

FM 61-100

DEPARTMENT OF THE ARMY FIELD MANUAL

THE DIVISION

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THE DIVISION

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*This manual supersedes FM 61-100, 25 June 1965; FM 57-100, 9 September 1959; FM 57-10, 15 March 1962; (S) FM 100-1, 23 September 1959, including all changes; TT 61-100-1, 20 January 1966; ST 61-100-1, 25 June 1964; ST 61-100-1, May 1965; and FM 12-11, 7 July 1967.

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Purpose and Scope

a. This manual is a guide for commanders and staffs of the airborne, airmobile, armored, infantry, and infantry (mechanized) divisions and their subordinate units. It provides doctrine for the training and tactical employment of all divisions and the essentials of combat support and combat service support operations for these organizations. This text also serves as a reference for commanders and staffs coordinating with, or supervising the training and employment of, divisions.

b. This manual repeats procedures and techniques contained in other manuals only when necessary for understanding and continuity.

c. This manual provides information on the organization, capabilities, limitations, command, operations, tactics, combat support, combat service support, planning, and principles of employment of the airborne, airmobile, ar-

mored, infantry, and infantry (mechanized) divisions. The doctrine contained in this manual is applicable to all areas and all types of tactical operations. Appendix A lists publications that cover special techniques for operating in unusual climates or terrain, such as riverine, mountain, jungle, and desert.

d. This manual furnishes guidance for—

(1) General war, to include a consideration of the employment of, and protection from, nuclear munitions and biological and chemical agents; and operations in nuclear, biological, or chemical environments.

(2) Limited war.

(3) Cold war, to include stability operations.

e. This manual is in consonance with the international agreements listed below. Applicable agreements are listed by type of agreement and number at the beginning of each chapter.

TITLE	NATO STANAG	CENTO STANAG	SEATO SEASTAG	ABCA SOLOG
Toxic Alarm System	2004	2004	2004	26
Bombing, Shelling, and Mortaring Reports	2008		2008	5R2
Operational Situation Reports	2020	2020	2020	16R
Intelligence Reports	2022		2022	2R2
Basic Military Road Traffic Regulations	2025		2025	
Marking of Military Vehicles	2027	2027	2027	19R
Method of Describing Ground Locations, Areas, and Boundaries.	2029	2029	2029	34R
Proforma for Artillery Fire Plan	2031	2031	2031	43
Operational Road Movement Orders, Tables, and Graphs	2041	2041	2041	51
Standard Procedures for Dealing With Prisoners of War	2044	2044	2044	22R
Civil Affairs/Military Government—Principles of Operation ..	2055	2055	2055	29
Civil Affairs/Military Government—Subjects for Instruction ..	2057	2057	2057	40R
Civil Affairs/Military Government—Principles of Organization.	2058	2058	2058	41R
Civil Affairs/Military Government—Training Principles for Armed Forces.	2065	2065	2065	42R
Straggler Control	2067	2067	2067	68
Rear Area Security and Rear Area Damage Control	2079	2079	2079	48R
Relief of Combat Troops	2082	2082	2082	49R

TITLE	NATO STANAG	CENTO STANAG	SEATO SEASTAG	ABCA SOLOG
Battlefield Illumination	2088	2088		108
Fire Coordination in the Land/Air Battle	2099	2099	2099	
Principles and Procedures for Establishing Liaison	2101	2101	2101	104
Reporting Nuclear Detonations, Radioactive Fallout, and Biological and Chemical Attacks.	2103			123
Friendly Nuclear Strike Warning to Armed Forces Operating on Land.	2104	2104		130
Intelligence Estimate	2118		2118	
Employment of Atomic Demolition Munitions	2130			
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Definitions and Regulations for Military Motor Movements by Road.	2154	2154	2154	
Withdrawal in Nuclear Operations				82

f. Appendix A contains only those references used in preparation of this manual. Users of this manual may find it necessary to refer to references not listed in appendix A. DA pamphlets of the 310-series contain a comprehensive listing of available references.

g. Users of this manual are encouraged to submit recommendations to improve its clarity and accuracy. Comments should be keyed to the specific page, paragraph, and line of the text in which the change is recommended. Reasons should be provided for each comment to insure understanding and to permit complete evaluation. Comments should be forwarded direct to the Commanding General, United States Army Combat Developments Command, Institute of Combined Arms and Support, Fort Leavenworth, Kansas 66027. Originators of

proposed changes which would constitute a significant modification of approved Army doctrine may send an information copy, through command channels, to the Commanding General, United States Army Combat Developments Command, Fort Belvoir, Virginia 22060.

1-2. Designation of Units

a. The word "battalion," when used in general terms, i.e., battalion commander, battalion staff, battalion trains, also applies to squadron unless otherwise specified. Similarly, any general reference to company pertains to the cavalry troop and the artillery battery.

b. The infantry division (mechanized) is referred to as the mechanized division throughout this manual.

Section II. MISSION AND ROLES OF THE DIVISION

1-3. Mission

The mission of the division is to destroy or capture enemy military forces and to secure or dominate key land areas and their populations and resources. The term "destroy" in the division mission is not limited to physical destruction, but may include defeating the enemy forces so decisively that they no longer have the capability or will to fight.

