coordination of security planning with commanders of other units and installations situated in the rear area.

f. Enemy operations and threats which endanger successful accomplishment of the mission of the command as a whole become operational matters and are beyond the scope of rear area security operations.

6-34. Area Damage Control

a. The term "area damage control" refers to measures taken to avoid or minimize the effects of enemy mass destruction attack or natural disaster on combat service support operations.

b. Control and assessment teams (CAT) are organized by all division units. When a unit has been subjected to a nuclear or CBR attack, a team is sent to its location. The senior member of the team determines the operational effectiveness of the unit to which it has been sent, executes area damage control operations, and takes action to assist the unit in resuming its primary mission. He will assume control of the unit if required. The CAT will estimate the type and number of casualties, the effective strength of the affected unit, and the loss of commanders, if applicable. The senior member will submit reports through command channels by the most rapid means available.

c. The division support command commander is responsible for the detailed planning and execution of area damage control for combat service support units, installations, and essential routes located in the division rear area. He is also responsible for insuring that the support command area damage control plan conforms to the overall division plan. The G4 has general staff supervision over area damage control operations.

d. The division area damage control forces consist of elements of support command units and other designated units. Damage control teams from these units are used for area damage con-

trol functions in their own units or to reinforce other units or installations if directed by the division commander or as otherwise warranted by the situation.

e. The action taken to prevent damage and establish readiness for dealing with attacks before they occur is of primary importance in area damage control operations. This includes planning, training, practice alerts, dispersion, and camouflage. If an attack occurs, the objective is to resume operations, which includes maintaining or restoring control, evacuating casualties, isolating danger areas, and reducing personnel and materiel losses. The following actions are taken: damage control teams are moved to the unit or installation attacked; radiological monitoring and chemical detection and survey are accomplished; damage is assessed to determine its impact on combat service support; salvage operations are begun; firefighting plans and fire prevention are carried out; casualties are given first aid; evacuation is

conducted; traffic and personnel movement control is established; decontamination is undertaken; bomb disposal is executed, as necessary; emergency supplies are provided; communications are re-established; and fallout prediction and warning of threatened areas are accomplished. Available combat and combat support units may assist by providing emergency communications and controlling traffic and personnel movement.

f. Further details on rear area security and on area damage control are contained in FM 54-2, FM 100-5, and FM 100-10.

6-35. Applicable STANAG's

The material presented in this chapter agrees with applicable portions of STANAG-2029 (SOLOG-34R)—Methods of Describing Ground Locations, Areas, and Boundaries and STANAG-2079 (SOLOG-48R)—Rear Area Security and Rear Area Damage Control.

CHAPTER 7

RETROGRADE OPERATIONS

Section I. GENERAL

7-1. Introduction

a. A retrograde operation is a movement to the rear or away from the enemy. Such an operation may be forced by enemy action or may be executed voluntarily. In either event, the operation must be approved by the higher commander. A well-planned, well-organized, and aggressively executed retrograde provides opportunities for inflicting heavy damage to enemy troops and materiel.

b. In the conduct of the retrograde, the division will employ a combination of offensive, defensive, and delaying tactics supported by nuclear weapons. Because of their inherent characteristics of tactical mobility and extensive communications, the armored and mechanized divisions can cover a wider front in the retrograde than the infantry or airborne divisions.

7-2. Types of Retrograde Operations

Retrograde operations are classified as withdrawal, delaying action, and retirement. These are defined as follows:

a. Withdrawal—an operation in which a deployed force disengages from the enemy.

b. Delaying action—an operation in which a force under enemy pressure trades space for time while inflicting maximum punishment on the enemy without becoming decisively engaged in combat.

c. Retirement—an operation in which a force moves away from the enemy to avoid combat under the existing conditions.

7-3. Purpose

Retrograde movements are conducted to accomplish one or more of the following:

a. To harass, exhaust, inflict punishment upon, resist, and delay the enemy.

b. To draw the enemy into an unfavorable situation.

c. To permit the employment of all or a portion of the command elsewhere.

d. To avoid combat under undesirable conditions.

e. To gain time and avoid fighting a decisive engagement.

f. To disengage from battle.

g. To conform to movements of other friendly troops.

h. To shorten lines of communication.

Section II. BASIC CONSIDERATIONS

7-4. Terrain and Weather

Proper use of the terrain can in itself cause considerable delay to an enemy force and provide the delaying force an opportunity to inflict heavy punishment. Plans provide for maximum use of natural obstacles (rivers, swamps, passes, and other defiles). Positions are selected which provide long-range observation and fields of fire. This procedure allows the unit commander to engage the enemy at long range and to maintain his fire as the enemy maneuvers toward the position. Concealment and cover are sought for delaying positions, assembly areas, and routes of movement. Arti-

ficial obstacles are created by mines, atomic and conventional demolitions, toxic chemical agents, and nuclear weapons. These barrier systems make maximum use of natural obstacles. Good road nets facilitate control of the operation and expedite movement. Road nets are denied to the enemy. Terrain affording good cross-country trafficability permits wider dispersion and reduces vulnerability to enemy air and nuclear attack. Clear weather provides good observation and assists in attaining maximum results from nuclear and chemical fires. Unfavorable weather conditions may limit observation, reduce the effects of nuclear fires, limit

cross-country movement, impair efficiency of personnel and equipment, and increase the problem of command and control. Weather conditions are of special interest in the planning and employment of fallout and persistent toxic chemical agents to create obstacles, canalize enemy forces, and disrupt enemy intentions.

7-5. Control and Coordination

a. The division conducting a retrograde operation will frequently be deployed on an extended front. Subsequent operations consist of a series of independent unit actions within the framework of the overall detailed plan. Missions issued to subordinate elements and their sequence of execution will be more detailed and more restrictive than in other types of operations. However, each subordinate commander should be given freedom of maneuver to permit him to exploit advantages that develop at his level. Care must be taken to insure the enemy does not bypass or envelop elements of the force, or make a penetration which might prevent the accomplishment of the overall mission. Detailed control and coordination are accomplished by the use of phase lines, lateral boundaries checkpoints, designated delay positions, time and routes for withdrawal, and provisions for positive traffic control. Plans for combat service support are detailed and provide for the disposition of excess supplies and equipment. Subordinate commanders must be aware of the overall concept of operation to insure effective and intelligent execution.

b. Radio communication is used at all echelons to exercise control and coordination. Careful communications planning is essential to preclude premature disclosure of the retrograde movement. In assigning missions and sectors to subordinate units, the capabilities of unit signal equipment must be considered. For information as to signal communication support, see paragraphs 4-22 through 4-25.

c. Movement of civilians must not interfere with the tactical operation. Civilian control measures prescribed must be easily understood and capable of enforcement with minimum employment of combat troops. The plan for control of civilians should include provisions for—

- (1) Early issuance of directions regarding the overall plan for civilian control. These directives should specify either a standfast policy or the plan for civilian

movement. When movement is authorized, the civilian population is advised of the hours during which movement may be made and specific routes to be used.

- (2) Maximum employment of civilian police, paramilitary units, and other appropriate civilian agencies to post refugee evacuation routes, to block routes leading into the division sector, and to aid in operation of civilian collecting points.
- (3) Establishment of civilian collecting points as required.
- (4) Coordination with adjacent and higher headquarters to integrate plans and provide for mutual support.

7-6. Reconnaissance and Security

a. In retrograde operations, the purpose of reconnaissance is to obtain information for the production of intelligence. All division intelligence collection agencies are employed to provide information of the enemy. Specific route and area reconnaissance missions may be assigned to the brigades within their assigned sectors.

b. The division's intelligence collection plan includes specific essential elements of information, such as:

- (1) Location of enemy nuclear delivery means.
- (2) Numbers and yields of weapons available.
- (3) Direction of movement.
- (4) Strength and composition of the main attack force.
- (5) Location of enemy armor.
- (6) Efforts to impede or block the retrograde movement.
- (7) Use by the enemy of such measures as airborne attack, air attack, amphibious attack, guerrilla action, or infiltration to interfere with the retrograde operation.

c. The division commander uses the available intelligence in arriving at a plan designed to inflict the maximum casualties on the enemy and insure success of the operation. Early intelligence of enemy movement permits the adjustments of plans to minimize interference with the retrograde operation. Carefully planned and violently executed offensive action is taken by the retrograde force to exploit available intelligence when decisive action is indicated.

d. Employment of nuclear fires, coupled with limited offensive action and other fires to include persistent chemical agents, assist in providing security during retrograde operations. Knowledge of the intent to withdraw is denied the enemy as long as possible. Maximum passive security and deception measures are adopted to deprive the enemy of knowledge of the move. These measures may include radio listening silence for units displacing and the maintenance of a normal radio pattern in the forward area, maintenance of normal artillery and other supporting fires, displacement under cover of darkness or under conditions of reduced visibility, and retention of sufficient troops in position to indicate the presence of the entire force.

e. Security against nuclear attack is provided by withdrawing on a broad front, using dispersed assembly areas, and denying observation and intelligence of the movement to the enemy.

f. Positive measures must be taken to provide security to the front, flanks, and rear of the main body from ground and air attack. Organic and supporting tactical air force reconnaissance aircraft are employed to locate and to maintain surveillance of enemy units. Artillery units are positioned to support the security elements.

g. Planning includes provisions for the defense of rear areas. Security detachments are employed to secure defiles which must be traversed by elements of the division. Attached air defense artillery is employed to protect such areas from enemy air attack.

h. Deception measures are employed to assist the main body and security forces in withdrawing with minimum enemy interference. Such measures are also employed to trap and destroy the enemy.

7-7. Combat Support

a. Air Support.

- (1) Tactical air force aircraft are employed against hostile aircraft and to delay the enemy advance by harassing and interdicting hostile ground forces at critical localities. Column cover aircraft are employed to assist the security forces in the accomplishment of their mission. Maximum use is made of tactical air force offensive aircraft to support counterattacks and other offensive action. Air

control teams (ACT's) are allocated to security elements and to other elements of the division in accordance with the overall operation plan. Provision is made for each major command to have ACT's. Fire support coordination lines (FSCL) are prescribed in operation orders. For retrograde operations, the FSCL is located closer to friendly units and may be shifted more frequently than during offensive operations.

- (2) High performance reconnaissance aircraft provide distant reconnaissance and information as to location and disposition of enemy forces. Particular attention is given to the detection of enemy attempts to envelop the flanks. Enemy concentrations located by reconnaissance aircraft are destroyed by nuclear attack or by other offensive action.
- (3) Army aviation units are employed to transport troops, supplies, equipment, and furnish limited aerial fire support. Such units assist the commander in overcoming terrain barriers, rapidly shifting troops, supplying units located at a distance from the main body, evacuating personnel and materiel, and providing limited aerial fire support.

b. Artillery.

- (1) In retrograde operations, field artillery is employed to take the enemy under fire at extreme ranges and force his early deployment. It is used to interdict enemy avenues of approach, deliver harassing fire, destroy enemy concentrations through use of nuclear weapons or conventional fires, and to support the combat elements of the division. Field artillery is prepared to give continuous support during all types of retrograde operations.
- (2) When operating on an extended front or against a strong enemy force, additional artillery units are frequently attached to the division. Artillery is retained under centralized control when such control insures effective support to committed elements of the division. Retrograde operations conducted on a wide front often will dictate the attachment of artillery to subordinate elements of the retrograde force.

Under this latter condition, the light and/or medium artillery battalions may be attached to committed brigades. Other field artillery units may also be attached to these artillery units to furnish effective artillery support. The range capability of the field artillery Honest John battalion (Little John battery, airborne division) normally will permit retention of this type unit under division artillery control and its employment in a general support role.

- (3) Planning for artillery support during retrograde operations includes provisions for artillery support to the division reserve and other uncommitted elements when committed. The division reserve should be provided with forward observers and liaison officers at the start of operation so it may be committed with minimum delay.
- (4) Attached air defense artillery units may be retained under centralized control or elements may be attached to subordinate commands. Priorities for air defense normally will be given to nuclear delivery means, critical avenues of low altitude approach, the support command, and command installations. When air defense artillery is not attached to the division, recommendations are submitted to the higher commander regarding units and areas to be protected.

c. Engineers.

- (1) Engineers may be placed in support of, or attached to, combat units as the situation demands. Execution of the division barrier plan, construction of obstacles and rearward positions, and road maintenance may dictate a centralized engineer effort. The requirements for engineers by units in contact with the enemy may dictate attachment of engineers to them. Brigades may further place engineers in support of battalion task forces. Unless additional engineer support is furnished by higher headquarters, attachment of engineers to combat units may decrease the effectiveness of the engineer effort.
- (2) One of the most important functions of the engineers will be to provide advice and

assistance in the overall formulation and implementation of the barrier plan. Barriers are used by the retrograde force commander to delay the enemy or canalize him into areas where he can be destroyed with nuclear or nonnuclear fires. Well-planned and widespread use of barriers, to include chemical munitions, assists in gaining time and in avoiding close pursuit. Barrier plans are coordinated with higher headquarters to prevent interference with future operations. The barrier plan is prepared as an annex to the operation order (plan).

- (3) Subsurface or surface nuclear detonations may be employed to create craters, fallout patterns, and contaminated areas, and to slow or impede the enemy's advance (FM 5-26).
- (4) Detailed plans are prepared for demolitions along enemy avenues of approach and those routes which lead into the division zone. Particular attention is given to the destruction of bridges and tunnels. Demolitions are placed in defiles and on routes traversing natural and artificial obstacles. Demolition plans include—
 - (a) Provisions for placing and firing the necessary demolitions.
 - (b) Adequate guards to prevent premature firing of charges or seizure by enemy infiltrators.
 - (c) Fixed responsibility for the destruction of bridges.
 - (d) Schedule for destroying bridges no longer needed by friendly forces.
 - (e) Covering by fire, including nuclear fire, those obstacles created by demolition.
- (5) The destruction of bridges is of major importance to the retrograde force commander. Care is exercised to insure that bridges are not destroyed prematurely or that they are not seized intact by the enemy. To accomplish this, responsibility for destroying bridges within his zone is delegated to the tactical commander. This delegation of responsibility is often subject to specific restrictions imposed by the higher commander. A demolition firing party and a demolition guard are designated for each bridge to be destroyed. The guard commander has the authority

to destroy the bridge, subject to conditions established by the higher commander. A list of all units that are to use the bridge is furnished the guard commander. Each unit commander notifies the guard commander when his unit has cleared. After the main body has crossed, the majority of the bridges in the zone are destroyed. Certain predesignated bridges are left for use by security elements. The demolition guard commander is responsible for destroying the bridge to prevent its capture by the enemy, but will do so only in accordance with the provisions of the demolition plan.

d. Signal. Because of the type of support furnished, signal units normally will be retained under centralized control. The communications centers of the command operations and forward communication companies will be employed to supplement the organic communication means within the subordinate units to provide an effective signal communications system. Every effort will be made to prepare signal facilities in the rearward areas well in advance of their occupation by the main combat elements.

7-8. Combat Service Support

a. Combat service support units are retained under centralized control when this procedure will provide effective support for major subordinate units. When operating over extended distances, the attachment of combat service support units to brigades may be required. Under these conditions, elements of the medical, supply and transport, and maintenance battalions may be attached.

b. Planning for a retrograde operation includes the following:

- (1) Adequate support for the operation;
- (2) Evacuation of supplies and disabled equipment;
- (3) Destruction of supplies and equipment (except medical) not evacuated; and
- (4) Prompt evacuation of patients.

This planning avoids the unnecessary destruction, loss, or hauling of supplies. These objectives are attained by limiting the flow of supplies into the forward areas and initiating early evacuation of excess supplies. Supply discipline is rigidly enforced. The commander directing a retrograde operation issues specific instructions authorizing the destruction of supplies and equipment that

cannot be evacuated and fixing responsibility for their destruction. During retrograde operations, supplies normally are prepositioned along routes of withdrawal. This reduces the enemy's ability to interfere with supply operations, simplifies supply procedures, and permits early withdrawal of supply units.

c. Medical evacuation is expedited during retrograde operations. Aeromedical evacuation service normally is provided by field army units. When such units are not available or cannot provide the support required, division aircraft may be employed to assist in the evacuation of patients. Clearing stations are established in the rear of committed brigades to provide effective support. Seriously wounded personnel who require immediate surgical treatment may be evacuated direct to mobile army surgical hospitals. Air evacuation direct from the battalion aid station is used to the maximum. The decision to abandon casualties is a command decision. If a commander is forced to abandon patients, he must, as far as military considerations permit, provide appropriate medical care for them.

d. Maintenance support for committed units is provided by forward support companies of the maintenance battalion. These companies are augmented with maintenance personnel from the headquarters and main support company when necessary. Each forward support company of the maintenance battalion is responsible for support of a designated unit or group of units or of all units in a specified area. The forward support companies repair equipment on-site when possible in order to maintain combat effectiveness and reduce evacuation requirements. Badly damaged materiel is evacuated to the rear to prevent its capture and to make necessary repairs. Equipment which can be repaired in position is so repaired to maintain combat effectiveness and reduce evacuation requirements. Equipment (except medical) which can be neither repaired nor evacuated is destroyed.

e. Combat service support units and installations are located well to the rear during retrograde operations. Such locations assist in insuring uninterrupted service, maximum protection, and minimum displacement. Maximum dispersion consistent with control and provisions for local security is maintained. These units are displaced early and normally under cover of darkness. This reduces traffic congestion and elimini-

nates interference with the movement of combat units. Details on combat service support are contained in FM 54-2.

7-9. Leadership, Command, and Morale

a. Retrograde operations at all echelons demand personal courage and aggressive leadership to maintain the offensive spirit within the units. The maintenance of a high state of morale is of special importance during retrograde operations. All troops are oriented to the extent possible on the purpose of the operation. An aggressive, offensive spirit is maintained by emphasizing the opportunities which will be afforded for destroying the enemy. Every opportunity for successful

offensive action is seized and the results disseminated to nonparticipating units. Successful nuclear fires employed against the enemy and their results are made known to the troops.

b. Operation and administrative plans have a direct influence on morale. Planning must be thorough and efficient. Provision is made to insure the withdrawal of all units and the prompt evacuation of casualties. Supply requirements are computed and appropriate measures are prescribed to insure receipt at the smallest unit level. Plans are closely supervised, effectively controlled, and vigorously executed. The highest degree of professional competence is demanded at all echelons.

Section III. WITHDRAWAL

7-10. General

a. Withdrawals may be executed during daylight or at night and may be forced or voluntary.

b. Night or voluntary withdrawals are favored over daylight or involuntary withdrawals since they are conducted without enemy pressure. They provide freedom of action, facilitate deception, and reduce the effectiveness of observed enemy fires.

c. A daylight withdrawal under direct enemy pressure is avoided, if possible, because observed enemy fires may result in heavy casualties and loss of freedom of action.

d. Regardless of the type of withdrawal being conducted—either voluntary or involuntary—contact is maintained with the enemy forces by conducting delaying actions to provide security and deception and to prevent a rapid enemy advance. When the corps is conducting a withdrawal, the division may be employed as a covering force to provide security for the remainder of the corps.

e. In the development of the withdrawal plan, division should require that subordinate units develop contingency plans for techniques of both the voluntary and the involuntary withdrawal. The success of voluntary withdrawal is based upon deception, while an involuntary withdrawal envisions fighting to the rear. If a withdrawal is made at night under enemy attack or when secrecy of movement is lost, it is conducted as an involuntary withdrawal. If smoke or other conditions reduce enemy observation, an involuntary withdrawal may be based upon deception as in a vol-

untary withdrawal. Illuminants are planned to support a voluntary withdrawal in the event secrecy is lost.

7-11. Plans and Orders

a. The division commander and his staff formulate a plan of withdrawal which includes a scheme of maneuver and a plan of fire support. Both of these are developed concurrently and must be closely integrated. The plan of withdrawal includes essential details of security, combat service support, and the establishment of the communication system necessary for control. Planning and directives for the operation must include, but are not limited to, the following elements:

- (1) New location to be occupied and disposition of units in that location.
- (2) Time and sequence of withdrawal of all subordinate units, based upon preserving the integrity of the force.
- (3) Sectors, phase lines, and routes of withdrawal to be used by subordinate units.
- (4) Provisions for covering force and its location.
- (5) Tactical cover and deception measures.
- (6) Organization for combat and time phasing of attachments and support.
- (7) Provisions for disposal or destruction of supplies and equipment, except medical, in a manner and at a time that will not compromise the plan of withdrawal.
- (8) Provision for fire support.
- (9) Provisions for combat service support.

- (10) Provisions for evacuation of patients.
- (11) Provisions for breaking contact in an involuntary withdrawal and action to be initiated in the event the enemy attacks to followup a voluntary operation.
- (12) Traffic control measures.
- (13) Communications plan.

b. As soon as a concept of operation is reasonably firm, the commander issues a warning order in sufficient detail to permit reconnaissance and planning by subordinate commanders during daylight hours.

c. The withdrawal may be facilitated by the conduct of aggressive, limited objective attacks. Such attacks force the enemy to hold his attack or to assume the defense thereby permitting the withdrawal to be conducted with minimum interference.

d. Division reserves are used to cover the withdrawal of the division. They may be assigned route and area reconnaissance missions or to seize and hold key terrain essential to the success of the mission.

e. Nuclear weapons are employed to assist in the withdrawal of units and to support the security forces by firing against located enemy concentrations. During operations, nuclear delivery means require protection against hostile action. This protection may be accomplished by their early withdrawal to rearward positions from which they can continue to deliver fire; by assigning specified combat units the mission of protecting the nuclear delivery means; or by locating uncommitted elements of the reserve sufficiently near the nuclear delivery means to afford them security without detracting from the ability of the reserve to perform its primary mission and without so concentrating forces as to present a lucrative target for enemy fires, risking the loss of both the reserve elements and the nuclear delivery means.

7-12. Conduct of Voluntary Withdrawal

a. Division normally specifies the time of withdrawal. To provide the maximum period of darkness, the withdrawal should commence as soon as darkness permits.

b. The division commander maintains control of the movement of subordinate units to successive delay positions by designating specific routes of withdrawal (including alternate routes), priority of movement by units on these routes, and enforcement of traffic control measures.

c. All daylight activities which might disclose the intention to withdraw, such as abnormal movement of vehicles to the rear, are prohibited. Necessary daylight motor movements to the rear, including reconnaissance, are made by infiltration. Provisions are made to insure that noise does not betray the withdrawal.

d. Brigades and other units in contact with the enemy designate detachments to be left in contact to protect the initial movement of the main body to the rear, and to simulate normal activity. In designating these forces to be left in contact, every effort should be made to provide mobility equal to or greater than that of the enemy.

e. The main force moves to the rear in the following sequence:

- (1) Elements to reconnoiter and prepare the next position. These units moved by infiltration.
- (2) Combat service support units, artillery not essential to the support of detachments left in contact, and the division reserve that becomes the division covering force (fig. 23).
- (3) Main body (fig. 24).
- (4) Detachments left in contact (fig. 25).

f. The withdrawal of forward units is executed on a broad front. Units move directly to the rear, form march columns, and proceed to the designated location. To further the reorganization and assembly of units, brigade or division may designate assembly areas for subordinate units. Such areas, when used, are widely dispersed and are occupied for minimum periods of time.

g. When all elements of the division except the detachments left in contact have disengaged from the enemy and formed march columns, the withdrawal from action is considered completed. Further movement to the rear or away from the enemy is classified as a retirement and is covered in paragraphs 7-21 and 7-22.

h. The detachments left in contact have limited capability for resistance, and must depend primarily upon deception and long-range supporting fires to accomplish their mission. Division coordinates their employment although brigades specify their time of withdrawal in consonance with the actions of adjacent units. Withdrawal of detachments left in contact should be initiated in time to permit their withdrawal prior to daylight.

i. The success of a voluntary withdrawal depends upon control, security, and deception. Con-

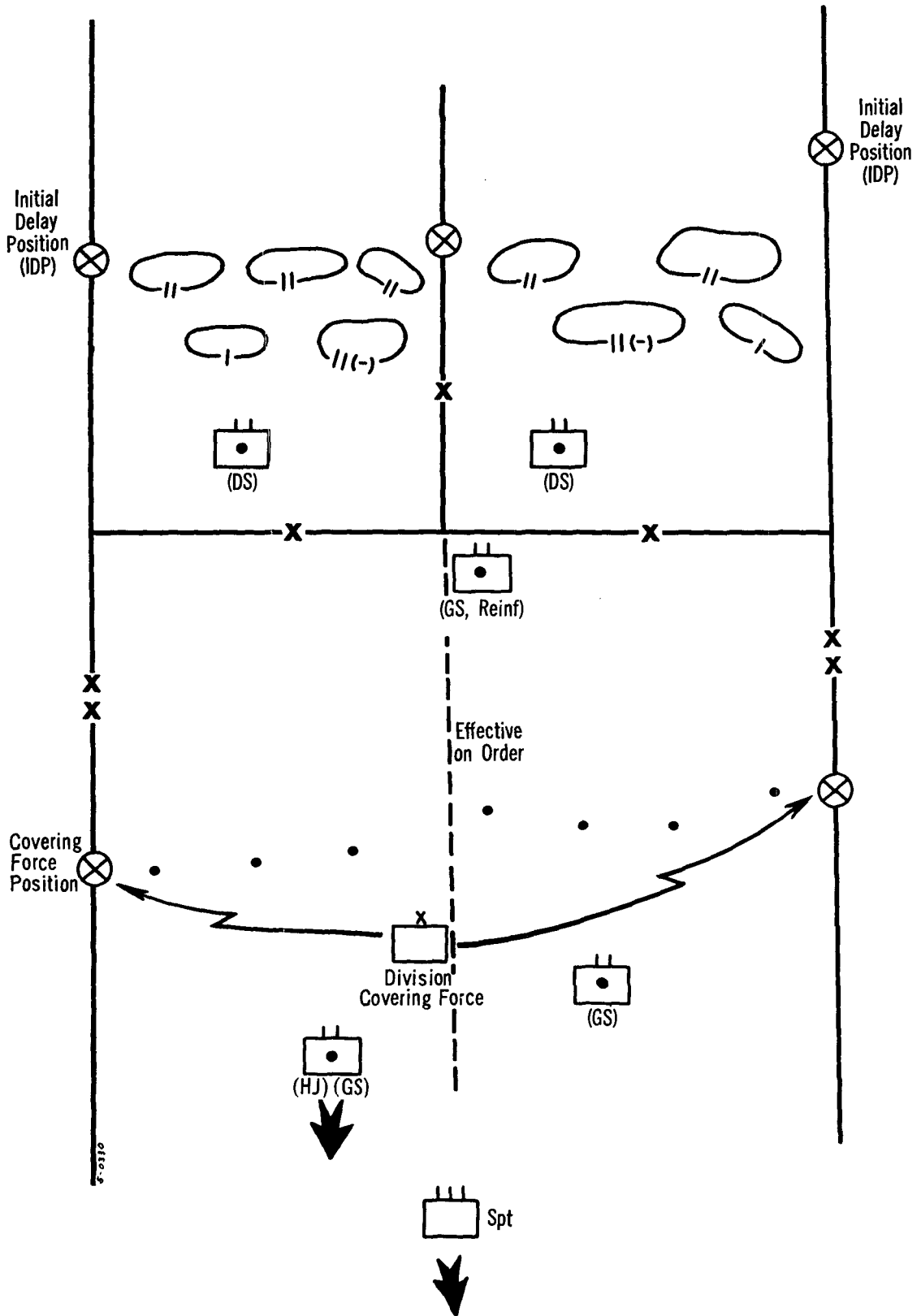


Figure 23. Voluntary withdrawal—division first phase.

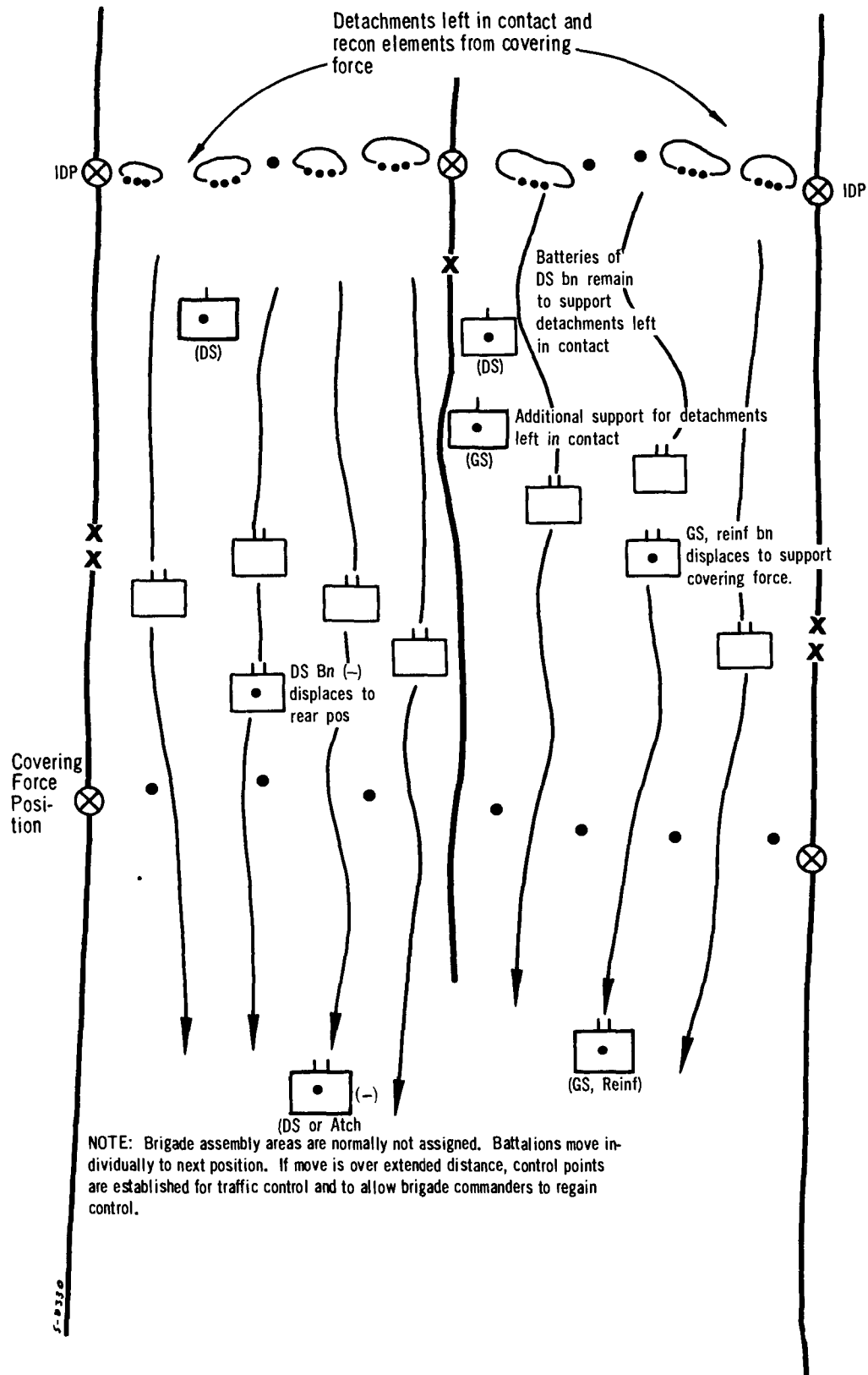


Figure 24. Voluntary withdrawal—division second phase.

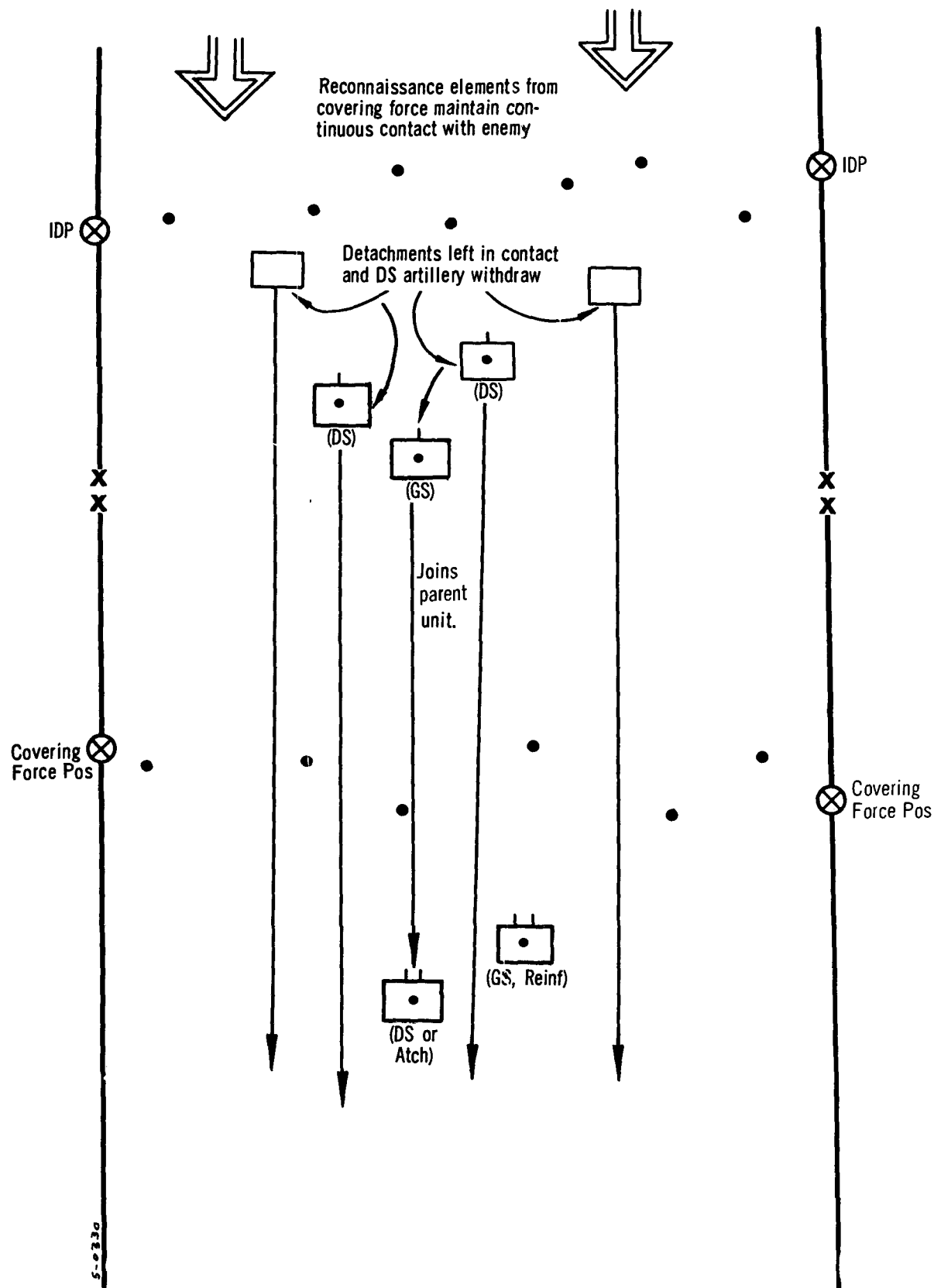


Figure 25. Voluntary withdrawal—division third phase.

trol and security are provided by thoroughly detailed preparation of plans, deception, and the simulation of normal radio traffic, fires, and other activities.

7-13. Conduct of Involuntary Withdrawal

a. An involuntary withdrawal is based upon elements fighting their way to the rear, using delaying tactics on successive positions. The greater the mobility and long-range firepower of the division, the better will be its capability to conduct a successful involuntary withdrawal. Since involuntary withdrawals normally are subject to enemy observation, success depends upon mobility, control, effective employment of covering forces, and local control of the air.

b. The procedure followed in an involuntary withdrawal provides for security forces at all echelons to cover forward elements which withdraw intact without leaving detachments in contact. Each unit of the forward defense force normally provides and controls its own security force. These forces should be organized with a relatively high proportion of tanks to obtain the greatest delay, to inflict maximum casualties on the enemy, and to minimize friendly losses. Close coordination and control between unit security forces are required.

c. A covering force normally is provided by the division reserve. It should consist of tanks and mechanized or motorized infantry, and be augmented by Army aviation, field artillery, engineers, and, if available, air defense artillery. It accomplishes its mission either from the security area of the new position or from prescribed areas forward thereof. In addition to covering the withdrawal of the forward defense forces, it is prepared to assist those forces to break contact and to conduct delay between successive positions.

d. The least heavily engaged elements of the forward defense force withdraw first. Those heavily engaged generally withdraw through cover provided by the division covering force and the massed fires of all delivery means available (fig. 26). Nuclear fires may be used to assist the forward defense force in breaking contact with the enemy and in supporting the security forces. Smoke may be used to screen movement and to reduce the accuracy of enemy fire.

e. Movement is expedited. Assembly areas normally are not used. Instead, units move to successive covering positions which are used alternately by the covering force and the disengaged forward defense forces until the entire unit breaks contact with the enemy or reaches the new delay position (fig. 27).

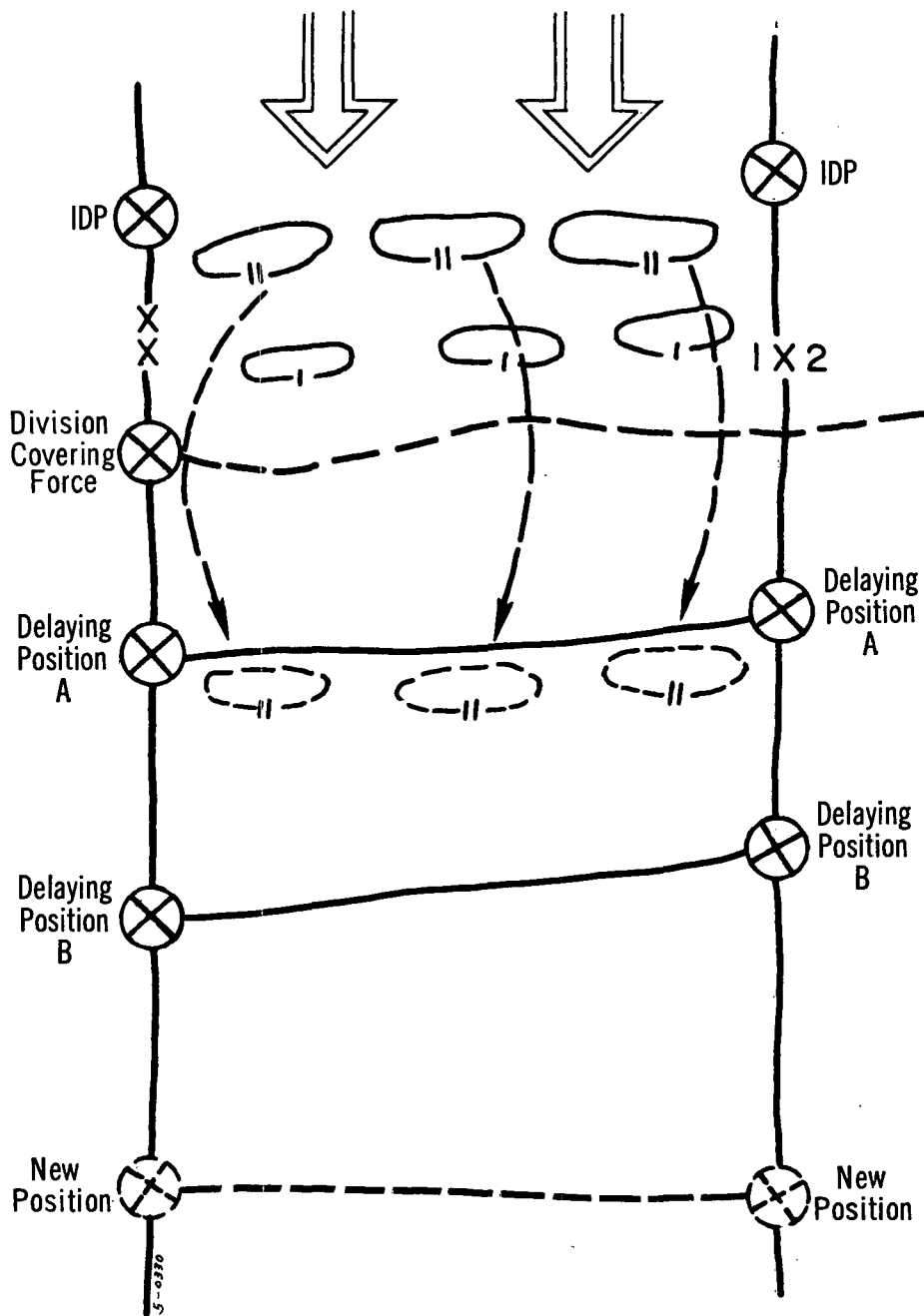


Figure 26. Involuntary withdrawal—forward defense area forces disengage.

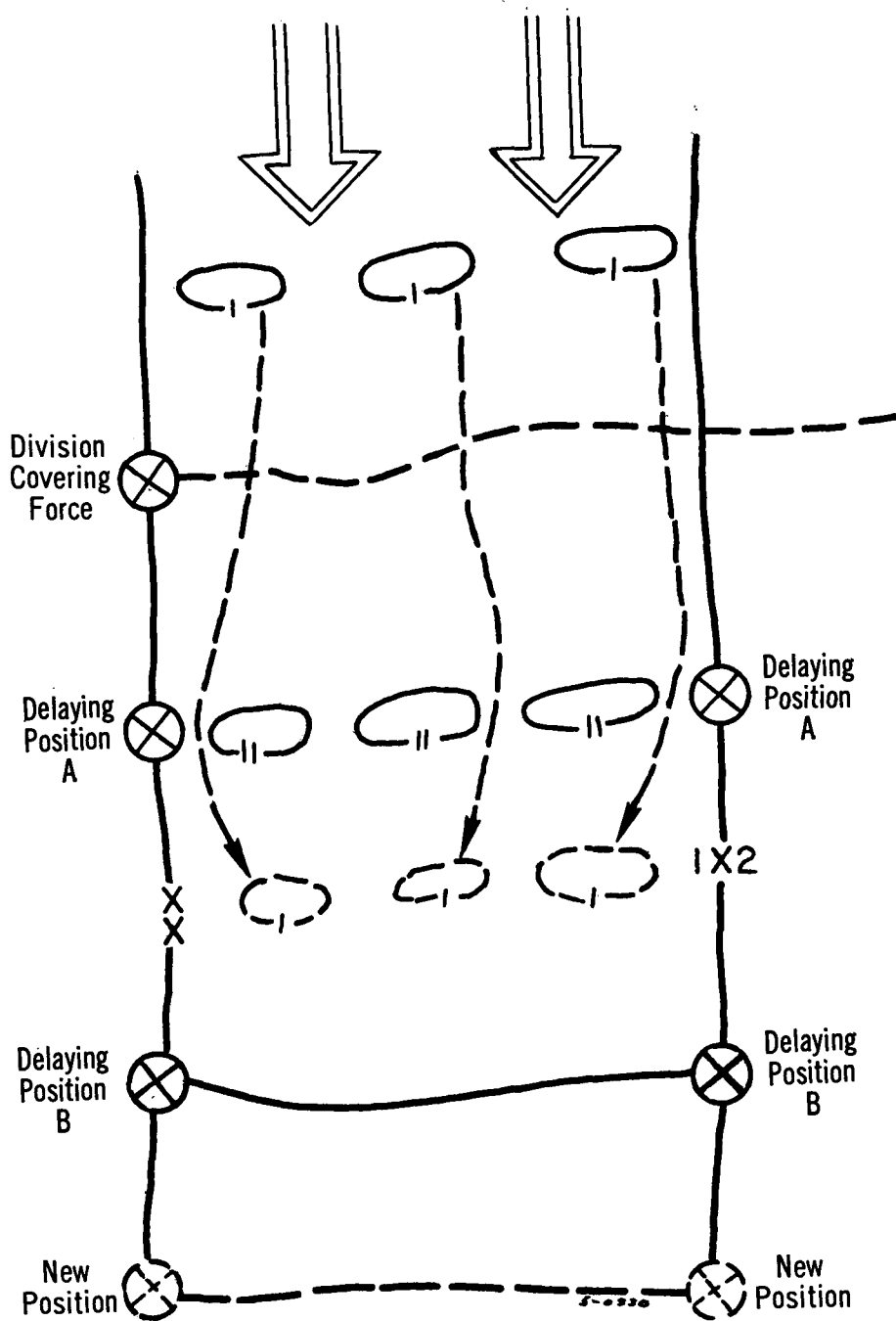


Figure 27. Involuntary withdrawal—security forces withdraw through division covering force.

Section IV. DELAYING ACTION

7-14. General

a. A delaying action is an operation in which maximum delay and damage are inflicted on an advancing enemy without the delaying force becoming decisively engaged in combat. It is the type of action normally fought by covering forces and security detachments. In executing a delaying action, minimum space is exchanged for maximum time.

b. A unit is decisively engaged when it has lost its freedom of maneuver and no longer possesses the capability of initiating planned action by the introduction of firepower or maneuver at its echelon. Although elements or all of a battalion task force or the bulk of a brigade may be decisively engaged, the division must retain the ability to maneuver to successfully execute the delay.

c. The division accomplishes a delaying mission by—

- (1) Delay on successive positions.
- (2) Delay on alternate positions.
- (3) Combination of the above techniques.

d. Continuous delay is inherent in each of the above techniques and requires constant contact with the enemy by at least a portion of the delaying force, including the use of long-range firepower and maneuver, to cause him to deploy, reconnoiter, maneuver, and take other time consuming measures.

e. The choice between delay on successive positions and alternate positions is usually based on the width of the front, the forces available, the enemy threat, and the period or degree of delay required.

- (1) The delay on alternate positions can only be used when the division can accomplish its mission and can occupy two positions simultaneously. This normally will prevail when the frontage assigned the division is relatively narrow.
- (2) Delay on successive positions may be used when a relatively wide front is assigned.

f. The above techniques may be used in combination. Continuous delay is sought on and between positions. Situations beyond the control of the division may require rapid transition from one technique to another. Aggressive offensive action is taken whenever opportunities arise to inflict serious casualties on the enemy. Similar

action may be required as a means of deception, to control dominating terrain, or to disengage a decisively engaged force.

g. Planning for and the control of the conduct of the overall operations is centralized, but its execution is decentralized. Within the overall plans announced by the division commander, subordinate unit commanders are given maximum freedom of action. This freedom of action permits the exploitation of any advantages which may accrue at the small unit level and allows increased delay to be caused at that level.

h. Nuclear fires, to include ADM, may be used by the division to inflict casualties; to create obstacles to enemy movement; to entrap, confine, or canalize the enemy; and to deny him use of major facilities. For additional information on the employment of ADM, see FM 5-26.

i. For more information on the delaying action see FM 100-5.

7-15. Planning the Delaying Action

When the division is given a mission to delay, the higher commander (corps or field army) normally will state the mission in general terms allowing the division commander maximum freedom for personal initiative. The following is considered to be the minimum command guidance necessary:

a. *General Location of the Initial Delay Position.* The higher commander's guidance may be specific to the point of designating the initial delay position (IDP) but normally will indicate a general area, thereby allowing the division commander to reconnoiter the area and recommend or select the specific location. If the division is in contact when the decision is made to initiate the delay, it is not necessary to designate an IDP since the friendly forward dispositions become the IDP.

b. *Area for Delay.* The higher commander will specify the area in which the division is responsible for the delay. Lateral boundaries are prescribed and coordinating points are indicated for the IDP and subsequent corps designated delay positions. When the division is deployed to cover the withdrawal of other corps elements, it is free to operate in the entire corps sector.

c. *Period of Delay.* The corps commander will specify to the division commander the time he

is to delay the enemy forward of a specified line. Normally, the division commander will be given the IDP and the new location of the corps security forces. He may add intermediate delay positions or phase lines.

d. Location of the New Corps Security Area. Location of the new corps security area and distribution of the elements occupying it are of primary concern to the delaying force commander since he must make plans for its occupation or a possible rearward passage of lines. For details on withdrawal through a rearward position see paragraphs 8-7 through 8-10. If the location of the new security areas is not known during the initial planning, the information must be provided the delaying force commander early enough to permit him to make timely plans. In the case of a division covering the withdrawal of other corps elements, the division commander will, if possible, insure that his brigade boundaries coincide with the boundaries of the major forces occupying the corps security area.

e. Limitations Imposed Upon the Operation. In his guidance, the corps commander must identify those areas in which he has reason to limit the operation. As an example, limitations on the use of nuclear weapons, chemical or biological agents, or a specific control measure may be necessary during a particular operational phase of the delaying action.

f. In turn, the division order normally will specify the initial delaying position, the time schedule for the delay, intermediate delaying positions, boundaries, phase lines, and the line along which the delay will terminate.

7-16. Selection of Delaying Positions

a. Delaying positions are selected which will provide the maximum delay while inflicting the most damage upon the enemy. Positions are selected where minimum forces can cause the enemy to mass and thus present a profitable nuclear target. Successive delaying positions should be far enough apart to cause the enemy to regroup prior to continuing the attack from one position to the next. Delaying positions are sought which incorporate the following:

- (1) A series of parallel ridges across the lines of hostile advance.
- (2) Unfordable streams, swamps, lakes, and other obstacles on the front and flanks.

- (3) High ground with good observation and long-range fields of fire.
- (4) Concealed routes of withdrawal.
- (5) A road net and/or areas providing good cross-country trafficability.

b. Delaying positions may be selected and designated by division or left to the discretion of brigade commanders. When a suitable natural obstacle extends across the entire division front, it normally will be designated as a delaying position by the division commander. In the absence of suitable natural obstacles, the division commander may designate phase lines rather than actual delaying positions. Concurrently, he announces how long the enemy is to be held forward of each phase line. Here the commander relates the overall time for delay to the depth of the area in which the delay will occur. From a study of the terrain he further relates this time in hours to distance on the ground, establishes phase lines, and determines the length of time the enemy must be held forward of each of these lines to gain the minimum overall time prescribed in the mission.

7-17. Organization of Ground

a. In planning for a delaying action, definite sectors of responsibility are assigned to each committed brigade. The limits of each sector are delineated by boundaries. These boundaries may be extended through the depth of the division sector, and as a minimum, must extend through the next rearward division delaying position or phase line.

b. In assigning sectors to subordinate units, each enemy avenue of approach is included, in its entirety, in the sector of one unit. Boundaries are assigned so that terrain features which control fire and observation into a sector are assigned to the unit having responsibility for that sector.

c. Natural obstacles are exploited in organizing delaying positions. Artificial obstacles also are used to improve the position to the extent possible with the materials, time, and manpower available. Although important, obstacles alone must not be relied upon to halt the enemy's progress. An aggressive enemy will attempt to gain surprise by attacking over ground considered impassable. All obstacles—natural and artificial—must be covered by fire to cause the maximum delay. In

massing to overcome such defended obstacles, the enemy may present a profitable nuclear target.

7-18. Organization for Combat

a. The division commander allocates troops to the delaying force and the division reserve. A division covering force may be employed if the division is not initially in contact. In such cases, the division commander allocates troops to the division covering force and provides a control headquarters for its employment.

b. The size of the delaying force necessary across the division front will depend upon the relative enemy strength, the width of the sector, the nature of the terrain, the depth of the sector, and the period of delay required. Usually, this will result in the major portion of the division being required in the major portion of the delay position.

c. The division reserve will be small since the bulk of the force is needed on the delaying positions. There may be times when the division commander may retain the authority to employ, as a division reserve, a portion of the troops allocated to a brigade.

d. Delaying positions are not organized in great depth. Firepower is forward with the bulk of the forces concentrated on likely avenues of approach. The delaying force should be capable of delivering long-range fires; the reserve should be highly mobile and responsive in the conduct of limited objective attacks and counterattacks.

e. Engineer support is provided to each committed brigade, usually by the attachment of elements of the engineer battalion.

f. The organization for combat of the division artillery and the division support command is discussed in paragraphs 7-4 through 7-9 and FM 54-2, respectively.

7-19. Delay on Successive Positions

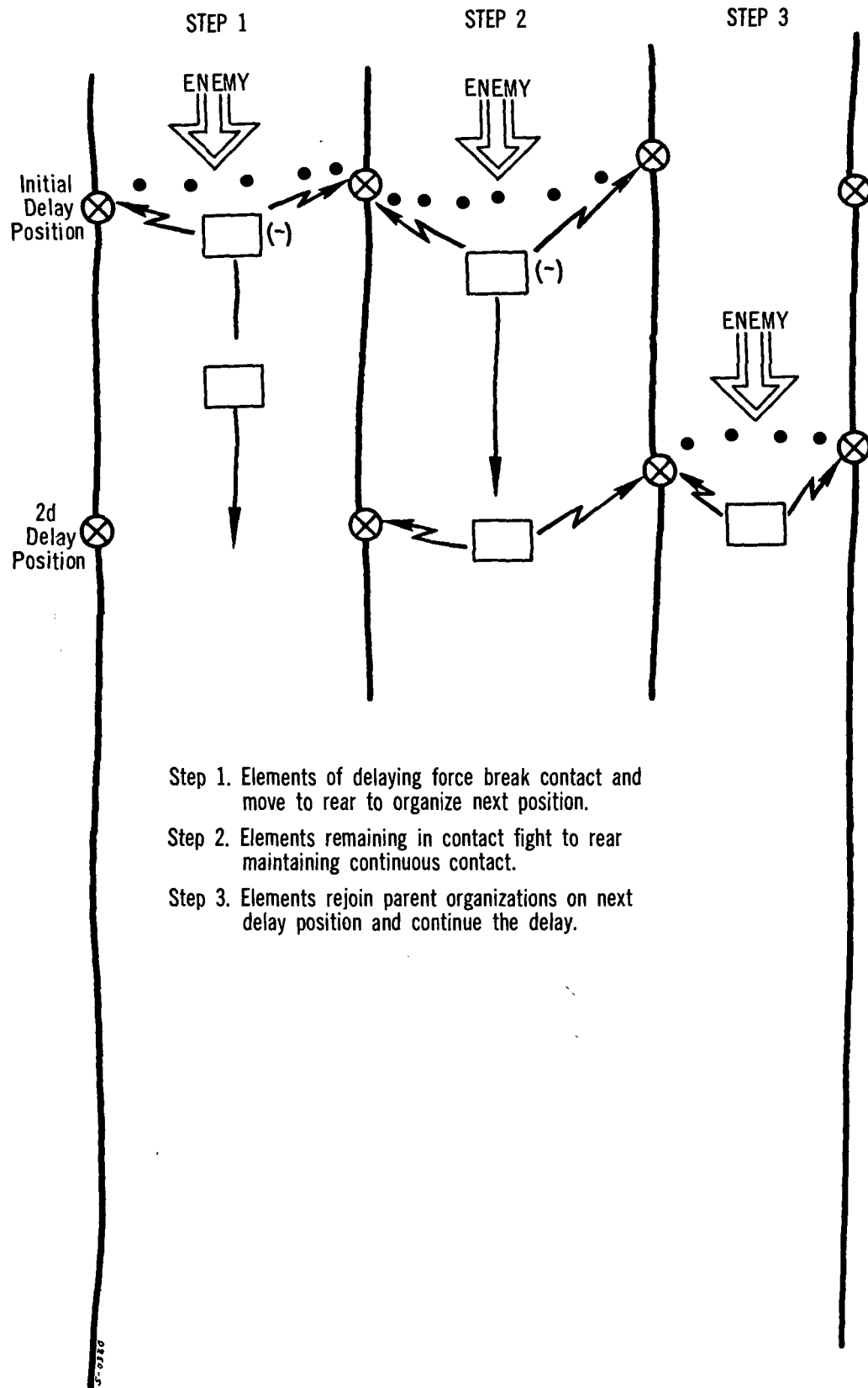
a. Delay on successive positions is the type of delaying action most frequently conducted by the division. When employing this type of delaying action, the major portion of the division is continuously in the line. Figure 28 is a schematic of a brigade delaying on successive positions.

b. Delay on successive positions envisages the improvement and occupation of each natural delaying position. Units delay continuously on and between these positions. Terrain is never given up unnecessarily.

c. The IDP is organized and occupied by the major elements of each committed brigade. In some cases, the IDP is occupied prior to the establishment of contact with the advancing enemy. In such cases, a division covering force or security elements from each committed unit are sent forward to establish contact and to delay the enemy advance toward the initial position. Long-range artillery and the units in the IDP take the enemy under fire at maximum range. This fire inflicts casualties on the enemy, causes his early deployment, and requires him to take other time-consuming measures to close with the position. As the enemy maneuvers toward the position, all individual and automatic weapons are brought to bear, thus subjecting the enemy to an increasing heavy volume of fire.

d. Each position occupied by a forward unit is defended by that unit until the enemy threatens decisive engagement or envelopment of the position. When the maximum delay has been achieved and it becomes apparent that further occupation of the position will result in the unit becoming decisively engaged, the withdrawal begins. The withdrawal may begin in accordance with prearranged plans, or order of the higher commander, or to prevent decisive engagement. Each withdrawal is coordinated with division and with adjacent units.

e. When the order to withdraw is received, a portion of the unit concerned displaces directly to the rear and occupies the next designated delaying position. The remainder of the unit maintains contact with the enemy and continues to delay between the first position and the next rearward delaying position. Forces remaining in contact should contain as much tank strength as possible. These units, when threatened with decisive engagement, slowly withdraw toward the next position. When the enemy has advanced to within range of the rear delaying positions, he is subjected to fire by the elements occupying these positions. These units provide overwatching fire for the delaying elements that have remained in contact. When forced back by the enemy, the forces which have remained in contact rejoin that portion of the command which is occupying the second prepared position. The commander then employs all his available firepower to hold the position as long as possible. When he is no longer able to hold the position without becoming de-



- Step 1. Elements of delaying force break contact and move to rear to organize next position.
- Step 2. Elements remaining in contact fight to rear maintaining continuous contact.
- Step 3. Elements rejoin parent organizations on next delay position and continue the delay.

Figure 28. Delay on successive positions.

cisively engaged, the withdrawal procedure is repeated.

f. The mission assigned to the division or a brigade may require that the enemy be delayed for an extended period in an area which has little depth. Under these conditions, the division may be required to risk decisive engagement to accomplish its mission. Maximum use is made of nuclear and nonnuclear fires to destroy those enemy forces that threaten the delaying position. Counterattacks disrupt the enemy attack, inflict casualties, and cause additional delay.

g. The division normally will retain a reserve when conducting a delay on successive positions. This reserve will be comparatively small and as mobile as possible. The reserve may be ordered to provide security forces forward of the delaying position, counterattack, protect a threatened flank, secure vital rear areas, prepare successive delaying positions, conduct spoiling attacks to assist in disengaging forces, or provide overwatching fire to a withdrawing unit. The reserve frequently will be employed to assist a decisively engaged unit to disengage by executing a counterattack. Such counterattacks may take the form of limited objective attacks. In this type of action, the counterattack force strikes the enemy flank immediately in rear of the area of contact. Enemy units moving forward in the march column are struck and destroyed prior to reaching the area of contact. The counterattack force usually does not attempt to seize and hold terrain; after reaching its objective, it delays back into friendly terrain. Counterattacks designed to strike the enemy flank and to place direct fire on the advancing enemy columns may also be used to cause the damage and delay required.

h. In the delay, brigades hold the enemy as far forward as possible, for as long as possible, without becoming decisively engaged. Based upon the phase lines and time-phasing schedule announced by the division commander, brigades select delaying positions to be occupied by their major subordinate elements. These units delay on and between these positions. Delaying positions selected by brigades are coordinated with division and with adjacent units.

i. Committed brigades may also retain a small reserve. This reserve may be employed on the same types of missions as the division reserve. The

division commander may require subordinate commanders to obtain his permission prior to the commitment of their reserves. Retention of control over the reserve of subordinate units enables the division commander to constitute a larger division reserve, should the situation require such action.

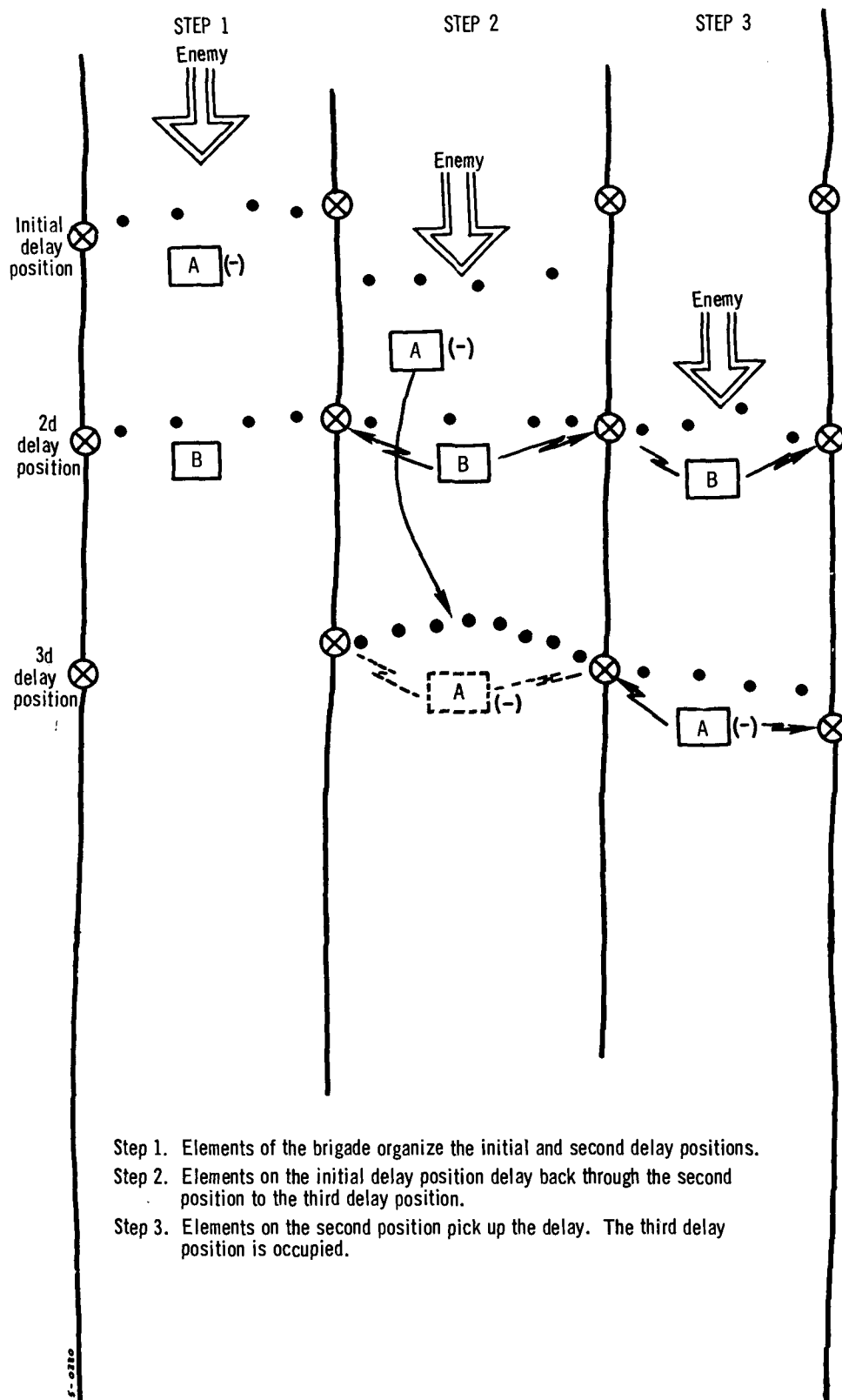
7-20. Delay on Alternate Positions

a. When operating on a narrow front, the division may elect to delay on alternate positions. Employing this technique, the division is organized into two elements. The first element occupies the IDP and engages the enemy. The second element occupies and improves the second delaying position.

b. Those units occupying the IDP delay the enemy by employing the continuous delay technique. They delay on the IDP and between it and the second delaying position. When the units arrive at the second delaying position they withdraw through or around the units that prepared and are occupying that position. After withdrawing through the second delaying position, the units proceed to the third delaying position and commence the preparation and occupation of that position. Responsibility for delay of the enemy is assumed by the units on the second delaying position when the first element has withdrawn through their position. Figure 29 is a schematic of a force delaying on alternate positions. The delay procedure is then repeated, with each element being alternately in contact and responsible for causing the required delay. When not in contact, each element is responsible for improving and occupying rearward positions and for providing overwatching fire for the withdrawal of the element that is in contact.

c. Division-level reserves normally are not retained if this type of delaying action is being conducted. The uncommitted elements occupying alternate positions will be committed as reserves if the need arises.

d. Delay on alternate positions has the advantage of providing more time for the improvement of delaying positions and the maintenance of materiel. It also provides troops with periods of relief from combat. However, this technique may leave the division vulnerable to nuclear fires because of the frequent rearward passage of lines required.



- Step 1. Elements of the brigade organize the initial and second delay positions.
- Step 2. Elements on the initial delay position delay back through the second position to the third delay position.
- Step 3. Elements on the second position pick up the delay. The third delay position is occupied.

Figure 29. Delay on alternate positions.

Section V. RETIREMENT

7-21. General

a. A retirement is a retrograde operation in which a force moves away from the enemy to avoid combat under the existing condition.

b. A retirement may be made following a withdrawal or when there is no actual contact with the enemy. When a withdrawal precedes the retirement, the retirement begins after the main forces have broken contact with the enemy and march columns have been formed.

7-22. Conduct of the Retirement

a. The division assigns definite routes and march objectives or rearward positions to each of the major commands moving with the main body. Movement by night is emphasized. During the initial stage of the retirement, control may be decentralized to subordinate commanders. However, as the main body increases the distance

between itself and the enemy, the division commander resumes centralized control.

b. Security for the main body is provided by advance, flank, and rear guards similar to the security employed in a movement to contact. When the retirement is preceded by a withdrawal action, a strong rear guard normally will be required. The rear guard employs delaying action tactics to delay the advancing enemy and to prevent interference with the movement of the main body. The commander must be especially watchful for attempts by the enemy to envelop the retiring force. Tactical air force reconnaissance aircraft and aircraft from the aviation battalion are employed to obtain early information of such enemy attempts.

7-23. Applicable SOLOG

The material presented in this chapter agrees with applicable portions of SOLOG-82—Withdrawal in Nuclear Operations.

CHAPTER 8

RELIEF OPERATIONS

Section I. GENERAL

8-1. Purpose and Types of Relief

a. When tactical operations continue over a prolonged period, conservation of fighting power, maintenance of effectiveness, and the tactical plan may require the periodic relief of committed units. Such reliefs are accomplished by a relief in place or a passage of lines.

b. The division may participate in a relief when the entire division relieves other divisions, or it may direct and control reliefs of subordinate units.

8-2. Basic Considerations

The following considerations are common to the planning and execution of all types of reliefs.

a. Adequate time must be provided for planning and reconnaissance. Early issuance of warning orders is mandatory.

b. Plans must be detailed, simple, and well-coordinated among all echelons of the relieving and relieved units.

c. When possible, reliefs should be executed during periods of reduced visibility.

d. The plans for tactical cover and deception must include all practicable measures to insure secrecy and surprise.

e. The relief must be executed efficiently, in the shortest possible time, and with every precaution taken to reduce vulnerability to enemy attack during the time the relief is being accomplished.

Section II. RELIEF IN PLACE

8-3. Definition

A relief in place is an operation in which all or part of a unit is replaced in a combat area by an incoming unit. The combat mission and area of operation responsibilities of the outgoing unit are assumed by the incoming unit. The relief in place is executed when the outgoing unit is on the defense. The incoming unit may have the mission of continuing the defense or preparing for a subsequent attack. In either case, the outgoing unit or elements thereof are withdrawn.

8-4. Planning Procedures

a. General. When the division relieves another unit in place, the warning order to the incoming division must specify, as a minimum, the time for commencing and completing the relief and the priorities for use of routes involved. The warning order normally will direct that the relief be carried out under cover of darkness or other conditions of reduced visibility. The order may direct the relief to be completed in one or more nights. Upon receipt of the warning order, the division commander and staff analyze the mission,

issue internal warning orders, establish liaison, and visit the unit to be relieved. The division will establish its tactical command post in the vicinity of the main command post of the unit being relieved. Joint conferences are held between the commanders and staffs of the two units concerned to work out the details of the relief.

b. Details to be Coordinated. Procedures for the accomplishment of the following must be agreed upon:

- (1) *Exchange of plans and liaison personnel.* The incoming unit commanders and staffs must be briefed and become thoroughly familiar with the existing defensive plans to include fire plans, barrier plans, and counterattack plans. To make the most efficient transfer of information concerning the plans, dispositions and area of operation, the outgoing unit leaves liaison personnel with the incoming unit. The number of these personnel and the duration of their stay with the incoming unit vary with the situation. Normally, they will remain with each combat and

- combat support headquarters of the incoming unit from company level up. These personnel usually remain until the incoming units become familiar with the situation.
- (2) *Sequence of relief (if not specified by the headquarters ordering the relief).* To establish the strongest defense during relief, the relief in place is executed by stages, either rear to front or front to rear. In determining the sequence of the relief, both commanders should consider—
- (a) The subsequent mission of the division that is conducting the relief.
 - (b) The strength and combat efficiency of the unit presently in the forward defense area.
 - (c) The capability of the enemy to detect and react against the relief.
 - (d) The characteristics of the area of operations.
 - (e) The need to vary the pattern of relief.
 - (f) Size and type of elements involved in the relief.
- (3) *When "command is to pass."* The time or circumstances under which the incoming unit commander will assume responsibility for the area must be clearly established. Until command passes, the outgoing unit commander retains responsibility for the area and mission and exercises operational control over all subordinate elements of the incoming unit which have completed their portion of the relief. During this period, the incoming units must fit into and accept the general defense plans of the outgoing unit. Normally, command passes to the incoming commander when the units in the forward defense area have been relieved by his subordinate units and when adequate communications means have been established. When command passes, the incoming commander assumes operational control of all units of the outgoing unit which have not been relieved.
- (4) *Reconnaissance.* Arrangements must be made for a thorough daylight reconnaissance by commanders and staff officers of all echelons of the incoming unit. Reconnaissance should include an inspection of terrain to the front, defensive installations, relief routes, assembly areas, weapon positions, and combat service support installations.
- (5) *Security.* Every effort must be made by all echelons of the incoming and the outgoing units to prevent the enemy from learning that a relief is taking place. In addition to conducting the relief during periods of reduced visibility, the following security measures should be taken:
- (a) Every form of normal activity in the area of operations must be maintained during the relief. The incoming unit should assume the normal pattern of harassing and interdicting fires, patrols, communications traffic, and movement previously employed by the outgoing unit.
 - (b) Restrictions on the size of advance parties and reconnaissance parties must be enforced. These parties should move to the area of operations by infiltration.
 - (c) Aerial reconnaissance by members of the incoming unit should be made in aircraft of the outgoing unit.
 - (d) Radio nets of the incoming unit should not be used in the new area until after the relief is complete.
 - (e) Registration of fires of the incoming unit should be coordinated by the outgoing unit until command passes.
 - (f) An integrated tactical cover and deception plan should be executed by both the incoming and outgoing units.
- (6) *Movement control.* Arrangements between the incoming and outgoing units must be made for the control of units moving into and out of the area. Coordination must include—
- (a) Routes to be used and priorities for their use.
 - (b) Responsibility for traffic control.
 - (c) Location of assembly areas.
 - (d) Provision of guides for incoming units.
 - (e) Common use of transportation.
- (7) *Intelligence.* The outgoing unit transfers to the incoming unit all information and intelligence concerning the enemy and the area of operations. Additional intelligence information required by the

incoming unit should be obtained by the outgoing unit.

(8) *Fire support.*

- (a) The method of relieving fire support units must be clearly established. Normally, the artillery of the outgoing unit will remain in position until the units in the forward defense area have been relieved. By using this procedure, artillery units which are familiar with the fire support plans and the area of operations are in position to fire during the critical period of the relief of forward units.
 - (b) If sufficient firing positions are available, the incoming artillery may elect not to take over the outgoing artillery's firing position, but may select new positions from which the same fire missions can be accomplished. In this case, the incoming artillery moves into position by battery under battalion control. The incoming artillery is prepared to take over fire missions before the outgoing batteries are withdrawn.
 - (c) When the lack of firing positions so dictates, artillery may be relieved in place. In this case, it may be necessary to relieve by platoon or section to avoid congestion.
 - (d) When the relief is to be conducted over a period of more than one night, the incoming artillery normally will move at least one gun per battery forward the first night to secure registration data. In any case, liaison officers and forward observers of the incoming unit join the outgoing units as soon as possible to become familiar with the existing fire plans.
 - (e) Until command passes, registration and all other fires of the incoming artillery units are controlled by the commander of the outgoing artillery.
 - (f) The headquarters ordering the relief may direct that the artillery of the outgoing unit remain in position to support subsequent operations of the incoming unit. In this case, careful coordination of position areas must be made in order to reduce vulnerability.
- (9) *Exchange of equipment.* The time avail-

able for and other circumstances influencing the relief may require that certain weapons and other equipment be exchanged between the incoming and the outgoing units. The extent of such exchange should be authorized by the headquarters ordering the relief.

- (10) *Combat service support.* Pertinent combat service support matters such as the transfer of supplies, use of installations, transfer of PW, operation of civilian collecting points, displacement of combat service support units, use of transportation, and traffic control must be coordinated between the incoming and outgoing units.

c. Concurrent Planning. The unit executing the relief and the unit being relieved will issue operation orders directing the conduct of the relief in accordance with procedures agreed upon at the planning conference. Prior to the issuance of the operation orders, fragmentary orders are disseminated to subordinate units to allow concurrent planning by these units.

8-5. Conduct of the Relief in Place

a. Two primary factors determine the method by which a relief in place is conducted. These factors are the sequence of the relief and whether the relief is to be conducted in one or more than one night. Within the scheme dictated by these factors, the relief in place is a series of relief operations conducted by subordinate units and controlled by the division. After detailed divisional planning, execution is decentralized.

b. Once the relief in place is begun, the division staffs are primarily concerned with—

- (1) Supervising the timing and movement of subordinate units.
- (2) Coordinating joint use of transportation between incoming and outgoing units.
- (3) Supervising the execution of traffic control.
- (4) Preparing for exchange of overall control after "command passes."
- (5) Staying abreast of the situation so that they can react swiftly to any emergency or required change in the plan for relief.

8-6. Nuclear Considerations

During the execution of the relief, the physical presence of two elements in an area where only one

normally is positioned inherently increases the vulnerability to nuclear attack. Therefore, the planning and conduct of the relief must be made with an appreciation of the risks involved. Careful scheduling of the reliefs executed by subordinate units must be accomplished to reduce to the minimum the troop density in the area of operations. Generally, if the relief is conducted over an extended period of time, vulnerability to nuclear at-

tack can be reduced. However, the possibility of enemy detection and reaction against the relief are increased. The threat of nuclear attack emphasizes the requirement for secrecy to avoid detection and the necessity for thorough planning to limit the number and duration of profitable nuclear targets. It also points out the need for early and preplanned tactical cover and deception measures.

Section III. PASSAGE OF LINES

8-7. Definition

A passage of lines is an operation in which an incoming unit attacks through a unit which is in contact with the enemy, or when a unit withdraws through another unit occupying a rearward position. Elements of the unit passed through remain in position and support—

a. The attacking unit until their fires are masked, at which time they may remain in position, be withdrawn, or committed to other action.

b. The withdrawing unit and take up either the delaying mission of the withdrawing unit or the defense.

8-8. Planning Procedures

a. General. The planning procedures involved when a division passes through another unit are very similar to those for a relief in place. Upon receipt of a warning order which directs an operation requiring a passage of lines, the division commander and his staff will make early contact with the unit being passed through. Arrangements will be made to establish a division tactical command post in the vicinity of the command post of the unit to be passed through and for the initiation of planning conferences to work out the details of the passage. Liaison officers will be exchanged at all levels.

b. Details To Be Coordinated. During the planning conferences, the following details must be coordinated by the commanders of the units involved:

- (1) Exchange of intelligence.
- (2) Exchange of tactical plans to include communication plans.
- (3) Exchange of radio frequencies.
- (4) Arrangements for reconnaissance by elements of the units passing through.
- (5) Measures to be taken to provide security during the passage.

- (6) Selection of areas of passage and provisions for guides.
- (7) Priorities for use of routes and provisions for movement control.
- (8) The time or circumstances when responsibility for the control of the area of operations will be transferred to the unit making contact with the enemy.
- (9) Extent of fire support and other combat support to be provided by the unit being passed through.
- (10) Extent of combat service support to be provided by the unit being passed through.
- (11) Exchange of liaison officers.

c. Selection of Areas of Passage. When possible, the areas selected for the passage of lines should be the unoccupied areas between elements of the unit in position or on its flanks. This procedure reduces the vulnerability that results when one unit passes directly through the occupied positions of another unit. Vulnerability also is reduced when the subordinate units of the division making the passage move directly to the areas of passage.

d. Priorities for the Use of Routes. The unit passing through must have priority for use of routes to and within the area of the unit being passed through. Route priority should be established by the headquarters directing the passage of lines. Traffic control in the area of the unit being passed through is the responsibility of that unit until the responsibility for the area passes to the unit making contact with the enemy. The passing unit may augment the traffic control capability of the unit in position during the time of passage.

e. Passage of Command. The time or circumstance when the responsibility for control of the zone of action or sector of defense is transferred to the commander of the unit executing the pass-

age of lines must be mutually agreed upon by the two commanders concerned. Normally, the commander of the unit making a forward passage of lines assumes responsibility for the zone of action at or prior to the time of attack. This responsibility may shift at the time of the firing of the preparatory fires or earlier at the direction of the headquarters ordering the passage. The commander of the unit in position may assume responsibility for the control of the sector at a specific time or during an operational phase, such as the rearward passage by the withdrawing force across a designated phase line. This transfer of responsibility requires that the commander making the passage assume operational control of those elements of the unit being passed through that remain in contact at the time of the transfer.

f. Tactical Support.

- (1) The unit in position provides all possible aid to the unit passing through, e. g., the gapping of minefields, provision of guides, fire support, and other combat support within its capabilities.
- (2) Normally, because of problems of control, only the indirect fire means of the unit in position will be used to support the passing unit. After responsibility for the zone of action or sector of defense is transferred to the passing unit, the artillery commander of the passing unit coordinates the fires of the artillery of the unit which has been passed through.
- (3) It is desirable to employ the artillery of the unit making the forward passage to support the attack. However, if the attack is receiving nuclear support, it may not be necessary to increase troop density by deploring the artillery of the attacking unit in the forward area. In this case, the artillery of the unit in position supports the attack initially, and the artillery of the attacking unit is placed in rear positions ready to move to forward firing positions to support the continuation of the attack.
- (4) In the case of a unit making a rearward passage of lines, the withdrawing force will coordinate with the forces in position for artillery and other fires to support the withdrawing unit as it approaches the forward defense area. These fires are espe-

cially needed to assist the withdrawal of elements of the delaying force left in contact with the enemy.

g. Combat Service Support. The unit in position provides assistance to the passing unit in combat service support matters as follows:

- (1) Evacuation of casualties and PW.
- (2) Civilian and straggler control.
- (3) Use of areas and facilities, e.g., water points, medical facilities.
- (4) Route priority and traffic control.
- (5) Evacuation of disabled vehicles, consistent with the capabilities of the unit in position.

8-9. Conduct of the Passage of Lines

a. Forward Passage of Lines.

- (1) Elements of the attacking division move preferably during periods of reduced visibility from rearward positions to attack at the scheduled time. Careful march calculations are made to insure that the units attack at the correct time without the requirements for use of a forward assembly area. This procedure reduces to the minimum the time in which elements of two units are concentrated in the forward area.
- (2) If the attack subsequent to the passage of lines is preceded by a nuclear preparation, it will be necessary, because of different degrees of protection inherent in the attacking division and the unit being passed through, to prescribe troop safety measures.
- (3) In some situations, it may be desirable to displace the reserves of the unit in position to rear assembly areas just prior to the beginning of the passage of lines. This procedure reduces troop density during the passage. If this procedure is used, normally it will be prescribed by the headquarters ordering the passage of lines.

b. Rearward Passage of Lines.

- (1) When contact is made with the corps covering force, uncommitted units of the withdrawing division will begin a withdrawal straight to the rear within their sectors. Corps security forces then take up the defense or delay. Units in the withdrawing force will avoid using

assembly areas, as this would result in an unacceptable density of troops in the forward area of the unit in position. Multiple routes designated and controlled by the commander of the unit in position are used to provide necessary dispersion and speed to the withdrawing force in movement through the forward defense area of the defense force.

- (2) While the division is withdrawing through the corps defensive positions, the withdrawing division is responsible for traffic control forward of the corps security area; the forces organizing the defense are responsible from the covering force to their rear boundary, and corps from there to the withdrawing division assembly area or new position.

8-10. Passage of the Armored Division Through the Mechanized or Infantry Division

a. In the passage of an armored division through a mechanized or infantry division, coordination is facilitated when the passage of each armored element takes place wholly within the lateral boundaries of one major subordinate element of the mechanized or infantry division. Transfer of responsibility for the area normally will be unnecessary, due to the difference in unit mission.

b. Special emphasis must be placed on the following coordination measures:

- (1) Refueling areas and routes into and out of these areas are reconnoitered by personnel from the passing unit assisted by guides furnished by the unit being passed through. It may be necessary for the unit being passed to adjust its positions to permit a satisfactory passage, but such adjustments should be held to a minimum.
- (2) Clearing and marking the lanes through friendly minefields to permit the rapid passage of the passing unit are accomplished by the unit being passed through. Passing units should provide their own liaison officers at difficult gaps or defiles to check each subunit through.
- (3) Details of fire support to be furnished by the division being passed through must be coordinated.
- (4) Priority on roads normally is given to the passing unit consistent with the traffic essential to the support of other units.
- (5) Within its capabilities, the unit being passed through furnishes combat service support to the passing unit during and immediately after the passing. This support may include using medical facilities, handling PW, clearing roads of refugees, providing traffic control, and assisting in handling the dead, but normally will not include supply of petroleum, oil, lubricants (POL), or ammunition.

Section IV. CONSIDERATIONS AFFECTING THE CHOICE OF RELIEFS PRIOR TO ATTACK

8-11. General

Frequently situations will arise within the division which require that a unit in contact be relieved prior to the initiation of an attack. This can be accomplished by a relief in place prior to the attack or a passage of lines. The following paragraphs discuss the considerations affecting the choice of methods of relief.

8-12. Relief in Place

When sufficient time is available, the relief in place prior to an attack should be employed in those situations where—

- a.* The unit being relieved is required in another area.
- b.* The capability of the enemy is such that the troop density involved in a passage of lines constitutes an excessive risk.
- c.* The attacker requires more detailed familiarity with the terrain and the enemy situation.

8-13. Passage of Lines

The passage of lines is preferred prior to the attack when—

- a.* There is insufficient time to conduct a relief in place.
- b.* More flexibility is desired in the selection of the formation for the attack.

c. The fire support of two units is desired in a particular area.

d. A major change in the direction of attack is planned.

e. It is desired to maintain continuous offensive pressure against the enemy.

f. Speed can be achieved.

g. It is desired to exploit the full capabilities of the attacking unit.

8-14. Applicable STANAG

The material presented in this chapter agrees with STANAG-2082 (SOLOG-49R) (SEA-STAG-2082)—Relief of Combat Troops.

CHAPTER 9

OTHER TACTICAL OPERATIONS

Section I. GENERAL

9-1. General

a. The division operates under any and all conditions. However, it may have to be augmented with additional equipment and/or specialized troops as required by the characteristics of the area of operations, the nature of the operations, conditions under which the operations may be conducted, or a combination of these factors.

b. The principles stated elsewhere in this manual are applicable to the tactical operations described in this chapter. However, techniques in the application of these principles may vary in conducting the operations under consideration.

c. Appendix I lists other references pertinent to tactical operations discussed in this chapter.

Section II. JOINT AMPHIBIOUS OPERATIONS

9-2. General

a. Army divisions participate in joint amphibious operations as part of the Army component of an amphibious task force. FM 31-11 sets forth basic joint doctrine governing the planning for and conduct of amphibious operations. FM 31-12 sets forth the fundamental principles, doctrine, and procedures relative to the Army component of the amphibious task force, to include preparatory training.

b. The composition and size of the Army component force (Army landing force) varies with the type amphibious operation, landing force mission, and the operational environment. The Army landing force is a task force formed on a basic tactical organization varying in size from the lowest echelon capable of semi-independent operations to a field army. It may include elements of a division, a complete division, or several divisions of like or different types.

c. Divisions of the landing force which execute assault landings are termed assault divisions. They are, in effect, a division task force, because the division is reinforced to provide required combat and interim combat service support pending establishment of normal support systems in the objective area.

d. Infantry, mechanized, or armored divisions may be employed as assault divisions. However, infantry divisions are more readily adapted to lift

in transport type ships and to ship-to-shore movement in assault craft and assault aircraft. The greater numbers of heavy vehicles in the mechanized and armored divisions necessitate a high proportion of landing ships, tank (LST), for their movement and landing. Mechanized infantry and armored divisions are well suited for landings over beaches already secured and for rapid advance inland in an exploitation role.

e. In training for amphibious operations, emphasis is placed upon preparation of the division for participation in an amphibious attack which is the principal type of amphibious operation. The amphibious raid, demonstration, reconnaissance, and withdrawal—as secondary types of amphibious operations—will normally involve a force of less than division size.

f. In amphibious operations, communications control is vital. This requires detailed planning among all of the amphibious forces.

9-3. Organization for an Amphibious Operation

For an amphibious operation, divisions form temporary combat and combat service support organizations which are designated according to a standard pattern for the landing force.

a. Organization for Landing. This is a temporary combat grouping of units under one commander for control and coordination during the assault. Assault divisions organize assault landing

teams as the basic subordinate task forces of the division. A division in landing force reserve which must be prepared to execute assault landings also organizes assault landing teams. Assault landing team designations include prefixal words reflecting the echelon of the combat unit around which the task force is formed. For reference purposes, an assault landing team may be further identified according to the type of ship-to-shore movement means to be used. Type designations are as follows:

<i>Designations</i>	<i>Surface movement</i>	<i>Air movement</i>
Battalion landing team, (BLT).	BLT (S)	BLT (A)
Brigade landing team, Bde (LT).	Bde LT (S)	Bde LT (A)

The brigade landing team consists of two or more battalion landing teams.

b. Organization for Embarkation. This is an administrative grouping of forces for the embarkation in ships and the overseas movement. Divisions form embarkation teams which consist of the troops, supplies, and equipment embarked in a single ship. Embarkation elements consisting of two or more embarkation teams grouped together to conform to the organization for landing are formed as required. A reinforced division normally constitutes an embarkation group with the division commander as embarkation group commander.

c. Organization of Shore Parties. A shore party is a task organization of the landing force formed to facilitate the landing and movement of troops, equipment, and supplies over the beaches; to evacuate casualties and PW from the beaches; and to facilitate the beaching, retracting, and salvaging of landing ships and craft. It is comprised of elements of both the naval and landing forces. Specialized engineer shore assault units provide the command and control elements for the shore party. These units also furnish engineer personnel specifically trained for shore party operations and provide equipment suitable for beach development and expansion tasks. (See FM 5-144.) Other nondivisional units are attached to shore parties as dictated by operational requirements. Shore parties are usually attached to each assault echelon of the division when these echelons have the responsibility for establishing or operating a beach support area. This attachment terminates when the next higher echelon lands and assumes control of shore party operations.

d. Organization of Airmobile Support Parties. An airmobile support party is a task organization formed for employment in a landing zone to facilitate landing and interim logistical support of elements in the zone. An assault division commander provides for organization of airmobile support parties by those landing teams which will execute initial assault landings in assault aircraft.

Section III. SHORE-TO-SHORE OPERATIONS

9-4. General

a. Shore-to-shore operations involve short over-water movement by small forces using Army water craft or aircraft. These operations include—

- (1) Shore-to-shore attack.
- (2) Shore-to-shore withdrawal.
- (3) Shore-to-shore raid.
- (4) Shore-to-shore deceptive operation.
- (5) Shore-to-shore reconnaissance.

b. Detailed guidance on shore-to-shore operations is contained in FM31-12.

c. Army shore-to-shore operations normally will involve a reinforced division or smaller size force employing primarily Army means for movement. A uniservice command structure normally is used. Navy and/or Air Force elements may be attached to or placed in support of the Army Force.

Section IV. JOINT AIRBORNE OPERATIONS

9-5. General

a. An airborne operation is an operation which involves movement and delivery by air, into an objective area, of combat forces and their logistical support for the execution of a tactical or a

strategic mission. Normally, the ground forces are provided by the Army and the airlift forces are provided by the Air Force. The means employed may be any combination of airborne units, air transportable units, and types of transport aircraft, depending upon the mission and the over-

all situation. Ground forces participating in an airborne operation are either parachuted into the objective area or air landed therein or both. A simple administrative air movement personnel, supplies, and/or equipment is not termed an airborne operation, although some of the techniques employed in airborne operations may be applicable (e.g., techniques for preparing, loading and lashing supplies, or for preparing flight manifests).

b. General considerations of joint airborne operations are contained in FM 100-5. Detailed information on the planning and conduct of joint airborne operations is contained in FM 57-10. Technical information required for planning the air movement of troops and equipment is contained in TM 57-210.

c. Movements by air are discussed in paragraphs 10-35 through 10-38.

9-6. Air Transportability of the Division

a. The airborne division has been designed primarily to perform joint airborne assault landings. Therefore, with the exception of a few bulky items, all of its equipment is air transportable in Air Force medium transport aircraft and can be delivered by parachute.

b. The majority of the infantry division's equipment is air transportable in Air Force medium and heavy transport aircraft. Exceptions are tanks, tank recovery vehicles, the armored vehicle launched bridge (AVLB) and certain other items of engineer heavy equipment, and fixed wing aircraft. If within range, organic aircraft may be flown into the airhead. The infantry division, when appropriately tailored, is well suited to participate in joint airborne operations in the air landed role.

c. Because their equipment—particularly main battle tanks and self-propelled artillery—is not air transportable, the armored and mechanized divisions normally do not participate in joint airborne operations. These divisions, minus heavy equipment, may be deployed by strategic airlift to an area where substitute equipment has been previously stockpiled.

9-7. Participation in Joint Airborne Operations

a. *General.* This discussion is applicable to infantry and airborne divisions when participating in joint airborne operations.

b. *Command Relationships.* The division may participate in joint airborne operations as follows:

- (1) *Unified command.* The division, by itself, or as a part of a larger Army echelon, may be part of a unified command established by an existing unified commander. Such a command is established when extensive airborne operations are anticipated, when a broad continuing mission for airborne forces is assigned, and when significant elements of two or more services are committed to such operations for an extended period of time.
- (2) *Joint task force.* The division, by itself, or as part of a larger Army echelon, may be part of a joint task force for a specific operation involving significant elements of two or more services.

c. *Role of the Airborne Division.* The airborne is the basic, large, tactical airborne unit. It is organized, trained, and equipped to conduct frequent airborne assaults and therefore normally is the principal participating ground force unit during the assault phase of a joint airborne operation. Doctrine and guidance for employment of the airborne division in joint airborne operations are contained in FM 57-10.

d. *Role of the Infantry Division.* The infantry division may participate in joint airborne operations in the air landed role. Such participation may be alone or in conjunction with airborne assault operations of the airborne division.

- (1) The division may be air landed within an established airhead to assist in expanding the airhead, to assume responsibility for a portion of the airhead, to be an exploiting force or part of such a force, or to be a reserve force.
 - (2) When conditions permit, normally as a result of nuclear fires or lack of enemy strength in the landing area, the division can conduct an air landed operation not preceded by an airborne assault by the airborne division.
 - (3) Doctrine and guidance for the employment of air landed units in joint airborne operations are contained in FM 57-10.
- e. *Tactical Operations in the Objective Area.*
- (1) Planning and execution of the airborne assault phase of joint airborne operations are discussed in FM 57-10. Doctrine for

employment of the division, as expressed elsewhere in this manual, is valid for the conduct of tactical operations following the assault. However, the following considerations are included to emphasize certain limitations in the capabilities of the division when conducting operations in the objective area.

- (2) Because of the limited availability of tracked and wheeled vehicles, the mobility of the division is somewhat restricted. This must be considered in the determination and assignment of missions during execution. Judicious use of available Army aircraft will partially compensate for this limited ground mobility.

- (3) Because of the absence of tanks and other armor protected vehicles in the airhead and the phaseback of equipment, action must be taken to reduce the vulnerability of the division to attack by enemy armor. Maximum use of terrain obstacles, together with the rapid installation of minefields and other obstacles, helps protect the division under such circumstances. Mobile antitank weapons, Army aircraft armed with rockets and ATGM, and tactical air support further reduce this vulnerability. If available, additional antitank weapons are used to partially compensate for the lack of tanks.

Section V. AIRMOBILE OPERATIONS

9-8. General

a. An airmobile operation is one in which combat forces and their equipment move about the battlefield in aerial vehicles, under the control of a ground force commander, to engage in ground combat. The size of an airmobile operation is contingent upon availability of aircraft. Such an operation may vary from one involving the use of a squad to one involving one or more battalions. The type and weight of organic equipment in the airborne and infantry divisions make the combat and combat support elements of these divisions more suitable for battalion and larger airmobile operations than equivalent elements of the mechanized and armored divisions.

b. The capability of the division commander to conduct airmobile operations enables him to—

- (1) Increase the speed and flexibility of operations.
- (2) Pose a constant threat which may cause the enemy to dissipate his forces to protect vital installations and hold key terrain in rear areas.
- (3) Extend the area over which he can exert his influence.
- (4) Improve his rear area security.
- (5) Concentrate his forces quickly and effectively at critical points and redisperse them after accomplishing the mission.

c. Appropriate missions for an airmobile force include—

- (1) Raids.

- (2) Anti-airborne operations and operations against irregular forces.
- (3) Over-obstacle assault operation.
- (4) Exploitation of nuclear fires.
- (5) Control of key terrain.
- (6) Blocking or screening enemy avenues of approach.
- (7) Feints and demonstrations.
- (8) Reconnaissance and security missions.
- (9) Counterattack of enemy penetrations.
- (10) Reinforcement of threatened areas.
- (11) Economy of force missions.

9-9. Basic Considerations

a. Using its organic airlift capability, the division is capable of conducting company size airmobile operations. Larger operations require transport aircraft from corps or Army.

b. Aviation support for airmobile operations is provided by attachment, operational control for a specified period, direct support, or various combinations of these methods. The lowest echelon capable of controlling and coordinating the operation exercises control of supporting aerial vehicles in accordance with the overall plan. Normally, an aviation unit is placed in support of a ground combat unit with operational control of both units retained by the commander who directs and supports the operation.

c. Limited airmobile operations can be conducted without full air superiority during periods of limited visibility or by using low level flight techniques.

d. Terminal guidance, when required, may be performed by specially trained personnel in the unit being lifted (unit pathfinders) or by TOE pathfinder detachments assigned to field army. These units may be further allocated to corps or divisions as required. Consistent with security, pathfinders may be used in all airmobile operations, especially during periods of reduced visibility. Pathfinder detachments are trained and equipped to provide terminal guidance to aircraft, to assist in the assembly of troops, to reconnoiter and recommend drop or landing zones, and to reconnoiter and make radiological surveys of areas subjected to nuclear attack. Detachments can be delivered to the landing zone by parachute, aircraft, surface vehicles and craft, or they may infiltrate on foot.

e. When possible, routes flown by aircraft avoid areas occupied by enemy forces. Ground or small airmobile patrols are useful in determining the safety of the routes and in securing them.

f. Airmobile operations do not envision direct assault of heavily defended objectives. Forces land at nearby landing zones and control or destroy the assigned objectives in dismounted attacks. Nuclear or chemical fires may be used to eliminate enemy defenses. Armed Army aircraft provide escort and limited suppressive fires during debarkation and assembly of landing troops.

g. A daylight airmobile operation permits more effective air and artillery support than one conducted at night and facilitates assembly of troops and equipment. However, darkness aids in achieving surprise and reduces the effectiveness of enemy fire.

9-10. Planning

Planning procedures for airmobile operations are discussed in detail in FM 57-35.

a. To act quickly and efficiently, the commander must plan rapidly and issue brief, simple orders. Formal operation plans complete with annexes are prepared only for large-scale operations. For small-scale operations, a simple operation plan that includes a graphic presentation of the following may be used:

- (1) Scheme of ground maneuver, including linkup or withdrawal.
- (2) Flight route diagram (including, as appropriate, loading areas, air control points, initial points, release points, land-

ing/drop zones, times between control points, and primary and alternate routes). When an air movement plan annex is not prepared, the flight route diagram may also show altitude and speed.