1-4. Other Roles

a. In addition to its primary combat mission, the division can be employed in a variety of stability operation roles. These include advisory assistance, truce enforcement, peace-keeping missions, and other related military operations designed to maintain, restore, or establish

a climate of order within which responsible government can function effectively.

b. The division can also accomplish the following tasks:

- (1) Show of force.
- (2) International police action.
- (3) Airborne or airmobile raids.
- (4) Legal occupation.
- (5) Restoration of order.
- (6) Protection of personnel and property.
- (7) Assist civil defense efforts.
- (8) Reconnaissance in force.
- (9) Riot control.

c. The basic doctrine for the division is applicable to the entire spectrum of warfare. The introduction of nuclear, biological, and chemical weapons to the battlefield and operations in

unusual climates or terrain do not require major doctrinal changes. The principal effect of the employment of nuclear, biological, or chemical munitions in the battle area is the requirement for increased emphasis on mobility, dispersion, and protection to counter the effects

of these munitions. Operations in unusual climates and terrain create a need for special equipment and training and may require modification of techniques; however, the division's missions and roles remain essentially unchanged regardless of the environment.

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

1-5. General Characteristics

a. The division consists of a relatively fixed command, staff, combat support, and combat service support structure to which maneuver battalions are assigned. Except in the airborne and airmobile divisions, the mission and anticipated operational environment determine the number and types of maneuver battalions assigned to each type of division. Tables of organization and equipment prescribe a fixed number of maneuver battalions for the airborne and airmobile divisions. Higher field commanders may detach or attach additional maneuver battalions to these divisions; however, the attachment or detachment is normally of short duration.

b. Nondivisional resources normally provide the division with Army Security Agency support, military intelligence support, psychological operations support, civil affairs support, and other nonorganic support.

c. Department of the Army designates a division as airborne, airmobile, armored, infantry, or infantry (mechanized) depending on the number and types of maneuver battalions assigned when it is organized. Assigned maneuver battalions and supporting units enable the division and its subordinate units to perform specific missions in an operational environment.

d. The three brigade headquarters are the major subordinate tactical command headquarters of the division. Combat, combat support, and combat service support elements are attached to, or placed in support of, the brigades to allow them to accomplish specific missions. The division organizes for its mission by grouping divisional and nondivisional elements under brigades and other control headquarters in numbers and types appropriate to each brigade's or other control unit's specific mission.

e. The division support command and other combat service support units attached to, or placed in support of, the division by higher field commands furnish the division's combat service support. The support command consists of a headquarters and headquarters company and band and functionalized combat service support units. These units can be retained under division control or organized into functional support elements and attached to, or placed in support of, the brigades or other combat units.

f. The division receives combat support from organic combat support battalions and those combat support units attached to, or placed in support of, the division by higher field commands. Attached combat support units can be further attached to the brigades or other combat units, placed in support of the brigades or other combat units, or retained under division control.

g. Since the number of maneuver battalions of the airborne and airmobile divisions is fixed, their capabilities and limitations remain relatively constant. The armored, infantry, and mechanized divisions' capabilities and limitations vary since their organization, strength, and equipment are based on contemplated mission and the operational environment. The lists of capabilities and limitations contained in paragraphs 1-6 through 1-10 aid in determining the mission which a specific division can perform and the conditions under which the various divisions can be employed.

h. All divisions with forces assigned can—

(1) Conduct ground combat operations, to include airmobile operations, in a nuclear and a nonnuclear environment.

(2) Organize for combat to suit the mission and the terrain in which they will fight.

(3) Control and administer up to 15 maneuver battalions.

(4) Control enemy populations.

(5) Restore order.

(6) Participate in joint airborne operations.

(7) Operate as a part of a joint amphibious force.

(8) Conduct patrol operations.

(9) Provide limited organic air defense.

(10) Conduct stability operations.

(11) Conduct deception operations.

i. Appendix B illustrates the organization of each type of division.

1-6. Capabilities and Limitations of the Airborne Division

a. The airborne division can—

(1) Conduct airborne operations alone or as a part of a joint force.

(2) Conduct operations deep in the enemy's rear employing vertical envelopment operations.

(3) Conduct sustained combat operations when augmented by necessary combat, combat support, and combat service support units.

(4) Deploy rapidly by air.

(5) Conduct airmobile operations.

(6) Exploit success, to include the effects of nuclear, biological, chemical, and conventional fires.

(7) Conduct riverine operations.

b. The airborne division has the following limitations:

(1) Requirement for large initial and continuing Air Force support when employed in an airborne role.

(2) Limited ground vehicular mobility.

(3) Less protection than other divisions against nuclear, biological, chemical, and conventional fires.

(4) Limited defense and protection against armor.

(5) Sensitivity to adverse weather conditions and aircraft availability when employed in an airborne role.

(6) Requirement for combat, combat support, and combat service support augmentation for sustained operations.

(7) Limited organic airlift capability.

(8) Lack of organic medium artillery fire support.

1-7. Capabilities and Limitations of the Airmobile Division

a. The airmobile division can—

(1) Conduct airmobile operations alone or as a part of a larger force.

(2) Conduct operations in the enemy's rear employing vertical envelopment techniques.

(3) Disperse over extended distances and concentrate rapidly from widely separated areas.

(4) Exploit success, to include the effects of nuclear, biological, chemical, and conventional fires.

(5) Conduct covering force operations.

(6) Conduct mobile defense operations when augmented by combat, combat support, and combat service support elements.

(7) Operate as a mobile counterattack force.

(8) Conduct surveillance, reconnaissance, and target acquisition over wide areas.

(9) Conduct screening operations over extended frontages.

(10) Operate without ground lines of communications more effectively than other divisions.

(11) Bypass difficult terrain and obstacles with greater ease than other divisions.