- (3) Air movement table (including, as appropriate, time and place of loading, aircraft allocated to units and aircraft loads, and times aircraft clear various control points).

b. Use of unit standing operating procedures (SOP) covering the activities involved in airmobile operations will save time in launching an operation. SOP aircraft loads are developed in detail at squad, platoon, and company level. General loading plans are developed for company and battalion to indicate how many spaces are required to lift each unit (planning work sheet). Loading plans are developed for each type aircraft and for several environmental conditions which would vary the lift capacity of the aircraft.

c. Plans include the provision of electronic countermeasures to reduce the effectiveness of enemy surveillance and fire control equipment. Detailed aerial reconnaissance and surveillance requirements in support of airmobile operations must be prepared and included in the division aerial surveillance plan.

d. Fire support planning includes the use of artillery, chemical, and biological fires, close air support, and armed helicopters to destroy or neutralize the enemy's capability to deliver fires against the force en route to or in the objective area.

e. Linkup planning is discussed in paragraphs 9-11 and 9-12.

f. Alternate plans are prepared in the event that—

- (1) Part of the force fails in its particular mission.
- (2) Signal communications are disrupted.
- (3) Weather conditions or enemy action prevent the use of designated routes or landing zones or interfere with landings.
- (4) Withdrawal from the objective area becomes necessary or desirable.
- (5) Reinforcement of units in the objective area becomes desirable.

g. When airmobile operations involve retention of terrain in the objective area, the plan includes defensive measures to be taken. If necessary, a

separate plan for defense of the area is prepared.

h. Selection of the hour of landing is influenced by—

- (1) Enemy situation and capabilities (air and ground).
- (2) Predicted weather.
- (3) Visibility.
- (4) Availability of artillery, air, and nuclear fires.

(5) Availability of ground and aerial vehicles.

i. Timing of the operation with respect to ground operation is influenced by the—

- (1) Depth of the operation.
- (2) Capabilities and limitations of fire support agencies.
- (3) Expected time of linkup.
- (4) Availability of logistical support.

Section VI. LINKUP OPERATIONS

9-11. General

a. A linkup operation entails the juncture of two ground units. Such a juncture may occur in joint airborne, joint amphibious, shore-to-shore, or air-mobile operations, during the relief of an isolated unit, the breakout of an encircled force, the convergence of separate forces, on the linkup with U.S.-sponsored guerrilla forces, or other allied forces.

b. The initial phase of a linkup operation is conducted as a normal offensive operation. As linkup becomes imminent, coordination and control are intensified, placing definite restrictions on the attacking forces.

c. Because forces within an airhead or those cut off by enemy action frequently lack staying power, time is often a critical factor.

9-12. Planning

a. *General.* Planning for the linkup must be timely. Plans of the forces involved in the linkup are coordinated in advance. Provisions are made for the prompt exchange of information between the two forces. The following factors should be considered in planning linkup operations:

- (1) Command relationships and responsibilities.
- (2) Command and staff liaison.
- (3) Coordination of schemes of maneuver.
- (4) Fire coordination measures.
- (5) Coordination of communications plans.
- (6) Actions following linkup.

b. *Command Relationships and Responsibilities.* The headquarters directing the linkup establishes the command relationships and responsibilities of the two forces. The linked-up force (hereafter called the stationary force) can be attached to the force making the linkup (hereafter called the linkup force), or the linkup force can be

attached to the stationary force, or both forces can come under or remain under control of a higher commander.

c. *Command and Staff Liaison.* Command and staff liaison between the two forces is essential. This liaison is initially established during the planning phase and is continued throughout the operation. As linkup becomes imminent, additional liaison personnel are exchanged to represent leading units and their supporting artillery. In the event that the operation entails linkup with allied forces, provisions must be made for interpreters or liaison officers with linguistic ability.

d. *Coordination of Schemes of Maneuver.* Control measures are carefully delineated. Linkup points are selected at which physical contact between the two forces will occur. These points are mutually agreed upon and should be readily recognizable to both forces. They are located where the routes of advance of the linkup force intersect the security elements of the stationary force. Alternate linkup points are established. Enemy action may force linkup to occur at places other than those planned. The number of linkup points established depends upon the capability of the stationary force, the number of routes being used by the linkup force, nature of terrain, and enemy threats to the operation. Troops manning the points, as well as the units contacting them, must be familiar with procedures for mutual identification and plans for the rapid passage of the advancing units. Assistance by the stationary force includes removing obstacles established to hinder enemy movement, providing guides, and reserving assembly areas for the reorganization of linkup forces.

e. *Fire Coordination Measures.* Fire coordination measures are established by the headquarters directing the operation. Neither force will deliver fires across the lines established without prior

clearance of the other. As linkup becomes imminent, the fire coordination line (FCL) is moved as close to the stationary force as possible to allow maximum freedom of action to the linkup force. Both forces establish fire support coordination lines (FSCL). The FSCL of the linkup force may be separate from the stationary force in the early stages. As linkup becomes imminent, a single FSCL becomes applicable to both forces. Airstrikes not controlled by an air control team in the area between the two forces must then be cleared by both the linkup force and the stationary force. Normally, the initial FCL will become effective at the time a common FSCL is established (fig. 30). Upon linkup, a responsibility for fire support coordination for the force as a whole must be clearly established; responsibility for such coordination is that of the senior headquarters in the area or of the force having primary interest in the operations following linkup. See paragraphs 4-3 through 4-7 for discussion of fire coordination measures.

f. Coordination of Signal Communications Plans. The signal communications plans for the linkup operation include channels for radio communication between major units of the two forces. This requires an exchange of call signs, frequencies, and authentication procedures. Army aircraft of both forces may be used to extend the range of communications or to deliver messages between the forces as linkup approaches. The signal communications plans also prescribe positive identification procedures for use during daylight and darkness. Pyrotechnics, colored smokes, and panels are used during daylight; and pyrotechnics, infrared devices, and flashing lights are used during darkness. Armbands, vehicle markings, arm and hand signals, and passwords are helpful.

g. Actions Following Linkup.

- (1) Upon linkup with the stationary force, the linkup force may reinforce or assume the defense of the area, continue the attack in coordination with the stationary force, or pass through or around the stationary force and continue the attack to more distant objectives (fig. 31). Provisions are made for relief in place or passage of lines as required. Since nuclear vulnerability is increased as linkup occurs, particularly if the linkup force passes through the stationary force, provisions for reducing the period of vulnerability or the density of troops and equipment in the area must be included in plans. Therefore, it is desirable that the linkup force pass around the stationary force. Its objectives should be located well outside the area occupied by the stationary force.
- (2) In the case of a linkup, operation involving the breakout of an encircled force, the linkup force (in this case the force breaking out) rapidly passes through the forward defense area of the stationary force to assembly areas in the rear. To speed passage and reduce the period of nuclear vulnerability, multiple routes are provided and suitable priority accorded elements of the linkup force during movement to their assembly areas.
- (3) When two moving forces link up, normally only suitable control measures, such as boundaries and fire coordination, are prescribed, and the units continue on their assigned missions.

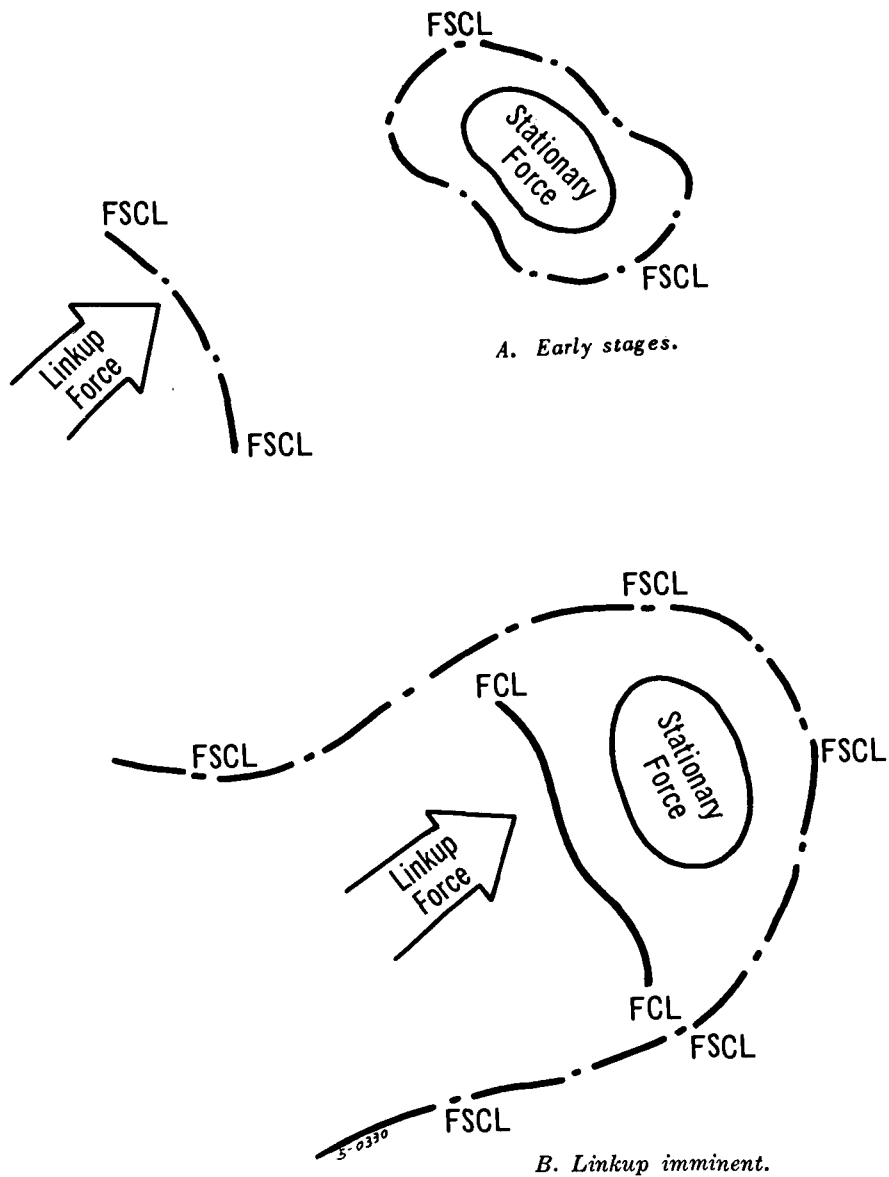


Figure 30. Fire coordination measures in linkup operations.

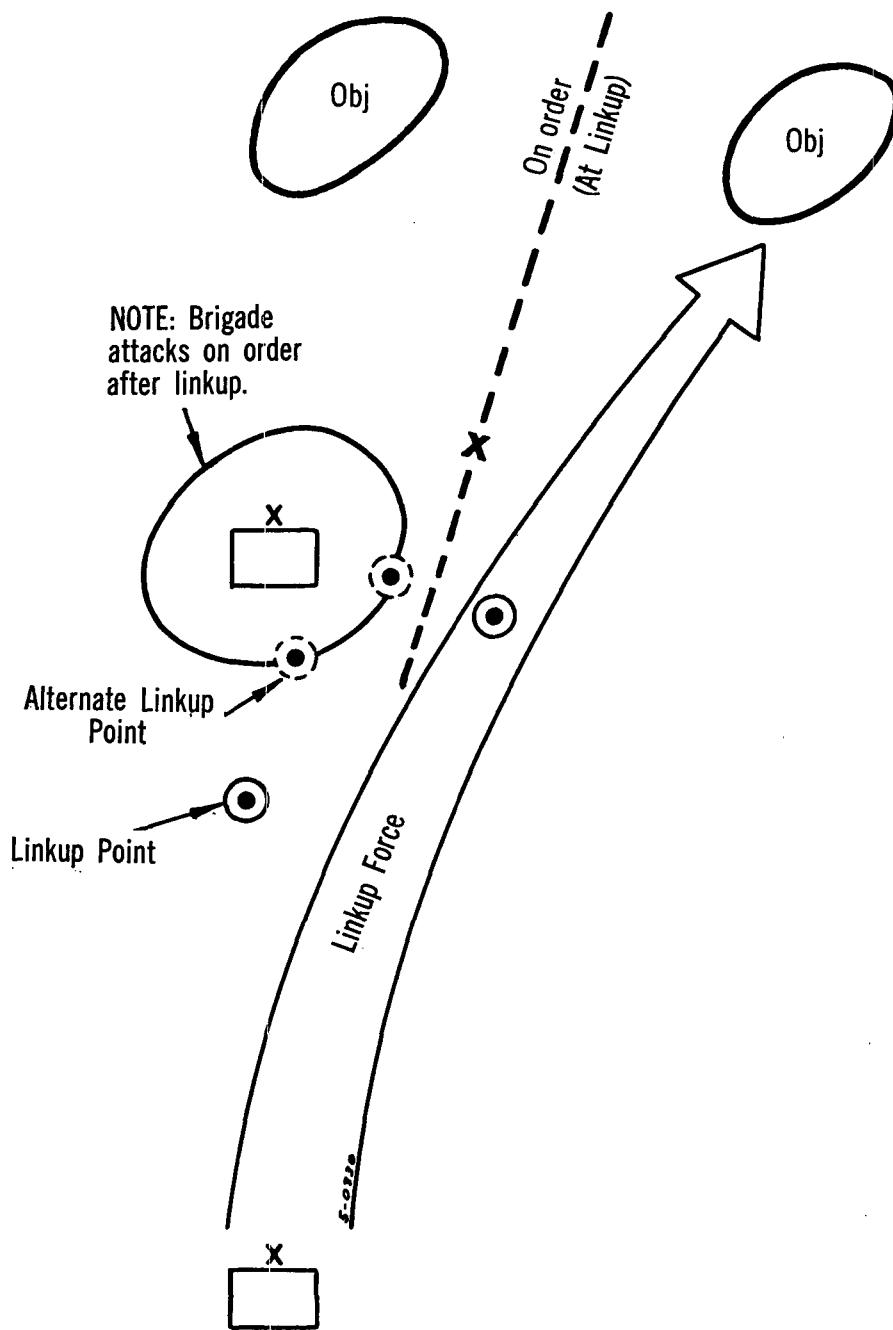


Figure 31. Coordination of maneuver during linkup.

Section VII. RAIDS, FEINTS, DEMONSTRATIONS, AND RUSES

9-13. Raids

a. General. A raid is an attack by a force to accomplish a specific purpose within the enemy position with no intention of holding the invaded territory. Raids may be conducted within or be-

yond supporting distance of the parent unit either in daylight or darkness. The raiding force may move on foot, in tanks, armored personnel carriers, aircraft, watercraft, or any combination of these means. Raiding forces are particularly vul-

nerable if they are discovered prematurely, encounter superior forces, or if they are cut off.

b. Purpose. A raid may be conducted to—

- (1) Capture prisoners or specific enemy materiel.
- (2) Obtain or free key civilians such as scientists or political leaders.
- (3) Destroy specific enemy materiel or installations.
- (4) Obtain detailed information of hostile units, dispositions, locations, strength, works, capabilities, intentions, or methods of defense.
- (5) Deceive or harass the enemy.
- (6) Complete the destruction caused by nuclear fires.
- (7) Support unconventional warfare activities.

c. Planning and Conduct.

- (1) Raids may be ordered by a higher echelon, by the division commander, or by a brigade or lower commander.
- (2) Plans and preparations for raids are carefully made, and all practicable measures of assistance are worked out and executed in detail. When possible, the raiding force rehearses the raid on ground similar to that over which it will move and under conditions similar to those anticipated during the actual raid.
- (3) Withdrawal of the force is planned and executed with the same care and thoroughness as the attack itself.
- (4) Security measures are emphasized, because the raiding force enters the enemy position and is vulnerable to attack from all directions.
- (5) Preparatory and supporting fires, including nuclear fires, can be used as in any attack. Protective fires isolate the objective, prevent or limit counterattacks, and keep open the route of withdrawal. Under some conditions where surprise is sought either by stealth or rapidity of attack and withdrawal, fires are planned but held on call for the raiding force.
- (6) Night raids may be illuminated. The considerations of the night attacks apply to their planning and conduct.
- (7) Infiltration enables the raiding force to attack deep objectives. Withdrawal of

such a force may be expeditiously accomplished by the use of aircraft.

- (8) Raiding forces are frequently organized into task forces, particularly when the depth of the operation places them beyond supporting distance of their parent units.
- (9) Frequently deep raids may be assisted by friendly guerrillas, or other irregulars. This assistance may include preparation of landing zones for aircraft, protection of the area during landing, provision of guides and equipment bearers, diversionary operations, and the isolation of the area to be raided.

9-14. Feints

a. General. A feint is a shallow, limited objective attack to mislead the enemy and draw him away from the main attack. It may vary in size from a small raid to a sizable supporting attack. A feint may affect the ultimate development of the enemy force. It is most effective when the enemy has a large reserve, when there are several feasible courses of action open to the attacker, and when the force employed is of adequate strength and composition to cause the desired enemy reaction. Planning and conduct of feints are similar to those of other offensive operations.

b. Purpose. A feint is designed to cause the enemy to react in a manner predetermined by the attacker. The attacker may desire the enemy to react physically or to confuse him, causing his reevaluation of the attacker's capabilities and intentions. The following are examples of enemy reactions which draw his defenses away from the main attack:

- (1) Employ reserve improperly.
- (2) Attract supporting fire away from the main attack.
- (3) Reveal defensive fires.
- (4) Frequent raids and feints may confuse the enemy and so accustom him to this type of activity that little or no action may be taken when the main attack is actually launched.

c. Time.

- (1) *Time in relation to the main attack.* Feints may be conducted before, during, or after the main attack.
 - (a) A feint before the main attack may cause the enemy to move his reserve

away from the area of the main attack, attract the enemy's supporting fires so that they may be located, and confuse him by frequent harassment.

(b) A feint conducted during the main attack may cause the enemy to divert his attention and, possibly his forces, including supporting weapons, to the feint. Uncertainty in the enemy commander's mind as to which is the main attack may cause him to hold his reserve in its present position pending the outcome of either of the attacks.

(c) A feint conducted after the main attack is launched tends to cause the enemy to hold his reserve in its present position because of the new threat and the uncertainty as to the place of the main attack.

(2) *Time of day.* The hour of the day for the feint is based upon the time that most favors success of the main attack. In addition, the pattern of previous operations is considered.

d. Place. The following are considered in determining the area for a feint.

(1) Areas for the main attack considered during initial planning but later rejected are logical areas for feints.

(2) The area must be of interest to the enemy.

(3) The area should be at such distance to preclude interference with the main attack.

(4) If the purpose of the feint is to cause displacement of enemy supporting weapons and troops, the feint should be conducted

far enough from the enemy units to force their displacement.

9-15. Demonstrations

a. General. A demonstration is an operation designed to deceive the enemy by a show of force in an area where a decision is not being sought. It differs from a feint in that there is no advance against the enemy. The basic considerations and techniques of planning feints also apply to demonstrations.

b. Characteristics. Fewer troops are required for a demonstration than for a feint, and the force involved need not necessarily be balanced. Withdrawal of demonstrating forces and their subsequent employment elsewhere are possible. Demonstrating forces can make extensive use of fires, smoke, sonic devices, and decoy equipment. A demonstration lacks the realism of a feint and is more susceptible to identification by the enemy as a deception. It is not a positive means of causing the enemy to react.

c. Use. Demonstrations are particularly effective when the enemy and demonstrating forces are separated by an obstacle. They can be used to good advantage to depict the buildup for operations such as river crossings or attack of fortified areas.

9-16. Ruses

Ruses are tricks to achieve deception. They are used at all levels in the division. The use of a few vehicles towing chains to produce dust clouds representing large movements and the movement of a few tanks throughout the area at night are examples of ruses. Ruses, such as the use of loudspeakers in the forward area, may divert the enemy's attention from other activities.

Section VIII. COMBAT AT RIVER LINES

9-17. General

The general considerations of combat at river lines are discussed in FM 100-5. Detailed information is contained in FM 31-60.

9-18. Attack

a. When the area through which the division is attacking contains an unfordable river, plans must include provisions to cross without loss of momentum or significant concentration on either bank. The river is approached at maximum speed on a broad front. All existing bridges in the zone of

advance are objectives. Whether or not bridges are seized intact, hasty crossings are attempted on a wide front capitalizing upon the amphibian characteristics of armored personnel carriers, air-mobile operations, nuclear fires, and improvised means. Advance planning for hasty crossings is essential.

b. A deliberate crossing is conducted when a hasty crossing has failed, when a hasty crossing is not feasible because of the difficulty of the obstacle or the strength of enemy defenses, or when an offensive is resumed at a river line. A delib-

erate crossing requires corps or army level coordination and concurrent, detailed planning at all levels.

9-19. Defense

a. The fundamentals of the defense of a river line by division are the same as for other defenses.

b. Unfordable rivers provide strength to the defense. An unwary enemy may mass troops and materiel in preparation for his crossing which then become remunerative targets for nuclear weapons. An attacking force astride a river is especially vulnerable to offensive maneuver.

c. The defense of a river line is organized to exploit the natural terrain features and the resources available. Only screening forces may be at the river line when the defense is being conducted primarily by nuclear fires and offensive maneuver.

d. The division, when defending a river line, should expect the attacker to move rapidly on a broad front and without pause to attempt to cross at multiple sites using amphibious vehicles, expedient crossing means, and helicopters. Because of the airborne or airmobile threat, the division must prepare plans for the protection of and counterattacks to regain key terrain well in rear of the river.

Section IX. COMBAT IN FORTIFIED AREAS

9-20. General

The general considerations of combat in fortified areas are contained in FM 100-5. Detailed characteristics of fortified areas and techniques of combat therein are contained in FM 31-50.

9-21. Attack

a. Whenever possible, fortified positions are contained by minimum forces while the main force continues the advance to seize more decisive objectives. Reduction of a fortified area may include a siege or an attack from the rear.

b. The special considerations in the attack of a fortified area are as follows:

- (1) A primary purpose of a fortified area is to cause the attacker to mass and present a profitable nuclear target. Attack formations and operations must recognize this danger.
- (2) Nuclear and chemical weapons are used in the destruction and neutralization of fortified areas. Surface and subsurface nuclear bursts can create gaps in the fortified area or isolate sections of it.
- (3) Detailed intelligence is required upon which to base training, rehearsals, and plans.
- (4) Planning and preparation are centralized, but the execution is decentralized.
- (5) The area selected for penetration must be isolated. Nuclear fires are particularly well suited to this task. Smoke iso-

lates individual strongpoints from the observed fires of other fortifications. Indirect fire weapons destroy camouflage, neutralize and destroy enemy field fortifications and artillery, fire on enemy counterattacks, and screen the movement of assault troops.

- (6) The assault elements are tailored for their specific missions and are specifically trained and rehearsed on replicas of the position. Their principal weapons are demolitions, flamethrowers, and direct fire weapons. A fortification neutralized by the assault element is immediately mopped up by a detachment of specially trained troops.
- (7) Reserves follow closely behind the assault echelon to exploit the penetration, maintain the continuity of the attack, or defend critical areas against counterattack.
- (8) Airborne or airmobile forces may be used in conjunction with other attacks of the fortified area principally to block the movement of large enemy reserves and to attack the fortifications from the rear.
- (9) Unless required for use by the attacker, captured enemy armament and fortifications are moved or destroyed to prevent their use if recaptured.

9-22. Defense

a. The primary purpose of the defense of a fortified area is to cause the enemy to mass and

present a nuclear target or to involve him in the reduction of fortified positions, thus dissipating his combat power and making him vulnerable to counterattack. Conversely, the enemy can readily destroy fortified areas with nuclear fires or bypass and neutralize them at a later time.

b. The specific considerations in the defense of a fortified area are that—

- (1) Fortified positions permit an economy of force in the forward defense area. This releases proportionately larger forces for the reserve.

- (2) The reserve must be provided suitable mobility and be aggressively used if the defense is to be successful.
- (3) Fortifications are organized in depth and provide for all-round defense. Field fortifications supplement the fortified area.
- (4) The defense is conducted in the same manner as set forth in chapter 6. Defense of a fortified area normally is associated with area defense, not mobile defense.

Section X. COMBAT IN BUILT-UP AREAS

9-23. General

The general considerations of combat in built-up areas are contained in FM 100-5. Detailed characteristics of built-up areas and techniques of combat therein are contained in FM 31-50.

9-24. Attack

a. When possible, built-up areas are bypassed and isolated. When this is impossible, methods applicable to reduction of fortified areas are used.

b. Terrain dominating the approaches is seized to isolate the built-up area. Mobile forces, including airborne or airmobile forces, are suitable for the seizure of such terrain. Objectives within the built-up area are selected to divide the enemy defense.

c. The advantages gained through the use of nuclear weapons and intense nonnuclear bombardments must be weighed against the creation of obstacles to the assault elements.

d. Measures to control the civilian population are essential.

9-25. Defense

a. Since built-up areas are obstacles to the movement of friendly counterattack forces as well as to the attacking enemy, consideration should be given to defending outside the built-up areas. Under some conditions, elements of the division may hold built-up areas while the remainder of the division counterattacks in the open.

b. The defense of a built-up area is organized around key terrain features which preserve the integrity of the defense and provide ease of movement to the defender. Subterranean systems may be used for the movement of forces and may provide protection against nuclear attack. They are incorporated in the organization of the defense. Maximum use is made of rubble and other obstacles. Defenses are prepared in depth for continuous defense throughout the area.

c. Plans should provide for the control of the civilian population, and the use of friendly elements in the preparation of defensive positions. Evacuation of civilians from the area should be considered.

Section XI. COMBAT IN EXTREME TERRAIN AND WEATHER CONDITIONS

9-26. General

a. The division generally is organized and equipped for combat in extreme terrain and weather conditions. Under certain circumstances, additional or substitute equipment and specialized training may be required. There usually is a requirement for increased engineer means and logistical support.

b. Difficult terrain may tend to slow the momentum of the division's operation or canalize its

movement with an increase in the susceptibility to location and identification by the enemy for attack by nuclear weapons or tactical air. In some instances, however, this terrain may provide natural concealment and protection from the effects of nuclear weapons.

c. The use of difficult terrain by the division may increase the opportunities for surprise. Areas of difficult terrain favor infiltration, raids, and guerrilla operations.

9-27. Woods, Swamps, and Lake Areas

a. Operations in woods, swamps, and lake areas in some respects are similar to those in fortified or built-up areas. Extended and dense woods provide good concealment and camouflage but limit visibility and fields of fire and hamper observation and control. However, large swamps or lakes within the area may provide good observation and fields of fire. Woods limit mobility. Trafficability in swampy areas is changeable as a result of rain, dry weather, or freezing. At times a swamp may be impassable; at other times, it may be an excellent route of advance. Similarly, frozen lakes can be used as routes of movement. Nuclear weapons used in wooded areas may create extensive blow-down or, when conditions are favorable, cause forest fires; in winter they may be used to break the ice on water bodies used as lines of communication.

b. Woods and swamps favor raids, infiltration, and guerrilla operations. Some woods, because of their size or location, are naturally strong defensive areas. Small wooded areas in open terrain are easily neutralized by fire or smoke.

c. Whenever possible, heavily wooded areas, swamps, and lake areas are bypassed. If it is necessary to clear such an area, it is encircled by mobile units and cleared by infantry.

d. The use of extensive wooded areas may add strength to a defense. However, such areas generally are not conducive to defense based upon maneuver. Further, the fire hazard of enemy nuclear weapons must be carefully considered.

9-28. Steppes

a. Steppes are vast areas of southeastern Europe and west-central Asia. They are flat, broken only by ravines, and in many cases have high, steep slopes overgrown with brush and thickets and some isolated clumps of trees. The steppe grass can provide concealment for individuals, but concealment for vehicles, tanks, artillery pieces, and similar materiel is limited. Except for ravines, there is no natural cover. Water supply on the arid steppe is difficult.

b. From late spring to early fall, the trafficability of the steppes is ideal for motorized and mechanized operations. The only obstacles are the ravines. During the summer the steppes are dry and susceptible to fires; either nuclear weapons or incendiaries may cause large fires destructive to

troops and supplies. Summer operations are influenced by dust which affects vehicles and makes it difficult to conceal movement. Winters are severe. There are no natural means of breaking the wind or banking snow which is whipped across the plains. There is a constant struggle against drifting snow. Trafficability in winter, while not ideal, is good. During the thaws, the ravines become streams, small depressions become ponds, and large areas of flatland are covered with water. The thawed ground is soggy. Movement is exceedingly difficult.

c. Operations on steppes are influenced by—

- (1) Lack of cover and concealment against air attack.
- (2) Increased need for security and deception measures because of the difficulty of concealment.
- (3) Increased problems of combat service support.
- (4) Increased emphasis upon speed of movement, and the accompanying requirement for additional means of mobility.
- (5) Increased reliance upon mines or surface burst nuclear weapons to impede or canalize enemy movement.
- (6) Danger of steppe fires during the dry season.
- (7) Problems created by dust.
- (8) Cold weather problems.
- (9) Mud.

9-29. Mountains

a. The general considerations of mountain operations are contained in FM 100-5. Detailed information on mountain operations, the employment of the arms and services, and training are contained in FM 31-71 and FM 31-72.

b. Only minor modifications are required in the organization of the infantry or airborne division for combat in the mountains. Increased emphasis is placed upon supply and movement by Army aircraft and the elimination of vehicles and weapons not suited to the terrain. In some areas, animal transport may be available from local sources. In alpine terrain, specialized technical training and equipment are required. The number of litter bearers for patient evacuation must be increased.

c. Decentralized command is essential in mountain combat.

d. Time and space factors vary with the configuration of the terrain, altitude, scarcity of roads, and season. Movement is measured in time rather than distance. Orders are issued early because of the longer time required and increased difficulty to move units and supplies.

e. Deployment of forces is restricted by the terrain. Small forces can impede, harass, or prevent the movement of large enemy forces. Frequently, mutual support between adjacent units is limited or impossible. Movement and employment of reserves are slow and difficult.

f. Tanks in substantial number are usually of limited value in mountain terrain, but their use must be exploited where possible. The use of heavy infantry weapons and artillery is hampered by their bulk and weight, considerable dead space in their fields of fire, and difficulty of observation. However, high-angle fire weapons assume major importance in support of units operating on heights. The importance of close combat increases as the value of other methods of combat decreases.

g. Attacks are characterized by centralized planning for execution by semi-independent tactical groupings. Objectives are frequently the heights which dominate the passes and permit movement through the mountains. Each dominant height must be secured before movement to the next. Whenever possible, attacks should strike the enemy in the flank or rear. Surprise may be achieved by movement of small, mountain-trained forces. Movement of counterattacking forces is slow and difficult; timing is highly important.

h. Mountainous areas favor guerrilla warfare.

i. In mountain operations, the use of radio and radio relay is restricted because of the terrain. The siting of radio equipment is critical, and use of auxiliary antennas is desirable. Installation of an extensive wire system is difficult. Airborne FM radio relay stations may be used extensively. Messenger and liaison personnel are slowed by limited road nets. Although dead space in radio reception will exist with both AM and FM radios, AM radio is the least affected and should be used for command control.

9-30. Deserts

a. The general considerations of desert combat are contained in FM 100-5. Detailed information on desert operations, the employment of the arms

and services, and training are contained in FM 31-25.

b. The doctrine expressed in chapters 5 and 6 for offense and defense applies without change in desert operations. The freedom of movement afforded by the desert, however, increases the depth of objectives and the frontages of units, and generally favors the use of wide envelopments and turning movements by highly mobile forces. The lack of concealment increases the need for dispersion and deceptive measures.

c. Combat service support problems are increased in the desert as a result of the great distances involved, extremes of temperature, sand or dust, shortage of water, and increased maintenance requirements. Troops must become acclimated to the desert before they can operate effectively.

d. Operation of the area communications system is facilitated by desert terrain, but problem areas in maintenance and camouflage are magnified. Extended ranges can be expected in the desert, and the use of special antennas may be necessary.

9-31. Jungle

a. The general considerations of combat in the jungle are contained in FM 100-5. Detailed information on the characteristics of jungles, the employment of the arms and services, and training are contained in FM 31-30.

b. Combat in jungles is conducted at extremely close quarters by relatively small bodies of troops. Proper training and conditioning of troops to jungle living, together with suitable equipment and initiative of individual and small unit leaders, are essential. Control of units and observation are difficult.

c. Combat service support problems are increased in jungle operations. Supply and evacuation by air are of great value but are difficult and often not feasible. Maintenance of equipment is difficult. Sanitation and health measures are important and must be rigidly enforced. Engineer requirements are increased.

d. Due to the greatly increased importance of routes through otherwise largely impassable terrain, roads, trails, and rivers are frequently considered key terrain.

e. Vegetation and lack of observation increase the need for security which often can be obtained only through the use of security detachments.

f. Airborne and airmobile forces can be used to outflank enemy defensive positions.

g. Jungle areas are conducive to raids, infiltrations, and guerrilla warfare.

h. In jungles the effects of terrain on communications are similar to those encountered in mountain operations. Establishment and operation of the area-type communication system will often not be possible. Employment of a modified communication system tailored to the tactical situation along the axis of tactical operations may be required. Between major command echelons AM radio may be the only usable means. Field expedients to elevate radio antennas above vegetation should be employed. Airmobile radio relay stations are used extensively to extend the range of ground radio stations. Maintenance of electronic equipment in jungle operations must be emphasized by commanders.

9-32. Defiles

a. Defiles are natural or artificial terrain features which canalize movement. A mountain pass, a gap through a minefield, routes through a large city, a river-crossing site, a bridge, and an area between two radioactive areas are examples of defiles. Major forces passing through a defile are particularly vulnerable to air and nuclear attack. Suitable air defense measures must be provided from sources outside the division.

b. A thorough reconnaissance must be made and consideration given to all possible routes. Provisions must be made to insure that the flow of traffic is rapid and uninterrupted. This often involves the use of highly mobile forces, including airborne and airmobile units, to reconnoiter the defile and establish suitable security on its flanks and at its exit. Units must plan in advance to move directly into a dispersed position upon clearance of the defile. Since a defile is a prime enemy target, deception measures will serve to hide the real intentions and facilitate successful passage.

c. Close command supervision and absolute control of traffic must be exercised to prevent inadvertent concentration of the division in the defile area. A defile commander is specifically designated by the major unit commander for each defile. He is vested with authority to exercise absolute control of the traffic entering and within the defile area to insure that the passage is properly executed.

9-33. Northern Operations

a. General considerations of northern operations are contained in FM 100-5. Detailed information on the arctic and subarctic areas, the employment of the arms and services, and training are contained in FM 31-70 and FM 31-71.

b. The division, when conducting operations in northern latitudes, requires specialized training and special equipment. The seasonal exchange of large amounts of organizational and individual equipment in the fall and spring presents a major logistical problem. Uninterrupted tactical operations demand careful planning for gradual exchange and storage of this equipment, and for scheduling shipments compatible with the tactical situation.

c. Offensive and defensive operations are conducted as in other climates. They are, however, affected by considerations which include long hours of daylight and the heat and dust of summer, long nights and bitter cold and storms of winter, mud and morass of the transition periods of spring and autumn, the disrupting effects of natural phenomena, the scarcity of roads, and vast distances and isolation. These considerations adversely affect but do not totally restrict mobility, firepower, and communications. The ability to move cross country is essential in all operations.

d. Training, equipment, and techniques of the division when operating in northern latitudes are affected by the following factors:

- (1) *During the winter.* The cold and snow create a constant need for heated shelter, cause difficulty in constructing fortifications, increase dependence upon combat service support, and require special winter clothing and equipment. The division must be trained in the use of oversnow equipment including skis, sleds, and snowshoes. Aircraft can use frozen lakes and rivers for landing areas. Wheeled vehicles can be used on frozen ground and frozen lakes where the snow cover is small. The thickness and type of ice determine the size and weight of vehicles that can use a lake surface as a roadway. Tracked vehicles should be substituted for wheeled vehicles wherever practicable.
- (2) *During the summer.* Extensive swamps, muskeg areas, lakes, and rivers require

special equipment such as boats and low ground pressure vehicles. Almost continuous daylight requires special care in movement. Aircraft equipped with floats can use lakes and rivers as landing areas.

- (3) *During the spring breakup.* Thaws weaken ice on waterways and swamps. Roads become impassable and the surface of the ground thaws. The resulting poor trafficability may seriously reduce surface movement.
- (4) *During the fall freeze.* The ground and waterways frequently freeze prior to heavy snowfall, increasing cross-country mobility. Early heavy snows, however, insulate the ground and delay its freezing. This condition impedes mobility.

- (5) *During all seasons.* The scarcity of roads affects large-scale operations and increases the difficulty of combat service support. Due to limited map coverage, special training and procedures are required in navigation and for accurate reporting of unit locations.

e. Personnel must receive special training to properly operate and maintain signal equipment in extreme cold. Special considerations include use of arctic batteries, attention to communications vehicles and power units, care of microphones due to their sensitivity to condensation, and variation in equipment operating ranges caused by condensation and freezing. Equipment should be kept at operating temperatures at all times. Selection and assignment of radio frequencies is particularly critical due to unusual atmospheric irregularities.

Section XII. COLD WAR SITUATIONS

9-34. General

a. Military contingencies arising from cold war will often require the division to conduct operations short of overt war.

b. The organization and wide range of available combat power of the division enable it to adapt itself to the variety of conditions which it may encounter. It can be employed independently or as part of a larger force. When employed independently, the division should be reinforced to insure its sustained logistical support.

c. In preparation for, and execution of, a mission of this type, the division commander should indoctrinate all personnel in civil-military relations, the limitations on application of force, the social conditions and customs, the religious practices and the political situation in the area of projected employment. He should also emphasize training in riot control, extensive patrolling, counterinfiltration, and widely dispersed operations. Commanders must insure proper conduct of their troops since misconduct may seriously affect relationships with the host country.

9-35. Special Considerations

a. Limitations on Authority. When employed on foreign soil in a cold war situation, specific limits are set on the authority of the division commander and on the individual commanders of divi-

sional elements by international agreements, such as the status of forces agreements, promulgated at the national level for the particular area of operations. These limitations will often restrict the tactical freedom of action of the unit commander and at times seriously reduce the effectiveness of his unit. These are major considerations and may dictate the force to be employed or the manner of its employment. Examples are restrictions on the use of firepower, roads, buildings, installations, railroads, and terrain. Civil officials of the host nation usually retain their authority, thus requiring time-consuming coordination procedures to insure the maintenance of good relations with the local populace.

b. Civil Affairs. The division and subordinate commanders must place special emphasis upon the civil affairs (CA) aspects of their missions. CA personnel and teams especially trained in CA operations are placed with key civilian control agencies to provide continuous liaison and to insure good relations. The division is reinforced with appropriate CA units in preparation for such missions. The impact of the limitations on authority discussed above is reduced by efficient CA operations. At division level, the CA annex to the operation order implements the provisions of existing status of forces agreements, if any, or other international or local agreements.

9-36. Operations

a. General. The division operating in a cold war situation will be confronted with a wide range of unpredictable factors—local political conditions regarding local and U.S. national policies; attitudes of local populations, law enforcement agencies, and native armed forces; potential enemy covert and overt capabilities; terrain and other environmental conditions; and command arrangements.

b. Planning.

(1) In a cold war situation, the division is involved in preparing plans for three types of conditions—conduct of current operations and training, planning for future cold war missions, and planning for probable combat operations. This planning effort will occupy much of the staff's time at division and subordinate levels.

(2) Planning for future missions in cold war situations and for future combat operations is initiated at the earliest opportunity, and is conducted continually and concurrently with the execution of current security missions and training. Operational plans are rehearsed when time and the situation permit and are revised in accordance with current intelligence reports.

c. Training. If the division is committed to a cold war mission for an extended period of time, its capability for coordinated combat action must not be allowed to suffer as a result of personnel losses and lack of training for combat skills. Therefore, individual and unit training exercises must be planned and conducted concurrently with the execution of the mission. Reserves at all echelons should be kept active and proficient through participation in these training exercises. Rotation of reserve elements with those required to be committed can insure effective periodic combat training of units through battalion level.

d. Control. If the division is deployed over a wide area in a cold war situation, the problem of control is increased. Major subordinate commanders normally are free to act within the limits of U.S. military policies and international agreements. The deployment of the division may exceed the capabilities of the organic communication systems because of the distances and terrain. The division may be augmented with additional Signal

Corps units. Commercial communications may be limited or nonexistent. Due to the increased need for military police, additional units may be assigned or attached.

e. Combat Service Support.

(1) Certain aspects of combat service support for operation in cold war situations require special consideration. If the division is held relatively concentrated, the logistical support problem is minimized. However, when the division's elements are widely deployed, the distances involved present conflicting requirements for transportation and security. The desirability of concentrating to increase security of combat service support units and supplies is balanced against the need to fragment distributing points and maintenance units to make support readily available to the user and to reduce transportation and distribution requirements. Decisions are based upon the number of troops available for security missions, supply distance, and the amount of transportation. Isolated units may be supplied by air.

(2) Logistical support plans for future combat operations must provide for area damage control. Intelligence efforts should be directed toward revealing the enemy's potential for infiltration operations and nuclear warfare, both of which will offer major threats to division operations.

(3) The deployment of combat service support units and supplies must support the division's mission and minimize the need for major relocation to support the various operational plans.

9-37. Unit Capabilities

a. The subordinate units of the division have characteristics and capabilities which make them particularly adaptable to the varied operational requirements in cold war situations.

(1) The infantry and mechanized infantry battalions provide the bulk of the troops necessary for patrol operations (mounted or dismounted), area search and security, outposts, strongpoints, and control posts, and for action in mountainous terrain, jungle, or swamp. These battalions are well suited for the control of mobs and for the suppression of riots and civil dis-

order. A battalion task force on parade makes an impressive local show of force. The timing and route of march are carefully selected for maximum effect. Mobile combined arms teams formed from units organic to the division provide the basis for quick application of measured force.

- (2) The armored cavalry squadron, because of its organization, mobility, and excellent communications, provides reconnaissance and security forces capable of being deployed over wide areas. It is also well suited for a show of force and riot control.
- (3) The tank battalion is an excellent show of force unit. Reinforced with mechanized infantry, tank units provide powerful mobile forces with extensive communications. When employed with dismounted infantry, tanks are effective in quelling riots and civil disturbances without resorting to their full firepower capability.
- (4) The division aviation battalion conducts day and night surveillance operations over wide areas and provides liaison and courier service. It operates from hastily prepared airstrips within protected areas. Army aircraft are used to supply isolated outposts and detachments located away from the major elements of the division. Army aircraft are used to disseminate leaflets and loudspeaker messages to assist in controlling the civilian population or to support propaganda efforts.
- (5) The engineer battalion may be required to construct or supervise the construction of airfields, fortifications, barriers, bridges, and roads, and to perform mine detection and removal. It provides technical assistance to civil agencies. In emergencies it may be employed on security and riot control missions.
- (6) The signal battalion normally is required to provide a signal communication network. Extensive reliance is placed upon

radio because of problems involved in maintenance of wire communication systems, particularly in partisan infested areas. Signal communications with subordinate elements are maintained over extremely wide areas by use of radio relay.

- (7) When the disposition of forces and terrain permit, artillery support is provided to outposts and detachments. Organic nuclear weapon delivery means are particularly effective in a show of force. When not required in its primary role, the division artillery is capable of executing security missions as a major subordinate element of the division.
- (8) Combat service support units may provide humane relief services such as the issue of food and clothing and medical treatment of the population in support of CA operations. Rendering assistance of this type entails a command decision and normally will be limited in scope. When adequate units and supplies are available, such action may influence accomplishment of the division mission.
- (9) The military police company, cooperating with civil police, can materially further the accomplishment of the division mission through control of division personnel and vehicles and through specific assistance to civil authorities.
- (10) The attached CA unit provides the division commander with an agency for the conduct of required CA operations including community relations, liaison, advice, and assistance to the civilian population, its government, and its institutions.
- (11) Combat units, Army aviation, and military police can employ riot control chemical agents against riotous or hostile personnel.
- (12) Other civic actions when authorized.
 - b. Air transportation of units speeds their employment and redeployment over wide areas when sufficient organic or supporting aircraft are available.

Section XIII. SPECIAL WARFARE OPERATIONS

9-38. General

a. Special warfare operations are concerned primarily with psychological operations, counterinsurgency operations, and unconventional warfare.

b. These operations are applicable throughout the entire spectrum of war encompassing cold, limited, and general war.

c. For further amplification of psychological operations see paragraphs 4-36 and 4-37, and FM 33-5.

d. Counterinsurgency operations are concerned with those situations ranging from subversive activities, which are only a potential threat, to situations when insurgency becomes primarily a war movement between organized forces of the insurgents and those of established authority. It is in this latter situation, commonly called Phase III of Insurgency, that conventionally organized divisions and their assigned units may be committed.

e. Unconventional warfare (UW) operations are conducted within enemy or enemy controlled territory by predominantly indigenous personnel. They are usually supported and directed in varying degrees by an external source through specially trained organizations such as the U.S. Army Special Forces. The three interrelated fields of UW are guerrilla warfare, evasion and escape, and subversion. The conventional forces are most generally concerned with guerrilla warfare.

f. Additional information concerning special warfare and its related activities is contained in FM 21-77 and 21-77(A), FM 31-15, FM 31-16, FM 31-21, and FM 31-21(A); FM 31-22, FM 31-22(A), FM 33-5, FM 41-10, FM 100-5, and FM 100-20.

9-39. Counterinsurgency Operations

a. The division, with its normal attachments, is particularly well suited to counterinsurgency type operations. To attain maximum effectiveness, however, intensive training must be completed in psychological operations, counter guerrilla operations, civic action, country or area orientation, and language training. Included in this training should be a thorough orientation on the roles and missions of the nonmilitary agencies and other military services engaged in counterinsurgency.

b. The division can be required to furnish assistance ranging from mobile training teams attached to deployed special action forces (SAF) and military assistance advisory groups (MAAG) to brigade size backup forces (FM 31-22).

c. In the more advanced stages of insurgency, the entire division can be committed in a counterinsurgency role.

d. Organization, operations, and employment of the division and its subordinate units in the roles described above are found in FM 31-15, FM 31-16, FM 31-22, FM 33-5, and FM 41-10.

9-40. Unconventional Warfare

a. Indigenous personnel operating as guerrillas are organized on a paramilitary or military basis with the purpose of reducing the combat effectiveness, war potential, and morale of their enemy. The combat operations of these forces include interdiction and diversion. Raids and ambushes are the principal offensive techniques. Integrated with the combat operations are psychological operations, evasion and escape, passive resistance, reprisal, subversion, sabotage, and intelligence activities. Guerrillas may or may not operate in conjunction with friendly conventional forces and special forces as dictated by the political climate at the time. This factor must be a prime consideration of the U.S. commander planning the commitment of his forces.

b. When the division area of influence overlaps an area in which U.S.-sponsored guerrillas are operating, the division may request that the guerrilla forces execute missions to assist its operations. When linkup with U.S.-sponsored guerrilla forces becomes imminent, operational control of the guerrilla forces normally is exercised by the commander of the U.S. force in whose area of influence the guerrilla forces are operating. Normally, this operational control is exercised through a special forces liaison detachment attached to the division from the special forces operational base (SFQB), if the guerrilla force is operating with a U.S. Army Special Forces detachment. Upon linkup, guerrilla units may be attached to the division for further employment within the limits of their

capabilities, or they may be demobilized. In those cases where the guerrilla force is not operating with the U.S. Army Special Forces, the division commander attempts to coordinate directly with the guerrilla force commander and provides a liaison party, with adequate communications, to the guerrilla force. See FM 31-21 for further discussion of link-up operations.

c. The employment of guerrilla forces to assist the division before, during, and after linkup are discussed in detail in FM 31-21.

9-41. Applicable STANAG

The material presented in this chapter agrees with applicable portions of STANAG 2099—Troop Safety in the Nuclear Land/Air Battle.

CHAPTER 10

TROOP MOVEMENTS

Section I. BASIC CONSIDERATIONS

10-1. General

a. The primary consideration in troop movements is to insure that troops arrive at the proper place, at the proper time, in effective condition, and in the best formation to accomplish their assigned mission. In nuclear warfare particularly, commanders must move their troops from dispersed positions to the critical point of decision and deploy them to minimize forming a remunerative target for the enemy's nuclear delivery means.

b. The division transportation officer advises the division commander and staff and the support command commander on matters relating to the employment, capabilities, and limitations of organic and attached logistical support transportation.

c. The division engineer advises the division commander and staff on matters relating to the condition, capabilities, and limitations of the road net.

d. The division provost marshal advises the division commander and staff on matters relating to military police direction and control of movement on the road.

e. Functions of staff officers concerning troop movements are described in FM 101-5.

10-2. Classification of Movements

Troop movements are classified as tactical or administrative. They can be further classified as to transportation means employed.

a. Tactical. A tactical move is conducted with primary emphasis upon movement in combat-ready formations. Tactical moves are based upon the assumption of early ground contact with the enemy, either en route or shortly after arrival at destination. Under these conditions, the most efficient use of transportation means is frequently sacrificed to tactical considerations.

b. Administrative. An administrative move is conducted with primary emphasis upon efficient use of available transportation. Such moves ordinarily are based upon the assumption that contact with the enemy is remote while en route and shortly after arrival at destination.

10-3. Plans

Carefully prepared and detailed plans are necessary for efficient troop movements. Units are given timely notification of impending movements to permit proper preparation. Factors which must be thoroughly evaluated include—

a. Organization of troops and equipment to meet the requirements of the tactical situation while best utilizing available transportation.

b. Assembly of troops and transportation.

c. Packing and marking of equipment.

d. Loading of personnel and equipment.

e. Control and logistical support en route and at destination.

f. Assembly of personnel and equipment in the formation desired at destination.

g. Adequate security en route and at destination.

h. Influence of the weather and adequacy of the transportation net.

i. Nature and extent of possible enemy interference.

10-4. Control and Coordination

a. Control of tactical and administrative troop movements is exercised by the G3 and G4, respectively, through the establishment of priorities. The division traffic headquarters plans, routes, schedules, and clears such movements according to their priority.

b. The division traffic headquarters maintains close liaison with the support command and supporting corps headquarters to insure that all essential highway movements are integrated into the division highway regulation plan.

c. For details of staff responsibilities for movements, see FM 101-5.

10-5. Use of Means

Within the limits prescribed by military necessity, troop movements must fully utilize transportation means. This fundamental principle is

paramount in administrative moves. It must always be considered in tactical moves.

10-6. Security

Security and security planning are essential to troop movement to avoid surprise attack and compromise of plans.

10-7. Training and Standing Operating Procedures

To expedite movement, individuals and units train for all types of movement. Unit SOP's include methods and techniques for using each mode of transportation the unit may be expected to employ.

Section II. TACTICAL MOTOR MARCHES

10-8. General

The movement of a division requires detailed planning. The time available for issuing orders normally is short, yet they must be disseminated throughout the division. Time is saved by practice and experience and by including pertinent detail in the division SOP. Details of planning and executing marches are contained in FM 55-30 and FM 101-10.

10-9. Preparation for the March

Proper organization for movement requires that the force be organized into manageable movement echelons. Unit integrity is preserved as much as possible. When movement groups are composed of troops from more than one unit, a single commander is designated. Subgroupings should consist of units under their own commanders. Preparation for the march normally requires the following steps. Many of these steps should be included in the division SOP.

- a. Issue a warning order.
- b. Make a map reconnaissance. Ground and air reconnaissance of the routes and the new area are made when possible.
- c. Select (if not specified by higher headquarters) and clear routes.
- d. Designate the start point (SP) and release point (RP).
- e. Reconnoiter the route to the SP.
- f. Establish necessary liaison.
- g. Provide for maintenance, supply, evacuation, and refueling.
- h. Determine the order of march, rate of march, maximum speed of vehicles, distance or density, phase lines and control or checkpoints (if used), and halts.
- i. Provide for air, ground, and communication security.
- j. Issue strip maps when practicable.

k. Dispatch advance parties, such as quartering and reconnaissance.

l. Provide for traffic control.

m. Designate signal communication channels for control and any restrictions on their use.

n. Issue the operation order.

10-10. Warning Order for the March

The warning order alerts units for the impending move. It is issued as soon as the first notification concerning the move is received. Additional information is disseminated as it is received. If the information is available, the warning order includes the destination, time and date of departure, purpose of the move, and other essential data. Subordinate commanders are issued the warning order at the earliest possible time to allow them to make plans and preparations, and perform reconnaissance. The warning order normally is issued as a fragmentary order and may be either written or oral.

10-11. Reconnaissance of Routes

a. The assignment of routes to subordinate units depends upon the mission and mobility of the unit, enemy capabilities, and the nature of the route. Consequently, all routes under consideration by the division should be reconnoitered. Speed of movement is closely related to the accuracy of reconnaissance.

b. The armored cavalry squadron, aviation battalion, military police company, and engineer battalion conduct route reconnaissance in conjunction with other functions. Battalion reconnaissance platoons are also used. When a special need for route reconnaissance arises, these units, as appropriate, provide the specific assistance required. The capacities of underpasses, bridges and culverts, ferries, fords, and routes are determined by reconnaissance. Reconnaissance also determines

critical points and obstacles so that congestion can be prevented and local security can be provided.

10-12. Selection of Routes

a. The selection of routes is an important factor in successful marches, especially when the march is to be long or is to be made during darkness or adverse weather.

b. To reduce vulnerability to nuclear fires, the division moves by multiple routes and cross-country. This allows moves to be completed more rapidly, and provides dispersion and mutual flank protection.

c. When moving on multiple routes, elements of the division often use secondary roads. Provision is made for engineer support if required. Care is exercised to assign routes that are suitable to the various division loads.

d. The overriding consideration in the selection of routes for a tactical march is the mission. The routes that best serve the mission are the ones selected. Military police are provided for control during the move. Provision is made for the necessary engineer support to clear obstacles, if requirements exceed the capabilities of the tactical unit.

e. When selecting a route, a commander insures that all vehicles in his column can negotiate the route. It may be necessary to march certain vehicles over separate routes.

10-13. Division Planning Considerations

a. The following calculations are involved in determining the time required to complete the move of the division:

- (1) *Preparation time* is the time from receipt of the order to move until the first vehicle crosses the start point (SP). FM 101-10 contains experience factors.
- (2) *Time distance* is the time required to travel between two given points at a given rate of speed (usually from the SP to the RP).
- (3) *Pass time* is the length of time required for a column to pass any given point.

b. Determination of the time required for the division to begin execution of a mission includes the time required for necessary tasks at the end of the march. These tasks include final reconnaissance, refueling, and movement to the line of departure. Units not needed immediately at the destination are not considered in the calculation of

the time for the division to begin its mission. The G3 plans backward from the scheduled time of beginning execution of the mission to determine the time when the division should start to move.

c. Tables, graphs, and other aids based upon the division's experience simplify movement calculations. The most important of these aids are—

- (1) Table of lengths of columns and pass times for division units.
- (2) Table of simplified formulas for road spaces and time lengths.
- (3) Table of time distances.
- (4) Table of average time factors.
- (5) Road movement graphs.
- (6) Road movement tables.
- (7) March calculators.

d. The vehicle availability status of divisional units changes frequently. Likewise, the organization for combat varies with the mission and the tactical situation. Consequently, commanders and staff officers must know the current status of vehicles. Each headquarters should ascertain the status of vehicles of the next lower command echelon and determine the current pass time and length of column of each unit.

10-14. Designation of the Start Point

a. The purpose of a SP is to provide all units of a march column a common point from which to start their integrated movement. When more than one route is being used, a SP is designated for each route. The SP must be a place along the route of march which is easily recognizable on the ground and is readily accessible, such as a road intersection. It should not be located in a defile, on a hill, or at a sharp curve in the road. A SP should be far enough from assembly areas to allow the march units to be organized and moving at the prescribed rate when they reach it. It should not require any element of a column to march to the rear or through another unit to reach it.

b. Prior to starting a march, each major unit of a serial reconnoiters its route from the serial SP to the route SP and determines the exact time required to move this distance. Normally, the time that each serial will arrive at the route SP is published in the operation order. However, the serial commander must calculate and announce the times for major units of his serial to arrive at and clear a designated serial SP. The serial and route SP's may be the same.

10-15. Designation of the Release Point

The purpose of an RP is to provide all units of a march column a common point at which they revert to the control of their respective commanders. The RP should be easily recognizable on the map and on the ground and must be on the route of march. Unit guides meet their units as they arrive at the RP and lead them to the new areas. Multiple routes and cross-country movement should be employed from the RP to enable units to disperse rapidly. A route RP should not be located in a defile, on a hill, or at a sharp curve in the road.

10-16. Road Movement Graph

A road movement graph is a time-space diagram used in planning and controlling marches and in preparing or checking road movement tables. It is a simple method of obtaining information to prepare a road movement table, and shows at all times the locations of the head and tail of each march serial. See FM 101-10 for details and an illustrative example of a road movement graph.

10-17. Road Movement Table

a. A road movement table normally is published as an annex to the operation order. The road movement table contains information and instructions concerning the march serials involved in the movement, including their identification serial numbers, rates of march, routes, SP's, times of crossing the SP's, critical points, times of arrival at and departure from critical points, and other pertinent details. This information usually is obtained from an accurate knowledge of the status of routes and units from a road movement graph and from time and space calculations.

b. It is difficult for a marching column to maintain a constant density and a uniform column gap between march units and march serials, while at the same time maintaining a set rate of march. Such factors as length of column, rate of march, column gap, elapsed time, pass time, and vehicle distance will vary somewhat from the calculated data even in well-disciplined and well-controlled marches. In preparing the road movement table, it is important to consider the state of training of units, weather, light, road conditions, the tactical situation, and to add a safety time factor to calculations if necessary.

c. Loss of time and the creation of obstacles and radiological contamination caused by nuclear attack must be expected, and alternate plans must be prepared for immediate execution. The time required for moves will depend upon the weather, terrain, experience factors, road conditions, and the enemy's nuclear capability.

d. For an example of a road movement table, see FM 101-10.

10-18. Organization of the Column

a. Whenever possible, elements should move in multiple columns, each organized to permit continuous movement. The following should be considered in planning the formation of the march elements and the order of march:

- (1) Missions of the units upon arrival and the disposition which will best accomplish those missions.
- (2) Present disposition of units.
- (3) Routes available.
- (4) Nature and extent of probable enemy interference.
- (5) Difference in rates of march of various elements.
- (6) Column gap between units on the move.
- (7) Implications of movement conducted during hours of darkness or limited visibility.
- (8) Degree of flexibility and relative vulnerability of formation adopted.
- (9) Degree of tactical control.

b. The division may march in up to six major march serials: three brigades, division troops, division artillery, and the support command. There is, however, no standard formation. March serials are organized as required by the tactical situation. Elements of division artillery, other division troops, and the support command can move with the supported brigades.

c. The division executing a march is organized into march units and march serials or march columns (FM 55-30).

d. For information concerning vehicle densities of motor columns, see FM 101-10.

10-19. Rate of March

a. The introduction of nuclear weapons increases the requirement for speed and precision of movement. Rates of march will vary with the local conditions. Wheeled and tracked vehicles in column must travel at the optimum rates (not maximum speeds) of the slowest vehicles.

b. Factors that determine the exact rate of march are—

- (1) Grades, sharp turns, cities, towns, and other restrictions along the route.
- (2) Surface conditions such as dust, ice, mud, and snow.
- (3) Condition of drivers and crews to include training and experience.
- (4) Condition of vehicles.
- (5) Conditions that affect visibility.

10-20. Halts on the March

a. See FM 55-30 for details of time, duration, frequency.

b. A series of assembly areas is selected along all routes for dispersal of units during planned halts. Units move into these areas for refueling and relief halts and to clear blocked or contaminated roads when ordered to do so. Movement into and out of assembly areas is rigidly controlled by unit commanders. These areas should be easily accessible to the routes of movement and should be large enough to permit dispersion of battalion size units. Camouflage discipline in such areas is very important.

10-21. Refueling on the March

Commanders make plans for refueling en route. Halts for refueling take place in selected assembly areas if possible. Sufficient class III supplies are carried in unit trains, obtained from army supply points en route, or are dispatched ahead of the movement to be on hand as required.

10-22. March Liaison

a. Each march unit and serial establishes liaison with the preceding element in the column before crossing the SP. The liaison agent keeps his commander informed of the state of readiness of the preceding unit, delays that occur, and the time of departure of the preceding unit. Unless radio or listening silence is imposed, liaison normally is accomplished by radio. When radio silence is imposed, wire and messengers (motor or Army aircraft) are employed. This type of liaison minimizes last-minute changes in march orders and enables each unit to start at the proper time. It also eliminates the premature removal of camouflage materials, unnecessary consumption of fuel, and fatigue to personnel.

b. Division headquarters establishes liaison with higher headquarters to keep abreast of priorities on roads and critical points on the route of march. If there is a possibility of other units using or crossing the routes designated for movement of the division, liaison is established with these units at the earliest time possible.

10-23. Combat Service Support

a. Through timely coordination and planning, combat service support units provide for emergency repair, evacuation, and resupply on the move and after arrival at the destination.

b. The division combat service support units move independently, when practicable, and generally on one or more interior routes. They may march to the location in a single move or may displace by echelon.

c. For details of maintenance and procedures in the event of accident, see FM 55-30.

10-24. Night Marches

Enemy air and nuclear capabilities and the requirement for secrecy frequently dictate movement at night or under conditions of poor visibility. In general, night marches are organized and conducted in the same manner as day marches; however, reduced visibility places greater emphasis upon control, security, liaison, and maintenance of direction. These aspects require careful prior reconnaissance, preparation, and suitable control measures.

10-25. Security

a. The division commander prescribes the security measures for the division.

b. The armored cavalry squadron and the aviation battalion assist in providing security for the division. During a move involving the major portion of the division, these units are used actively under division control. For details of security during movement, see paragraphs 5-31 through 5-40.

c. When a column halts for a short period, its advance, flank and rear guards establish march outposts. If the command is required to halt for a long period, it secures itself by means of an interior guard for internal security and an outpost system disposed to cover its front, flanks, and rear. Each column organizes its own outpost system.

When important points outside the outpost system are to be secured, detached posts are established. The main body is disposed to counter enemy threats and facilitate the adoption of a predetermined defense.

10-26. Orders

a. The operation order contains the instructions issued for the movement of units from one location to another within a stated period of time. This order normally is prepared after the completion of the necessary reconnaissance and an estimate of the situation. On occasion, the time available and the existing tactical conditions will not permit detailed planning or reconnaissance. Consequently, it is advisable for a division to have several march plans prepared in the form of an SOP. These plans can then be modified by fragmentary orders to fit the given situation.

b. Conditions and time permitting, information in the operation order includes destination, routes, rate of march, maximum speeds, order of march, SP's, time of crossing the SP's, details of air and ground alert guards scheduled halts, vehicle distances, RP's, communications, location of the commander during the march, and strip maps. Additional details, such as route or unit markers to be used, control or checkpoints, and location of road guides, may be included if necessary. Certain items listed above often are standardized and included in the unit SOP. Items so included are not repeated in the operation order.

10-27. Strip Maps

A strip map is a schematic sketch containing useful information about the route of march. A strip map should be included as an annex to the operation order. It is particularly useful to commanders of small units for organizational control. Strip maps should be reproduced in quantity by the using units and supplied to key personnel.

10-28. Control

a. The division commander establishes initial control of the march by designating in the order—

- (1) The start and other critical points.
- (2) The time at which the heads or the tails of columns pass these points.
- (3) The rate of march.
- (4) Column gap between units.

- (5) The order of march.
- (6) The routes of march.
- (7) The assembly areas.
- (8) Phase lines and march objective if appropriate.
- (9) The locations of his command post.
- (10) Communications to be used for control of the march.
- (11) Military police traffic control posts.

b. The rapid movement of forces requires effective control. Emphasis must be placed upon the movement control of divisional units and of corps and army units operating in the division zone. A movement plan or an SOP should provide for—

- (1) Establishment of unit priorities and control of the movement to and on routes. Routes must be clearly marked and vehicle operators thoroughly briefed.
- (2) The granting of a clearance by the appropriate traffic headquarters prior to movement.
- (3) A surveillance system to check unit locations and march dispersion and to assist in controlling the march.

c. March discipline and adherence to march techniques are necessary for the maintenance of uninterrupted movement and reduction of the vulnerability of the division. Army aircraft provide an efficient means of detecting and correcting violations. Consistent with tactical security, this system is used to the maximum. Units identifying themselves to aerial observers by displaying panels. Ground surveillance should be used for all marches. Staff officers at all echelons should be used to check and control columns.

d. Efficient use of military police must be planned. Movement on multiple routes during periods of poor visibility and the existence of major intersections, defiles, and detours along routes increase traffic control problems. Minimum essential traffic control posts should be used. In conjunction with control posts and consistent with tactical security requirements, aerial and mobile ground control teams can be used with each column. The aerial control team can land and control situations until relieved by a ground control team. Additional military police support from higher headquarters should be requested when organic military police cannot handle the operation alone.

Section III. MOVEMENTS BY RAIL**10-29. General**

Rail is an economical form of land transportation for moving large bodies of troops long distances and should be used to the maximum extent possible. When rail facilities are limited, tracked, heavy, and oversized vehicles should receive priority for rail movement.

10-30. Responsibilities

Troop movements by rail are the joint responsibility of the transportation agency and the unit being moved.

a. The transportation agency is responsible for providing suitable transport equipment—CONEX if required—loading and unloading facilities, and necessary technical guidance and supervision.

b. The moving unit is responsible for its own internal administration and control. It prepares and implements loading plans in accordance with directives and in cooperation with the transportation agency. The moving unit also provides housekeeping and local security troops for the transportation agency.

10-31. Plans and Orders

a. When directing the movement of a unit by rail, the order will designate the points at which

the unit will entrain and will indicate the desired closing time at the unit's destination.

b. The commander of the troops is responsible for the preparation of plans and tables regulating loading. Details of the move are worked out with the transportation officer of the area in which the move originates. A central transportation movements agency determines the routing. Contacts by the moving unit with civilian or foreign government railroads are usually made through the area transportation officer.

10-32. Organization for Movement

a. The sequence in which elements are moved is determined by the availability of transportation, the mission, and the situation which will confront the moving unit at its destination. The assignment of units to entraining points is determined by availability of suitable loading facilities, material to be loaded, and proximity of elements to entraining points.

b. A transportation grouping consists of the troops, equipment, and supplies transported on one train. Transportation groupings are organized to obtain the most economical loading unless tactical considerations dictate the maintenance of tactical unity. When tactical considerations govern, each combat element should be accompanied by its own equipment and supplies.

Section IV. MOVEMENTS BY WATER**10-33. General**

a. Water transportation is the primary means by which oversea operations are established and maintained. It is characterized by a large capacity for personnel and tonnage, great range, comparatively slow speed, but a high rate of movement.

b. Waterborne movements are especially vulnerable to attack by hostile air, surface, and undersea forces. When there is a possibility of enemy attack, vessels usually will be assembled in a convoy

under naval command and provided with a naval escort to include air cover.

10-34. Responsibilities

a. The responsibilities of the moving agency—the Military Sea Transport Service (MSTS) or the U.S. Navy—are set forth in JCS Pub 3. For details relative to water transportation, see FM 101-10.

b. The responsibilities of the unit being moved are the same as set forth in paragraph 10-30.

Section V. MOVEMENTS BY AIR**10-35. General**

Air movement is a means of transporting units rapidly into battle or of delivering troops, supplies, or equipment to a secured objective area or

into an area inaccessible to other means of transport. Movements by air may be either tactical or administrative, or a combination thereof, depending upon the contemplated employment of the

force being moved. Movement by air capitalizes on the capability of the aircraft to overcome distances and overfly geographical barriers, and is characterized by speed. It is limited in its employment by a low tonnage and cubage capacity, adverse weather, inadequate air-landing facilities, and enemy counterair activities.

a. Strategic. Speed is maximized by air movement. The division, less tanks, tank recovery vehicles, armored vehicle launched bridges, and self-propelled artillery, can be moved to locations throughout the world in a short time, thereby capitalizing on strategic surprise. The division can be moved by air independently or as part of an airborne force. See TM 57-210 and FM 57-10 for information regarding air movement.

b. Tactical. Tactical movement by air is covered in FM 57-10 and FM 57-35.

10-36. Army Aviation

Within the division, aircraft suitable for cargo and troop lift are assigned to the aviation battalion. Mobility of the division is improved by the battalion's support of the reconnaissance effort and its use to move troops and supplies and to evacuate casualties. Since the division's airlift capability is limited, careful coordination and planning are essential for its efficient use. Consideration is given to the additional Army transport aviation support available within the field army. Plans for employing units using Army transport aviation may encompass operations up

to and including the tactical airlift of one or more battalions.

10-37. Control of Army Aviation

Army aviation units from higher headquarters may be attached, placed under the operational control, or placed in support of the division. Normally, the division will retain operational control of such units; however, circumstances may require that control be passed to a lower level. Delegation of operational control may be favored when—

a. A subordinate unit is better able to plan, coordinate, and control the overall operation.

b. The planned operations do not transcend the area of responsibility of the unit conducting the operation.

c. The unit conducting the operation has been assigned the responsibility for designating the mission to be accomplished by the airmobile force.

d. The unit conducting the operation has adequate communication facilities for control of Army transport aviation.

10-38. Air Force Troop Carrier Support

The division plans for operations employing troop carrier aircraft to include maintaining up-to-date requirements to move the division or its subordinate elements by various types of aircraft. When aircraft are not available in the quantities required, elements which are not needed immediately in the objective area are phased back to subsequent echelons. See TM 57-210 for technical information regarding air movement.

Section VI. BIVOUAC AND ASSEMBLY AREAS

10-39. General

a. The division normally occupies a bivouac area only when the possibility of contact with enemy ground elements is remote. Disposition of the units within the bivouac area is influenced by the need for adequate dispersion to minimize the effects of an air or nuclear attack and for protection against guerrilla attack. Adequate security measures are required for protection of any bivouac area.

b. An assembly area for a division is an area in which its organic units assemble to organize and prepare for further action. Unit dispositions are influenced by the tactical situation, and the prob-

ability and imminence of contact with the enemy. Security measures are taken in assembly areas as required by the tactical situation.

c. The following may be performed while units are in an assembly area:

- (1) Issue orders.
- (2) Reorganize for combat.
- (3) Refuel and resupply.
- (4) Maintenance and decontamination.
- (5) Rest and relaxation of personnel.

10-40. Selection of Bivouac and Assembly Areas

a. Bivouac Areas. The selection of bivouac areas depends more upon the availability of suit-

able space than upon any other consideration. The area must be large enough to permit adequate dispersion of subordinate units. The bivouac area should be located to favor combat service support of the division. The transportation net within the area must be considered and should be adequate to support division traffic. Dispersion of unit areas should be consistent with the factors of control and the minimizing effects of nuclear, air, and ground attack. Required dispersion normally is obtained between battalion assembly areas rather than by the dispersion of smaller units over the entire division area.

b. Assembly areas.

- (1) The assembly area of a division under conditions of nuclear war normally is located either in the army service area or in the corps rear area. This area is a general area within which are located the assembly areas of the major elements of the division. The subordinate command assembly areas are specified by the division commander. Unit integrity is maintained in the assignment of the subordinate unit assembly areas.
- (2) In selecting an assembly area, the following factors are considered:
 - (a) Whether the area is located to permit the contemplated employment of the unit to occupy it.
 - (b) Whether the area is defensible against known enemy capabilities.
 - (c) Whether the area is large enough and of proper shape and ground conforma-

tion to allow the occupying unit sufficient protection and dispersion to preclude the loss of more than one battalion to a single nuclear weapon.

- (d) Whether the occupying unit will be able to establish the necessary communications.
- (e) Whether the nature of the terrain provides adequate trafficability, concealment, and physical facilities to accommodate the unit.

10-41. Occupation of Bivouac and Assembly Areas

An advance or quartering party normally precedes the main body of the division into the bivouac or assembly area. Air defense, if required, is requested and furnished the advance party. The advance party improves entrances into and routes within the area and prepares the area for occupancy prior to the arrival of the division. Subareas are allocated and signs and guides are posted so that the march units can move into the area without halting. Both logistical and tactical considerations apply in the occupation of an assembly area.

10-42. Applicable STANAGS

The material presented in this chapter agrees with applicable portions of STANAG 2041 (SOLOG 51)—Operational Road Movement Orders, Tables, and Graphs and STANAG 2154—Definitions and Regulations for Military Motor Movements by Road.

APPENDIX I

REFERENCES

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|--------------|---|
| FM 1-5 | Army Aviation Organizations and Employment. |
| FM 1-15 | Aviation Battalion, Infantry, Airborne, Mechanized and Armored Divisions. |
| FM 1-60 | Army Aviation Air Traffic Operations—Tactical. |
| FM 1-100 | Army Aviation. |
| FM 3-5 | Chemical, Biological, and Radiological (CBR) Operations. |
| FM 3-8 | Chemical Corps Reference Handbook. |
| FM 3-10 | Chemical and Biological Weapons Employment. |
| (S) FM 3-10A | Chemical and Biological Weapons Employment (U). |
| FM 3-12 | Operational Aspects of Radiological Defense. |
| FM 5-1 | Engineer Troop Organizations and Operations. |
| (S) FM 5-26 | Employment of Atomic Demolition Munitions—ADM (U). |
| FM 5-135 | Engineer Battalion, Armored, Mechanized, and Infantry Divisions. |
| FM 5-136 | Engineer Battalion, Airborne Division. |
| FM 5-142 | Nondivisional Engineer Combat Units. |
| FM 5-144 | Engineer Shore Assault Units. |
| FM 6-20-1 | Field Artillery Tactics. |
| FM 6-20-2 | Field Artillery Techniques. |
| FM 6-54 | 115mm Area Toxic Rocket System. |
| FM 7-11 | Rifle Company, Infantry, Airborne, and Mechanized. |
| FM 7-15 | Rifle Platoons and Squads Infantry, Airborne and Mechanized. |
| FM 7-20 | Infantry, Airborne Infantry, and Mechanized Infantry. |
| FM 7-30 | Infantry, Airborne, and Mechanized Division Brigades. |
| FM 8-10 | Medical Service, Theater of Operations. |
| FM 8-15 | Division Medical Service, Infantry, Airborne, Mechanized and Armored Divisions. |
| FM 8-35 | Transportation of the Sick and Wounded. |
| FM 8-55 | Army Medical Service Planning Guide. |
| FM 9-1 | Ordnance Service in the Field. |
| FM 9-5 | Ordnance Ammunition Service. |
| FM 9-30 | Maintenance Battalion: Division Support Command. |
| FM 10-8 | Air Delivery of Supplies and Equipment in the Field Army. |
| FM 10-50 | Supply and Transport Battalion: Division Support Command. |
| FM 10-63 | Handling of Deceased Personnel in Theaters of Operations. |
| FM 11-21 | Tactical Signal Communications Systems, Army, Corps, and Division. |
| FM 11-50 | Signal Battalion, Armored, Mechanized, and Infantry Divisions. |
| FM 11-57 | Signal Battalion Airborne Division. |
| FM 12-11 | Administration Company, Airborne, Armored, Infantry, and Mechanized Divisions. |
| FM 14-8 | Class A Agent Officers. |

FM 16-5	The Chaplain.
FM 17-1	Armor Operations.
FM 17-15	Tank Units, Platoon, Company, and Battalion.
FM 17-30	The Armored Division Brigade.
FM 17-36	Divisional Armored and Air Cavalry Units.
FM 19-10	Military Police Operations.
FM 19-15	Civil Disturbances and Disasters.
FM 19-20	Military Police Investigations.
FM 19-25	Military Police Traffic Control.
FM 19-40	Enemy Prisoners of War and Civilian Internees.
FM 19-60	Confinement of Military Prisoners.
FM 19-90	The Provost Marshal.
FM 20-60	Battlefield Illumination.
FM 21-5	Military Training Management.
FM 21-6	Techniques of Military Instruction.
FM 21-18	Foot Marches.
FM 21-26	Map Reading.
FM 21-30	Military Symbols.
FM 21-40	Small Unit Procedures in Chemical, Biological, and Radiological (CBR) Operations.
FM 21-41	Soldier's Handbook for Chemical and Biological Operations and Nuclear Warfare.
FM 21-48	Chemical, Biological, and Radiological (CBR) and Nuclear Defense Training Exercises.
FM 22-100	Military Leadership.
FM 24-16	Signal Orders, Records, and Reports.
FM 24-17	Tactical Communications Center Operations.
FM 24-18	Field Radio Techniques.
FM 26-5	Interior Guard.
FM 27-10	The Law of Land Warfare
FM 30-5	Combat Intelligence
FM 30-7	Combat Intelligence, Battle Group, Combat Command, and Smaller Units.
FM 30-9	Military Intelligence Battalion, Field Army.
FM 30-10	Terrain Intelligence.
(C) FM 30-15	Intelligence Interrogation (U).
FM 30-16	Technical Intelligence.
FM 30-20	Aerial Surveillance—Reconnaissance, Field Army.
FM 30-101	Aggressor, The Maneuver Enemy.
FM 30-102	Handbook on Aggressor Military Forces.
FM 30-103	Aggressor Order of Battle.
FM 31-10	Barriers and Denial Operations.
FM 31-12	Army Forces in Amphibious Operations (The Army Landing Force).
FM 31-15	Operations Against Irregular Forces.
FM 31-21	Special Forces Operations.
(S) FM 31-21A	Guerrilla Warfare and Special Weapons Operations (U).
FM 31-22	U.S. Army Counterinsurgency Forces.
(S) FM 31-22A	U.S. Army Counterinsurgency Forces (U).
FM 31-25	Desert Operations.
FM 31-30	Jungle Operations.
(C) FM 31-40	Tactical Cover and Deception (U).
FM 31-50	Combat in Fortified and Build-up Areas.

FM 31-60	River Crossing Operations.
FM 31-70	Basic Cold Weather Manual.
FM 31-71	Northern Operations.
FM 31-72	Mountain Operations.
(CM) FM 32-5	Communications Security (U).
FM 33-5	Psychological Operations.
FM 41-5	Joint Manual of Civil Affairs/Military Government.
FM 41-10	Civil Affairs Operations.
FM 44-1	U.S. Army Air Defense Employment.
(S) FM 44-1A	U.S. Army Air Defense Employment (U).
FM 44-96	Air Defense Artillery Missile Unit, Hawk (Battalion and Battery).
FM 54-2	Division Logistics and the Support Command.
FM 55-6	Transportation Services in Theaters of Operations.
FM 55-30	Motor Transportation Operations.
FM 57-10	Army Forces in Joint Airborne Operations.
FM 57-35	Airmobile Operations.
(S) FM 100-1	Doctrinal Guidance (U).
FM 100-5	Field Service Regulations—Operations.
FM 100-10	Field Service Regulations—Administration.
(C) FM 100-20	Field Service Regulations—Counterinsurgency (U).
FM 101-5	Staff Officer's Field Manual—Staff Organization and Procedure.
FM 101-10 (Part I)	Staff Officer's Field Manual—Organization, Technical, and Logistical Data, Part I—Unclassified
FM 101-31-1	Staff Officer's Field Manual—Nuclear Weapons Employment
FM 101-40	Armed Forces Doctrine for Chemical and Biological Weapons Employment and Defense.
(S) TC 3-7	Capabilities and Employment of Biological Agents (U).
TC 5-2	Employment of Mobile Assault Bridging.
(C) TC 17-7	Aerial Surveillance Platoon, Divisions and Armored Cavalry Regiment (U).
TC 31-35	Control of Gaps.
TC 101-2	Tactical Operations Centers.
TM 3-200	Capabilities and Employment of Toxic Chemicals.
TM 3-210	Fallout Prediction.
TM 3-220	Chemical, Biological, and Radiological (CBR) Decontamination.
TM 57-210	Air Movement of Troops and Equipment.
(C) AR 10-122	U.S. Army Security Agency (U).
AR 105-31	Message Preparation.
AR 220-10	Preparation for Oversea Movement of Units (POM).
AR 220-58	Organization and Training for Chemical, Biological, and Radiological Operations.
AR 320-5	Dictionary of United States Army Terms.
AR 320-50	Authorized Abbreviations and Brevity Codes.
AR 638-30	Graves Registration Organization and Functions in Support of Major Military Operations.
DA Pam 310-series	Military Publications Indexes.
JCS Pub 1	Dictionary of United States Military Terms for Joint Usage.
JCS Pub 2	Unified Action Armed Forces (UNAAF).

(C) JCS Pub 3 Joint Logistics and Personnel Policy Guidance (U).
TOE 7E Infantry Division (July 1963).
TOE 17E Armored Division (July 1963).
TOE 37E Infantry Division (Mechanized) (July 1963).
TOE 57E Airborne Division (August 1963).

APPENDIX II
ORGANIZATION CHARTS

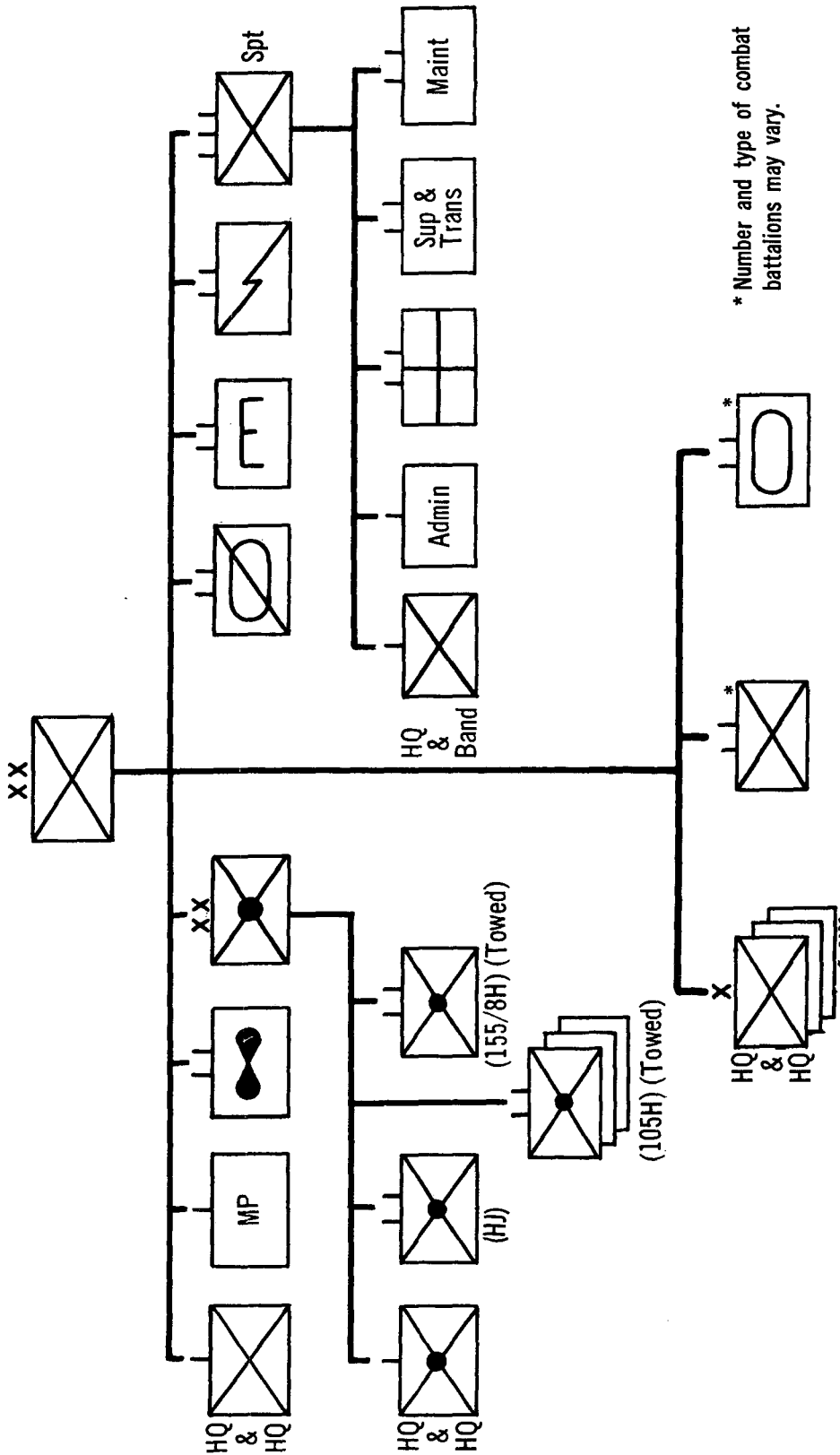


Figure 32. Infantry division.

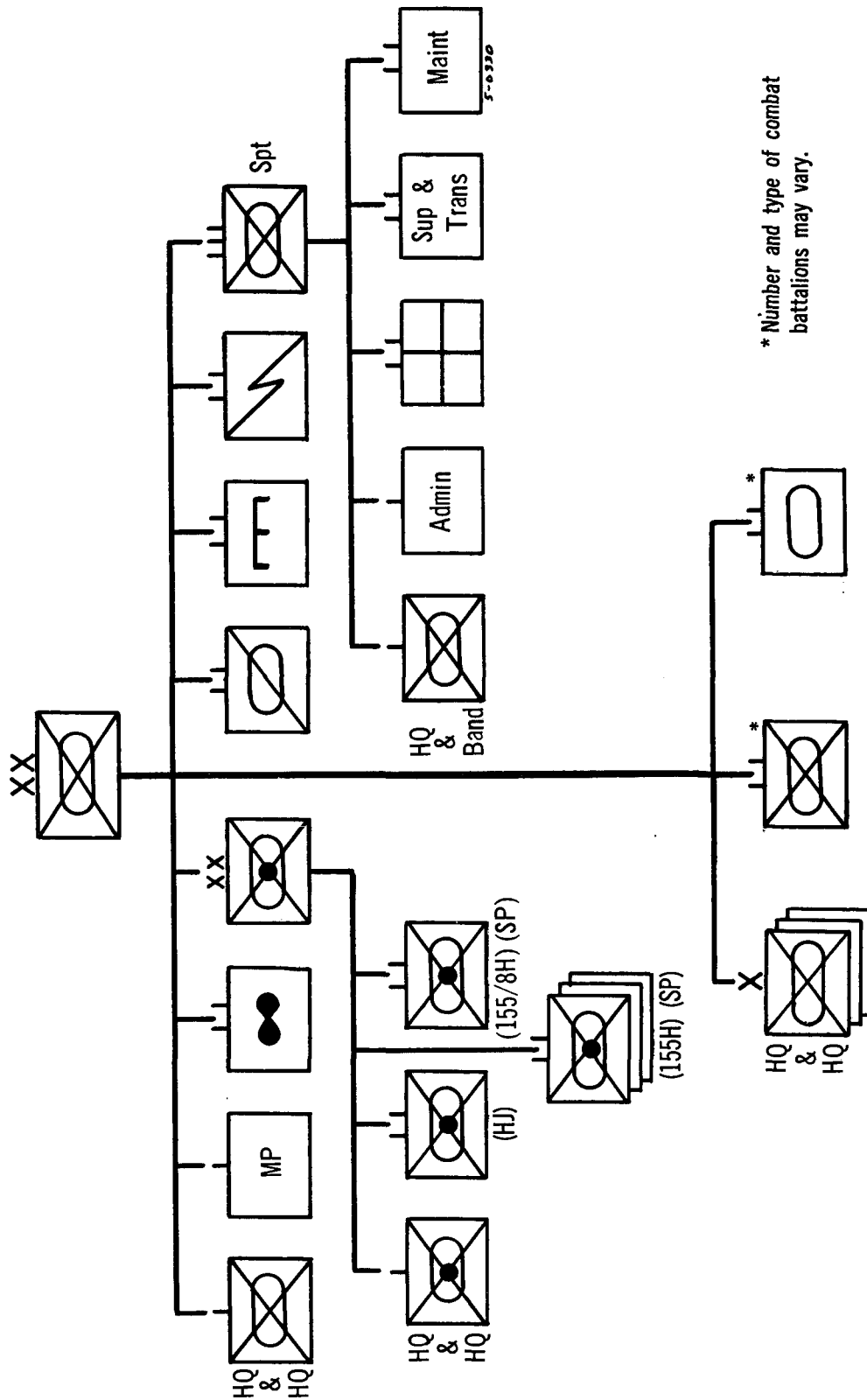
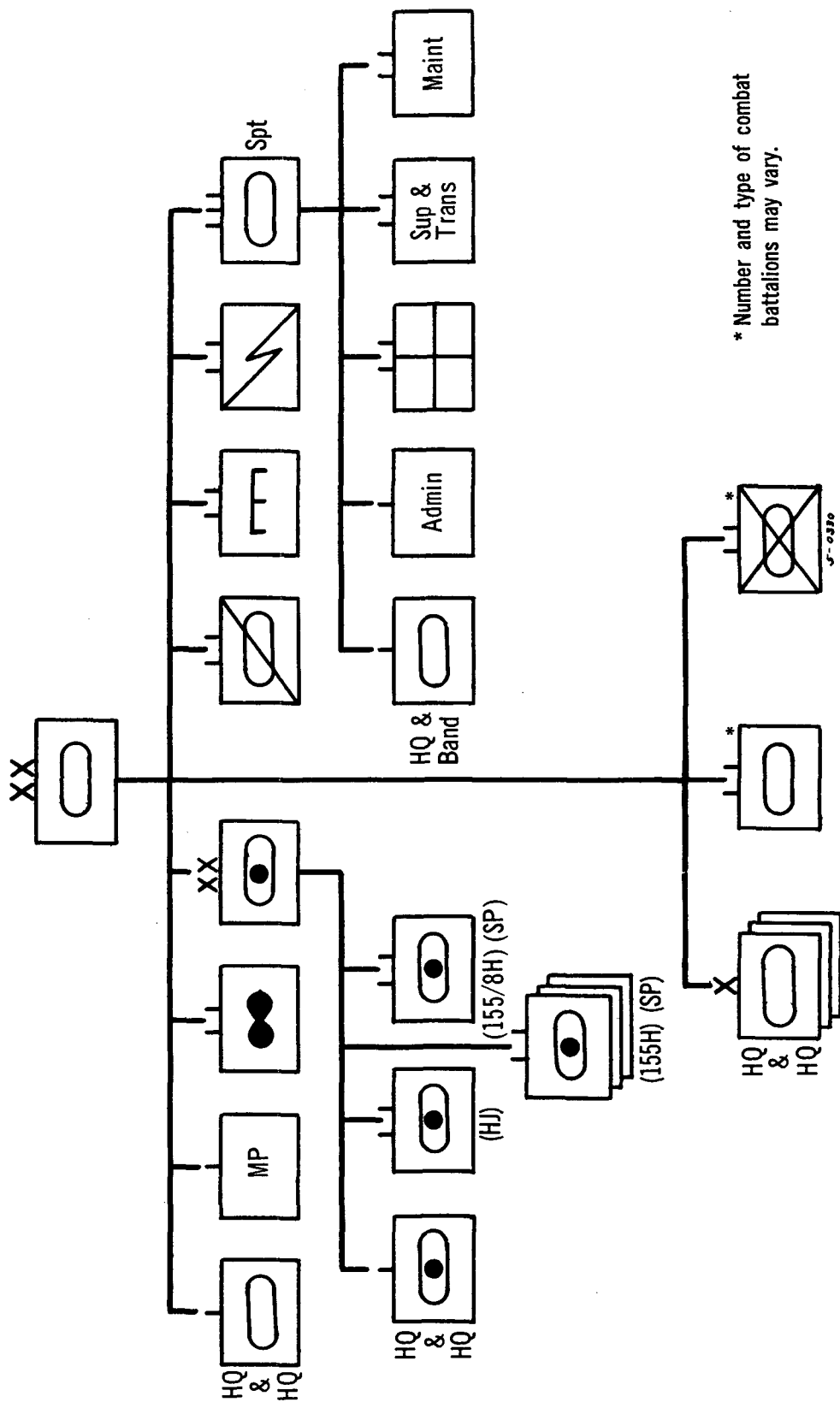
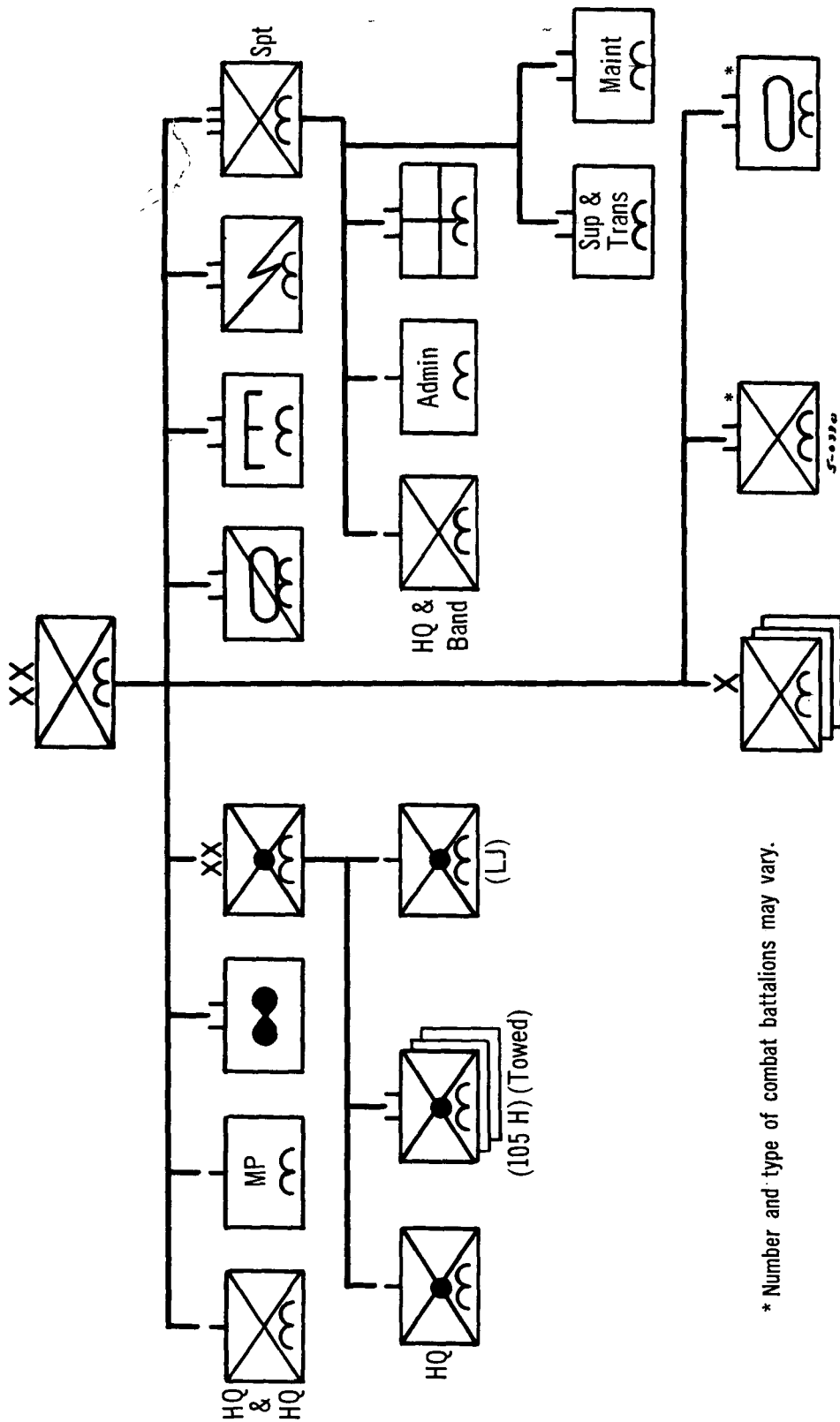


Figure 33. Mechanized infantry division.



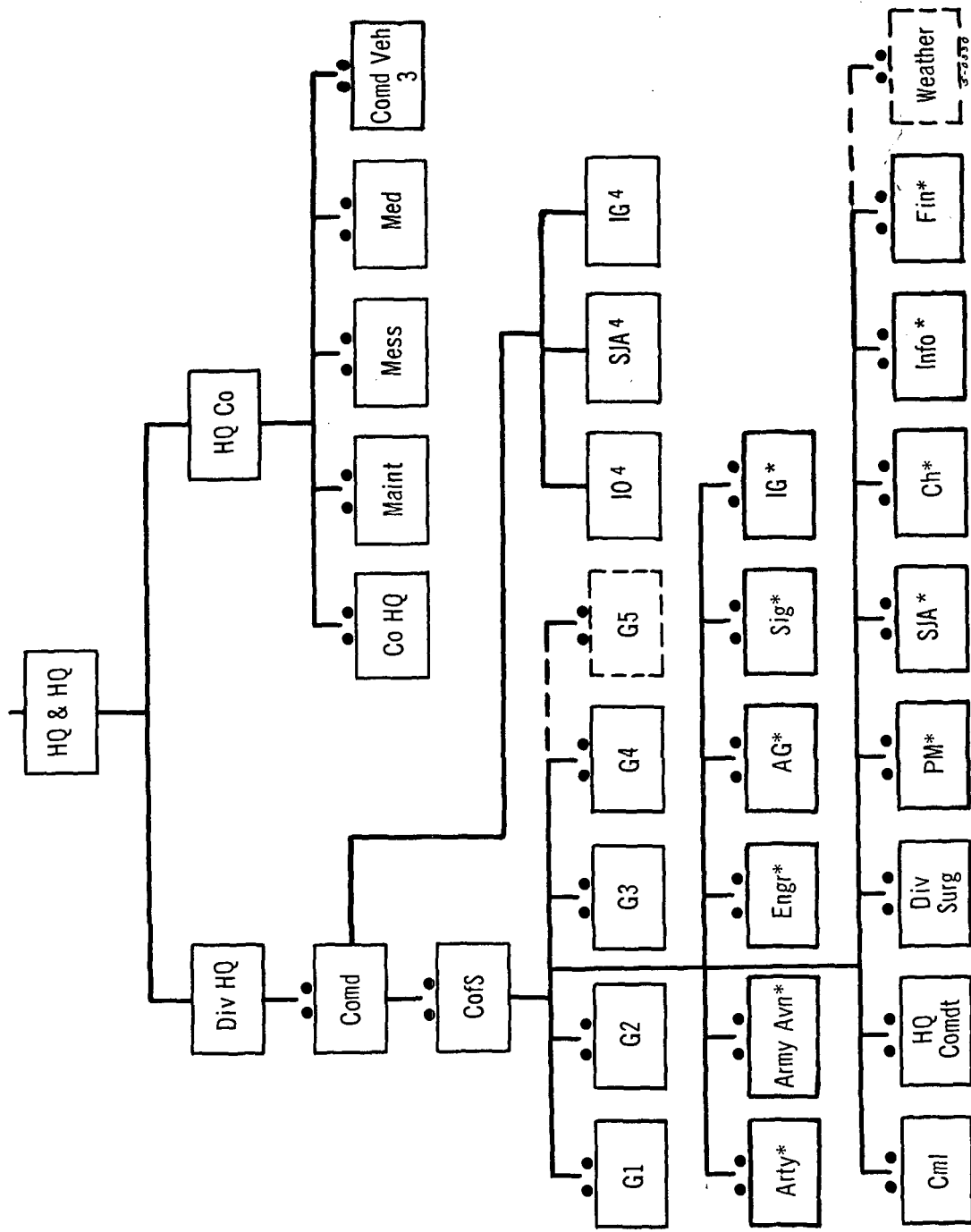
* Number and type of combat battalions may vary.