(12) Conduct riverine operations.

b. The airmobile division has the following limitations:

(1) Limited ground vehicular mobility.

(2) Sensitivity to adverse weather conditions and aircraft availability.

(3) Requirement for a large continuing amount of logistical support, particularly aircraft maintenance, aircraft fuel, and aircraft lubricants.

(4) Lack of organic medium and heavy artillery fire support.

(5) Limited protection and defense against armor.

(6) Limited protection against nuclear, biological, chemical, and conventional fires.

(7) Less defense against air attack than other divisions.

(8) Requirement for more engineer support than other divisions to prepare landing zones and to construct and maintain base airfields.

1-8. Capabilities and Limitations of the Armored Division

a. The armored division can—

- (1) Conduct sustained combat operations.
- (2) Accomplish rapid movement, deep penetration, and pursuit.
- (3) Disperse over great distances and concentrate rapidly from widely separated areas.

(4) Exploit success, to include the effects of nuclear, biological, chemical, and conventional fires.

(5) Conduct covering force operations.

(6) Conduct mobile and area defense operations.

(7) Operate as a mobile counterattack force.

(8) Conduct limited airmobile operations.

b. The armored division has the following limitations:

(1) Primary fighting vehicles (tanks) are not air transportable.

(2) Restricted vehicular mobility in jungles; dense forests; untrafficable, steep, or rugged terrain; and over other natural or enemy-placed obstacles.

(3) Requirement for large quantities of supplies and other heavy logistical support, particularly maintenance, fuel, lubricants, and ammunition.

(4) Requirement for rail or highway transport of tracked vehicles in long administrative moves.

(5) No organic airlift capability.

c. The armored division possesses relatively good protection against nuclear, biological, chemical, and conventional fires.

1-9. Capabilities and Limitations of the Infantry Division

a. The infantry division can—

- (1) Conduct sustained combat operations.
- (2) Operate in difficult weather and terrain.
- (3) Operate as a part of a joint airborne force.

(4) Operate with less combat service support than other divisions.

(5) Conduct airmobile operations.

(6) Organize and conduct an area defense.

(7) Conduct riverine operations.

b. The infantry division has the following limitations:

(1) Limited ground vehicular mobility.

(2) Limited organic airlift capability.

(3) Limited protection against armor.

(4) Limited protection against nuclear, biological, chemical, and conventional fires.

1-10. Capabilities and Limitations of the Mechanized Division

a. The mechanized division can—

(1) Conduct sustained combat operations.

(2) Accomplish rapid movement, deep penetration, and pursuit.

(3) Operate as a mobile counterattack force.

(4) Disperse over great distances and concentrate rapidly from widely separated areas.

(5) Conduct limited airmobile operations.

(6) Exploit success, to include the effects of nuclear, biological, chemical, and conventional fires.

(7) Conduct covering force operations.

(8) Conduct mobile and area defense operations.

b. The mechanized division has the following limitations:

(1) In airmobile operations, it loses much of its striking power and ground mobility since its armored personnel carriers are not airmobile and its tanks are not air transportable.

(2) Restricted vehicular mobility in jungles; dense forests; untrafficable, steep, or rugged terrain; and over other natural or enemy-placed obstacles.

(3) Requirement for large quantities of supplies and other heavy logistical support, particularly maintenance, fuel, lubricants, and ammunition.

(4) Requirement for rail or highway transport of tracked vehicles in long administrative moves.

- (5) No organic airlift capability.
c. The mechanized division possesses rela-

tively good protection against nuclear, biological, chemical, and conventional fires.

CHAPTER 2

COMMAND AND CONTROL

(NATO STANAG 2101, ABCA SOLOG 104, CENTO STANAG 2101,
SEATO SEASTAG 2101)

Section I. COMMAND

2-1. General

a. Command is the authority that a commander exercises over his subordinates by virtue of rank and assignment. It includes the responsibility for effectively using available resources and for planning the employment of, organizing, directing, coordinating, and controlling military forces to accomplish assigned missions.

b. The trend toward mechanization and air-mobile operations in present-day armies, the capability for mass destruction, and the increased speed and tempo of modern combat operations require a high degree of flexibility in the exercise of command. The commander must make decisions rapidly and execute them forcefully. Flexibility of thought, as well as mobility of personnel and equipment, is essential on the modern battlefield. Commanders must be prepared to employ combined arms teams or any combination of combat, combat support, and combat service support elements required by the division mission and environment.

c. The mission and the scope of division operations prevent the commander from personally accomplishing or supervising all tasks in the time and manner required. He reduces demands on his time and energy by directing operations through an efficient chain of command and by effectively using his staff.

d. Although separate elements, the commander and his staff must function as a single entity. Effective command requires that the commander and his staff function as a team. The staff is an extension of the commander.

e. If the commander becomes a casualty, the next senior officer succeeds him. Commanders

should designate individuals, in order of succession, to assume command and to direct operations until the next senior commander assumes command or until a new commander is appointed by higher headquarters.

2-2. Division Command

a. Division Commander.

(1) The division commander concentrates on the essential aspects of his mission and delegates supervision of less critical activities to his staff. He provides overall guidance to his staff and to subordinate commanders so that they can exercise initiative and exploit rapid changes in the tactical situation.

(2) The division commander normally exercises command through the commanders of the brigades; division artillery; support command; aviation group (airmobile division); cavalry squadron air defense artillery, engineer, signal, and aviation (infantry and airborne divisions) battalions; and the military police company. Occasionally the division commander may be required to issue instructions or orders directly to subordinate units of these commands. When this is necessary, intermediate commanders are informed and normal command channels are restored at the earliest opportunity.

b. Assistant Division Commanders.