Figure S4. Armored division.



* Number and type of combat battalions may vary.

Figure 35. Airborne division.



NOTES: 1. Sections shown in dashed boxes are augmentation.
 2. Sections marked with asterisk are staffed by personnel in other units.
 3. Not included in infantry and airborne divisions.
 4. These officers are also the personal staff of the commander.

Figure 86. Division headquarters and headquarters company.

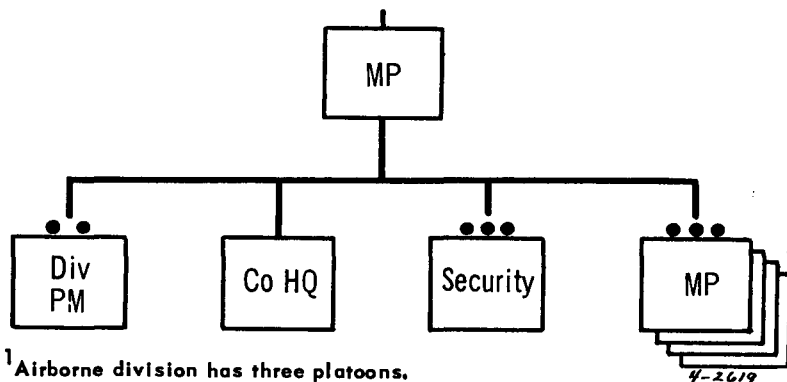


Figure 37. Division military police company.

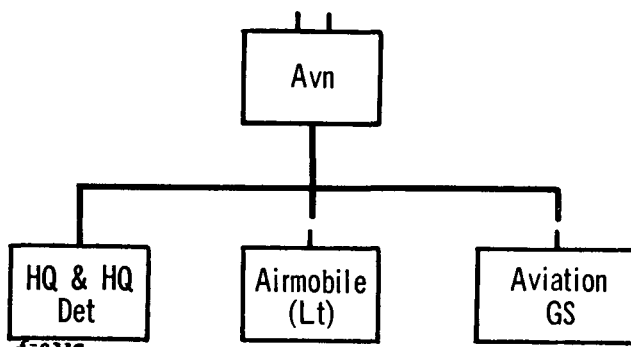
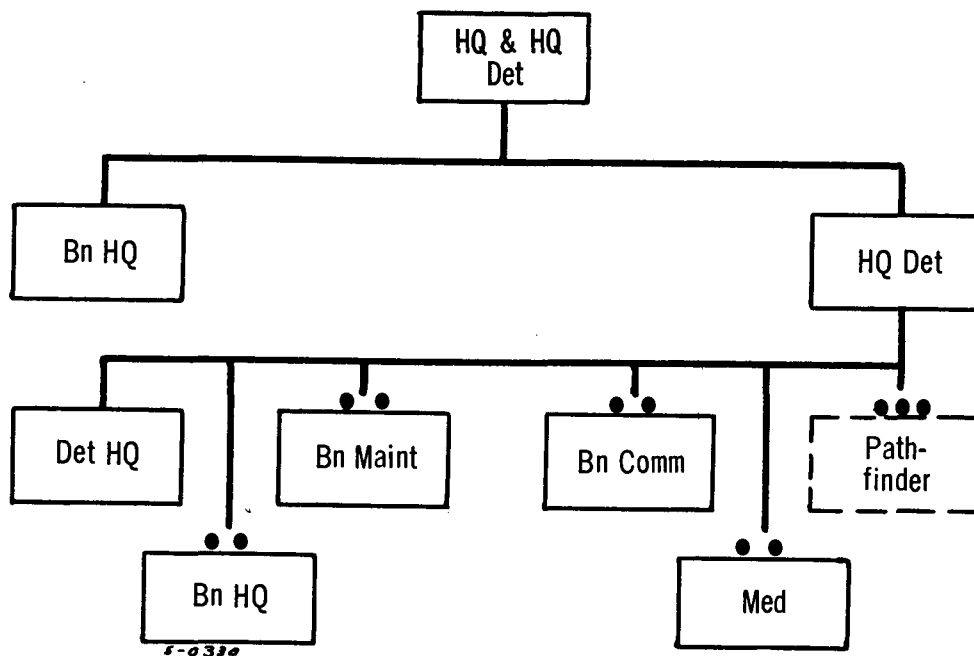


Figure 38. Division aviation battalion.



 Augmentation

Figure 39. Headquarters and headquarters detachment, division aviation battalion.

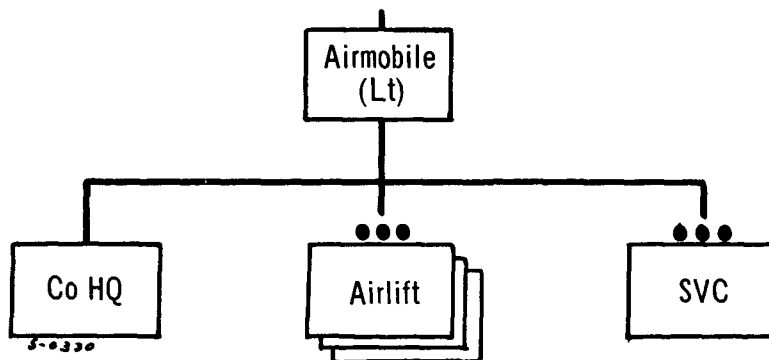


Figure 40. Airmobile company (light), division aviation battalion.

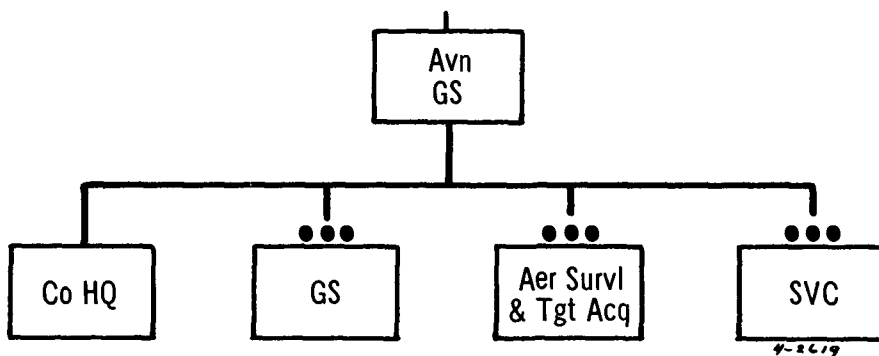
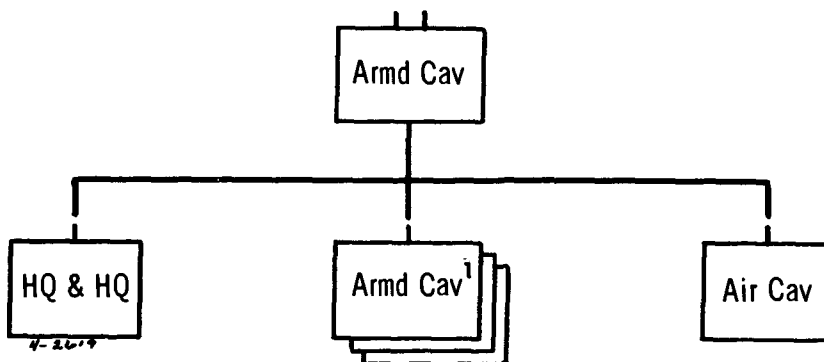
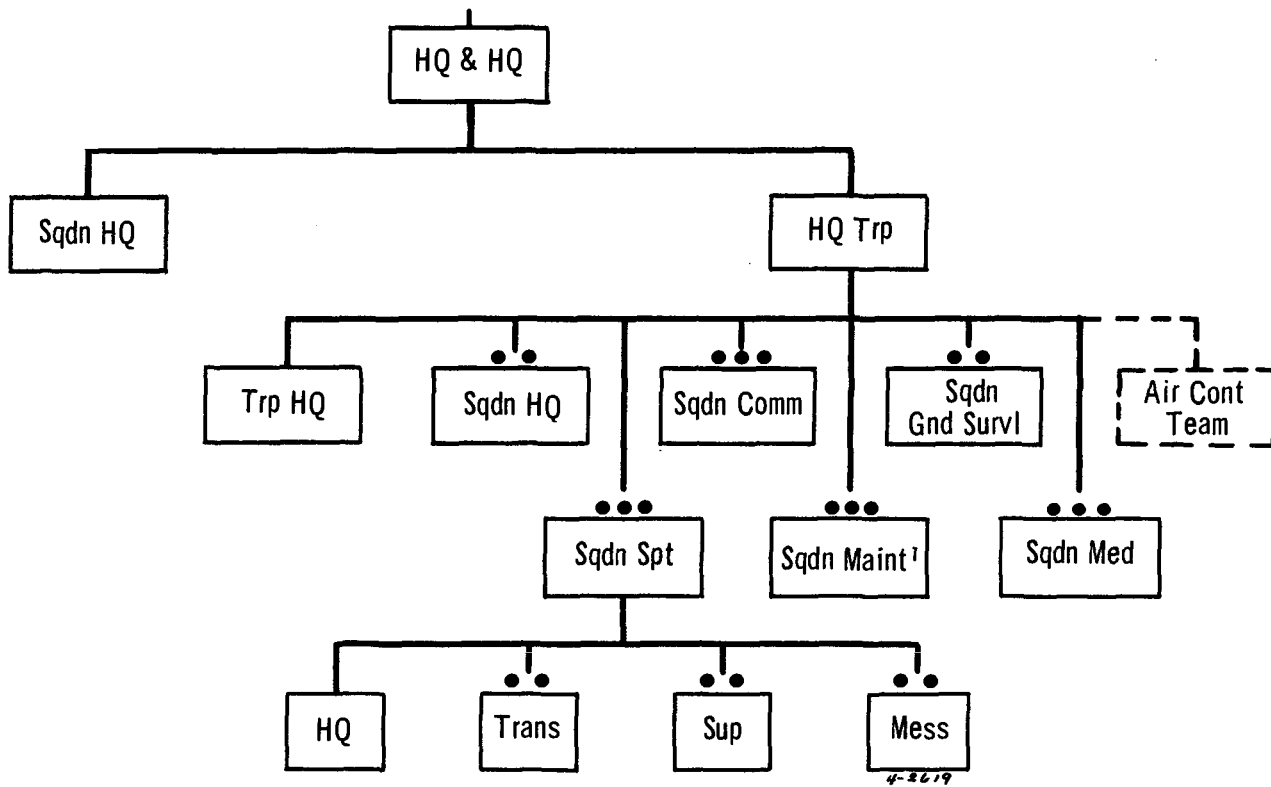


Figure 41. Aviation general support company, division aviation battalion.



¹ Airborne division has two armored cavalry troops.

Figure 42. Armored cavalry squadron.



¹In the airborne division this is a section.

Figure 43. Headquarters and headquarters troop, armored cavalry squadron.

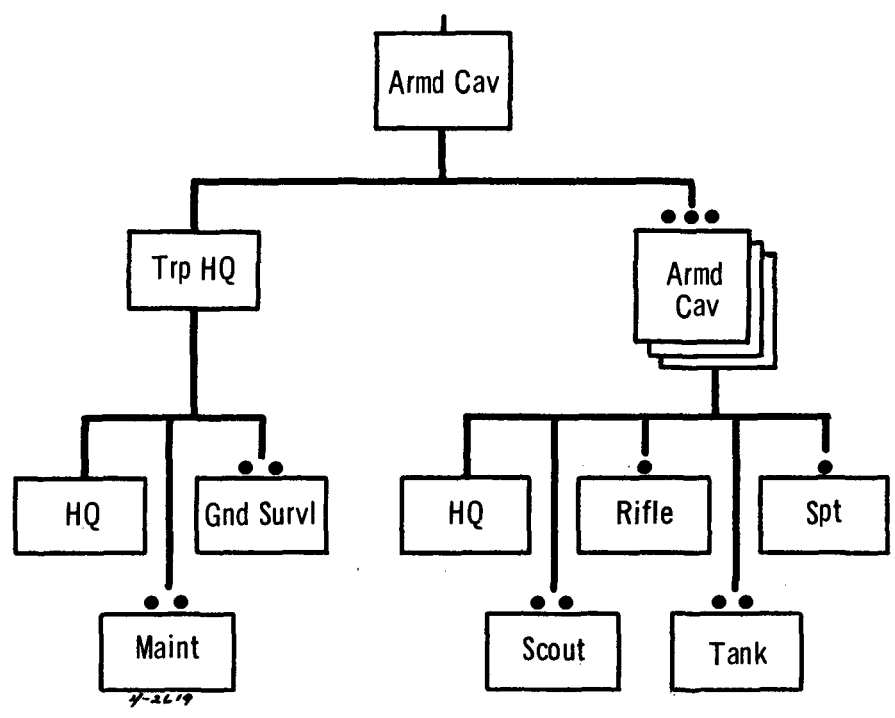


Figure 44. Armored cavalry troop, armored cavalry squadron.

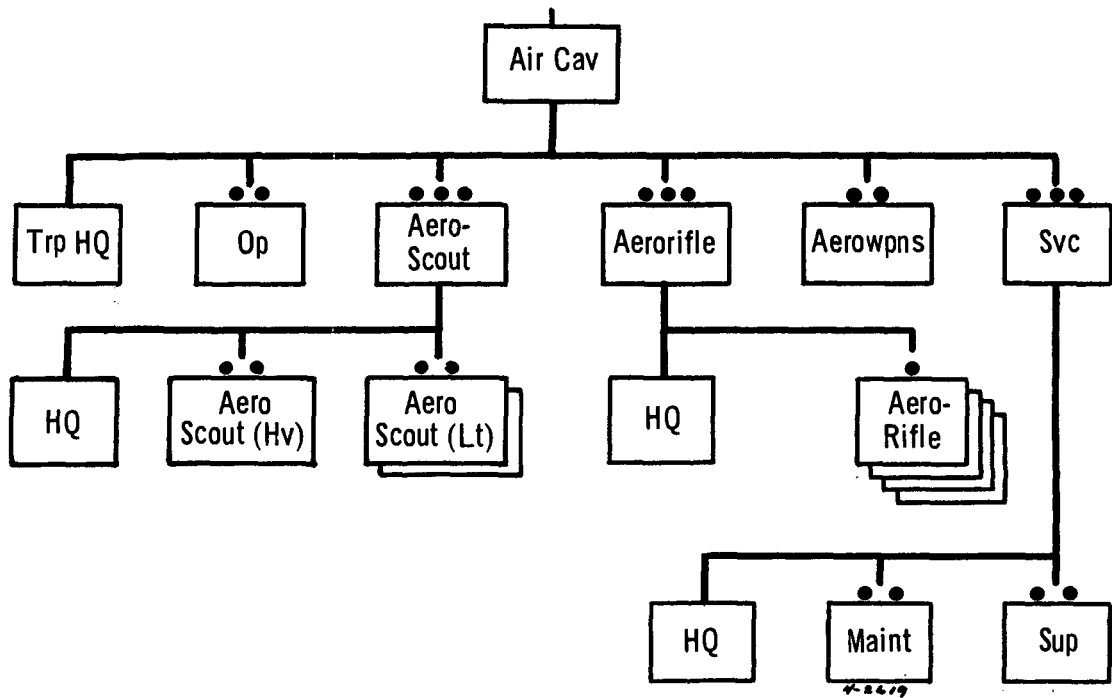
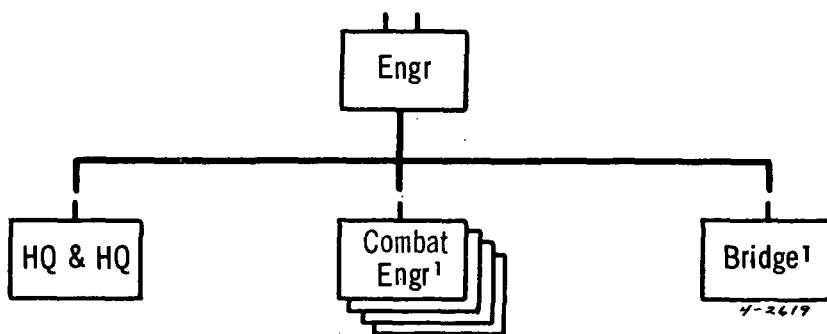
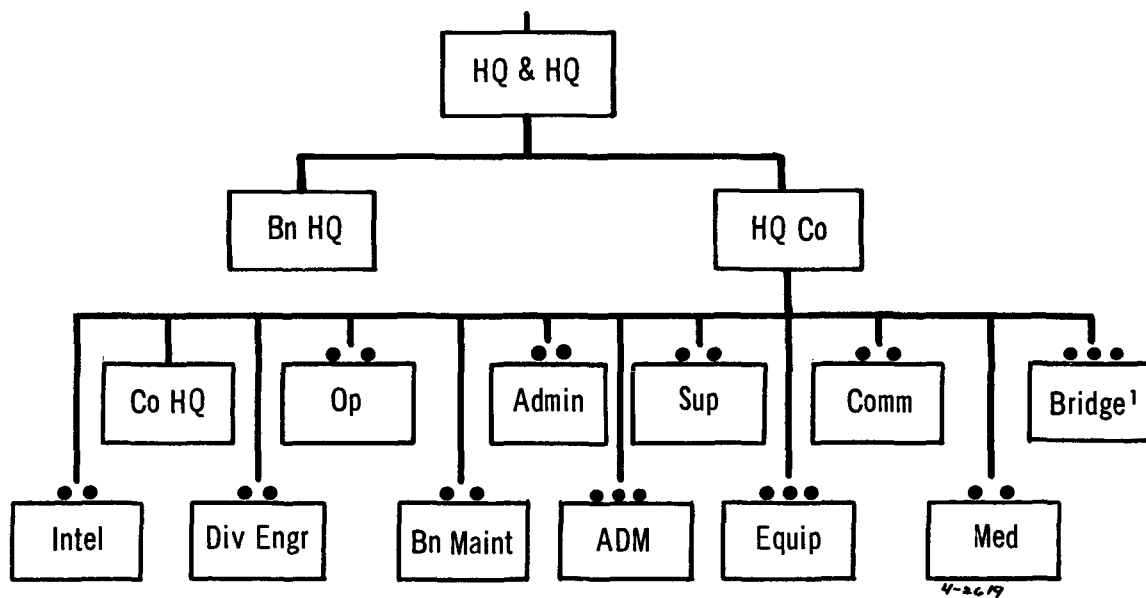


Figure 45. Air cavalry troop, armored cavalry squadron.



¹ Airborne division has three combat engineer companies; no bridge company.

Figure 46. Division engineer battalion.



¹Bridge Platoon in airborne division only.

Figure 47. Headquarters and headquarters company, division engineer battalion.

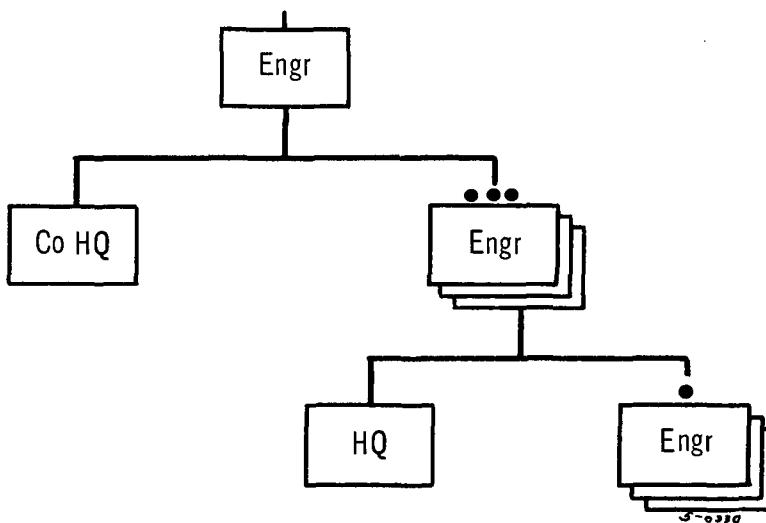
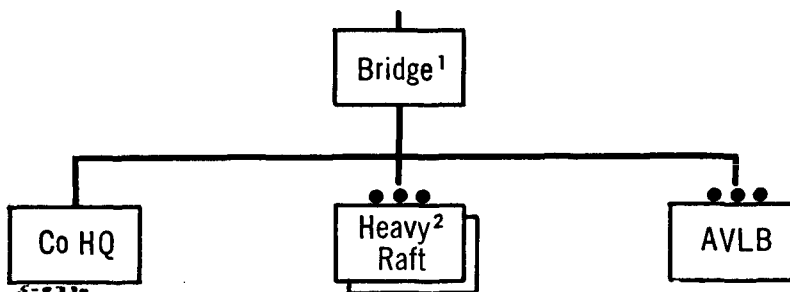


Figure 48. Engineer company, division engineer battalion.



¹Not organic to airborne division.

²Bridge platoons when equipped with M4T6 Bridge.

Figure 49. Bridge company, division engineer battalion.

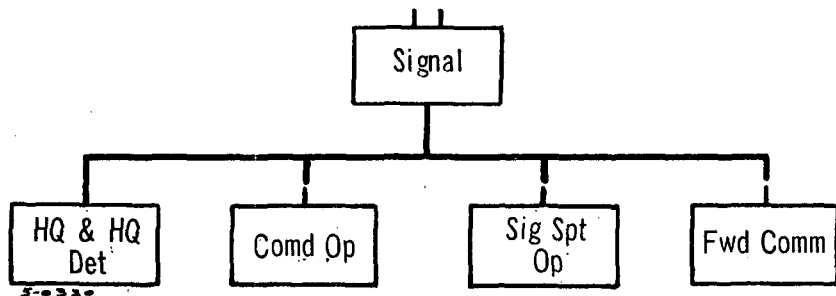


Figure 50. Division signal battalion, infantry, mechanized infantry, and armored divisions.

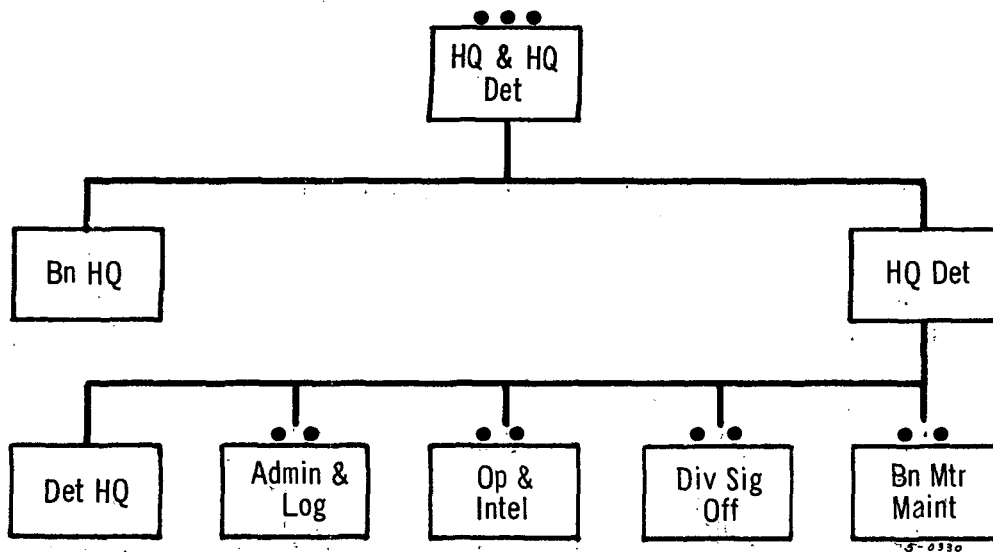
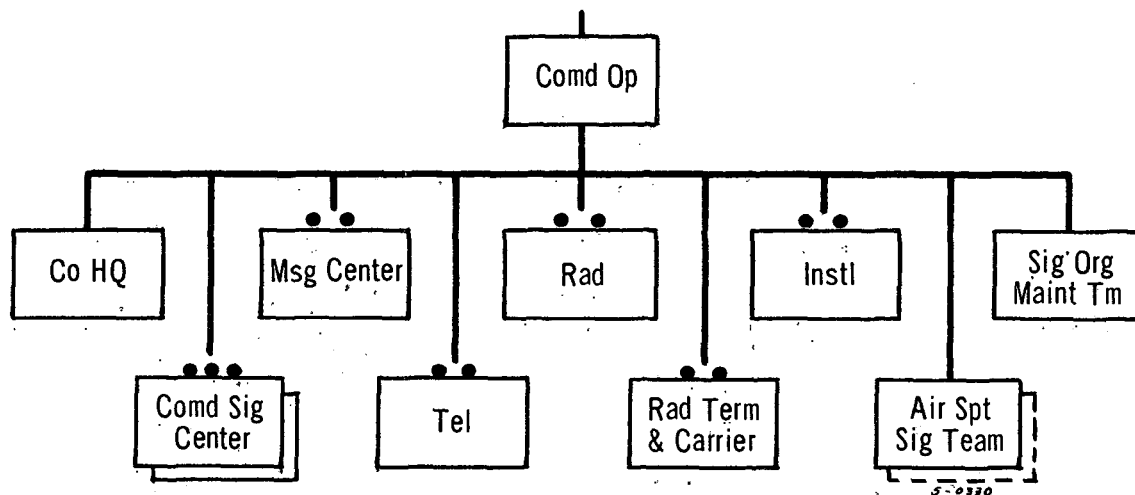


Figure 51. Headquarters and headquarters detachment, signal battalion, infantry, mechanized infantry, and armored divisions.



 Augmentation

Figure 52. Command operations company, signal battalion, infantry, mechanized infantry, and armored divisions.

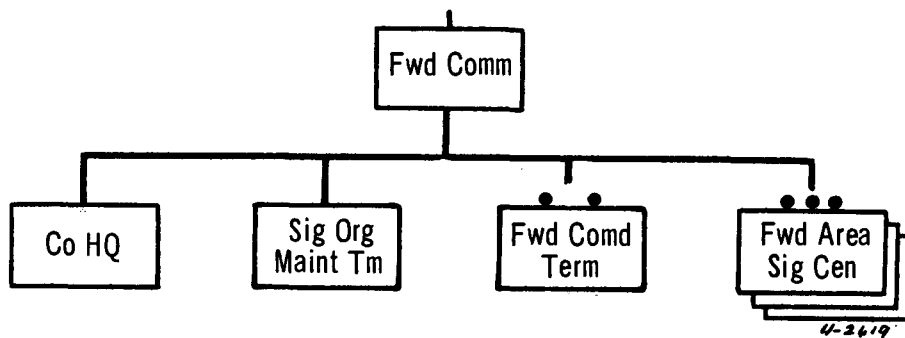


Figure 53. Forward communications company, signal battalion, infantry, mechanized infantry, and armored divisions.

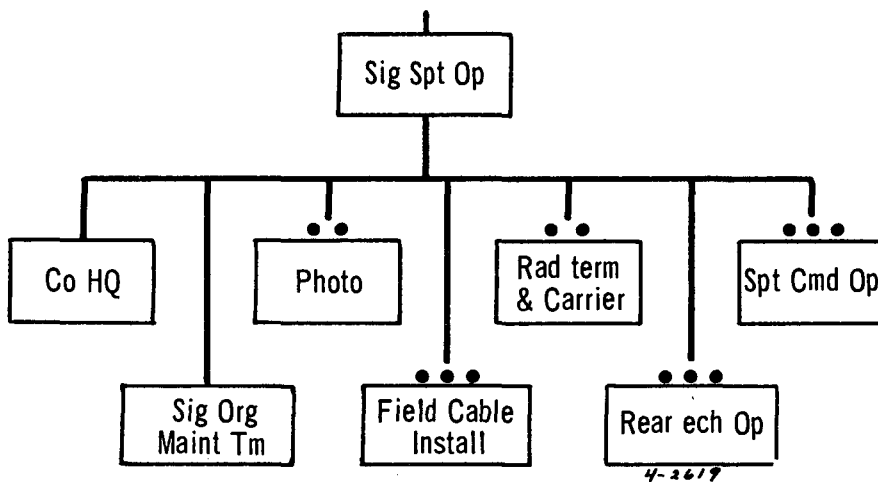


Figure 54. Signal support operations company, signal battalion, infantry, mechanized infantry, and armored divisions.

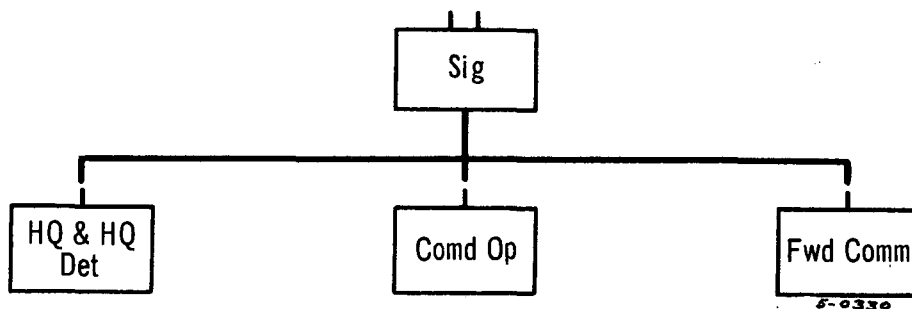


Figure 55. Signal battalion, airborne division.

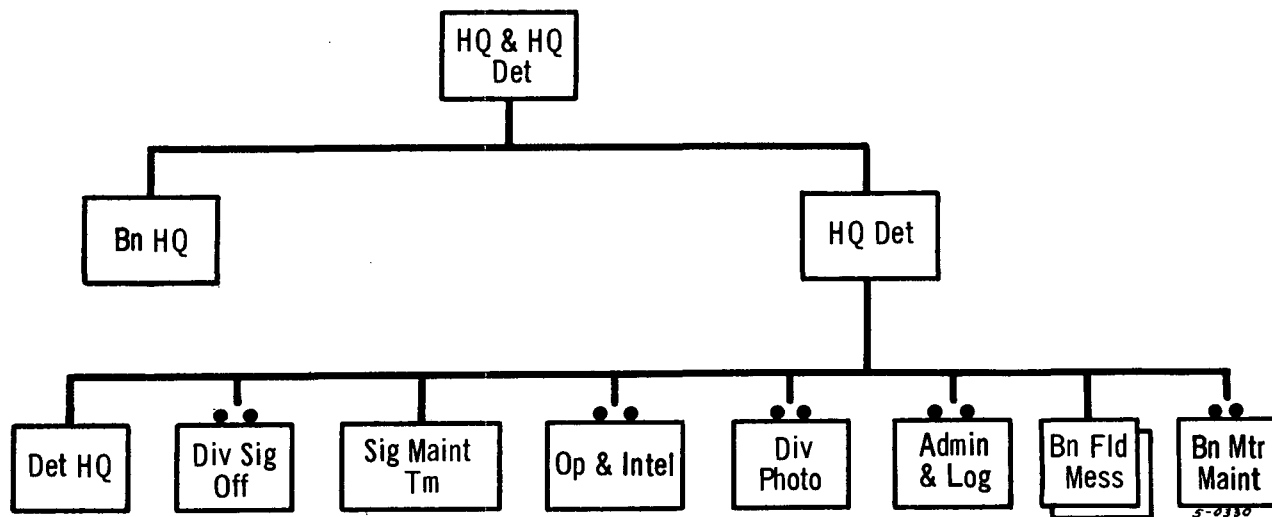


Figure 56. Headquarters and headquarters company, signal battalion, airborne division.

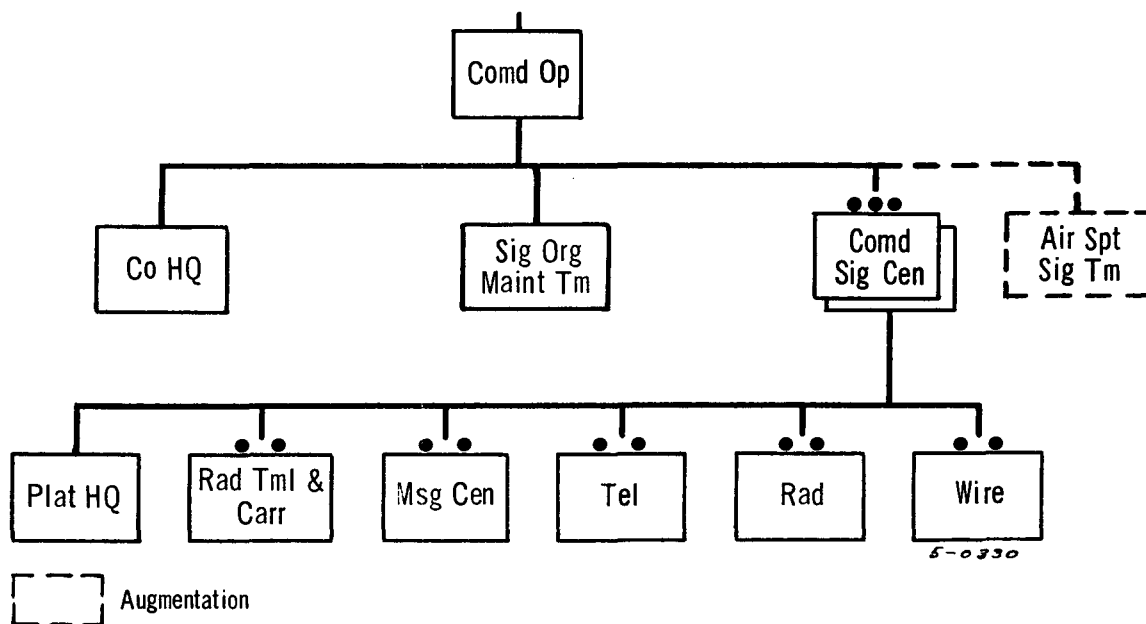


Figure 57. Command operations company, signal battalion, airborne division.

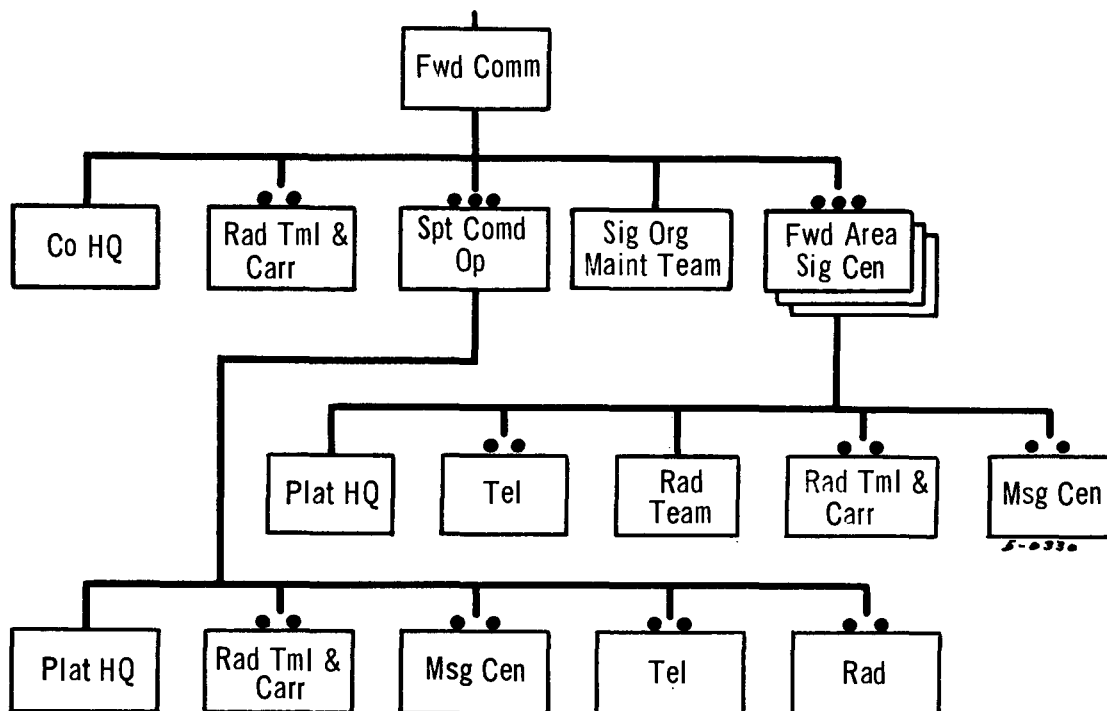


Figure 58. Forward communications company, signal battalion, airborne division.

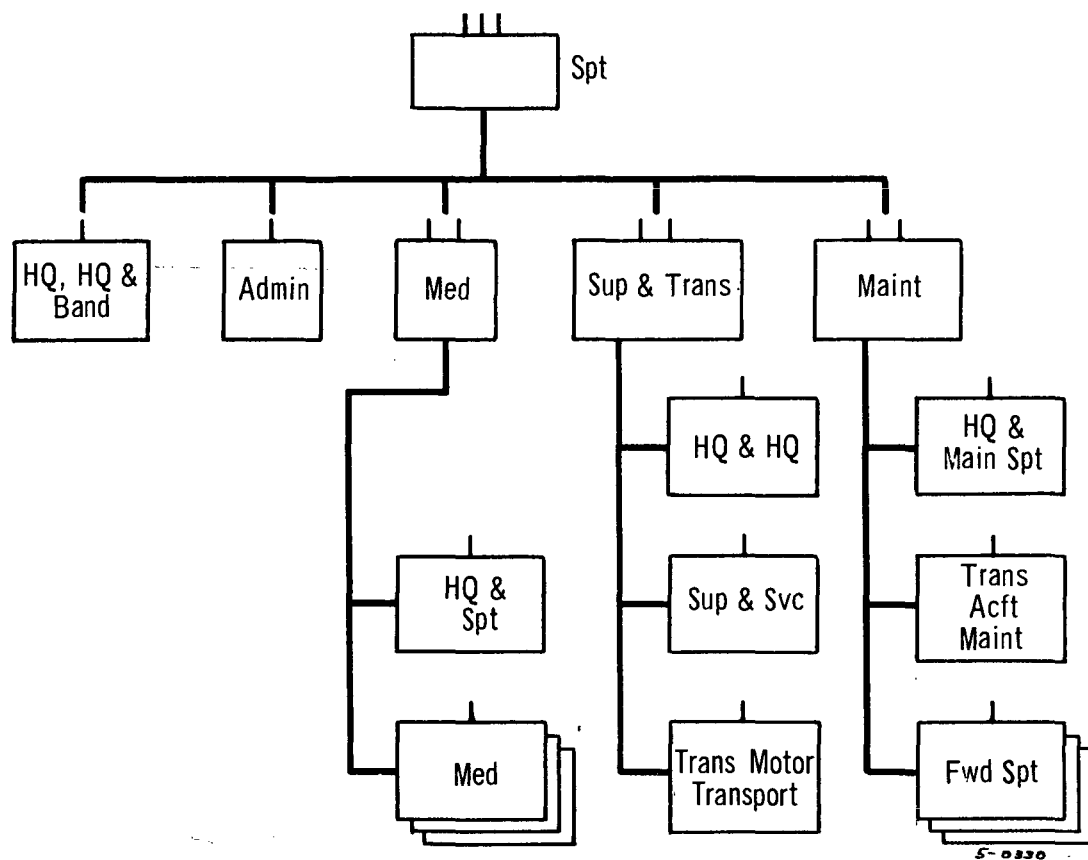


Figure 59. Division support command, infantry, mechanized infantry, and armored divisions.

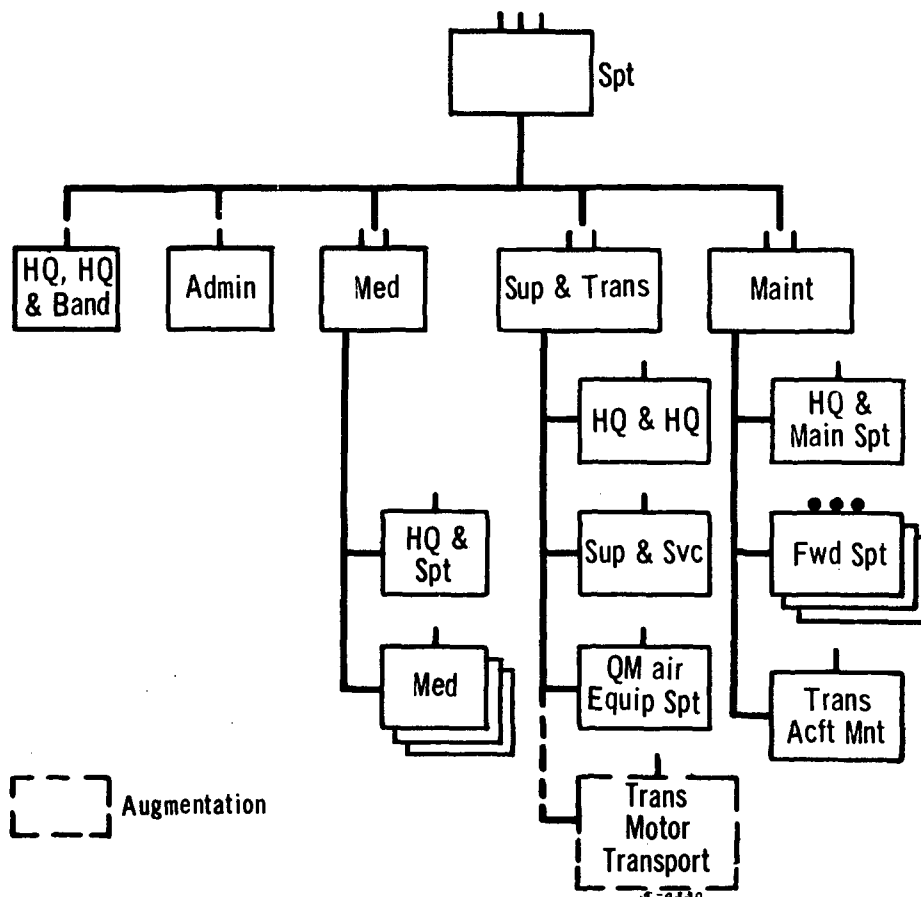
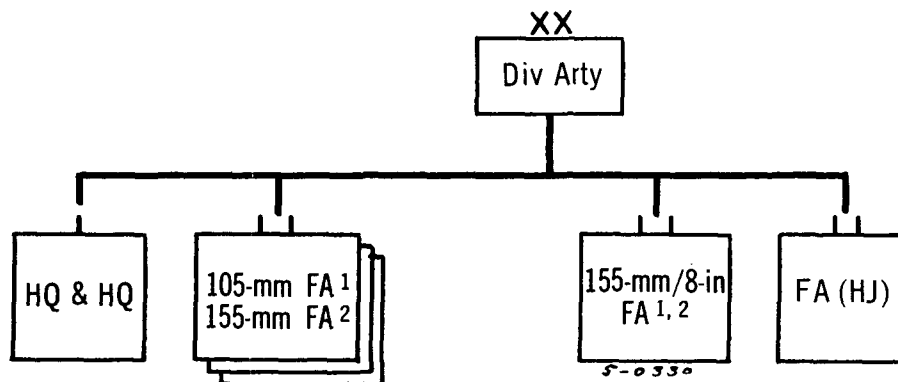


Figure 60. Division support command, airborne division.



1 Towed in infantry division.
 2 SP in mechanized infantry and armored divisions.

Figure 61. Division artillery.

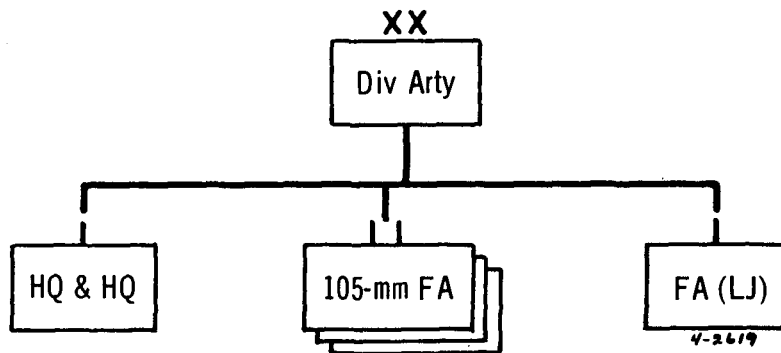


Figure 62. Division artillery, airborne division.

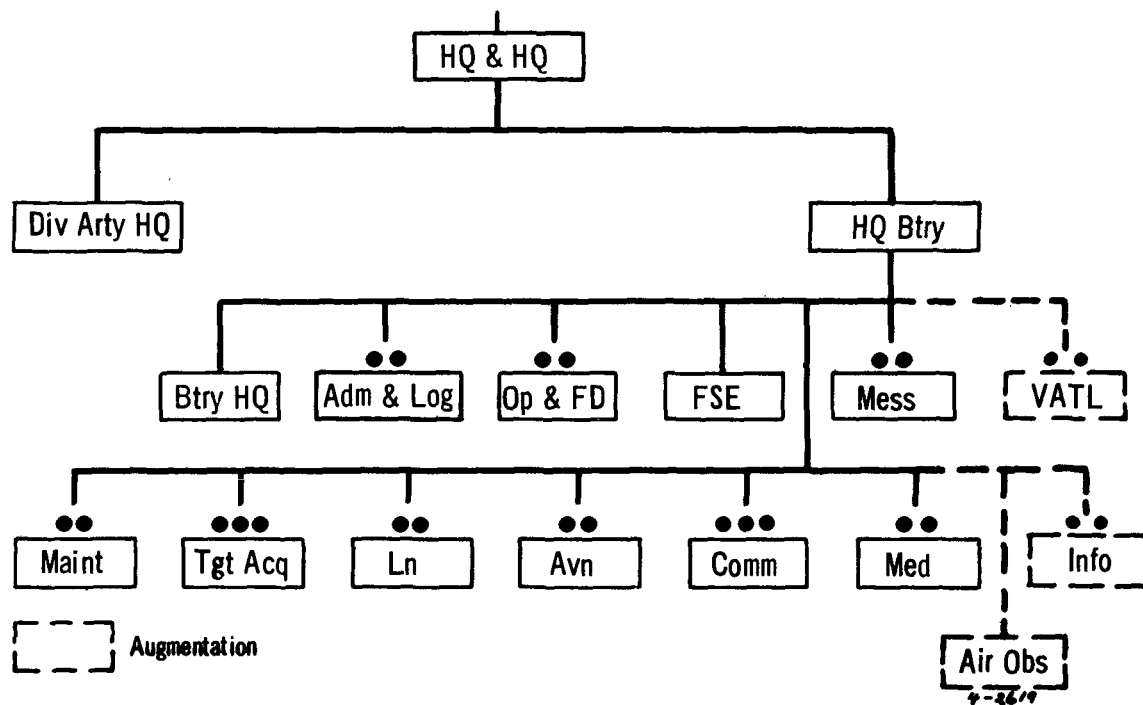


Figure 63. Headquarters and headquarters battery, division artillery, all divisions.