(1) The two assistant division commanders assist the division commander in his command functions. They perform those tasks and functions assigned to them by the division commander. FM 101-5 contains examples of duties that may be assigned to assistant division commanders.

(2) They must be kept abreast of division operations; however, they are not normally in the chain of command between the division commander and the chief of staff or between the division commander and subordinate commanders. The senior assistant division commander is second in command and assumes command of the division in the absence of the division commander.

2-3. Brigade Command

a. Brigade Commander. The brigade commander is responsible for the tactical training of his headquarters and of attached combat,

combat support, and combat service support units and for the conduct of tactical operations. He monitors combat support and combat service support operations within the brigade to insure adequate support. He is guided by the principles outlined in paragraphs 2-1 and 2-2.

b. 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 the brigade commander and acts for the brigade commander during his absence.

c. Command Techniques and Procedures. FM 7-30 and FM 17-30 contain detailed command techniques and procedures for the brigade.

Section II. STAFFS

2-4. General

A staff is composed of those personnel specifically ordered or detailed to assist the commander in the exercise of command. The staff reduces the demands on the commander's time and assists the commander by providing information, making estimates and recommendations, preparing plans and orders, and supervising the execution of orders issued by or in the name of the commander. The staff allows the commander to accomplish his duties without becoming mired in the administrative details incident to command.

2-5. Division Staff

a. The division staff is composed of the general (coordinating), personal, and special staffs.

(1) FM 101-5 describes general (coordinating), personal, and special staff responsibilities, procedures, and relationships. The personnel for the general (coordinating), personal, and special staff sections are provided by the division headquarters and headquarters company and other units of the division.

(2) A U.S. Air Force tactical air control party (TACP) usually augments the division staff. The TACP normally includes an air liaison officer (ALO), a fighter duty officer, a reconnaissance duty officer, an airlift duty officer, and necessary enlisted personnel.

(3) A U.S. Air Force weather detachment

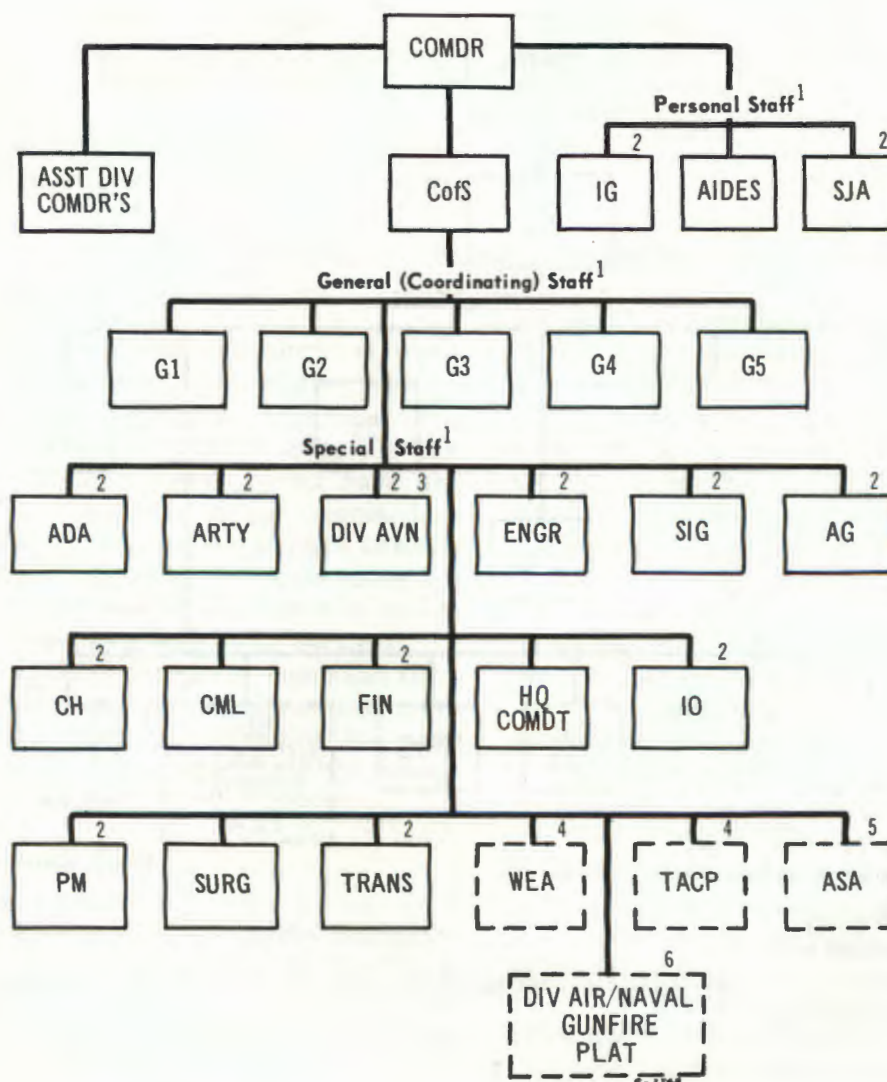
normally augments the division staff. The detachment usually consists of specially trained officer and enlisted personnel with meteorological equipment. The division furnishes the detachment transportation. The detachment provides or arranges for the required weather information. It is augmented by its parent unit when necessary.

b. The chief of staff is the principal staff assistant to the division commander. He is responsible to the division commander for the coordination and supervision of the division staff within the authority delegated to him by the division commander. FM 101-5 describes the duties and responsibilities of the chief of staff.

c. Figure 2-1 shows the organization of the division staff. The staff sections shown represent the staff members organic or normally attached to the division. The commander can select representatives from other attached nondivisional units to serve as members of the special staff. He can also select additional staff members from organic or attached units. With the consent of the supporting commander, representatives from nondivisional supporting units can be designated members of the special staff.

2-6. Brigade Staff

a. The brigade staff consists of the personnel required to plan and supervise tactical training and brigade tactical operations. The brigade



¹Support command commander furnishes the staff information on logistical operations.

²Personnel are furnished from units other than division headquarters and headquarters company.

³Division aviation section in armored and mechanized divisions is organic to the division headquarters and headquarters company.

⁴Personnel furnished by Air Force.

⁵Personnel furnished by Army Security Agency division support company.

⁶Personnel furnished by Fleet Marine Force air/naval gunfire liaison company when naval gunfire and naval (marine) air are supporting the division.

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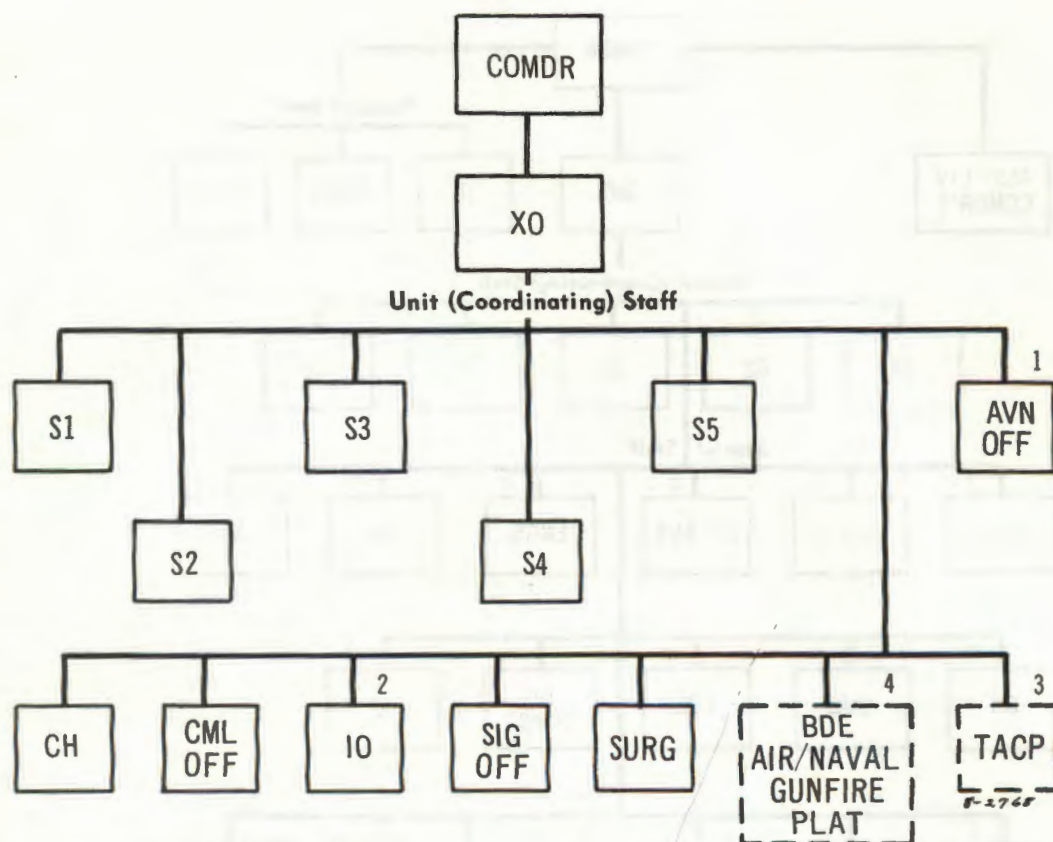
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Figure 2-1. Division staff.

staff monitors brigade combat support and combat service support operations to insure adequate support; however, it lacks the capability

to perform normal staff supervision of these operations.

b. Except in scope, the duties and responsibilities



¹Aviation section commander.

²Airborne division only.

³Personnel furnished by Air Force.

⁴Personnel furnished by Fleet Marine Force air/naval gunfire liaison company when naval gunfire and naval (marine) air are supporting the division.

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Figure 2-2. Brigade staff.

bilities of the members of the brigade staff are similar to those of their counterparts on the division staff. The brigade staff has a very limited capability for future planning while conducting tactical operations. FM 7-30 and FM 17-30 contain detailed discussions of the duties of the brigade staff.

c. Figure 2-2 shows the organization of the brigade staff. The staff sections shown represent the staff members organic to the brigade. The commander can select representatives from attached and supporting units to serve on

the brigade staff. The consent of the supporting commander is obtained prior to placing a member of a supporting unit on the brigade staff.

2-7. Liaison

a. Tactical operations within the division require a constant exchange of information within the division and between the division and higher and adjacent field commands. Liaison officers provide one of the primary means of accomplishing this contact or intercommuni-

cation; however, liaison is not restricted to liaison officers. Liaison between staff elements of higher, lower, and adjacent commands is normal procedure.

b. The chief of staff is responsible for establishing liaison at division level. The executive

officer normally supervises liaison at brigade level; however, this function may be under the supervision of the S3.

c. FM 101-5 discusses the duties of liaison officers.