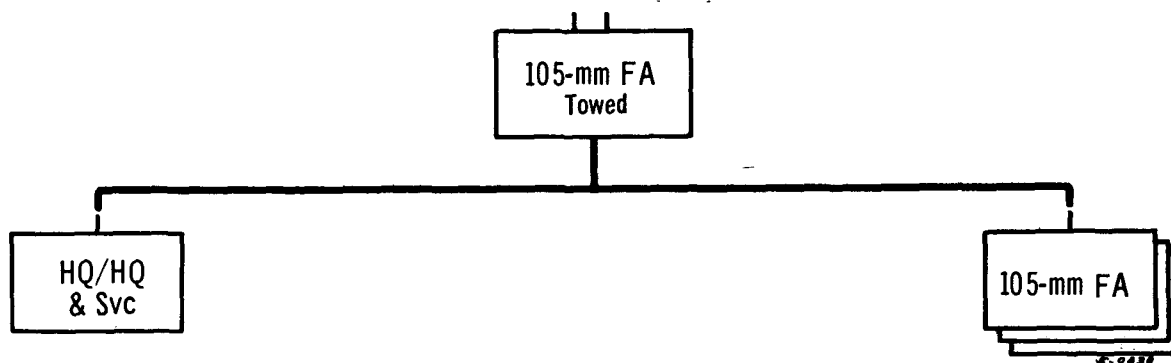
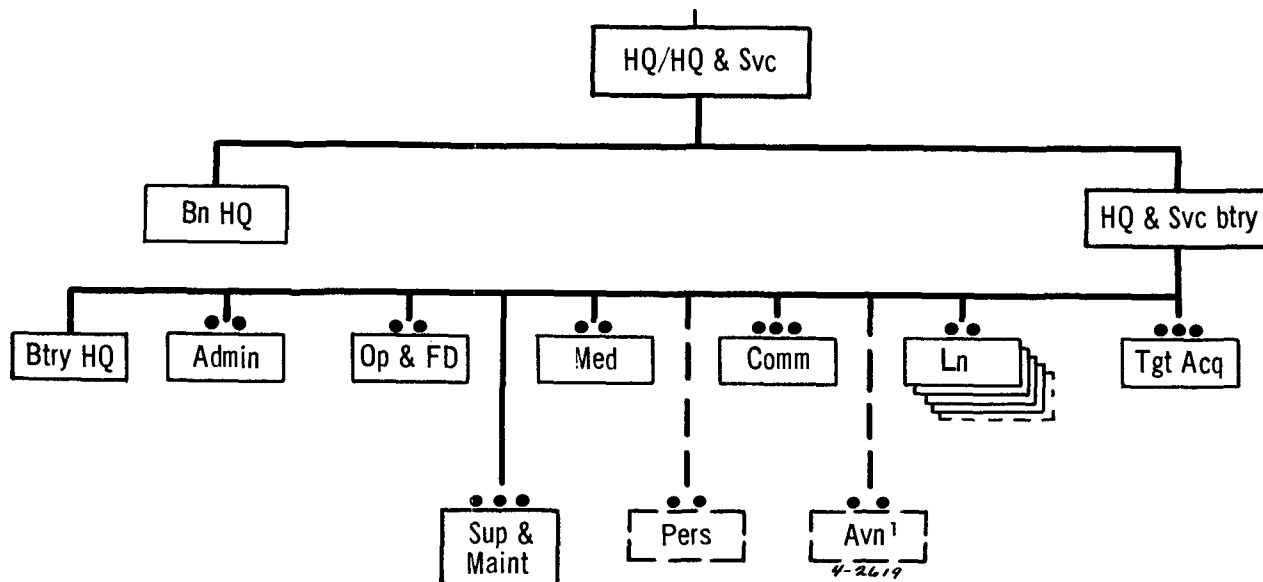


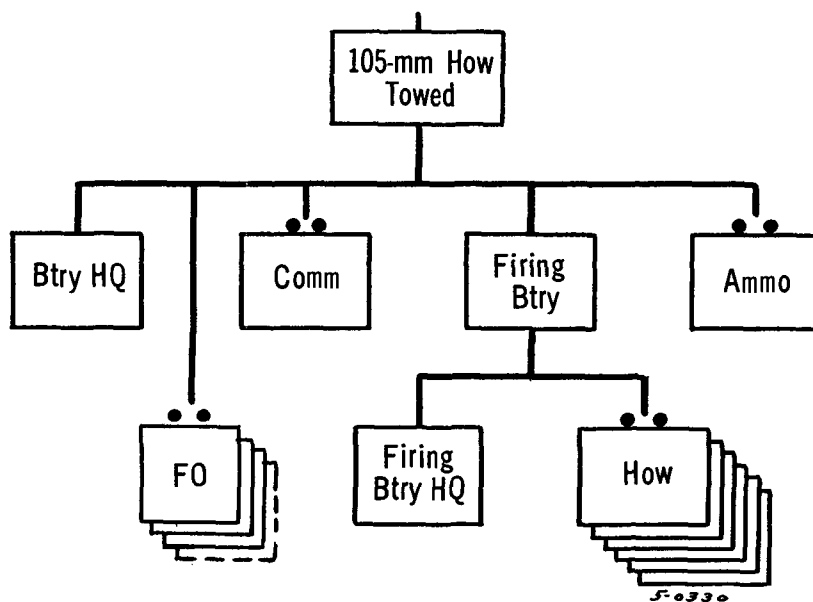
Figure 64. 105-mm field artillery battalion, division artillery, infantry and airborne divisions.



¹Aviation section in airborne division only.

 Augmentation

Figure 65. Headquarters, headquarters and service battery, 105-mm field artillery battalion, division artillery, infantry and airborne divisions.



 Augmentation

Figure 66. 105-mm field artillery battery, 105-mm field artillery battalion, division artillery, infantry, and airborne divisions.

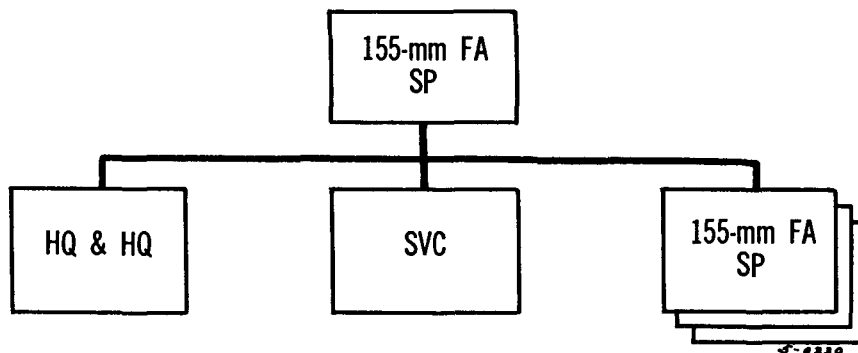
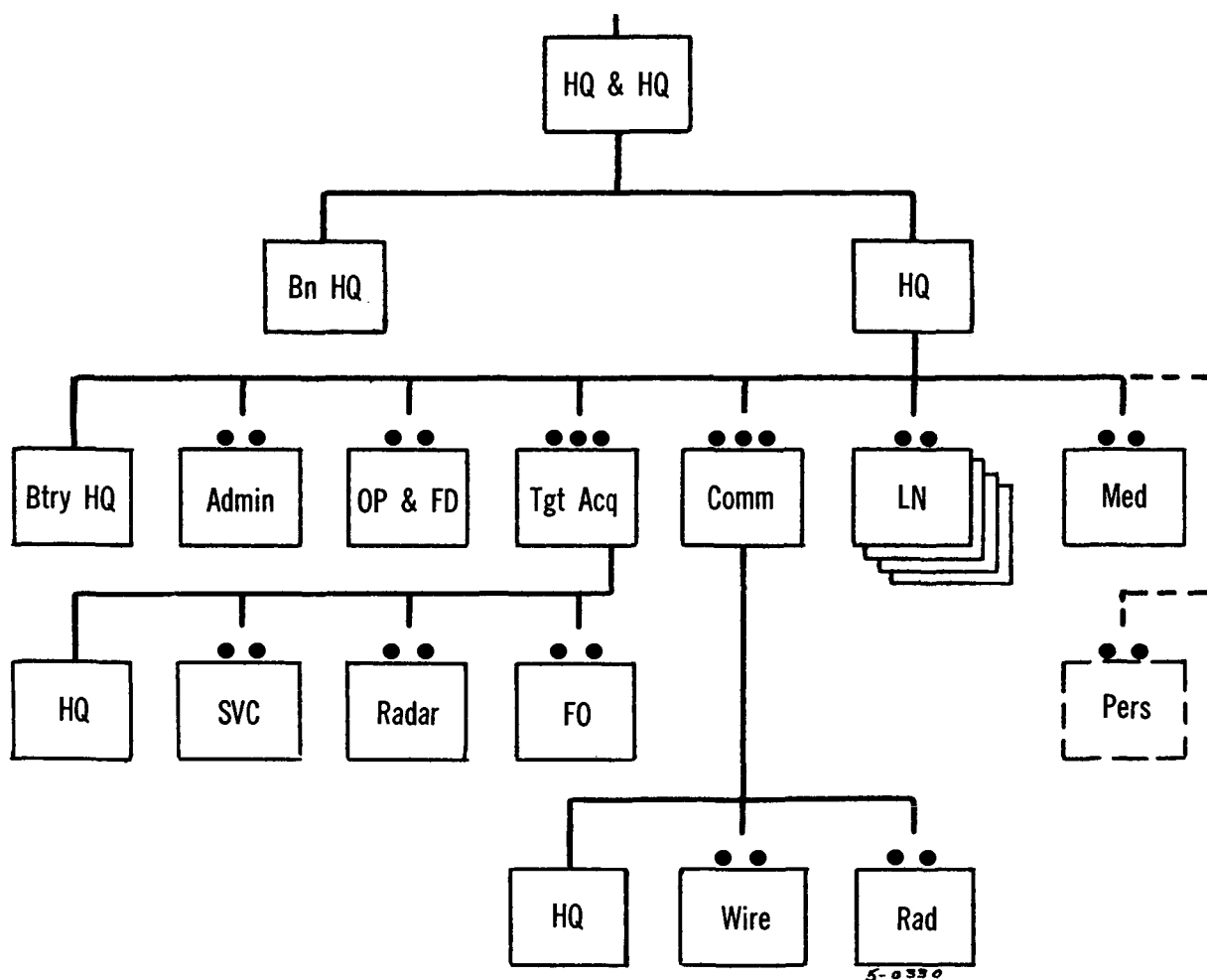
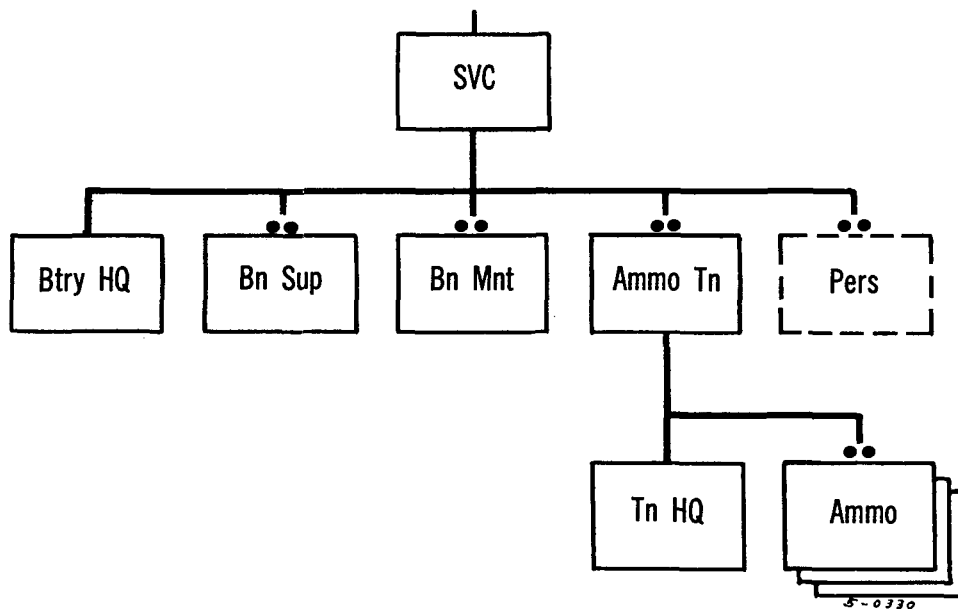


Figure 67. 155-mm field artillery battalion, self-propelled, division artillery, mechanized infantry, and armored divisions.



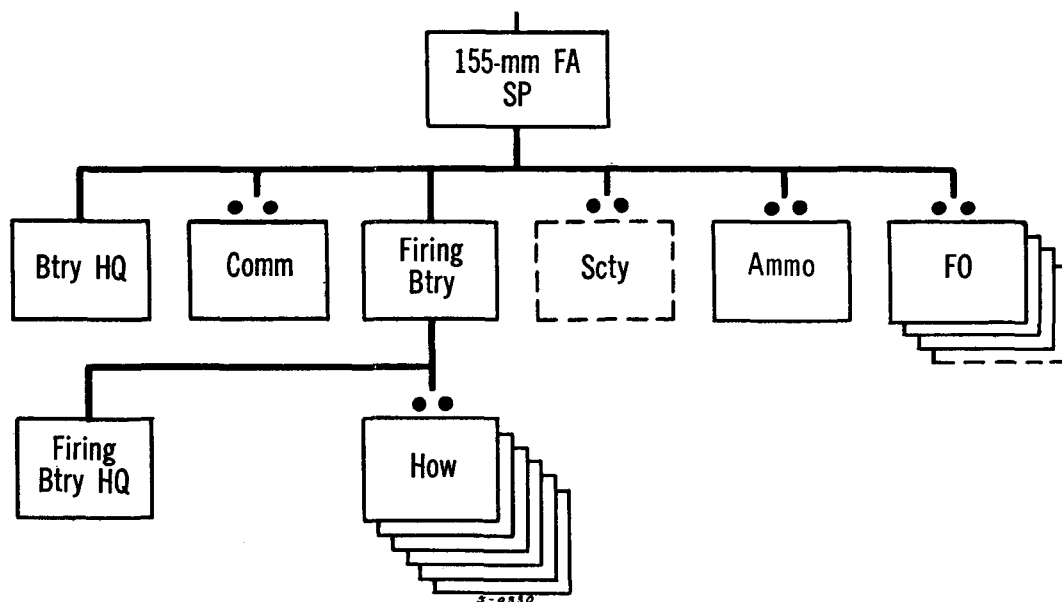
 Augmentation

Figure 68. Headquarters and headquarters battery, 155-mm field artillery battalion, self-propelled, mechanized infantry, and armored divisions.



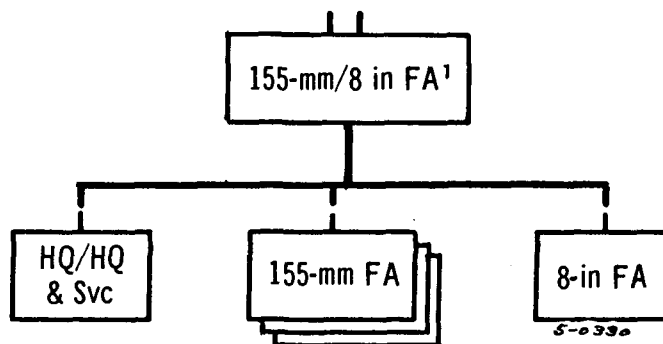
 Augmentation

Figure 69. Service battery, 155-mm field artillery battalion, self-propelled, mechanized infantry, and armored divisions.



 Augmentation

Figure 70. 155-mm field artillery battery, 155-mm field artillery battalion, self-propelled, mechanized infantry, and armored divisions.



¹Towed in infantry division, self propelled in mechanized infantry and armored divisions.

Figure 71. 155-mm/8-inch field artillery battalion, division artillery, infantry, mechanized infantry, and armored divisions.

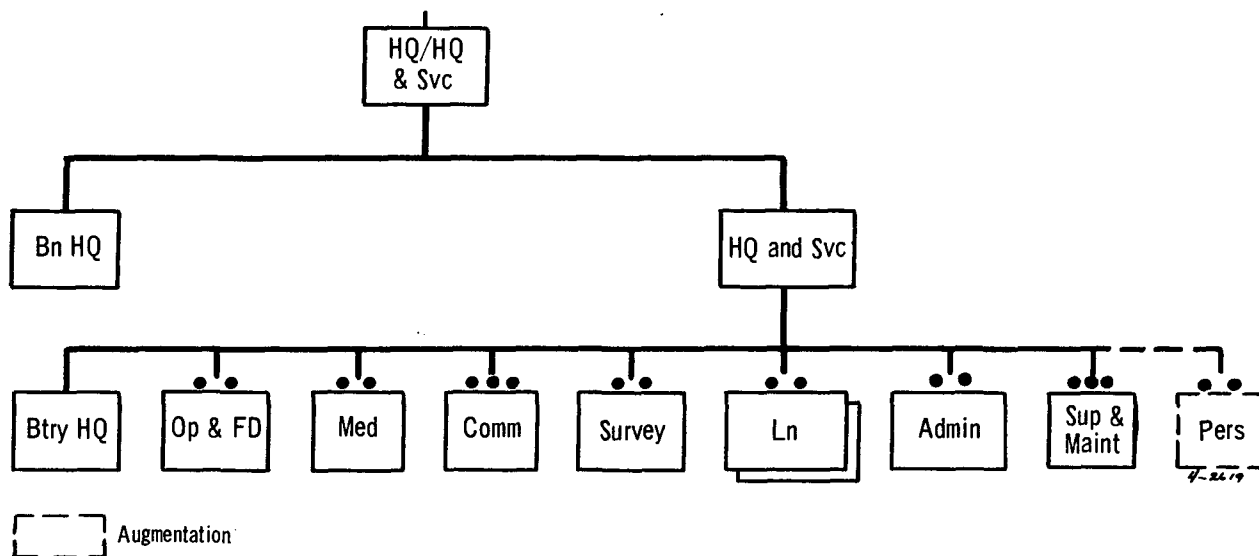
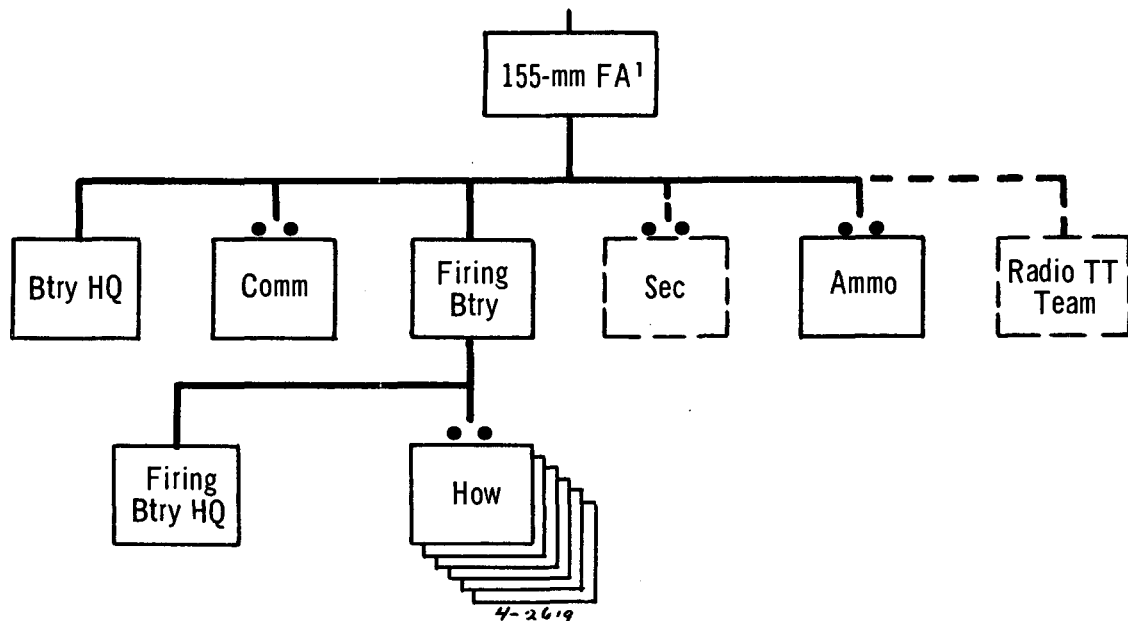


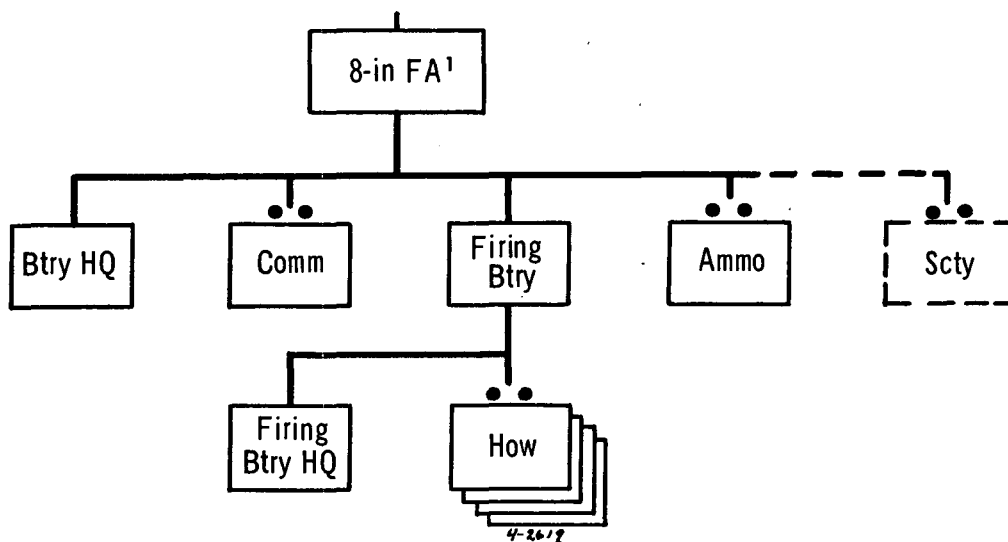
Figure 72. Headquarters, headquarters and service battery, 155-mm/8-inch field artillery battalion, division artillery, infantry, mechanized infantry, and armored divisions.



¹Towed in infantry division, self propelled in mechanized infantry and armored divisions.

 Augmentation

Figure 73. 155-mm field artillery battery, 155-mm/8-inch field artillery battalion, division artillery, infantry, mechanized infantry, and armored divisions.



¹Towed in infantry division, self propelled in mechanized infantry and armored divisions.

 Augmentation

Figure 74. 8-inch field artillery battery, 155-mm/8-inch field artillery battalion, division artillery, infantry, mechanized infantry, and armored divisions.

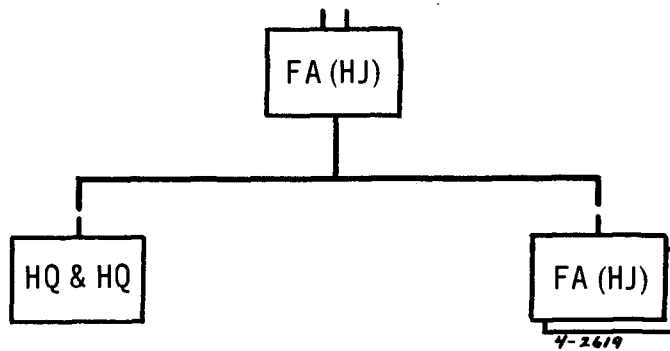


Figure 75. Field artillery battalion, Honest John, division artillery, infantry, mechanized infantry, and armored divisions.

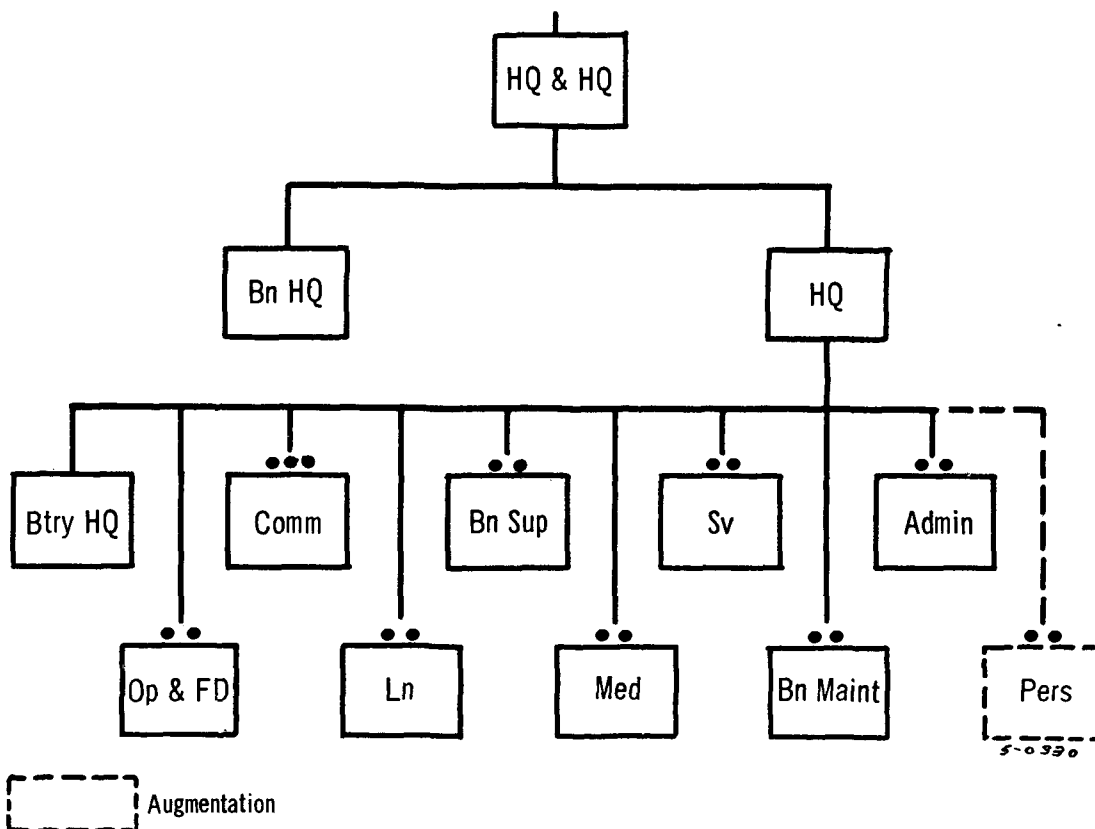


Figure 76. Headquarters and headquarters battery, field artillery battalion, Honest John, division artillery.

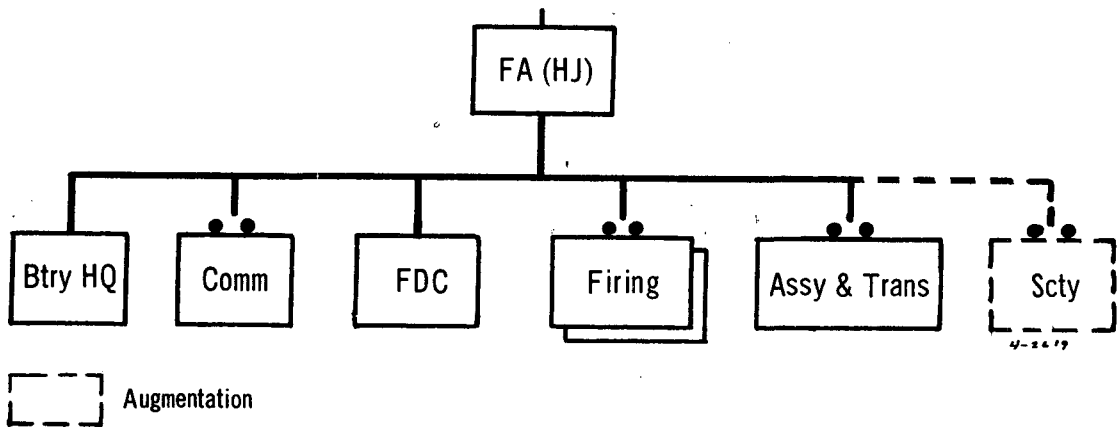


Figure 77. Field artillery battery, field artillery battalion, Honest John, division artillery.

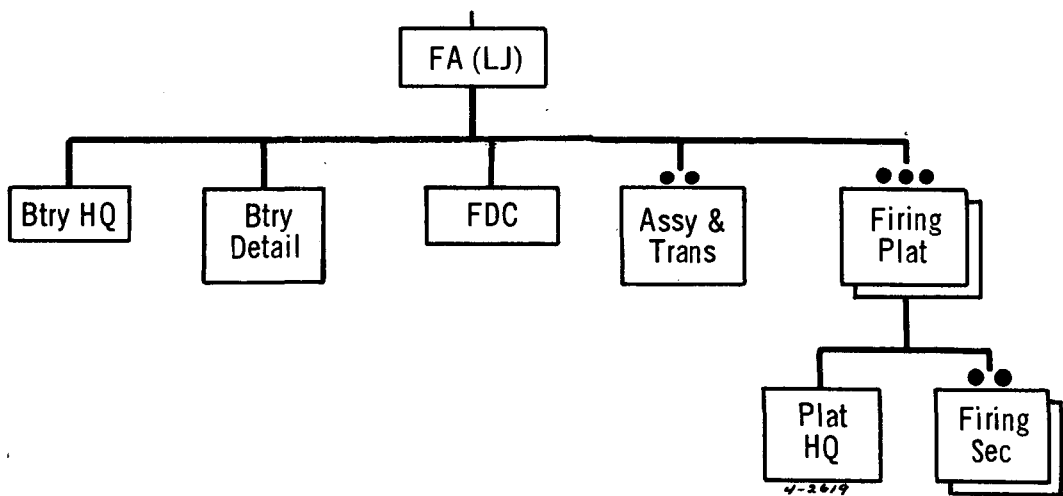
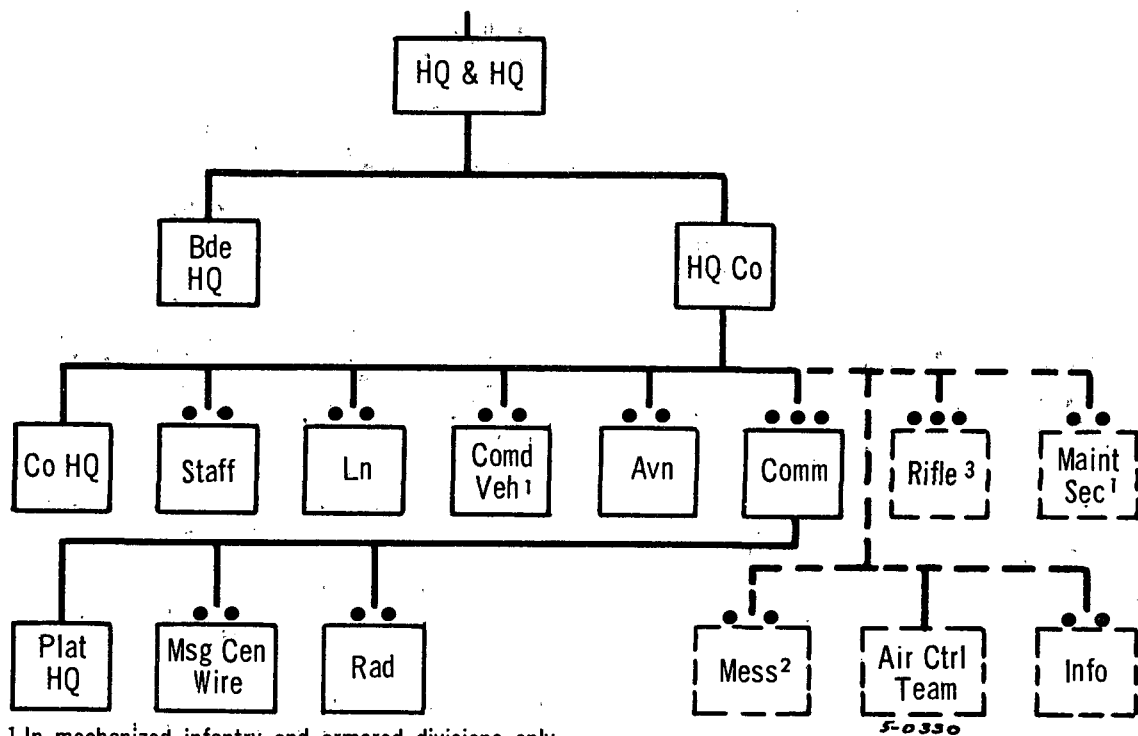


Figure 78. Field artillery battery, Little John, airborne division.



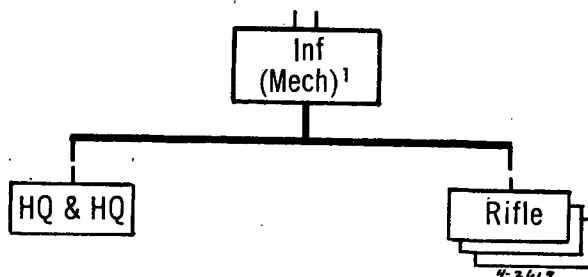
1 In mechanized infantry and armored divisions only.

2 Except airborne division.

3 Mechanized rifle platoon in mechanized infantry and armored divisions.

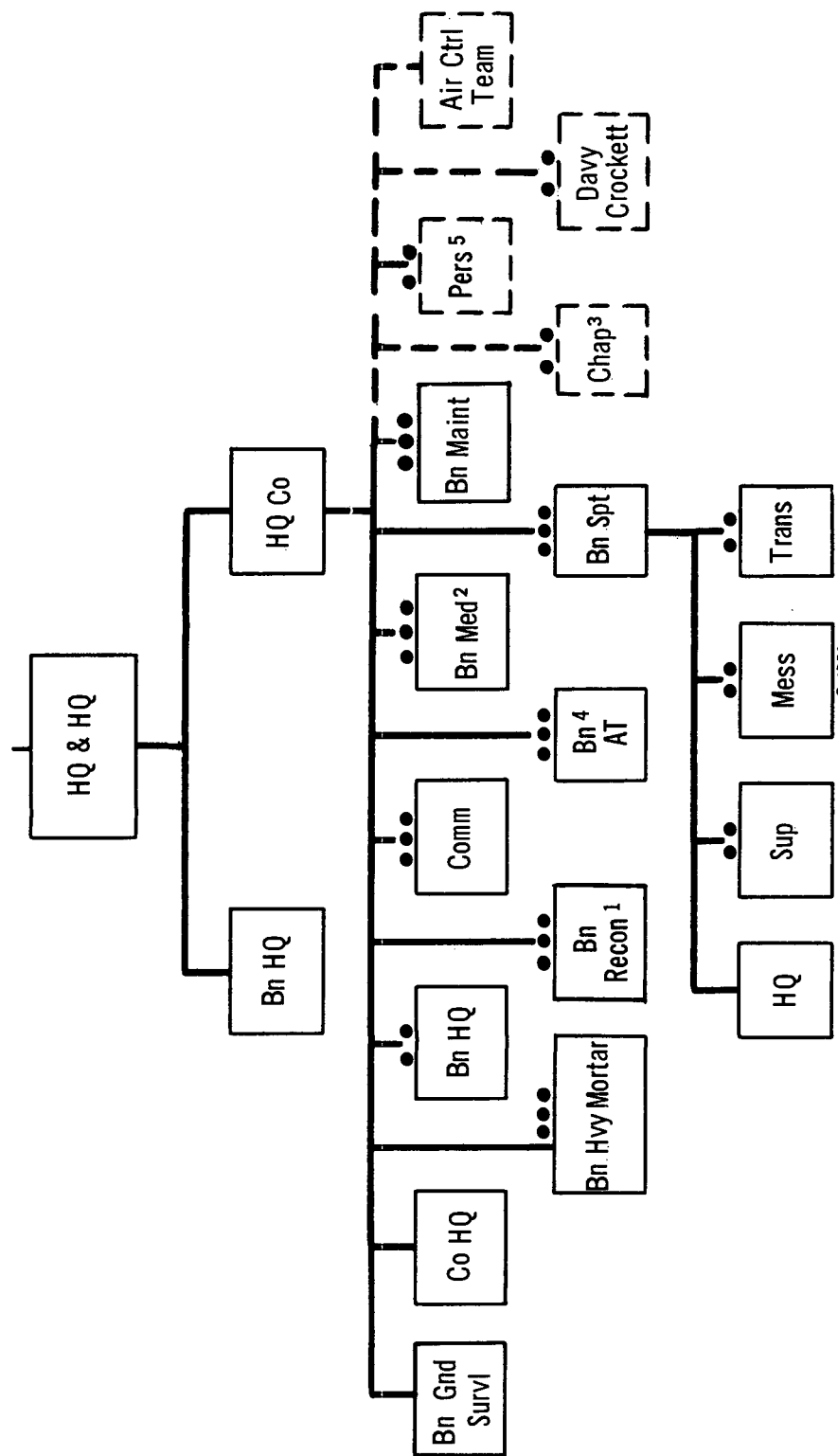
 Augmentation

Figure 79. Headquarters and headquarters company, division brigade.



¹In mechanized infantry and armored divisions.

Figure 80. Infantry battalion.



1 In airborne division, only scout and tank sections; other divisions also have rifle squad.

2 Section in airborne division.

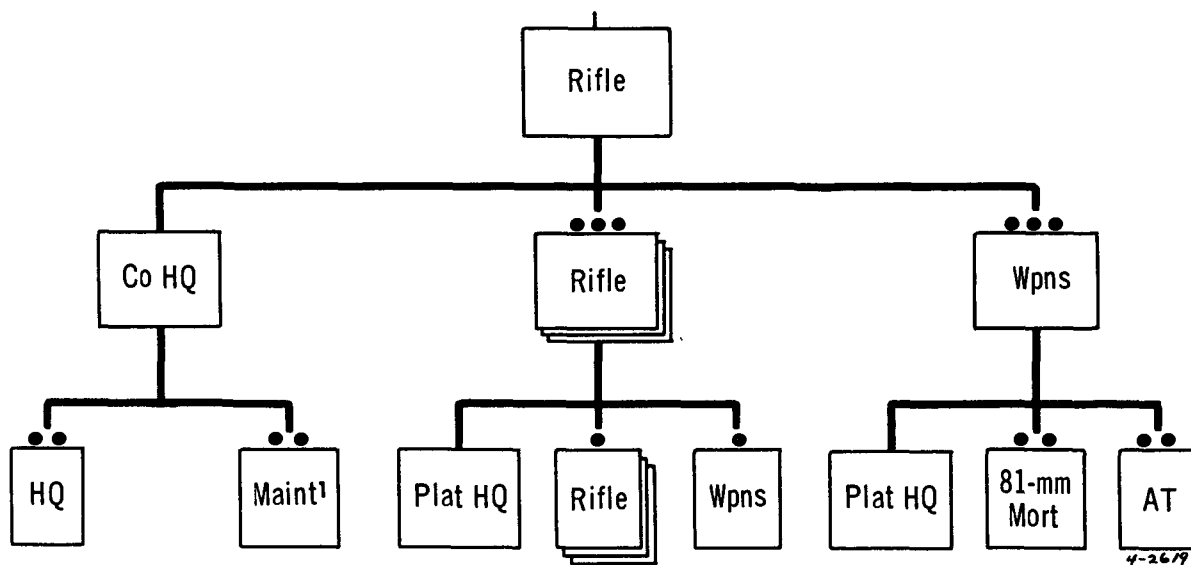
3 Not included in airborne division.

4 Platoon has six squads in airborne division; three in other divisions.

5 Provided only when battalion is separated from the division.

--- Augmentation

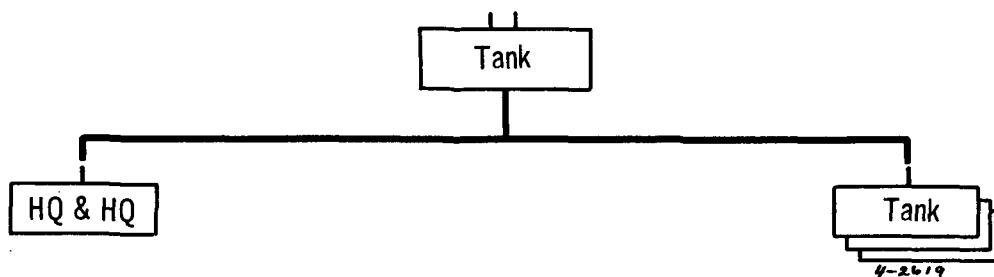
Figure 81. Headquarters and headquarters company, infantry battalion.



4-2679

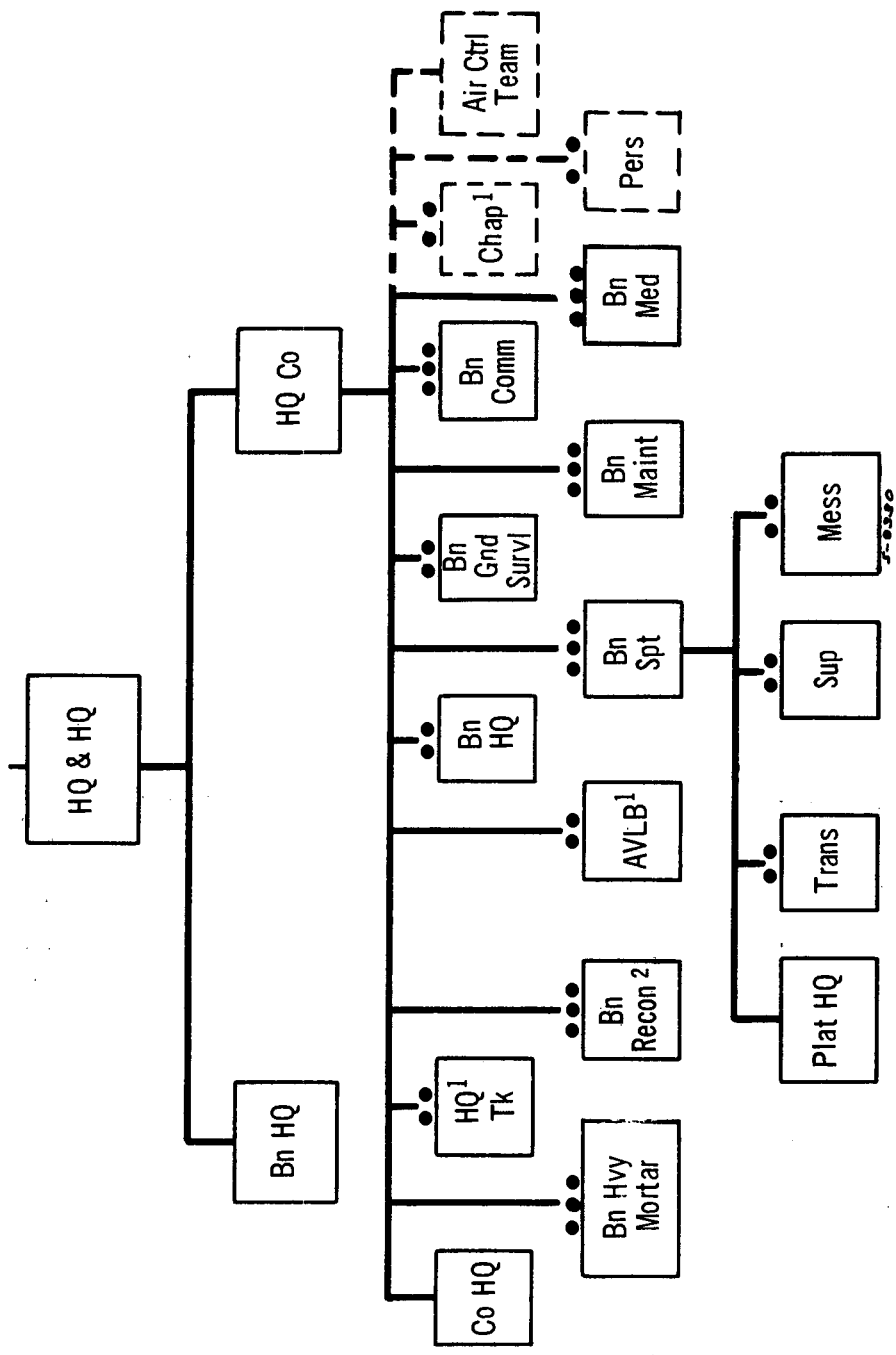
¹Not included in rifle company in infantry and airborne divisions.

Figure 82. Rifle company, infantry battalion.



4-2619

Figure 83. Tank battalion.



1 Not included in airborne division.

2 Contains scout and tank sections and a rifle squad.

Augmentation

Figure 84. Headquarters and headquarters company, tank battalion.

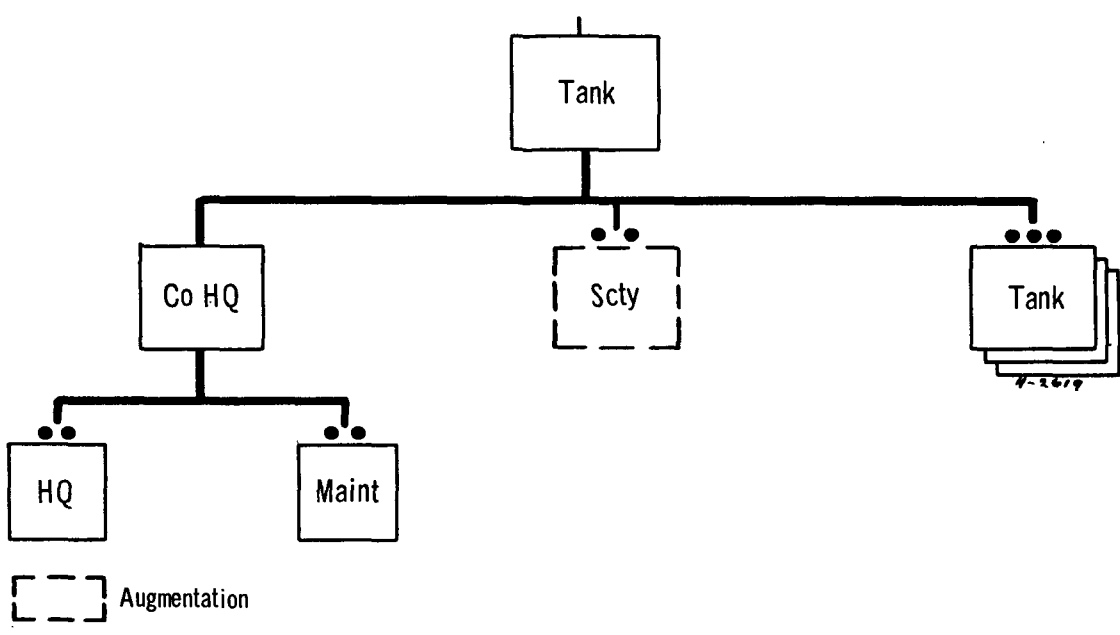


Figure 85. Tank company, tank battalion.

APPENDIX III
STANDING OPERATING PROCEDURE

Section I. GENERAL

a. A standing operating procedure (SOP) is a set of instructions, having the force of orders, which cover those features of operations that lend themselves to a definite or standardized procedure without loss of effectiveness. The procedure is applicable unless prescribed otherwise in a particular case.

b. A standing operating procedure states the desires of a commander with respect to the conduct of routine and recurring operations of his command. Thus, it reduces the amount of detail required in orders. It may include policy, guidance, areas of special emphasis, and expedient measures. Content will vary with the type organization, level of command, the state of training of the unit, and the desires of the commander.

c. Section II contains a sample standing operating procedure for the combat operations of army divisions. SOP items applicable to all army divisions are contained in annexes A through J. The sample SOP provides additional background on the nature of division operations. While it is based on current doctrine, it is not intended to establish doctrine.

Section II. A SAMPLE STANDING OPERATING PROCEDURE

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(Classification)

Division
FORT LEAVENWORTH, KANSAS
1 Sep 19__

STANDING OPERATING PROCEDURE

No. 3

COMBAT OPERATIONS

I. GENERAL

- A. Purpose. This SOP standardizes routine recurring operational and combat service support procedures within the division and applies except when modified by division order.
- B. Conformity. Subordinate unit SOP's will conform.
- C. Organization.
1. The following major tactical groupings will normally be used.
 - a. 1st Brigade.
 - b. 2d Brigade.
 - c. 3d Brigade.
 - d. Division Troops
 - e. Support Command
 - f. Division Artillery.
 2. Division major command installation. (The echelon in which the commander is located or from which he operates is designated the CP.)
 - a. Division tactical (Command Group) (when established). Commanding General; aides; G2, G3, division artillery representative, signal representative; other staff officers as Commanding General deems necessary; Military Police security escort, and operating personnel.
 - b. Division main. (Includes personnel in tactical CP when latter is not operating separately) Commanding General; aide; Chief of Staff; G1, G2 (and special teams), G3, G4, G5 sections; TOC; headquarters commandant; chemical, engineer, army aviation, provost marshal, signal, chaplain and surgeon sections; liaison officers; command operation company (-), signal battalion; adjutant general and military police company (-).
 - c. Division Alternate (alternate TOC). Assistant division commander; aide; others as designated.
 - d. Division rear. Administration company; information, inspector general, staff judge advocate, finance, and adjutant general section; replacement detachment, and rear echelon echelon operations platoon, signal battalion.
- D. Combat Orders and Distribution.
1. Operation orders limited in distribution to major subordinate command, battalion and separate task force, and separate company. Others informed by commander or liaison officer.