Section III. CONTROL FACILITIES

2-8. General

a. Nuclear, biological, and chemical weapons, technical advances, and greater mobility have provided the commander with more rapid and effective means of accomplishing his mission. However, these developments have also increased the complexity of the commander's problems. The commander must have effective means to direct and control forces under his command, to integrate the support provided to him, and to coordinate with other Services.

b. Adequate communications, command facilities, standing operating procedures, and proper organization for combat enable the commander to control and coordinate the operations of his command.

2-9. Command Posts

a. General.

(1) The command post is the headquarters where the commander and his staff perform their activities. It is the primary control facility available to the commander for the exercise of his command.

(2) Effective combat operations frequently require the command and staff elements of the command post to be echeloned. The commander determines the composition of each echelon of the command post after considering the recommendations of his staff.

(3) The organization of the staff into echelons and its operation, location, movement, internal arrangement, and security frequently become standing operating procedures; however, these arrangements must not become rigid and inflexible. The composition of the echelons and the standing operating procedures governing them must be changed as the tactical situation warrants.

(4) Organization into echelons is dis-

cussed in appropriate references cited in appendix A and succeeding paragraphs.

b. Location.

(1) The commander selects the general location of the command post based on recommendations of the G3. The headquarters commandant, in coordination with the G1 and the signal officer, selects the specific command post location and plans the internal arrangement.

(2) The tactical plan is the governing consideration in selecting the command post site. The location of the command post should—

(a) Facilitate command and control of subordinate units.

(b) Provide easy access to higher, lower, supporting, and adjacent headquarters.

(c) Provide sufficient space to accommodate all command post elements.

(d) Require minimum construction.

(e) Provide adequate, suitable sites for communications means.

(f) Provide adequate cover, concealment, and area for dispersion.

(g) Provide good drainage.

(h) Provide adequate internal and access road nets and parking.

(i) Facilitate security and defense.

(j) Provide an area for landing rotary-wing aircraft and access to a fixed-wing facility.

c. Security.

(1) The headquarters commandant is responsible for security of the command post. Internal security of the division main command post is provided by the security platoon of the military police company and is a staff responsibility of the provost marshal. Defense of division main command post against ground attack is provided by personnel of the division headquarters company and the division headquar-

ters staff sections under control of the headquarters commandant. Other troops may be attached to furnish greater protection; however, such attachments are made only when absolutely necessary. Better all-round security is provided by locating the command post within the perimeter of, or near, combat units.

(2) Special attention is given to the security of key installations such as the war room, the tactical operations center, the communications center, facilities for special intelligence, and other activities containing sensitive material. The provost marshal has staff responsibility for security of these installations at the division main command post and for preventing unauthorized access. The security platoon of the military police company carries out the provost marshal's internal security responsibilities. The provost marshal coordinates with the headquarters commandant to integrate the internal security plan with the overall plan for security and defense of the division main command post.

(3) The security platoon of the military police company normally mans the dismount point at the entrance to the division main command post. Within its capabilities, the security platoon furnishes forces to the headquarters commandant to assist in providing local perimeter security for the installation.

(4) The principles outlined above are applicable to command post security at brigade level. FM 7-30 and FM 17-30 contain detailed discussions of security of brigade command posts.

d. Displacement. Continuous control of operations during command post displacement is essential and can be accomplished by—

(1) Shifting control to an alternate during the move.

(2) Early provision of new signal facilities.

(3) Expediting movement by use of advance parties from each staff section.

(4) Using radio, messengers, or other means to maintain contact with key personnel during the move.

(5) Moving in echelon.

e. Alternate Command Posts. Each headquarters must, within its capabilities, establish

an alternate command post to insure continuity of tactical and combat service support operations should the main command post become incapable of operating. The alternate headquarters is the minimum size necessary to allow it to assume the functions of the main headquarters element. The size of the headquarters and the level of command determine the extent to which this alternate command post is physically established. The provision for an alternate command post varies from prescribing the succession of command to maintaining a separate facility with duplicate records and maps. Succeeding paragraphs and the field manuals applicable to organic units of the division describe procedures and requirements for establishing alternate command posts.

2-10. Division Command Posts

a. General. The division provides command and control of tactical and combat service support operations and insures continuity of command through three installations during field operations: division main, division alternate, and division rear command posts. These are not separate levels of command but are components of the division command post.

b. Division Main. Division main is the principal facility through which the division commander exercises command and control of tactical operations. The division main normally contains the division tactical operations center (DTC) and its elements; the necessary security, mess, and signal support; and the personnel and sections listed below:

- (1) Division commander and aides.
- (2) Assistant division commander and aides.
- (3) Chief of staff section.
- (4) General (coordinating) staff sections.
- (5) Chemical section.
- (6) Engineer section.
- (7) Signal section.
- (8) Provost marshal section.
- (9) Headquarters commandant section.
- (10) Liaison officers to the division.
- (11) Headquarters of attached intelligence units.

(12) U.S. Army Security Agency personnel.

(13) Military police security platoon and other military police security personnel, as required.

(14) Division headquarters company.

(15) Command signal center platoon.

(16) Adjutant general administrative service team.

(17) The chaplain.

(18) Transportation section.

(19) Division surgeon.