(Classification)

 (Classification)

2. Distribution A, when used, includes :
 - Corps and army
 - Attached units
 - Supporting units
 - Adjacent units
 - Each brigade
 - Each separate battalion, squadron, and separate company
 - Division artillery
 - Support Command
 - Each general and special staff section
 - File
3. Division signal officer will assign message reference number for combat orders, annex, appendix, tab, and inclosures thereto. When annex, appendix, tab, or inclosure is to receive the same distribution and be issued at the same time as the basic order, it will bear the same message reference number. When annex, appendix, tab, or inclosure is to receive a different distribution or be issued before or after the basic order, it will bear a separate message reference number.
4. Major subordinate command deliver two copies of operation orders to G3.

II. COORDINATION OF TACTICAL OPERATIONS

A. Command and Control.

1. Command posts.
 - a. Major units select and report location and time of opening and closing. Report location of CP, airstrips, heliports with each change in CP location.
 - b. During move headquarters remain operational.
 - c. To reduce the possibility of multiple loss of major headquarters as a result of enemy use of nuclear weapons, major command headquarters maintain a minimum of 5,000 meters distance from each other.
 - d. When a headquarters facility has been destroyed or neutralized, the senior surviving officer within the command will assume command and move to a new headquarters facility.
 - e. Surviving staff personnel of a headquarters which has been destroyed or neutralized will move promptly to the new headquarters.
 - f. In the event of the destruction or temporary neutralization of division main, in the absence of specific instructions, division command facility will be reestablished by following headquarters in accordance with the sequence in which they are listed :
 - (1) Division Alternate.
 - (2) Headquarters, division artillery.
 - (3) Headquarters uncommitted brigades (in order of seniority of commanders).
 - g. Major subordinate command will establish sequence of alternate command facilities and report to division.

 (Classification)

(Classification)

2. Liaison
 - a. Chief of Staff establishes liaison officer facility.
 - b. Liaison officers from brigades, support command, division artillery, separate battalion, and squadron and attached combat units not attached to subordinate command, report to Chief of Staff prior to march or combat operation.
 - c. From supporting unit to supported unit, from subordinate unit to headquarters to which unit is attached, and laterally between units from left to right. Division flank units will establish and maintain liaison with adjacent parallel headquarters.
 - d. G3 will provide a situation map for liaison officer.
3. Signal communication.
 - a. General.
 - (1) Report immediately loss or compromise of SSI or SOI to both G2 and division signal officer.
 - (2) Responsibility for establishing signal circuits: higher to lower, left to right, and supporting to supported, unless otherwise specified by division order.
 - (3) Annex H (Signal).
 - b. Radio.
 - (1) Radio restricted (netting and flash or immediate message permitted) when radio relay or wire communication established.
 - (2) Listening silence (transmitter turned off; receiver on) or radio silence (transmitter and receiver turned off) when prescribed.

B. Intelligence.

1. Prisoners of war.
 - a. Capturing units tag and interrogate PW (to include wounded) briefly for information of immediate necessity and identification. PW found to have any knowledge of enemy nuclear, chemical, or biological activity will be segregated and reported to G2 immediately. All other interrogation by IPW teams at division PW collecting point and division clearing station.
 - b. PW will not eat, smoke, drink, or rest prior to arrival at division PW collecting point, except when such treatment would be inhumane.
 - c. Enemy officer, field grade or higher, to division PW collecting point without delay.
 - d. Report immediately to G2 capture of enemy aircrews and guided missile, chemical, biological, and nuclear weapons personnel.
2. Captured documents. Cryptographic material and documents containing information on nuclear, chemical, and biological weapons delivered immediately to G2. Other documents through S2 except as below. All documents marked with date, time and place found or captured, including name and rank of PW. Docu-

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- ments found on PW carried by prisoner's escort to division collecting point. Technical documents found with captured equipment kept with equipment.
3. Technical intelligence.
 - a. Reports: Report of new or unusual enemy equipment, armament, nuclear material, or CB agents forwarded immediately to G2 with brief description. Enemy material related to nuclear warfare evacuated only to avoid recapture. Captured or crashed enemy aircraft reported immediately to G2 and guarded by discovering unit.
 - b. Captured materiel evacuation: Captured enemy materiel will be evacuated to nearest maintenance collecting point. Maintenance collecting point report receipt of materiel to division G2 and request disposition instructions.
 - c. Captured enemy material of new type or which may indicate new tactics or procedures or items suspected of being dangerous, promptly reported by capturing unit, inspected by technical intelligence team, and evacuated as directed by technical intelligence team.
 4. Maps and terrain models. Requisitions in excess of prescribed allowance to support command (supply and transport battalion) through G2.
 5. Weather. G2 obtains and disseminates weather reports to division staff and to major subordinate commands.
 - a. Normal weather reports will be furnished twice daily or as deemed necessary for operations.
 - b. Special reports:
 - (1) Aviation weather forecasts for division area and flight routes every six hours.
 - (2) Reports every 2 hours to include winds and other data required for nuclear weapons employment fallout prediction.
 - (3) Severe weather warnings accompany 2 hours reports or are broadcast as spot transmissions during intervals between reports.
 6. Reconnaissance.
 - a. General.
 - (1) Flash message: Use flash message report for approach of enemy armor, aircraft, naval or amphibious landing craft, airborne troops, or enemy nuclear or CB attack. Include number, type, location, direction of movement, speed, altitude (if applicable), time observed, and identification of observer. For nuclear flash message report, see Annex C, (Actions to Minimize Effects of Enemy Nuclear Attack).
 - (2) Report immediately:
 - (a) Known or suspected enemy troop concentrations which may be suitable for nuclear attack, or indication of their existence or development.

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- (b) Enemy countermeasures including, but not limited to, issue of special protective clothing to troops in forward area, construction of unusually deep or covered foxholes, or special shelters defiladed in rear of forward positions.
 - (c) Indication of enemy use of nuclear weapons, such as presence of special troop units in area, registration of heavy artillery, limited withdrawal of forward units without any apparent tactical reason, use of smoke cover on own forward troops, use of missiles with HE warheads.
 - (d) Effect of our nuclear and chemical weapons. Estimated enemy casualties, equipment, and vehicles destroyed or rendered unusable, extent of area affected, and any obstacles to our movement created. Air or surface burst and estimated ground zero.
 - (e) First contact with enemy; initial enemy artillery fire and marked change in volume of artillery fire; changes in enemy dispositions includes changes of company or larger units, counter-attack indications, and change in enemy combat attitude; loss of contact; initiation of hostile attack, identification of new enemy units; location of barriers, enemy minefields, demolitions, obstacles, and other defensive works, information on CB activities; known or suspected espionage, sabotage, or subversion.
- b. Ground.
- (1) Ground patrol plans to G2 as soon as developed.
 - (2) Constant surveillance of enemy activities and movement maintained by ground electronic units. Report location of observation posts and radar and primary sectors of ground radar sets to G2.
 - (3) SHELREP, MORTREP, TOXREP and BOMREP to nearest artillery headquarters immediately.
- c. Air.
- (1) Requests. Air requests for preplanned visual and photographic reconnaissance submitted to tactical air support element, TASE, by 1900 hours daily. Immediate aerial reconnaissance requests may be submitted at any time.
 - (2) Reports.
 - (a) Major subordinate commands forward organic aviation visual aerial reconnaissance reports to G2 air.
 - (b) Pilot and observer personnel, regardless of the type mission flown, report to the TASE any intelligence observed while in flight.

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- (3) Briefings and debriefings.
 - (a) Pilots, observers, or aerial photographers will be briefed and debriefed by a representative of G2 air division airfield.
 - (b) Requesting units be prepared to assist G2 air representative in the briefing and debriefing of pilots, observers, or aerial photographers.
7. Counterreconnaissance and counterinfiltration.
 - a. Civilians. Civilians infiltrating through division zone or sector to or from enemy occupied territory apprehended and turned over to intelligence personnel.
 - b. Unoccupied areas. Unoccupied areas reconnoitered periodically, employing ground or air patrols as appropriate. Maximum use made of ground surveillance equipment.
 - c. Night illumination. See Annex A, (Fire Support Coordination).
8. Counterintelligence.
 - a. Units check evacuated installations, bivouac, and assembly areas to insure no classified or identifying material left in area.
 - b. Pass system established in conformity with division security plan. Control measures and guard system inspected and tested frequently.
 - c. CP and directional signs use assigned code titles.
 - d. Known or suspected loss or compromise of codes or other classified material will be reported immediately to G2.
 - e. Communication security: compliance with current SOI, SSI, and operation order.
 - f. Daily aerial and ground visual or photo checks by all units to determine effectiveness of camouflage measures.
 - g. Security instructions for nuclear weapons and delivery will be coordinated in the operation and counterintelligence plans.
 - h. Recovery of any friendly personnel specially trained in nuclear warfare will be reported to G2 without delay.
 - i. Suspected enemy agents will be reported immediately to G2.
 - j. Recovered U.S. or Allied military personnel claiming to have escaped from the enemy or evaded capture behind enemy lines will be evacuated immediately to division medical facilities and reported to division G2 for interrogation on a priority basis.
 - k. Surrender of sizable number of enemy personnel or marked decrease in the combat effectiveness of enemy troops or units as a result of friendly use or threatened use of nuclear weapons will be reported to G2 without delay.
9. Elements isolated behind enemy lines.
 - a. Elements isolated behind enemy lines take all measures to defend against enemy or friendly conventional, chemical and nuclear fires.
 - b. Using methods prescribed in Annex B, (Methods of Reporting Location of Units), and current SOI, report locations,

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strengths, available communications equipment, maps available, and status of supply to parent headquarters.

C. Procedures.

1. Fire support coordination. See Annex A, (Fire Support coordination).
2. Security. Division G3 coordinates defense against enemy ground, air, and airborne attack. Each unit responsible for own local security. G3 supervises rear area security. G4 supervises area damage control. Support command commander coordinates and executes rear area security and area damage control plans of that portion of the rear area essential to the efficient functioning of combat service support units. Additional security for protection of division nuclear delivery units to be provided as required; requests to G3.
3. Development of the situation. Units reconnoiter and clear resistance within capabilities. Reconnaissance security elements habitually locate obstacle bypass for heavy vehicles.
4. Tactical operations.
 - a. Contact maintained left to right, from supporting to supported units.
 - b. Tactical air support. Requests for preplanned missions submitted to TASE not later than 1900 on the day prior to the desired activity. Immediate requests submitted any time.
 - c. Unit progress. After contact with enemy, units report location of elements every two hours, upon reaching assigned objective, or crossing designated phase line or checkpoint.
 - d. Employment of nuclear weapons.
 - (1) Nuclear allocation announced in the operations order. Allocation to commander is authority to fire. Weapons larger than Davy Crockett may be allocated to brigade. Davy Crockett may be allocated down to battalion/squadron or small task force.
 - (2) Authority to fire nuclear weapons retained by commander or designated representative.
 - (3) Individual protective or other restrictive measures included in coordination instructions in operations order.
 - (4) Risk criteria, unless otherwise directed by Division Commanding General: negligible risk for unwarned, exposed troops.
 - (5) Tactical damage assessment by ground and air OP reported following strike giving:
 - (a) Approximate location actual GZ.
 - (b) Whether fallout was produced.
 - (c) Location of significant obstacles.
 - (d) If known, estimated enemy casualties, equipment and vehicles destroyed or rendered unusable, and extent of area affected.
 - (6) Appendix 1 (Nuclear Strike Warning) to Annex A (Fire Support Coordination).

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- e. Engineer. Report immediately to the engineer element of the TOC the location of own and enemy minefields and other barriers and obstacles to include prepositioned nuclear weapons on standard Department of Army report forms by most expeditious means available.
 - f. Chemical and Biological.
 - (1) See Annex D (Actions to Minimize the Effects of Enemy Chemical and Biological Attack), for defensive measures. Offensive use only on order of division commander.
 - (2) Chemical troop safety will be negligible risk for unprotected troops.
 - g. Smoke. See Annex A (Fire Support Coordination).
 - h. Defense against air attack.
 - (1) Aircraft fired on only when hostile markings are plainly visible or when aircraft commits hostile act.
 - (2) Maintain dispersion of vehicles and ground installations at all times.
 - i. Bomb and shell disposal. Units mark location of dud shells and bombs and report location to division support command in six digit coordinates. Use flash message report for suspected dud nuclear weapon. Establish safety precautions.
 - j. Actions to minimize effects of enemy nuclear, chemical, and biological attack, see Annexes C and D.
- D. Techniques.
- 1. Orders.
 - a. Fragmentary orders normal during operations. Maximum use of overlays, tables, and charts. Written orders when time permits and for record.
 - b. Nuclear fires will be planned and target analysis will be prepared in division Fire Support Element (FSE) of TOC, based on applicable portions of corps plans, weapons allocated to division, and coordination between the division G3 and the FSCoord. Necessary information will be included in appropriate annexes to plans and orders (fire support, air support, barrier, etc).
 - c. Warning order to own troops for friendly nuclear and chemical attack:
 - (1) Time of attack for scheduled fires will be disseminated in the OPOrd and appropriate fire plan. Procedures for warning of on-call fires and fires on targets of opportunity see Appendix 1 to Annex A (Fire Support Coordination).
 - (2) Postponement of nuclear and chemical attacks. Transmit in clear by fastest communications means available the message "Tarry, target number _____ instructions later" followed by transmission of appropriate instructions.

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2. Reports. The following reports will be submitted by major commands, separate task force, and separate units:

a. Intelligence (para IIB).

<u>Report</u>	<u>How submitted and precedence</u>	<u>Time</u>
Flash message report all types.	By expeditious means—flash.	At once.
BOMREP, SHELREP, and MORTREP.	Radio, radioteletypewriter, or telephone—immediate.	At once.
INTSUM.....	Radio, radioteletypewriter, or messenger—routine.	As of 0600, 1200, 1800, and 2400 daily.
Radioactive and toxic contamination.	By expeditious means—immediate.	At once.
b. Operations		
Unit progress report....	By expeditious means—immediate.	See para IIC4c.
Loss of contact with friendly units.	By expeditious means—immediate.	At once.
SITREP.....	Message form—routine....	As of 1800 daily; reach division headquarters by 2200 daily.
Command report (to include intelligence, operations, logistics, civil affairs, and personnel).	Formal written report—routine.	As of 2400 end of each month by 5th of following month.

E. Special considerations.

1. Actions to minimize effects of nuclear attack. See Annex C, (Actions to Minimize Effects of Enemy Nuclear Attack), with Appendices 1, 2, and 3.
2. Fallout, radiological monitoring, and survey. See Annex E, (Prediction of Fallout, Radiological Monitoring, and Survey).
3. Army aviation. See Annex G (Army Aviation).
4. Chemical and biological operations. See Annex D (Actions to Minimize the Effects of Enemy Chemical and Biological Attack).
5. Mobility.
 - a. March organization. Division moves in march column (multiple routes when available) preceded by reconnaissance element, normally in six major march serials: three brigades, division artillery (-), division troops, and support command. Maximum use of darkness.
 - b. Control. March serials provide own security. Prior reconnaissance (routes and assembly areas); organizational traffic control; guides; and posting and removing route markers are responsibility of serial commander, supplemented (for main routes) and coordinated by division. Report hourly location

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- of heads of march serials. Annex B, (Methods of Reporting Location of Units).
- c. Priority. Nuclear delivery units, tactical troop movements, ambulance, ammunition vehicles, construction crews, staff cars, and messenger vehicles.
 - d. Density and rate.
 - (1) Night. Close column 20 meters between vehicles, (density 75 vehicles per mile) at average speed 10 MPH. Maximum speed 15 MPH.
 - (2) Daylight. Open column 75 meters between vehicles (density 20 vehicles per mile) at average speed 15 MPH. Maximum speed: wheel, 25 MPH, track, 20 MPH.
 - (3) Infiltration. Irregular dispatch, 3 vehicles per mile at 12 to 20 MPH.
 - (4) Time interval. Company is the basic march unit. Time interval between company march units: 2.5 minutes; between battalion march serials: 5 minutes; between major march serials: 15 minutes.
 - e. Halts. Halt time stated in march order based on 15 minutes after each 1 $\frac{3}{4}$ hours of march. Keep road clear. Commander determine cause of all unscheduled halts and take appropriate action. Refueling halts are prescribed. Crews make maintenance check. Disabled vehicles display yellow flags.
 - f. Lights. Blackout forward of army light line. Use of infrared authorized.
 - g. Passing. Only when column is halted, except control, reconnaissance, general officer, messenger, medical vehicles, and vehicles displaying red emergency flags. Convoys pass only on permission of halted column commander.
 - h. Vehicle marking. Lead vehicles of serial carry blue flag. Rear vehicles in serial carry green flag.
 - i. Accidents. Officers at tail of each march unit investigate and take necessary action.
 - j. Guards. Air guards in all vehicles. Traffic guards will be posted at head and tail of each halted march unit.
6. Barriers and division blocking positions. Responsibility for preparation announced in operation orders. Responsible units submit barrier plan, overlays, and schedules to G3. Minefields reported on DA Form 1355 (four copies) to engineer.

III. COORDINATION OF COMBAT SERVICE SUPPORT OPERATIONS

- A. General. Brigades, separate battalions (squadrons) and separate companies receive combat service support from units/installations as follows:
 1. Each brigade and its attached and supporting units will be supported by the following units/installations located in/near the brigade trains area:

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- a. Division support command.
 - (1) Forward support company of the maintenance battalion.
 - (2) Division forward distributing points for classes I, III fast moving II & IV supplies. (In the airborne division this subparagraph may also direct the establishment of a class V forward distributing point. See Annex J. (Airborne Assault Operations).)
 - (3) A medical company.
 - (4) A graves registration collecting point.
 - (5) One or more bath teams.
 - (6) Forward maintenance and salvage collecting points.
- b. Engineer battalion. One water point.
- c. Military Police company (committed brigades only).
 - (1) One military police platoon tailored to brigade mission.
 - (2) A prisoner of war collecting point.
2. All other units will be supported from brigade trains area designated by the division G4 or from the division support area.
3. Brigade commanders will coordinate combat service support operations of attached units and movement, location and security of combat service support units/installations in brigade areas.
4. Supporting and supported units have a mutual responsibility for informing each other as to locations of units/installations.
- B. Coordinating Agency. The Commanding Officer, support command, is the division logistical operator. Selected Division staff sections and units will provide representation to support command as required. All report receiving agencies will maintain current information at the support command headquarters by direct communication and liaison.
- C. Techniques. Following reports will be submitted by battalion and separate companies.

1. Logistics:		
Special logistic reports (status of major items of equipment minus vehicles).	Radio, radioteletype-writer, or telephone.	When called for as of 1800 by 2200 to support command with information copy to G4.
Combat vehicle status report.	Radio, radioteletype-writer, or telephone.	Daily as of 1800 by 2200 to support command with information copy to G4.
POL status report.....	Radio, radioteletype-writer, or telephone.	Daily as of 1200 by 1400 to support command with information copy to G4.

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2. Personnel:		
Personnel daily summary.	Radio, radioteletype-writer, or telephone.	Daily as of 1800 by 2200 through G1 to AG.
Casualty report-----	Radio, radioteletype-writer, or telephone.	Daily as of 1800 by 2400 to AG.
Special strength report--	Radio, radioteletype-writer, or telephone.	When called for, through G1 to AG.

(In missing and missing-in-action cases, unit commander will suspend forwarding of report for a period of 6 days, during which time all possible sources of information will be checked to verify that the individual is actually missing.)

D. Detailed Considerations.

1. Logistics.

a. Coordinate through division support command. See paragraph IIIB.

b. Materiel and services.

(1) Supply.

- (a) General. Unit distribution of classes I, II, III, and IV by division to brigade or separate battalion trains area. Supply of class V by supply point distribution.
- (b) Class I. Reserve one ration, small detachment, in supply and transport battalion; three rations, individual combat, for crew or personnel assigned to each vehicle. Begin rations cycle with supper meal.
- (c) Class II and IV (except medical, repair parts, aircraft parts, cryptographic, and electrical accounting machines). Units requisition through supply and transport battalion. Supply and transport battalion determine and maintain limited stocks of fast-moving items. Direct exchange items from supply and transport battalion. Requisitions for items in excess of allowances and regulated or critical items through command channels.
- (d) Class II and IV medical. Requisitions through medical battalion.
- (e) Class II and IV repair parts. Requisition through maintenance battalion.
- (f) Class II and IV cryptographic supplies. Requisition through signal battalion.
- (g) Class III and IIIA. Issued on basis of empty tank truck or container for container. Supply and transport battalion attach tank trucks to units as appropriate. Each wheeled vehicle carry minimum reserve of 10 gal; except ¼-ton truck, 5 gallon. Individual vehicles refuel at any supply point on route.

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- (h) Class V. Units maintain basic loads. Replace expenditures from ASP or division Class V distribution point, when authorized, on transportation order signed by division ammunition officer (DAO). Establish and replace special ammunition load on orders. Flame fuel mixing and service equipment operated by chemical corps personnel. Separate transportation order for nuclear and other special weapons cleared through DAO; firing unit provides transportation and security. Request for authority to exceed available supply rate to G4. Request for authority to stockpile ammunition in excess of basic load to G4, 24 hours prior to pickup time; request to be accompanied by transportation order for quantity in excess of basic load.
 - (i) Water. All water except that secured from engineer water supply point considered contaminated. Water purification tablets issued to individuals with rations.
 - (j) Salvage. Unit commanders responsible for collection and evacuation to nearest maintenance and salvage collecting point. Supply and transport battalion evacuates from collecting points.
 - (k) Captured materiel. See paragraph IIB3.
 - (l) Cannibalization. Controlled cannibalization is permissible within the provisions of AR 750-50.
- (2) Transportation.
- (a) Dispatch of six or more vehicles in convoy rearward of division support area requires clearance from traffic headquarters.
 - (b) Requests for additional transportation to support command will specify number of persons or tonnage.
 - (c) Emergency supply by air. Requests for supply by air to support command, giving amount and identification of supply required, location and description of primary and alternate Drop Zone (DZ) or Landing Zone (LZ); date, time, and method of delivery (air-landed, airdrop, parachute); DZ or LZ identification, summary of enemy situation vicinity of DZ or LZ; location of forward dispositions, and SOI data.
- (3) Services.
- (a) General. Report location of logistical installations and unit trains to support command.
 - (b) Decontamination. Decontamination of areas, supplies, and equipment in a nuclear, chemical, or bio-

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logical attack will be limited to those essential for operations and survival.

(c) Maintenance.

1. General. Unit commander responsible for evacuation to axis of supply and evacuation or to forward support company maintenance and salvage collecting point. Support by forward support company includes all troops in immediate vicinity of supported brigade. Mobile repair teams will repair equipment on site or exchange as appropriate.

2. Signal (except cryptographic). Tag signal equipment for repair with unit designation and nature of trouble and notify maintenance battalion. Mobile repair teams repair equipment on site or exchange as appropriate. Repair of cryptographic equipment direct to signal battalion.

3. Medical equipment direct to medical battalion.

c. Medical evacuation and hospitalization.

(1) Medical battalion evacuates from unit aid stations. Units report location of aid stations to support command and nearest medical clearing station (medical company).

(2) Requests for aeromedical evacuation to division surgeon by most expeditious means.

2. Personnel.

a. Replacements. Upon request of brigade, battalion, and squadron commanders, AG assigns replacements direct to companies based on TOE position vacancies as reflected in the current morning report. Units receive replacements at replacement detachment, administration company, on notification by AG.

b. Discipline, law and order.

(1) Personnel awaiting trial, except those requiring physical restraint, remain with their units while in combat.

(2) In occupied areas, military police have authority to enforce laws and regulations and make apprehensions within division area without regard to nationality, service, or civilian status, and to require any U.S. military personnel to assist them.

c. Prisoners of war and civilian internees.

(1) PW evacuated by capturing brigade, battalion, or squadron to nearest division collecting point. PW and civilian internees evacuated from forward collecting points in brigade areas as arranged by PM.

(2) Wounded PW and civilian internees evacuated through medical channels.

(3) MP Company operates division collecting point.

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- d. Graves registration (GRREG) service.
 - (1) Commanders of all echelons responsible for collecting, identifying, and evacuating U.S., Allied, and enemy dead to GRREG collecting point. Mass burials only on instructions from division headquarters.
 - (2) One collecting and evacuation section of the GRREG platoon (augmentation) supports each brigade. Division collecting and evacuating section supports division troops.
 - (3) Isolated burials only when unavoidable. Report location of graves to support command.
 - (4) Nonradioactive personal effects on body remain with deceased until arrival at cemetery.
 - (5) Units properly identify and forward personal effects found in area to supply and transport battalion without delay.
 - (6) Indigenous civilian dead interred by local civilians in accordance with local customs.
 - (7) Remains and personal effects contaminated by nuclear or chemical effects not evacuated until decontamination completed.
- e. Civilian personnel. When authorized to employ local civilian labor, requisitions will be submitted to division G1.
- f. Morale and personnel services.
 - (1) Appropriate denominational chaplain support for assigned and attached units without assigned chaplains will be provided by chaplains of adjacent divisional units under the supervision and coordinations of the division chaplain.
 - (2) Leave and division rest camp quotas will be filled.
 - (3) Decorations and awards.
 - (a) No quotas.
 - (b) Recommendations submitted by any person having knowledge of action of any other person. Time for processing kept at absolute minimum.
 - (c) All recommendations to division review board through channels.
 - (d) Presentation without delay at appropriate troop formation which, when practicable, include associates and eyewitnesses.
 - (4) Unit mail delivery with class I supply (unit distribution).
 - (5) Unit commanders arrange with finance section (through the personnel staff NCO and the personnel service division) for payment of troops, soldiers' deposits, and savings bonds.
 - (6) Army exchange items distributed with class I supply.
 - (7) Special services. Priority to combat troops.

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- g. Personnel procedures. Personnel receiving battlefield commissions will normally be assigned to own battalion or squadron and may be assigned to own company.
- 3. Civil affairs.
 - a. Internal affairs and government.
 - (1) Division retains responsibility for all CA activities in area except those specifically delegated to subordinate units.
 - b. Resources. Safeguard public works, utilities, fuel, and oil storage, or supply installations.
 - c. Logistical support.
 - (1) Maximum use of civilian resources for civilian relief, camps, control, and health.
 - (2) Minimum military support for civilian relief upon approval this headquarters.
 - d. Reports. Units immediately report to G5 capture of key civilian officials, national treasures, and stores of supplies.

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Annexes:

- A—Fire Support Coordination
- B—Methods of Reporting Location of Units
- C—Actions to Minimize Effects of Enemy Nuclear Attack
- D—Actions to Minimize Effects of Enemy Chemical, and Biological Attack
- E—Prediction of Fallout, Radiological Monitoring, and Survey
- F—Rear Area Security
- G—Army Aviation
- H—Signal
- I—Division Tactical Operations Center
- J—Airborne Assault Operation

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Division
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Annex A (Fire Support Coordination) to SOP No. 3

1. FIRE SUPPORT ELEMENT—TOC

- a. Composition. Chief of FSE, duty team chief, operations and intelligence representatives from division artillery; naval gunfire officer (NGFO); liaison officers from fire support agencies as required.
- b. Location: TOC, division main.

2. TARGET NUMBERING SYSTEM

- a. Division prefix. The letter "_____" is assigned _____ Division, as an identification prefix, for all targets designated by division agencies. (See Note 1 at end of this annex.)
- b. Unit prefixes. The following letter prefixes are assigned to division units. The originating unit will identify each target by assigning a number preceded by the two-letter prefix (the division and the unit identification letters), except for nuclear concentrations (see paragraph c below).

<u>Unit</u>	<u>Letter</u>
Supporting weapons organic to major combat elements (brigades, etc., in numerical order).	A thru E.
Division artillery FDC-----	F.
Artillery battalions in numerical order-----	G thru K.
Attached artillery, or as desired-----	L, M, etc.

- c. Nuclear concentrations are designated by the letter "N" as its first letter, followed by the letters indicated in a and b above which identifies the planning headquarters. Targets are then numbered consecutively by each headquarters.
- d. Enemy artillery and mortar location.
 - (1) Suspect enemy artillery locations are identified in the order of location by use of letters, the first letter denotes artillery and the second the order of location: AA (1st suspected location), AC (3d suspected location), BA (27th suspected location). Confirmed locations will be followed by suffix "C".
 - (2) In a similar manner to that of designating artillery, enemy mortar locations are assigned a two-letter designation, preceded by the letter "M" to indicate a mortar location: MAA (1st suspected location), MAB (2d suspected location), MBB (28th suspected location). Confirmed locations will be followed by suffix "C".

3. SAFETY

- a. Air safety. Restrictions on artillery fires during airstrikes controlled by division Fire Support Element (FSE) of TOC. Orders transmitted through fire support channels.
- b. Ground safety.
 - (1) No-fire line. Responsibility of direct support battalions to recommend location. Division artillery disseminates location.
 - (2) Fire support coordination line. Designated by corps; units recommend changes; ALO advises air support units of location.
 - (3) Risk criteria. See SOP, para IIc4.

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4. OBSERVATION

- a. O-O line. Division artillery commander responsible for requests to corps for changes as required.
- b. Responsibility. Direct support artillery battalion responsible for observation in zone of supported unit; general support and reinforcing artillery units observe as directed by division artillery commander; reinforcing units observe as requested by reinforced unit.

5. TACTICAL AIR SUPPORT (AF)

- a. TASE is responsible for informing requesting unit of final action taken on requests for air reconnaissance or requests for preplanned close air support.
- b. Requests for immediate close air support over the division air request net directly from the ACT at battalion to the TASE at division.

6. NAVAL SUPPORT

- a. Naval gunfire will be fired by direct support ship of the echelon concerned, using naval gunfire procedures. If additional naval gunfire support is required, it will be requested from next higher FSE through naval gunfire channels.
- b. Shore fire control parties will control and adjust naval gunfire; adjustment of naval gunfire by artillery forward observer in emergency only.
- c. Combat service support of naval parties by units to which attached.
- d. If air naval gunfire liaison company (ANGLICO) attached, ANGLICO channels through FSE will be employed for naval gunfire and control of naval air.
- e. Division artillery responsible for survey control to naval gunfire radar beacon.

7. AIR DEFENSE ARTILLERY

- a. The Air Defense Element (ADE) of the TOC is responsible for coordinating army air defense with other tactical and tactical support agencies located at the TOC.
- b. The Division Army Aviation Element (AAE) of the TOC coordinates the flight of division aircraft with the ADE.
- c. The TASE will inform the ADE of all known air support of reconnaissance missions in the division zone.

8. ARMY AVIATION

- a. One aircraft in air constantly in division zone or sector on observation or combat surveillance when flying conditions permit, coordinated by AAE.
- b. Unit requests for aircraft missions direct to AAE.

9. SMOKE

When predicted effects may interfere with adjacent units, missions must be cleared with adjacent units or approved by TOC.

10. BATTLEFIELD ILLUMINATION

- a. Requests for battlefield illumination will be processed through direct support artillery unit. Requests must be approved by division FSE except as indicated below.
 - (1) No restrictions on illumination by organic weapons of combat unit.

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- (2) Emergency illumination by artillery on authority direct support artillery battalion commander. Notification to division FSE by fastest means.
- b. Decentralized control of searchlight and aircraft for battlefield illumination on division order only.
11. COMMUNICATIONS
- a. Requests for nuclear fires from major command through command communication channels to division headquarters.
- b. Immediate close air support requests will be sent over the division air request net. The spot report receiver system (UHF-voice) will be used in emergency only.
- c. Immediate requests sent by electrical means are assigned a precedence of IMMEDIATE and are preceded by the words quote IMMEDIATE AIR REQUEST unquote. Message thus sent takes priority over other IMMEDIATE messages and those of lower precedence.
- d. Combat units down to and including battalion and squadron headquarters will enter station in the division air request radio net; net frequency to be announced; call signs in SOL.
12. NUCLEAR DAMAGE CRITERIA AND FALLOUT
- a. Destruction—30 to 50 percent probable minimum coverage; 40 to 70 percent average coverage.
- b. Neutralization—10 percent probable minimum coverage and 20 percent average coverage.
- c. Target of unknown composition assumed to be protected personnel.
- d. Point targets.
- (1) Single target element—90 percent assurance of success.
- (2) Small area target—40 to 70 percent average coverage.
- e. All weapons will have a height of burst to assure a 99 percent probability (P=.99) of no significant fallout unless fallout is approved by CG. When fallout is authorized, predicted fallout pattern should lie within the zone of the commander employing the weapon. When significant fallout is predicted in adjacent zones, fires will be coordinated with the adjacent commander, or lacking concurrence, approved by the next higher commander.

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App: 1. Nuclear Strike Warnings

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Note 1: Ref para 2a.

- a. A system of designating concentrations identifying targets is necessary to prevent duplication and to indicate the planning source. A system of identifying hostile artillery and mortar locations is essential to differentiate such targets from other targets.

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- b. Concentration designations consist of letters and numbers. Corps will assign the letter prefixes of concentrations to major subordinate units within corps. Major subordinate headquarters will assign an additional letter prefix to each subordinate element. The letter "N" will not be used as the first letter of a target designation, except for nuclear.

Prefix letters

Assigned by corps headquarters and changed according to the organization of the corps.

<u>Corps</u>	<u>Abn</u>	<u>Armd</u>	<u>Divisions</u>		
			<u>Inf</u>	<u>Mech</u>	<u>Air Aslt</u>
1st—X	102—D	23d—L	18th—A	52d—E	47th—Q
_____—Y		25th—M	19th—B	53d—F	48th—R
_____—Z		26th—P	20th—C	54th—G	
				56th—H	
_____Armd Cav Regt—S					

Note 2: Examples:

- a. Ref para 2b.

Concentration CA7 is the seventh target planned by the 1st Bde, 20th Inf Div; L18 is the eighteenth target, planned by the 23d Armd Div.

- b. Ref para 2c.

Concentration NC5 is the fifth nuclear concentration planned by the 20th Inf Div; concentration NEB 1 is the first nuclear concentration planned by 2d Bde, 52d Inf Div (Mech).

Appendix 1 (Nuclear Strike Warning) to Annex A (Fire Support Coordination) to SOP No. 3

1. PURPOSE

To establish procedures to warn personnel of nuclear on-call fires and nuclear fires on targets of opportunity.

2. REFERENCES

FM 101-31-1 and SOI.

3. ORGANIZATION

Organization for combat.

4. RESPONSIBILITIES

- a. G3 disseminates warning to subordinate and adjacent headquarters requiring warning.
- b. Warning passed through command channels on all available wire nets and on radio over the division warning broadcast net (AM-voice).
- c. Units pass warning to supporting and attached units.

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5. MESSAGE FORMAT

a. Message to battalion size and larger units.

- (1) Line 1. Proword indicating message is nuclear strike warning (see SOI Item _____).
- (2) Line 2. Target designation.
- (3) Line 3. Coordinates of desired ground zero (DGZ) (see SOI item _____).
- (4) Line 4. Distance in hundreds of meters from DGZ within which it is unsafe to locate troops (in clear).
- (5) Line 5. Distance in hundreds of meters from DGZ within which troops must take maximum protection (in clear).
- (6) Line 6. Distance in hundreds of meters from DGZ within which troops must take at least minimum protection (in clear).
- (7) Line 7. Distance in hundreds of meters from DGZ within which troops must protect eyes (in clear). This line blank for daylight attacks.
- (8) Line 8. Time of burst (see SOI item _____).
- (9) Line 9. Acknowledge.

b. Message to company size and smaller units.

- (1) Line 1. Proword indicating message is nuclear strike warning (unit SOI).
- (2) Line 2. Prearranged message directing the protective measures to be taken (unit SOI).
- (3) Line 3. Time of burst (unit SOI).
- (4) Line 4. Acknowledge.

6. PROCEDURES

- a. Strike warning messages sent only to units likely to be affected by burst.
- b. Warning messages given FLASH precedence.
- c. Acknowledgement indicates notification of platoon size units.
- d. Weapons not to be delivered earlier than desired time of burst. Backup weapon in event of first weapon failure fired within 15 minutes of desired time of burst.
- e. Personnel assume required degree of protection two minutes before desired time of burst. Remain protected two minutes after detonation. Remain protected 15 minutes after desired time of burst if weapon fails to detonate.
- f. New strike warning initiated if strike not delivered within 15 minutes of desired time of burst.
- g. Strike warnings passed to Air Force and Navy liaison officer not later than _____ minutes before burst. (Time to be developed based on guidance from higher headquarters.)
- h. Strike warning messages 10 minutes before burst transmitted in clear.

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Annex B (Methods of Reporting Location of Units) to SOP No. 3

1. TIME OF REPORTS

Every two hours or as phase line and/or checkpoints are reached.

2. STANDARD METHOD (NORMAL USE)

Checkpoint report. Procedure similar whether checkpoint location on routes of march, on phase lines, or general throughout area.

- a. Terrain features recognizable on the ground (towns, road junctions, stream junctions, hilltops, etc.) are designated by small circles and numbered. Area covered will normally extend at least 4,000 meters beyond division objective.
 - b. Report by giving location or distance and direction from checkpoint and direction of movement.
 - c. Checkpoints will be issued by G3 each time a complete OPORD is issued, or by fragmentary message.
 - d. Brigade, battalions, squadrons, and division artillery issued blocks of numbers for selection of additional checkpoints within their zones for subordinate units.
- 3. ALTERNATE METHODS (EMERGENCY OR AS DIRECTED)**
- a. Coded map coordinates. Numerical coordinates are encoded to letters using SOI.
 - b. Terrain code name. Similar to standard control checkpoint method, except that code names instead of numbers are used to designate terrain features.
 - c. Ten square grid map code.

4. SECURITY

- a. If standard checkpoint overlay compromised :
 - (1) Report to G2 without delay.
 - (2) G3 will direct one or more of following be adopted :
 - (a) Prearranged number be added to or subtracted from number on checkpoint overlay.
 - (b) Issue new checkpoint overlay with checkpoints renumbered.
 - (c) Use one of alternate methods.
- b. If one of alternate methods compromised, report fact to G2, and G3 will direct the issue of new code names of reference point (s), as applicable, or direct use of another method.

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Annex C (Actions to Minimize Effects of Enemy Nuclear Attack) to SOP
No. 3

1. GENERAL

- a. This annex prescribes normal procedures for defense against and actions following enemy nuclear attack.
- b. See Appendix 3 (Area Damage Control) for actions required to avoid or minimize effect on combat service support operations.
- c. See Annex D (Actions to Minimize Effects of Enemy Chemical and Biological Attack) for procedures peculiar to CB operations.

2. PLANNING

- a. Units organize and designate personnel for control and assessment team (CAT) (app. 1).
- b. Units organize and designate personnel for rescue, labor, and decontamination squads (app. 2).
- c. Orders.
 - (1) Commander's concept habitually in sufficient detail to permit continued and, when necessary, independent action by subordinate units.
 - (2) Division designates emergency assembly areas or alternate positions within zone or sector. Use only on division order. Subordinate headquarters designates rallying points.
- d. Procedures.
 - (1) Predict own disposition at critical stages.
 - (2) Assume enemy nuclear attack against predicted disposition at point of maximum vulnerability.
 - (3) Evaluate effect on own troops.
 - (4) Determine actions to offset effect of enemy attack to continue mission. Prepare contingency plans to include essential draft OPOD and checklist of actions to be taken in chronological order.
 - (5) Predict fallout and effects.

3. OPERATIONS

a. General.

- (1) Priority of tasks subsequent to enemy nuclear attack.
 - (a) Capable units continue mission.
 - (b) Reestablish command and communication and implement monitoring plan.
 - (c) Determine and report remaining combat effectiveness of damaged unit(s).
 - (d) Reorganize damaged units.
- (2) Alternate plans. Battalion size or larger units prepare, coordinate and keep current alternate tactical plans, including displacement and decontamination plans.
- (3) Passive protective means.
 - (a) Units disperse and dig in when permitted by situation.
 - (b) Construct shelters in stabilized situation.

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- (c) Make maximum use of any shielding.
 - (4) Movement. Units make maximum use of night movement, multiple routes of march, and dispersion.
 - (5) Camouflage and deception means. Enforce camouflage discipline and use of natural concealment at all echelons. Coordinate deceptive means, including dummy installations, with division plans.
 - (6) CAT dispatched upon instructions from division G3 element, TOC.
- b. Actions immediately following nuclear attack (automatically without orders).
- (1) Individual and combat vehicle crews. Establish contact with immediate superior.
 - (2) Individuals actions under fallout. Actions that can be taken by individuals to minimize the effects of fallout are outlined below. Individuals will be directed to take such of the following actions as are consistent with the mission of the unit and nature of the action in which the individual is involved.
 - (a) Acquire the following protection in the order listed: remain in the shelter until the area has been determined safe or exit is required for urgent reasons.
 - 1. Underground shelters.
 - 2. Foxholes with overhead cover. Foxholes will be continually improved as time permits.
 - 3. Armored vehicles. Vehicles will be used when shelters listed in 1 and 2 above are not available and time precludes constructing such shelters.
 - 4. Buildings. Buildings of masonry construction will be used in preference to those constructed of wood or other materials.
 - 5. Clothing, shelter halves, etc. Exposed personnel will, when possible, cover all exposed skin and further cover clothing with such items as shelter halves, blankets, canvas, etc.
 - 6. Sandbags in vehicles. Vehicles operating in contaminated areas will, when practicable, be equipped with sandbags on the floors and sides to reduce radioactivity being emitted from the ground.
 - (b) Decontamination. When fallout has ceased, individuals will, where practicable, decontaminate as follows:
 - 1. Brush clothing and personal equipment thoroughly to remove fallout particles. This should be done in an area away from that which the individual will occupy.
 - 2. Bathe thoroughly, preferably by showering, and change clothing. Insure personal effects such as billfolds, watches, etc., are decontaminated; otherwise, disposed of.
 - 3. Decontaminate individual equipment by brushing, wiping, and, as appropriate, scrubbing.

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4. Decontaminate the immediate area in which the individual is located by hosing or turning the soil as appropriate. (For example, the soil within a foxhole should be removed and the soil around a foxhole turned over or covered to bury the fallout; tents, vans, and other vehicles should be hosed.)
5. Clean other equipment as required. When available, high pressure steam or high pressure air is most effective.
 - (c) Maintain a full canteen of water and sufficient rations to permit the individual to remain in a protected area for a minimum of 24 hours.
 - (d) Protective masks, dust respirators, or handkerchiefs over nose and mouth may be worn if the dust or fallout particles hinder breathing. It is not necessary to wear the mask to avoid inhaling radioactive particles.
 - (e) Reduce stay time in contaminated areas. Only tasks which are vital to accomplishment of the unit mission should be performed in radioactive contaminated areas. Individuals entering the contaminated area should have maximum protection, consistent with the task to be performed and should remain in the contaminated area for a minimum practicable time.
- (3) Units.
 - (a) Turn on radiac instruments and start continuous monitoring.
 - (b) Report to next higher headquarters any element out of contact.
 - (c) Protective measures.
 1. Prepare for early movement.
 2. Displace as directed by higher headquarters to avoid radiation hazard and continue mission.
 - (d) Avoid doses in excess of those in Radiation Exposure Guidance shown in FM 3-12.
 - (e) Report information relative to nuclear blast as shown in Appendix 1 (Nuclear Burst Report) to Annex E (Prediction of Fallout, Radiological Monitoring, and Survey) to SOP No. 3.
 - (f) All units report initial time of arrival and dose rate of fallout in area. Thereafter, report as directed to CBRE, TOC.
- (4) Division Headquarters, division artillery, each brigade, division support command, infantry, tank, artillery, aviation, engineer, signal battalion, and squadron.
 - (a) When required, dispatch control and assessment team (CAT) and report action.
 - (b) Report Army aircraft immediately available for reconnaissance.
 - (c) Prepare to release attached and uncommitted combat elements.
- (5) Uncommitted units. Prepare for immediate movement.

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- (6) Armored Cavalry Squadron. If not committed, provide one platoon with monitoring equipment available for immediate movement.
- (7) Aviation Battalion.
 - (a) Dispatch aircraft to vicinity ground zero to make preliminary damage assessment and to determine presence of a crater and radiological hazard.
 - (b) Initial observer report (para 3b(2)(f)).
 - (c) Hold two utility helicopters at division airstrip for use by support command CAT.
- (8) MP Co.
 - (a) Prepare to reinforce existing traffic control posts and patrols and to establish additional ones on order.
 - (b) Prepare to establish MP patrols and posts in rear of affected units for circulation control of individuals and maintenance of law and order.
 - (c) Prepare to assist in establishment of emergency refugee collecting point : execute on div order.

c. Battlefield decontamination. See TM 3-220.

4. LOGISTICS

- a. Support. Units operating in damaged areas obtain required supply from nearest available source.
- b. Evacuation and hospitalization.
 - (1) Units accomplish maximum self-aid.
 - (2) Nonmedical personnel will assist in routine medical care and evacuation outside the unit's area of responsibility only on division order.
 - (3) Walking wounded will assist in evacuation of patients from affected area at direction of medical officer concerned.
- c. Transportation.
 - (1) Include alternate means of transportation, unit, and route priorities in all pertinent plans.
 - (2) Only vehicles engaged in, or supporting, area damage control activities or engaged in combat operations enter damaged area.
- d. Services.
 - (1) Decontamination limited to that essential to operations.
 - (2) Priorities for repair or reconstruction.
 - (a) Signal command transmission facilities.
 - (b) Medical facilities.
 - (c) Supply and vehicle maintenance facilities.
 - (3) Priority for engineer decontamination employment.
 - (a) Command and communication installations.
 - (b) Routes.
 - (c) Logistics including medical installations.
 - (d) Combat areas.
- e. Miscellaneous. Commander or senior surviving officer responsible for damage control operations in own area.

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5. PERSONNEL

- a. Strengths. As soon as practicable, unit or CAT commanders forward following:
 - (1) Number and type of casualties.
 - (2) Effective strength of affected units.
 - (3) Loss of commanders, if applicable.
- b. Replacements. Replacement detachment, administration company, insure that all incoming personnel are familiar with current doctrine and procedures for survival under conditions of nuclear warfare.
- c. Discipline, law and order. See para 3b(7) above.
- d. Graves registration. Mass burial only on order this headquarters.

6. CIVIL AFFAIRS

- a. Develop and maintain current plans for control of civilian population in event of enemy nuclear, chemical, or biological attack.
- b. Plan to establish emergency refugee collecting point. Execute only on division order.
- c. Recommend measures to be taken by civil defense.

7. COMMAND

All units within division area may be assigned to damage control mission. Combat and combat support units on division order only. Combat service support units on order division support command commander.

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- Appendixes: 1—Control and Assessment Teams (CAT)
2—Rescue, Labor, and Decontamination Squads
3—Area Damage Control

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Appendix 1 (Control and Assessment Teams) (CAT) to Annex C (Actions to Minimize Effects of Enemy Nuclear Attack) to SOP No. 3

1. MISSION

Reestablish military control over elements hit by enemy nuclear and chemical attack. This is accomplished by—

- a. Reestablishing command and communications.
- b. Assessment of damage to unit.
- c. Rehabilitation of unit to continue mission.

2. ORGANIZATION

Division headquarters, division artillery headquarters battery, each brigade headquarters company, division support command headquarters, and each battalion and squadron form at least one CAT as follows:

- a. Senior off-commander. (May be technical service officer in division support command, otherwise, must be of an arm.)
- b. Medical representative (when available)—coordinate medical support, including air evacuation.
- c. Supply representative—determine extent of supply required.
- d. Engineer representative (when available)—determine engineer effort required.
- e. CBR team—determine degree and extent of radiological and chemical contamination.
- f. Communications detachment—capable of replacing minimum communications at next lower echelon.
- g. Security element—capable of securing CAT.
- h. Transportation (including available Army aircraft)—capable of lifting CAT.
- i. Military Police representative (when available)—traffic control in affected area.
- j. Chemical representative (when available)—advise commander on CBR situation.

3. DUTIES

In priority—

- a. Move to damaged area without delay.
- b. Determine and report remaining effectiveness of damaged unit.
- c. If necessary, assume control of damaged units to restore command communications.
- d. Take action to resume unit's mission.
- e. Request medical, engineer, aviation, chaplain, military police, and GRREG assistance required.
- f. As soon as practicable, report following:
 - (1) Number and type of casualties.
 - (2) Effective strength of damaged units.
 - (3) Loss of commander, if applicable.
 - (4) Location of CAT CP.