(20) Other special or personal staff sections as required.

c. Division Alternate. Division alternate provides a facility to insure continuity of operations during movement or when division main cannot operate. A new, separate facility may be established or a subordinate headquarters may be designated as an alternate. Normally, the division artillery command post is designated as the division alternate command post. Necessary duplicate records and maps are maintained by the alternate. Frequently the division alternate command post is provided additional personnel and communications to include a small command element. Off-duty personnel from the division tactical operations center may be a major source of personnel for reconstituting the division main if it is destroyed. Detailed plans for rapid augmentation of the division alternate are prepared and kept current. FM 101-5 discusses requirements for an alternate command facility.

d. Division Rear.

(1) The division rear command post contains elements of the division staff not required to assist the division commander in tactical operations. These staff elements normally perform continuing, routine, administrative type, combat service support functions. This installation includes the administration company; the adjutant general, finance officer, inspector general, staff judge advocate, chaplain, and information sections; and other elements as desired by the division commander.

(2) The division adjutant general is normally designated the officer in charge of the division rear command post, unless the division commander directs otherwise. The officer in

charge of the division rear command post does not command the administration company. Command is exercised by the support command commander and the administration company commander. The officer in charge is responsible to the division support command commander for tactical control, security, and movement of the division rear command post. FM 54-2 contains details of the organization and employment of the administration company. FM 12-2, FM 14-3, and FM 101-5 discuss operations of the staff sections of the administration company.

(3) The division commander approves the general location of the division rear after consideration of the recommendations of the commander of the support command, the G1, and the signal officer. The division rear command post is normally located in the division rear area but may be located in the corps or army rear area, and in unusual circumstances, may be outside the army area. The considerations contained in paragraph 2-9 are applicable to the selection of the location of division rear. The administration company commander is the headquarters commandant of the division rear command post. He coordinates with the officer in charge, selects the specific location, and plans the internal arrangement of the division rear command post.

(4) The division rear command post moves under the tactical control of the support command commander. The principles outlined in chapter 13 are applicable to the movement of the division rear command post.

2-11. Tactical Operations Center

a. A tactical operations center (TOC) is normally established at division level during active operations to expedite staff reaction. The TOC is not a separate organizational entity in the tables of organization and equipment but is a facility at the division main command post containing 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 estimates and recommendations for command decisions, taking action within established policies, and issu-

ing implementing instructions. The commander may add other representatives. The TOC is the minimum size necessary for efficient tactical operation.

b. The chief of staff exercises overall direction of the staff representatives in the TOC. Normally, the G3, without derogation of the responsibilities and functions of other general and special staff officers, will be assigned primary staff responsibility for supervision of the TOC.

c. FM 101-5 contains details of organization and functions of the TOC.

2-12. Tactical Command Post

a. Normally when it is necessary for the commander to operate away from the main command post for any length of time, a tactical command post is formed. This group usually consists of the G2 and G3, necessary fire support representatives, communications and security personnel, and other personnel that the commander deems necessary. This group, with the occasional exception of security personnel, is drawn from the main command post; therefore, it is the minimum size necessary to meet the commander's needs. This group is not a separate echelon in the command and control system, but is an extension of the main command post.

b. The tactical situation, the terrain, and the type of mission may necessitate that the commander and his staff have increased mobility to control tactical operations. Mobility is especially significant in stability operations. This mobility can be provided by an aerial command post using organic, attached, or supporting aircraft.

c. The airborne, airmobile, and infantry divisions are well-equipped to establish an aerial command post from their aviation resources. The armored and mechanized divisions may require additional aircraft to establish adequate aerial command posts.

d. The commander determines the size and composition of the aerial command post. The main command post resources provide the necessary personnel and equipment. The commander's decision to operate from an aerial command post and the composition of the com-

mand post are influenced by the number and types of aircraft available.

e. Plans and standing operating procedures for the aerial command post must be developed and kept current. The aerial command post is not a separate installation but is an extension of the main command post.

2-13. Division Support Command Command Post

The division support command command post is established in the division support area. It is the principal facility through which the division commander exercises command and control of combat service support operations. Basic considerations for the movement, location, and security of the support command command post are generally the same as those outlined in paragraph 2-9. The support command controls, coordinates, and regulates division logistical operations. FM 54-2 contains details of organization and operation of the command post of the support command and doctrine for combat service support operations.

2-14. Brigade Command Posts

Brigade command posts perform functions similar to those of the division. They are located to permit adequate communication with their subordinate units and with the division main and alternate command posts. The considerations in selection of the command post location listed in paragraph 2-9 are applicable to the brigade. FM 7-30 and FM 17-30 contain details of organization and operation of brigade command posts.

2-15. Division Army Air Defense Command Post

The organic air defense artillery battalion establishes the division army air defense command post (AADCP). This command post may be located near the division main to facilitate control of subordinate units and communications with other units. FM 44-1 and FM 44-3 outline functions of the AADCP.