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g. Report (location, dose rate, time of reading) all radiation areas over 5 rad/hour and chemical contamination discovered in course of operation.

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Appendix 2 (Rescue, Labor, and Decontamination Squads) to Annex C (Actions to Minimize Effects of Enemy Nuclear Attack) to SOP No. 3

1. LIGHT RESCUE SQUADS

- a. Each company, battery, or similar unit (except units furnishing heavy rescue squad or labor squad), will organize and have available for use one light rescue squad consisting of at least one NCO or specialist and six EM. Functions of squad include rescue of casualties (when removal does not involve use of heavy equipment), and administration of first aid when necessary. Medical items required to be furnished by medical battalion.
- b. Equipment for each light rescue squad will include—
 - (1) Two trucks, 1/4-ton; or one truck, 3/4-ton.
 - (2) One pick.
 - (3) Two shovels.
 - (4) Two axes.
 - (5) Two cutters, wire.
 - (6) Radiacmeters, dosimeters, and chemical agent detection kit, as available.
- c. Squad will be used when necessary or as directed for rescue work. Rescue squad formed by units will normally be only for local use by commander thereof.

2. HEAVY RESCUE SQUADS

- a. Maintenance battalion and engineer battalion will organize and have available four heavy rescue squads. Each squad will consist of at least 1 officer and 12 EM. Each squad may be augmented as determined by unit commander in consideration of unit equipment, personnel available, and work to be performed.
- b. Function of heavy rescue squad includes extrication of trapped casualties and salvage of materiel in damaged areas. Equipment for heavy rescue squad should include following items when authorized in TOE.
 - (1) One truck, 2 1/2-ton, and trailer, 1 1/2-ton.
 - (2) Two bars, pry.
 - (3) One differential chain hoist, 1 1/2-ton or 3-ton.
 - (4) Two snatch blocks with 1-in. manila rope.
 - (5) Two hacksaws.
 - (6) Two cold chisels.
 - (7) Manila rope, 1-in., 300 ft.
 - (8) Two hydraulic jacks.
 - (9) One acetylene welding and cutting equipment.
 - (10) Two hooks, grappling.
 - (11) Four road flares.
 - (12) Four crowbars.
 - (13) One cross-cut saw.
 - (14) Two picks.
 - (15) Four shovels.
 - (16) Two sledges.

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- (17) Two hatchets.
- (18) Portable lights.
- (19) Four flashlights.
- (20) Four pair rubber gloves.
- (21) Two buckets.
- (22) Two wire cutters.
- (23) One truck, wrecker.
- (24) One bulldozer with transporter.
- (25) Radiacmeters, dosimeters, and chemical agent detection kit, as available.

3. LABOR SQUADS

- a. The support command, headquarters company and band, and the administration company will organize one labor squad each consisting of at least one officer and 20 enlisted men. Each squad will have two 2½-ton trucks and other equipment to include first aid equipment and other items as prescribed.
- b. Labor squad performs tasks which do not require specialized training or equipment. Such tasks include clearing debris by hand, search for casualties, evacuation of casualties, salvage of material, and decontamination. Labor squad may augment Military Police or remove military supplies from areas endangered by fire. Unexploded bombs and other dangerous materiel will normally be removed under technical supervision.

4. DECONTAMINATION SQUADS

- a. Each company, battery, or similar unit will train and have available an emergency decontamination squad consisting of at least one noncommissioned officer or specialist and nine enlisted men. Functions of squad include emergency decontamination of rescue personnel and equipment which may become contaminated from radiation, chemical, or biological effects.
- b. Equipment and supply for emergency decontamination squad should include following items. Equipment and supply, if not organic, will be furnished as required.
 - (1) Shovels.
 - (2) Radiacmeters and dosimeters, as available (survey meter and personnel monitoring instrument).
 - (3) Chemical agent detection kit.
 - (4) Brushes, scrubbing.
 - (5) Gloves, rubber.
 - (6) Two cans, corrugated, 16 or 32 gallon.
 - (7) Bandage scissors.
 - (8) Ten each protective field mask with authorized accessory, chemical agents protection and treatment set.
 - (9) One rake.
 - (10) Four brooms.
 - (11) Rags, 20 pounds.
 - (12) Two buckets, 14 quart.
 - (13) One heater, immersion type.
 - (14) One ax, single bit.

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- (15) DANC, STB BPL, DS² and other decontamination materials as appropriate.
 - (16) Soap, issue, 5 pounds.
 - (17) Leather dressing, vesicant gas resistant, M-2, 10 cans.
- c. Squad will be used when necessary or as directed to assist in recovery work.

5. MEDICAL TEAMS

- a. Medical battalion organize and be prepared to dispatch three medical teams on 30-minute notice. Each medical team will consist of one medical officer, four senior aid men, four litter bearers, three ambulance orderlies, one light truck driver, four aid men, and five ambulance drivers.
- b. Equipment and supplies for medical teams will include—
 - (1) One ¼-ton truck with radio.
 - (2) Five ambulances.
 - (3) First aid equipment.
 - (4) Medical equipment and supplies.
 - (5) CBR decontamination material as available.

6. CHAPLAIN TEAMS

- a. Division chaplain designates three chaplain teams to be prepared to move into area on 30-minute notice. Teams will normally operate with medical teams.
- b. Equipment and supplies for each chaplain team will include:
 - (1) One ¼-ton truck.
 - (2) Ecclesiastical equipment.
 - (3) CBR decontamination equipment, as available.

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Appendix 3 (Area Damage Control) to Annex C (Actions to Minimize Effects of Enemy Nuclear Attack) to SOP No. 3

1. APPLICATION

- a. The provisions of this appendix apply to all units and installations within the division area except as modified by current area damage control and operation plans.
- b. Division support command responsible for area damage control within the division rear area, exclusive of those areas occupied by combat or combat support units.
- c. Appropriate damage control measures will be as prescribed by division artillery, brigades, and each battalion sized unit for their respective areas and will be coordinated with division support command. Passive defensive measures will habitually be employed. Mutual assistance between units in the conduct of area damage control will be limited only by the requirement of the tactical situation.
- d. Support command units located in brigade areas will support brigade damage control operations as required.

2. RESPONSIBILITIES

- a. Division G4 is responsible for general staff supervision of damage control in division area. He coordinates overall plan and its implementation with G3 (including planned movement of units within division area) and with G2.
- b. Within division rear area, Commanding Officer, division support command, is responsible for—
 - (1) Preparation of area damage control plans. Plans include provisions for—
 - (a) Communications.
 - (b) Training and equipping labor, rescue, and decontamination squads by units within division support area, including specific instructions on where and when squad reports when plan is implemented.
 - (c) Employment of area damage control personnel including those from other units or installations in the division area.
 - (d) Emergency food, clothing, and water.
 - (e) First aid and evacuation of patients.
 - (f) Control measures to prohibit nonessential movement and to provide for rerouting of traffic to restrict access into damage control area except essential damage control personnel and units.
 - (g) Instruments to survey, mark, and report all contaminated areas, using trained personnel from local units.
 - (h) Assistance to other affected areas when directed.
 - (2) Supervision and coordination of damage control.
 - (3) Employment of damage control units.

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- (4) Combat service support in coordination with G4.
- (5) Determining manpower and materiel needed for area damage control purposes.
- (6) Assistance to be provided by or to nondivisional units located within division support area.

3. MEDICAL EVACUATION AND HOSPITALIZATION

Division support command will coordinate with division surgeon for higher echelon medical service and evacuation necessary for damage control in the division area.

4. SUPPLY

Division support command will coordinate directly with appropriate units for necessary supply for area damage control and salvage operations.

5. TRANSPORTATION

a. Traffic control and regulation.

- (1) Only vehicles engaged in area damage control activities or in combat operations within the area will be permitted to enter and operate in the damage area.
- (2) Traffic will be controlled within the damage area by Military Police units.

b. Requirement for transportation. Requirements for transportation of damage control operations will be submitted to division support command.

6. PERSONNEL

PW and civilian internees held in division area will be provided protection facilities and equipment and will be oriented as to procedures to be followed in case of CBR attack.

7. CIVIL AFFAIRS

a. Maximum utilization will be made of civilian personnel, supplies, and facilities to support area damage control operations. Military support of civil defense operations will be provided only upon division order.

b. CA units located within division area will provide liaison between all military headquarters and civil authorities and will coordinate the employment of civilian support for area damage control operations.

8. RECORDS AND REPORTS

a. Periodic reports on availability of area damage control squads and other damage control services will be made by each organization and separate unit direct to G4 with information copy to Commanding Officer, division support command, as follows:

- (1) Nonactive combat—as of last day of month prior to 1800 hr that date.
- (2) Active combat—as of Friday of each week prior to 1800 hr that date.

b. All units or installations moving within division area report departure, estimated time of arrival, and actual time of arrival to division traffic headquarters.

c. Personnel entering damaged area to assist in reestablishing control will report to CAT.

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9. SIGNAL COMMUNICATION
Current SOI and SSI in effect.

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Annex D (Actions to Minimize Effects of Enemy Chemical and Biological Attack) to SOP No. 3

1. GENERAL

- a. This annex prescribes normal procedures for protection against CB attack for units of this command.
- b. See Appendices I-IV, Annex C (Actions to Minimize Effects of Enemy Nuclear Attack) for procedures common to CB and nuclear attack.

2. REFERENCES

FM 21-40, FM 21-41, TM 3-220, and AR 220-58.

3. ORGANIZATION

- a. Unit monitors report CB matters through command channels. Designated CB survey personnel report information to CBRE by most direct means available.
- b. CB detection and survey teams will be formed at the brigade, battalion, and company level, using trained personnel and operating under the supervision of unit commanders. Personnel who are especially trained in CB operations advise and assist their commander.
- c. Decontamination specialist trained as required.

4. RESPONSIBILITIES

- a. Unit commanders are responsible for—
 - (1) Proficiency of personnel in all phases of CB defense.
 - (2) Proper and expeditious processing of captured enemy CB personnel and equipment.
 - (3) Inspection and maintenance of CB equipment.
 - (4) Appropriate warning to be transmitted on unit voice radio command net immediately on confirmation of CB alert (para 5).
 - (5) Organization (first and second echelons) decontamination.
- b. Division chemical officer will—
 - (1) Provide technical advice and assistance to division and unit commanders and staff officers.
 - (2) Provide training aids concerning enemy equipment and CB agents.
 - (3) Provide advice concerning the supply and maintenance of Chemical Corps items of protective equipment and supervise CB training and technical intelligence activities.
 - (4) Recommend and exercise technical supervision of survey operations.
 - (5) Maintain contamination situation map and advise commander on actions to minimize casualties.
 - (6) Coordinate third-echelon decontamination projects.
- c. Support command commander responsible for issue of protective clothing and arrangements for decontamination of clothing by higher echelon supporting the division.
- d. Division engineer responsible for decontamination operations requiring earth-moving equipment, constructing of protective shelter beyond the capability of using units, and furnishing potable water.

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e. Division surgeon responsible for analysis of biological warfare samples and advice to commander on actions to minimize casualties.

f. Division provost marshal responsible for traffic control.

5. TYPES OF ALERTS

a. Possible CB attack (enemy capable of CB attack) : alert to be given by this headquarters. See paragraph 6a(1).

b. Imminent CB attack (enemy believed preparing for CB attack) : alert to be given by this headquarters. See paragraph 6a(2).

c. Actual attack (enemy CB in progress) : alert to be given by first individual detecting the attack. See paragraph 6b.

6. PROCEDURE IN CASE OF CB ATTACK

a. Action prior to attack.

(1) Units alerted for possible CB attack acknowledge receipt of alert but take no further action until notified by this headquarters. Check to insure that protective measures are adequate.

(2) Units alerted for imminent CB attack acknowledge receipt of alert and put individual and collective protective measures on ready basis. Personnel wear protective clothing and carry masks.

b. Action during attack.

(1) Execute collective protective measures.

(2) Inform higher, lower, and adjacent units of attack by most rapid means.

c. Action after attack.

(1) Announce "all clear", as determined by unit commander.

(2) Decontamination. See Appendix 2, Rescue, Labor, and Decontamination Squads, to Annex C.

(3) Resupply of protective equipment.

(4) Mark and report contaminated areas to higher, lower, and adjacent units.

(5) Submit report of enemy use of CBR agents by most expeditious means, and follow up with completed DA Form 890.

(6) See Appendix 1 (Control and Assessment Teams) (CAT) to Annex C.

(7) See Appendix 3, Area Damage Control, to Annex C.

7. PROTECTION

a. Individual. Individuals carry protective masks and associated equipment and are responsible for first aid.

b. Collective. Construction of collective protective shelters at discretion of unit commanders.

c. Tactical.

(1) Unit commanders prescribe equipment and procedures required for occupation of or passage through contaminated areas.

(2) Supply and equipment dispersed as much as the situation permits and maintained under cover.

8. DECONTAMINATION

a. Units perform organizational decontamination.

b. Submit requirements for field decontamination or third echelon decontamination to division chemical officer.

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9. SUPPLY

Emergency requisition for CB and radiaic equipment submitted by most expeditious means.

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Annex E (Prediction of Fallout, Radiological Monitoring, and Survey) to
SOP No. 3.

1. GENERAL

Purpose. Prescribes procedures for prediction of fallout and radiological monitoring and survey.

2. REFERENCE

TM 3-210, FM 3-12, Operational Aspects of Fallout, FM 101-5.

3. ORGANIZATION

Current organization for combat.

4. DUTIES AND RESPONSIBILITIES

a. General Staff.

- (1) G2. Supervise the Chemical, Biological and Radiological Element (CBRE), TOC, in dissemination of fallout predictions resulting from enemy employment of nuclear weapons; dissemination of radiological contamination charts; and planning radiological surveys.
- (2) G3. Coordinate with the CBRE concerning planned friendly nuclear employment to include dissemination of fallout predictions pertaining thereto.
- (3) G5. (G3 when division has not been augmented.)
 - (a) Establish procedures and channels for exchange of radiation information with appropriate civil agencies.
 - (b) Establish local civil defense measures and capabilities to conduct radiological monitoring and survey operations.
 - (c) Supervise radiological monitoring and survey operations of local civil defense organizations.

b. Other staff responsibilities.

- (1) FSE.
 - (a) Informs the CBRE of the details of planned nuclear weapons employment in order that the CBRE can prepare and disseminate prestrike and poststrike fallout predictions.
 - (b) Disseminates upper air wind data to CBRE each 2 hours.
- (2) Aviation Officer.
 - (a) Conducts training to insure all assigned aviators are qualified to fly aerial survey missions.
 - (b) Furnishes aircraft and pilots for aerial survey missions.
 - (c) Insures authorized radiacmeters are mounted on aircraft normally used for reconnaissance and observation missions.
 - (d) Coordinates with CBRE for planning and conducting aerial radiological survey.
- (3) Engineer. Provides personnel and equipment for decontamination operations involving use of engineer earthmoving equipment. Coordinates with CBRE on radiological information associated with employment of ADM.
- (4) Support command. Procures, distributes, calibrates, and maintains radiac instruments.

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- (5) Chemical Officer.
 - (a) Operates CBRE.
 - (b) Plans, directs and coordinates radiological surveys.
 - (c) Supervises operation of attached chemical units.
 - (d) Advises on decontamination operations.
 - (e) Prepares and disseminates fallout predictions.
 - (f) Maintains CBR Situation Map.
 - (g) Prepares and disseminates current contamination charts to division staff officers, corps, and subordinate and attached units as required.
- (6) Provost Marshal. Provides traffic control into, within, and around contaminated areas.
- (7) Surgeon. Responsible for advice on radiation doses and physiological effects.
- c. Organizations and units.
 - (1) Periodic monitoring. All units of company size or larger will maintain a monitor on duty with the CP on a continuous basis. In company size units (and smaller units operating independently), the monitor will make a routine check of the unit area every 12 hours and will check a designated point within the CP area each hour.
 - (2) Continuous monitoring.
 - (a) Continuous monitoring will be initiated—
 1. When a fallout warning is received.
 2. When ordered by the unit commander.
 3. After a nuclear burst has been heard.
 4. When the unit is moving.
 5. When a nuclear strike is observed or reported.
 6. During reconnaissance and patrol activities.
 7. When radiation above 1 rad/hr is detected by periodic monitoring.
 - (b) During continuous monitoring, all radiacmeter readings will be made in the same location, except when units are moving or other factors make it impracticable to do so. The monitor will note and report the following information to the next higher headquarters:
 1. The location, dose rate, and time of the initial dose rate of 1 rad/hr for units not in a fallout warning area of 5 rad/hr for units in a fallout warning area.
 2. The peak dose rate recorded.
 3. The dose rate, location, and time an increase or decrease of 10 rad/hr is recorded until the dose rate reaches 50 rad/hr and an increase or decrease to 50 rad/hr will be reported thereafter.
 4. The correlation factor data for the shelter or vehicle of the monitor.
 5. Summary report described in d(4), below.
 - (c) Continuous monitoring will stop—
 1. On instructions from higher headquarters.

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2. When the dose rate falls below 1 rad/hr (except for units on the move).
- d. Reporting procedures. (See Appendix 1)
- (1) The initial detection of radioactivity in an area not predicted to receive fallout will be broadcast over the division warning broadcast net as an IMMEDIATE message in clear text giving location, dose rate, and time detected.
 - (2) The initial detection of radioactivity in an area predicted to receive fallout will be broadcast over the division warning broadcast net as a message in clear text giving location, dose rate, and time detected.
 - (3) Subsequent reports. Subsequent reports will be screened and consolidated by intermediate headquarters. These reports will include the general level of radioactivity in the area, and the location and time detected of highest dose rate in the area. Reports will be submitted while the dose rate in the area is rising; at the first indication the dose rate is beginning to decline; and thereafter as directed by division. These reports will be assigned the highest precedence (other than FLASH) consistent with other operational requirements for communications facilities.
 - (4) Communication. Reports will be submitted by teletype or voice through the area communications system. Units temporarily out of contact with the area communication center will use the division operations intelligence net as an alternate means.
 - (5) Summary reports. Upon direction of division headquarters, units will submit a summary report consisting of an overlay showing the radiation situation in the area as compiled from monitoring reports.
- e. Training.
- (1) Unit commanders will train a minimum of two monitors to operate each organic radiacmeter. All qualified aerial observers will be trained to perform aerial survey duties.
 - (2) Company size units will train a CBR Team. A minimum of two survey parties per area survey instrument authorized will be trained within the CBR Team.
- f. Survey. Surveys will be conducted only when essential radiological information cannot be obtained by monitoring.
- (1) Division controlled surveys.
 - (a) Aerial surveys. During aerial surveys the aircraft flies at the lowest possible constant ground altitude and ground speed along the designated course. Readings are taken at equal time intervals and recorded by the monitor on DA Form 1971-R. The location, altitude, dose rate, and time of reading will be reported in clear text by radio directly to the CBRE. The air-ground correlation factor will be determined by the monitor for each survey and included with his initial report.

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- (b) Ground surveys. Ground survey parties will follow the prescribed survey course and will report the dose rate, location, and time of reading at points designated by the CBRE or the control party. Reading will be taken with the survey meter held approximately 1 meter above the ground. In open areas, readings will be taken at least 10 meters away from buildings or other large structures. In built-up areas, readings will be taken in the center of the street or street intersection. Mounted monitors will determine the shielding correlation factor and include this data in the first survey report. Readings will be recorded on DA Form 1971-R. Reports will be submitted as directed by this headquarters.
- (2) Unit controlled surveys. Units will conduct surveys as outlined in (a) above. Upon completion of the survey, the results will be forwarded to the CBRE.
- g. Communications. Operations intelligence nets will be used to report monitoring and survey information. The area communication system will be used by brigades and separate units in reporting to division. Artillery units may also use artillery nets.

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Appendix : 1—Nuclear Burst Report

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Appendix 1 (Nuclear Burst Report, NBC 1) to Annex E (Prediction of Fall-out, Radiological Monitoring, and Survey) to SOP No. 3.

1. FORMAT

<u>LETTER</u>	<u>MEANING</u>
	Precedence
	Date/Time(ZULU)
	Security
	From
	To
	Type of Report: NBC 1
A.	Strike Serial Number (if known).
B.	Position of Observer.
C.	Azimuth of attack from observer. Report grid or magnetic, (state which) bearing or azimuth of attack from observer in mils or degrees, (state which).
D.	Date and time of attack in Greenwich Civil Time (ZULU).
E.	Illumination Time. (Report under conditions of poor visibility when cloud measurements cannot be made; report in seconds.)
F.	Location of Attack. (Report observed or known coordinates on this line; if this line is reported, omit C.)
H.	Type of Burst. (Air, surface or unknown. This line must be reported.)
J.	Flash-to-Bang Time (seconds).
K.	Crater present or absent and diameter, if known. (Report in meters.)
L.	Nuclear Burst Cloud Width. (Measure when bang is heard; report in mils or degrees, state which.)
M.	Stabilized cloud-top angle and/or cloud-bottom angle or cloud-top height and/or cloud-bottom height. (Measure at H+10 minutes; report in mils, degrees, meters, or feet; state which. Report <u>Top</u> or <u>Bottom</u> with appropriate angle.)

2. INSTRUCTIONS

- a. Transmit available data promptly.
 - (1) Transmit all data except line M immediately after bang time.
 - (2) Transmit line M immediately after measurement of the angles. Also, include lines B and D with this report.
- b. Transmit only those lines of the format for which data are available.
- c. Transmit line E only when observation is limited and cloud measurements cannot be obtained.

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Annex F (Rear Area Security) to SOP No. 3.

1. PURPOSE

Prescribes procedures for rear area security planning and operations within division rear area.

2. GENERAL

Security of those portions of the division rear area in which combat service support functions are conducted is the responsibility of the support command commander. Areas occupied by combat reserves, artillery units, and other combat support elements are the responsibility of the combat unit commanders concerned and are specifically excluded from the rear area security responsibility of the support command commander. Local security plans of these units will be coordinated with the support command commander. Staff supervision of rear area security operations is the responsibility of G3.

3. INTELLIGENCE

- a. Information of enemy attack (guerrilla, nuclear, ground attack, air attack, or any other) will be reported to TOC immediately. (See para 4c.)
- b. Counterintelligence. Information pertaining to transportation and storage of classified items of supply and equipment will be disseminated on a need-to-know basis.

4. OPERATIONS

a. Orders.

- (1) Commanding Officer, support command, is responsible for security of division support area. He assigns responsibility and tasks to elements under his command, to insure all-round security. Commanding Officer, support command, will provide, from sources available within division support area, small provisional security detachments.
- (2) Combat units located in division rear area whose primary mission is rear area security will be designated in current OPORD. These units may be placed under the operational control of Commanding Officer, division support command, for specific tasks, periods of time, or specific operations.
- (3) Units and installations in division rear area are responsible for their own local security.

b. Procedures. General location of the division support area is recommended to the division commander by the G4 in coordination with the G3. Specific areas for elements of division support command are designated by Commanding Officer, support command. Primary considerations will be given to unit's ability to accomplish its mission. Other considerations include dispersion between units and installations, and defense of area.

c. Reports. Any incident associated with rear area security including nuclear, chemical, and ground or airborne attack will be reported immediately through command channels to G3 TOC. Reports will include

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map coordinates, time and type of incident, unit(s) involved, extent of damage, casualties, and support required.

5. COMBAT SERVICE SUPPORT

a. Supply.

- (1) Level of emergency supply indicated in current Administrative Order or Administrative Annex to OPORD.
- (2) Requisitions for supply directly related to rear area security mission will be submitted through normal supply channels citing special authority.
- (3) Supplies required by units and detachments operating in an incident area will be obtained from nearest available source.

b. Evacuation and hospitalization.

- (1) When medical requirements are beyond capability of units involved in rear security, support command commander will provide additional means.
- (2) Division surgeon will coordinate with higher headquarters to provide required reinforcement of division medical capability.

c. Transportation.

- (1) Support command will provide necessary additional transportation required to support rear area security operations in coordination with commander concerned.
- (2) Commanding Officer, support command, will coordinate with G4 regarding changes in division movements and traffic control plans required as a result of an incident.
- (3) Provost Marshal will coordinate establishment of traffic control posts in the rear area.

d. Reestablishment of combat service support. Reestablishment of combat service support after an incident is responsibility of support command commander.

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Annex G (Army Aviation) to SOP No. 3.

1. ORGANIZATION FOR COMBAT

- a. General. The aviation battalion is normally employed in two echelons normally under centralized control. Units may be attached to division units when required by situation. When attached, combat service support provided by combat units will not include supply of aviation fuel, repair parts, or maintenance. This responsibility remains with aviation battalion and the support command.
- b. Tactical grouping, Aviation Battalion.
 - (1) 1st echelon. Headquarters and headquarters detachment and the aviation GS company, and aircraft maintenance co, maintenance battalion, located at division instrumented airfield.
 - (a) Tactical support section, GS platoon, aviation GS company, provides command and liaison aircraft to division CG, staff, and division troops as required.
 - (b) Aerial surveillance and target acquisition platoon, aviation GS company, employed under G2 staff supervision.
 - (2) 2d echelon. Airmobile company, located at dispersed landing areas.
- c. Battalion headquarters provides personnel for AAE, TOC.
- d. Attached aviation support. Aviation support attached to, under operational control, or in support of division is under operational control division aviation officer. Army Aviation Element (AAE) coordinates and assigns missions.

2. INTELLIGENCE

- a. Reconnaissance and surveillance.
 - (1) Submit aerial reconnaissance and surveillance mission requests to TASE.
 - (2) Capabilities of organic Army aviation fully exploited prior to requests for interservice support.
 - (3) Requests for airlift submitted to AAE.
- b. Enemy materiel. Aircraft maintenance company and aviation battalion provide technical assistance to division G2.
- c. Requests for aviation charts and photos directed to supply and transport battalion.
- d. Counterintelligence.
 - (1) Personnel forced down behind enemy lines and not immediately retrieved will move to pickup points designated in aviation annex to division OPORD. Pickup points will not be occupied by downed personnel except periods of 30 minutes prior to and following sunrise and sunset unless mutual identification between downed personnel and pickup has been established.

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- (2) Documents containing classified information, except daily SOI extracts, will not be carried forward of friendly dispositions.

3. OPERATIONS

a. Security.

- (1) Local security of division airfield is responsibility of Commanding Officer, aviation battalion. Defense of division support area is responsibility of Commanding Officer, support command.
- (2) Local security of forward airfield(s) is responsibility of senior aviation officer. Area defense is responsibility of supported unit.

b. Combat.

- (1) Requests for tactical air as cover for organic aviation elements submitted through command channels to TASE.
- (2) Requests for lifting of friendly fires to permit organic aviation employment submitted to FSE.
- (3) Report location all airstrips prior to occupation.
- (4) Requests for additional aviation support.
- (a) Immediate through supporting or attached element to AAE, TOC.
- (b) Other through normal channels.
- (5) Chemical and biological.
- (a) Defensive. See Annex D.
- (b) Offensive. Employment for CB distribution on division order.
- (6) Smoke. Organic or attached aviation employed to distribute smoke on division order and coordinated with FSE.
- (7) Battle area illumination. Organic or attached aviation employed as illumination means on division order and coordinated with FSE.
- (8) Air defense. Aircraft attacked by enemy air or ground fire take evasive action and report immediately location, type, and quantity of enemy action to division FSE.
- (9) Defense against nuclear attack. Following employment of nuclear weapons by enemy, observation and surveillance effort concentrated on detection of enemy attempt to exploit effects.
- (a) Aviation general support company:
1. Be prepared to provide emergency peakload aeromedical evacuation.
 2. Provide RADLSV and RADLMON of blast and fallout areas on division order.
- (b) Airmobile company:
1. Provide airlift to reinforce supporting elements in RADLSV.
 2. Provide airlift to reinforce supporting elements in aeromedical evacuation missions.
 3. Provide airlift for transportation of CAT's.

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4. Provide airlift for emergency evacuation of personnel in fallout areas.
- (10) Movement.
- (a) Supporting elements displace with supported unit. Prior notification of new airfield to AAE.
 - (b) Division AAE displace with division TOC.
- (11) Communications.
- (a) Wire communication to aviation battalion subordinate elements from closest area signal center.
 - (b) Lateral communication maintained between supporting or attached elements on forward airstrips.
 - (c) Aviation battalion (—) satellites on division main signal center when possible to provide following:
 1. Direct line, G2-3 to aviation battalion operations section.
 2. Direct line, AAE to aviation battalion operations section.
 - (d) Reconnaissance for new division airfield coordinated with division signal officer, division engineer, and G3.
 - (e) Communications with ATC facilities coordinated with division signal officer.
 - (f) Nuclear strike warnings disseminated through TOC.
4. LOGISTICS
- a. Supply.
- (1) Class I.
 - (a) Supporting and attached elements by supported units.
 - (b) Division AAE by division headquarters company.
 - (2) Class II and IV.
 - (a) Supporting or attached aviation element receive aviation items from aviation battalion.
 - (b) Aviation battalion (—) by requisition to aircraft maintenance company (repair parts), other to supply and transport battalion.
 - (3) Class III.
 - (a) All elements maintain prescribed load.
 - (b) Supply of aviation fuel through supply and transport battalion.
 - (4) Class V. First priority logistical employment of aviation is for movement of special ammunition items.
 - (5) Salvage. Aviation items salvaged by aircraft maintenance company.
- b. Logistical employment.
- (1) Emergency aerial supply. By request to support command.
 - (2) Aeromedical evacuation. By request to division surgeon.
 - (3) Aerial personnel transportation. By request to AAE, TOC.
5. REPORTS
- a. Daily status report for all aircraft submitted with vehicle status report by—
- (1) Units for organic aircraft.

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- (2) Aviation battalion for all other aircraft.
- b. Daily operations report to G3 by AAE, TOC.

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Annex H (Signal) to SOP No. 3

1. COMMUNICATION CENTERS

- a. Communication centers will be operated continuously at administrative and tactical echelons.
- b. During operations, message precedence as prescribed in AR 105-31, ACP 121, and FM 24-17. Use message form DD 173, DD 173-1, and DA Form 11-70 (M210 Message Book).
- c. Report excessive delays to message originators and to the signal officer of the headquarters concerned.
- d. Units prepare to operate airdrop and pickup service at tactical echelons.

2. MESSENGER SERVICE

- a. Scheduled messenger service operated to all assigned and attached major units of the division including division support command and division rear. Frequency of delivery and pickup determined by the division signal officer.
- b. Special messengers available at message center for high precedence communications.

3. RADIO COMMUNICATIONS

- a. Radio nets.
 - (1) Radio nets conform to those prescribed in the current division SSI and SOI, as implemented or modified by the signal annex of the division OPORD (OPLAN) in effect.
 - (2) Radio teletypewriter operators of the army logistic nets, corps or army command; intelligence and division logistics nets keep message center informed of the status of their nets.
- b. Restrictions.
 - (1) Listening silence broken only on orders of the headquarters imposing the silence or under special conditions stated in OPORD. Proper identification of the unit requesting break of listening silence is necessary before passing any traffic.
 - (2) All restrictions imposed on radio stations lifted when unit makes contact with the enemy unless otherwise specified in OPORD.
 - (3) Minimum readability and calibration checks made upon initial opening of each radio net. Thereafter, they will be exchanged once every 4 hours if traffic has been passed in the previous period; readability will NOT be exchanged. When the net control station institutes readability checks for an entire net, each subordinate station will permit 30 second of open-air time from conclusion of preceding station transmission before initiating its report.
- c. Interference. Report interference between tactical stations to the next command. Include call letters, frequency, and time of interference and signal strength of interfering station.
- d. Security.

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- (1) Authenticate when opening or closing a net, imposing or lifting radio listening silence, during frequency changes, and at any other occasion that the operator deems it necessary for maximum radio security.
 - (2) Radio stations will NOT attempt to enter, jam, or otherwise interfere with unknown radio nets, even if such nets should be identified as enemy, except on orders from division signal officer.
 - (3) Report jamming or attempts to enter division radio nets by unknown stations to division signal officer without delay, giving time, frequency, type of jamming (interference), signal strength, readability, and identification (if obtainable) of interfering station.
- e. When unable to establish radio contact, division units request voice relay by any aircraft.
- 4. RADIO RELAY COMMUNICATIONS**
- a. Multichannel telephone and teletype facilities established between command signal centers, area signal centers, command terminal teams supporting brigade headquarters, division artillery, and such other locations as the division signal officer directs.
 - b. Radio relay terminals at brigade or other headquarters remain under the operational control of the division signal officer. Construction of lines between the radio relay terminal and the unit switchboard is the responsibility of the signal battalion. The units being served will assist in the installation of these wire lines where time and personnel availability permit. Where the unit has no organic wire communications personnel, the signal battalion will construct the required lines.
- 5. WIRE COMMUNICATION**
- a. Installation. When practicable, each headquarters below division constructs minimum of two field wire circuits to subordinate units. Division signal battalion provides minimum of one radio relay or spiral four system to brigade.
 - b. Commercial facilities. Use of commercial facilities requires prior approval of the division signal officer. Signal officer publishes instructions for severing communication facilities extending into enemy territory. Portions in our territory will be preserved pending instructions from the division signal officer.
 - c. Wire recovery. Recover wire as the tactical situation permits.
 - d. Reports.
 - (1) Brigade, division artillery, separate battalion and squadron forward one copy of circuit diagram, traffic diagram, and line route map to the division signal officer.
 - (2) One copy each of the division line route map, circuit diagram, and traffic diagram forward to brigade and division artillery headquarters to assist in reestablishing the communication system when a major disruption occurs.
 - e. Repair. If wire circuits are damaged, repair as effectively as possible and report exact location of the damaged circuits to the division signal officer.

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- f. Telegraph and teletypewriter. Division establishes teletype facilities at each echelon of division headquarters, division support command headquarters, and each area signal center. Brigades enter teletype nets with organic equipment.
- 6. VISUAL AND SOUND COMMUNICATION
 - a. Units reproduce and distribute visual and sound items of the division SSI and SOI as required.
 - b. Suitable alerting devices mounted near unit message center.
 - c. General alarms sounded over the signal communications system of each unit.
 - d. Units display panels as necessary.
- 7. AIR COURIER SERVICE
 - Aviation battalion prepared to fly air couriers.
- 8. SIGNAL SECURITY
 - a. Complete authentication codes, map coordinate codes, operation codes, and other brevity codes of division and higher headquarters will NOT be carried forward of brigade, division artillery, separate battalion and squadron CP's without prior approval of the division signal officer.
 - b. Extracts of crypto SOI items will NOT be made, copied, or reproduced by units subordinate to this headquarters.
- 9. PHOTOGRAPHIC
 - Division photo section furnish ground still and motion picture coverage as directed by division signal officer. Request for aerial photo coverage to G2 air; all other photo requests to division signal officer.
- 10. MISCELLANEOUS
 - Location of area signal centers determined by the division signal officer.

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Annex I (Division Tactical Operations Center) to SOP No. 3

1. GENERAL

- a. The TOC is a grouping of representatives of general and special staff sections concerned with current combat and combat support operations.
- b. Once an operation is in progress, current combat and combat support operations are supervised and coordinated through the TOC so that accurate, detailed, and up-to-date situation (friendly and enemy) is maintained and immediately available. Upon receipt of a requirement, the TOC elements concerned analyze it concurrently, isolate problem areas, and coordinate directly.
- c. G3 exercises general staff supervision over the TOC.
- d. OIC TOC. Issue instructions for internal operations using FM 101-5 as a guide.

2. ESTABLISHMENT AND DISPLACEMENT

- a. Establishment.
 - (1) TOC part of division main and the alternate TOC as part of the alternate headquarters.
 - (2) Alternate TOC prepared to take over immediately in the event that the TOC at the division main becomes ineffective.
- b. Displacement.
 - (1) The TOC and alternate TOC will not displace at the same time.
 - (2) When the division main displaces, the alternate TOC will take over as the TOC (either in place, or displaced to a new location).

3. PERSONNEL

- a. The composition of TOC will be as follows:
 - (1) G2-G3 operations, composed of a G2 element and a G3 element.
 - (2) Army aviation element.
 - (3) Air defense element.
 - (4) Fire support element.
 - (5) Tactical air support element, to include a G2 air group and a G3 air group.
 - (6) Communications—electronics element.
 - (7) Chemical, biological, radiological element.
 - (8) Engineer element.
 - (9) G1 and G4 representation and G5 representation when required.
- b. Support command will establish liaison with TOC.

4. PLANNING

- a. Current planning will be accomplished in the TOC.
- b. Planning for future operations and preparation of operations plans and annexes will be accomplished by staff sections outside the TOC.
- c. Coordination of plans with TOC elements will normally be made to insure the plan can be implemented readily from the situation existing or expected to exist at the time the plan becomes effective.

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- d. When the division is operating independently or is the army component of a joint task force, the TOC assumes responsibility for interservice coordination for current operations.

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Annex J (Airborne Assault Operations) to SOP No. 3

1. GENERAL

a. Purpose. This annex is published in order to simplify the planning, preparation, and execution of airborne assault operation.

b. Organization.

(1) The division is organized for airborne operations into assault, followup, and rear echelons.

(2) Division commander exercises direct and personal command over assault echelon. Commanders of followup and rear echelons will be designated by division commander for each operation.

(3) If feasible, Army aircraft of the division will be flown to the objective area under their own power. Movement to the airhead will be under division control.

(4) Assault echelon.

(a) The following attachments are effective prior to initiation of movement to marshalling areas. Attachments terminate on division order after arrival in the objective area. Attachments of infantry battalions and elements of the tank battalion will be specified for each operation.

<u>1st Bde</u>	<u>2d Bde</u>
105mm How FA Bn	105mm How FA Bn
Engr Co	Engr Co
Fwd Area Sig Cen Plat,	Fwd Area Sig Cen Plat,
Sig Bn	Sig Bn
Plat, MP Co	Plat, MP Co
Med Co	Med Co
Coll and Evac Sec, Sup	Coll and Evac Sec, Sup
and Trans Bn	and Trans Bn
<u>3d Bde</u>	<u>Div Trps</u>
105mm Arty Bn	HHC, Abn Div
Engr Co	Engr Bn (—)
Fwd Area Sig Cen Plat,	Cav Sq
Sig Bn	Sig Bn (—)
Plat, MP Co	Avn Bn
Med Co	MP Co (—)
Coll & Evac Sec,	Det, Spt Comd
Sup & Trans Bn	Med Bn (—)
	Det, Sup & Trans Bn
	Det, Admin Co
<u>Div Arty</u>	<u>Div Res</u>
Abn Div Arty (—)	Specified for each
LJ Btry	operation

(5) Follow-up echelon

Spt Comd

HHC & Band (—)

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 (Classification)

Maint Bn (—)
 Det, Hq and Main Spt Co
 Trans Aircraft Maint Co
 Fwd Spt Det (3 each)

S&T Bn
 Sup & Svc Co (—)
 Trans Mtr Trans Co

Follow-up elements of assault units

- (6) Rear echelon
 Spt Comd (—)
 Admin Co
 Maint Bn (—)
 Hq & Main Spt Co (—)
 S&T Bn (—)
 Air Equip Spt Co (—)
 Unit rear echelons

2. COORDINATION OF TACTICAL OPERATIONS

a. Command and control.

- (1) Major subordinate units report location of CP upon entering division assault net.
- (2) Captured Materiel. Usable weapons, transportation, ammunition, and fuel will be immediately reported to support command commander and may be utilized at the discretion of unit commander.
- (3) Ground Reconnaissance.
 - (a) Immediately report time COP's designated by division are manned and operational.
 - (b) Immediately report presence of antiairborne obstacles on DZ's and LZ's.
- (4) Counterintelligence.
 - (a) Upon sealing in marshalling camps, all personnel, including ARC and war correspondents, will be isolated from outside contacts.
 - (b) Personnel hospitalized or imprisoned subsequent to briefing will be isolated until the operation is officially announced by higher headquarters.
 - (c) Classified documents carried into the objective area by parachute elements of the assault echelon will be limited to extracts of the SOI and fire plans and will be carried on the person of a responsible individual. Maps will contain no markings other than known enemy dispositions and pre-planned artillery concentrations.
- (5) Procedures.
 - (a) During period when tactical air coordinator (airborne) is operational, requests for close air support strikes submitted directly from battalion to tactical air coordinator.
 - (b) Air space coordination procedures established separately for each operation.

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3. COORDINATION OF COMBAT SERVICE SUPPORT OPERATIONS

a. Techniques. Following reports will be submitted by brigade and separate company:

	<u>Means</u>	<u>Time</u>	<u>To</u>
(1) Logistics:			
Major equipment losses.	Radio, Radio-teletypewriter.	As soon as possible after drop.	G4
Status of accompanying supply.	Radio, Radio-teletypewriter.	As soon as possible after drop.	G4
(2) Personnel: Effective strength.	Radio, Radio-teletypewriter.	P-hr + 30 min and every half-hour thereafter until fully assembled.	G3

b. Detailed considerations:

(1) Logistics

(a) Supply

1. Accompanying supply:

	<u>Unit prescribed load</u>	<u>Force supply (Division Control)</u>
Class I.....	3 days	
Class II & IV.	3 day level (selected items—prescribed by div).	Selected items (Cl II & IV Sup Plat, Sup & Svc Co).
Class III....	Vehicle tanks 3/4 full; on-vehicle cans 4/5 full.	5,000 gallons (Cl III Sec, Sup & Svc Co).
Class IIIa...	18 hrs opn/acft (3 day @ 6 hrs/day).	
Class V.....	Basic load unless otherwise prescribed.	
Repair parts.	3 days estimated expenditure.	7 days estimated expenditure (Maint Bn).

2. Automatic followup supply:

a. Two days supply delivered to battalions and separate companies on D+1; one day daily thereafter until discontinued.

b. Composition announced for each operation.

3. On-call followup supply: Announced for each operation. Normally two days requirements prepared for delivery by TALOG.

(b) Medical evacuation and hospitalization: Aeromedical evacuation coordinated by division surgeon.

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- (2) Personnel.
- (a) Replacements: Overstrength replacements join division administration company when unit marshals. Delivered to units in objective area as required commencing D+1.
 - (b) Prisoners of war: Air evacuation of PW coordinated by G1.
 - (c) Graves registration: Temporary cemetery established by division in airhead. Temporary cemetery established by brigade when operating separately. Isolated burials only in emergencies. Chaplains to provide appropriate religious burial services.
 - (d) Discipline law and order:
 1. Jump refusals. An airborne officer at each departure site designated investigating officer. He will meet returning aircraft, take custody of alleged jump refusals, keep them separated and under armed guard, and will allow them to communicate with no one not briefed on the operation until public announcement of operation. He will investigate jump refusal incidents, to include taking statements from crewmembers of aircraft in which refusal returned. Statements and individuals turned over to parent unit rear echelon detachment for further action.
 2. Disposition of military prisoners. The provost marshal is responsible for arrangements for detention of military prisoners or persons awaiting trial by general court.
 3. Postal Service. Delivery and posting service established for letter mail and packages during marshalling. No mail service in objective area in short duration operations. Commanders inform personnel all mail routed through U.S. Army postal service. Outgoing mail not dispatched until operation disclosed or canceled.

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Appendix 1 (Marshalling)

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Division
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1 Sep 19__

Appendix 1 (Marshalling) to Annex J (Airborne Assault Operations) to SOP
No. 3

1. PURPOSE

This standing operating procedure for marshalling is published to establish procedures for handling routine marshalling requirements. Procedures established herein will apply unless deviation is directed by orders from this headquarters.

2. GENERAL PROCEDURES AND CONSIDERATIONS

- a. Tactical integrity will be maintained during marshalling.
- b. Attachments join brigades before movement into marshalling areas.
- c. To the extent possible, units destined for the same LZ/DZ and in the same serial will marshal together to facilitate close coordination and briefing.
- d. Signal Battalion (—) marshals in the same camp with division headquarters.
- e. Agencies that normally operate in or with the division CP marshal with division headquarters.
- f. Minimum time will be spent in marshalling areas. Normally, marshalling by the division will be accomplished within 48 hours. To reduce time spent in marshalling area, maximum planning and preparation, to include initial preparation of supplies and equipment, will be accomplished prior to movement into marshalling areas.

3. ASSIGNMENT OF UNITS TO MARSHALLING CAMPS

- a. This headquarters will assign units to marshalling camps based on:
 - (1) Departure airfields from which units will outload.
 - (2) Size of force.
 - (3) Available camps.
- b. Normally not more than one reinforced brigade will be assigned to a single camp.
- c. Marshalling camps will not necessarily be located on an airfield but will be close enough to allow rapid outloading with minimum movement.

4. SECURITY

Prior to units being sealed in marshalling areas, information concerning the operation will be released on a strict "need-to-know" basis.

5. PREPARATION FOR AIRBORNE OPERATION

- a. Upon closing in marshalling camps, units initiate action to prepare personnel and equipment for forthcoming operation.
 - (1) Conduct final inspection of equipment.
 - (2) Begin rigging heavy drop loads in accordance with loading plans.
 - (3) Seal units in marshalling camps and conduct thorough briefings.
 - (4) Issue supplies to be carried into airhead by the individual. Class I and V supplies will be issued as late as feasible.
 - (5) Load platforms, aerial delivery containers, and parachute adjustable equipment (PAE) bags aboard aircraft.
 - (6) Issue and fit parachutes and load personnel.

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- b. A detachment from Air Equipment Support Company will marshal with units to assist in preparation of heavy drop loads.
 - c. To reduce the distance rigged loads must be hauled, heavy drop loads will be rigged in the vicinity of the aircraft parking area.
 - d. Units will establish and maintain liaison with combat air lift support unit (CALSU) at departure base.
6. ADMINISTRATION AND LOGISTICS
- a. Marshalling support.
 - (1) When possible, a logistical command agency will support forces being marshalled with limited organic combat service support. The agency establishes a logistical base to handle the resupply of the airborne task force after the assault has been launched. In addition it will receive and care for personnel and equipment evacuated from the airhead. Units being marshalled will be required to perform those essential combat service support functions that can be performed without seriously interfering with preparation of the unit for the assault.
 - (2) In the absence of a logistical command or agency capable of operating marshalling camps, units being marshalled will be required to provide all essential services by available forces.
 - (3) Units must be trained and prepared to rig and load heavy drop loads without special materials handling equipment.
 - b. After dispersal to marshalling areas, major units will deal directly with supporting logistical command for routine supply and service requirements. Unit distribution of supply.
 - c. To the extent possible, accompanying supplies will be drawn prior to movement into marshalling camps.
 - d. Preparation and unloading of supplies.
 - (1) Accompanying supplies are prepared and unloaded by units, assisted by support command and logistical command. They are normally rigged for aerial delivery concurrently with unit equipment.
 - (2) Followup supplies.
 - (a) Quantity and type supplies and items of equipment to be included in automatic and on-call followup supply will be developed during joint planning for the airborne assault.
 - (b) The logistical command agency designated to support the operation will be responsible for assembly, preparation, and unloading of followup supplies.
 - 1. Normally, three days automatic and two additional days of on-call supplies will be prepared. These may be unloaded from one or several airfields.
 - 2. Units assist in preparation of followup supplies as situation permits.
 - 3. Support command coordinates closely with supporting logistical command and provides such assistance as is compatible with its airhead mission.
 - 4. In operations involving a task force only, or in the absence of a logistical command, support command may be re-

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quired to outload followup supplies with assistance from other units available.

7. MISCELLANEOUS

- a. Elements of units no longer required in marshalling areas after departure of parent unit will move to division rear CP location.
- b. Communications.
 - (1) The supporting logistical command agency is responsible for communications between and within marshalling camps.
 - (2) Organic signal equipment is used only when other not available.

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APPLICABLE STANAGS

The material presented in this SOP agrees with the following STANAGS and SOLOGS:

STANAG-2004 (SOLOG-26)	Toxic Alarm System.
STANAG-2008 (SOLOG-5R2)	Standard Method of Rendering Enemy Bombing, Shell- ing, Mortaring and Toxic Reports.
STANAG-2020 (SOLOG-16R)	Operational Situation Reports.
STANAG-2022 (SOLOG-2R2)	Intelligence Reports.
STANAG-2099	Troop Safety in the Nuclear Land/Air Battle.
STANAG-2079 (SOLOG-48R)	Rear Area Security and Rear Area Damage Control.
STANAG-2101 (SOLOG-104)	Principles and Procedures for Establishing Liaison.
STANAG-2103	Reporting Nuclear Detonations and Radioactive Fallout and Chemical and Biological Attacks.

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By Order of the Secretary of the Army:

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For explanation of abbreviations used, see AR 320-50.