2-16. Base of Operations

a. Stability operations and independent operations frequently require a base of operations

from which operations are launched or supported. This base of operations is normally in a fixed or relatively fixed location. Maximum use is made of available buildings, equipment, and subsidiary facilities, such as airfields, piers, rail spurs, and access roads. The base of operations includes the support command and elements of attached and supporting combat service support units. The commander may locate additional facilities and units within this area. This area will often contain the division main command post, the division reserve, and the division rear command post.

b. The commander designates the location of the base of operations after consideration of the recommendations of the G3, the support command commander, and, when appropriate, the G5 and the air defense officer. The G3 prepares his recommendations in coordination with the G1, the G2, the G4, the division engineer, and the signal officer and after considering the latest intelligence information, the estimated duration of the division mission, and other factors affecting the location of the base, its arrangement, and the permanency of facilities required.

c. The measures necessary to protect or re-

duce the effectiveness of attack or sabotage of any tactical installation are applicable to the defense of a base of operations; however, the size of the installation, the mission of the forces in the base of operations, and the presence of indigenous personnel create unusual problems and require special measures. The size of the installation and the inability of combat service support elements to provide the required combat service support and still accomplish the essential security measures, frequently make it necessary to organize a provisional defense force or to divert combat forces for security. Combat service support personnel are not relieved of their responsibilities for local security by the organization of a provisional defense force or by the assignment of a combat unit to provide security for the base of operations. These combat service support personnel must be integrated into the overall plan for defense since adequate security can be provided to the base of operations only by using all available personnel.

d. FM 31-81 (Test) (to be published) contains interim doctrinal guidance on base defense with emphasis on stability operations.

Section IV. SIGNAL COMMUNICATIONS

2-17. General

a. The division communications system provides commanders with the means of rapidly transmitting orders and instructions. All signal communications means are employed. The system must be capable of integrating the organic signal communications means of organic, attached, or supporting combat, combat support, and combat service support units; battalions assigned to the division; and any combined arms teams organized within the division.

b. FM 11-50, FM 11-57, FM 24-1, and FM 61-24 discuss division communications procedures, planning, and doctrine in detail.

c. Appropriate tables of organization and equipment list communications means.

2-18. Responsibility

a. The G3 is responsible for general (coordinating) staff supervision of signal communica-

tions operations within the division and for the integration of signal plans with tactical operations.

b. The division signal officer commands the signal battalion, prepares signal plans and orders, and is responsible to the division commander for the installation, operation, and maintenance of the division communications system. The division signal officer has a dual responsibility as follows:

(1) As a member of the division special staff he is responsible for providing technical assistance and advice to insure that the division signal communications systems and nets are operational.

(2) As commander of the division signal battalion, he is responsible that the system and nets operated by that battalion are operational at all times.

c. Each commander is responsible for his organic signal communications and for their

efficient functioning as a part of the higher units communications system.

d. Commanders are mutually responsible for taking immediate action to keep organic signal communications operational and for insuring that the commander responsible for providing signal communications is informed when a portion of a signal system becomes inoperable.

e. Each subordinate commander must—

(1) Establish communications within his command.

(2) Establish communications with supported and adjacent units and units to his front.

(3) Establish other external communications in accordance with the commander's policies and as directed by higher headquarters.

(4) Reestablish interrupted communications regardless of responsibility for initial installation.

f. FM 24-1, FM 61-24, and FM 101-5 contain detailed discussions of signal responsibilities.

2-19. Communications Security

a. Telecommunication is any transmission, emission, or reception of signs, signals, writings, images, and sounds or information by wire, radio, visual, or other electromagnetic systems.

b. Communications security is the protection resulting from all measures designed to—

(1) Deny unauthorized persons information of value which might be derived from the possession of communications equipment and study of telecommunications.

(2) Mislead unauthorized persons in their interpretation of the results of such a study.

c. Communications security includes cryptosecurity, transmission security, and physical security of communications security materials, equipment, and information.

d. The objective of communications security is the effective and efficient application of se-

curity procedures to avoid compromise of sensitive information. Communications security must be considered during the planning stage of any operation. Security measures for the protection of military information, equipment, and material include defense against capture, observation, photography, salvage, theft, interception, direction finding, traffic analysis, enemy intrusion or imitative deception, and personal carelessness and laxity.

e. The commander is responsible for communications security. He states general principles to insure communications security in the unit standing operating procedures and announces variations from these normal security practices before each operation.

f. The G2 has primary general (coordinating) staff responsibility for communications security. He is assisted by the U.S. Army Security Agency staff officer and elements of the attached U.S. Army Security Agency division support company.

g. The G3 has primary general (coordinating) staff responsibility for electronic warfare.

h. The signal (communications) officer is responsible for distribution and maintenance of cryptomaterial.

i. FM 24-1 and FM 61-24 contain procedures for providing communications security.

j. FM 32-5 contains a detailed discussion of communications security.

2-20. Communications Considerations in Locating Headquarters Installations

The principal technical communications considerations in positioning headquarters installations are the—

a. Location of powerlines, electrical stations, hill masses, and dense woods.

b. Effect of distance and terrain on wire, radio, radio retransmission, and messenger communications.

c. Routes of communications and traffic conditions.

CHAPTER 3

ORGANIZATION

Section I. THE DIVISION BASE

3-1. General

a. All divisions are organized around similar bases consisting of a division headquarters and headquarters company; three brigade headquarters and headquarters companies; division artillery; support command; a cavalry squadron; air defense artillery, engineer, and signal battalions; and a military police company. The division base also contains an aviation group in the airmobile division and an aviation battalion in the airborne and infantry divisions. Additional units and maneuver battalions are assigned or attached to this base to provide the division with the ability to accomplish its mission in an anticipated operational environment.

b. The number of maneuver battalions in airborne and airmobile divisions is fixed by tables of organization and equipment.

c. The capability of the division support command is modified as necessary to meet the varying supply and maintenance requirements of the different types of divisions.

d. The quantity and type of equipment, as well as the number and types of units, vary as the mission and operational environment of the division change. The applicable tables of organization and equipment referenced in appendix A illustrate the organization and contain a detailed listing of the quantity and type of equipment found in each type of division.

e. Mobility varies from unit to unit within the division.

f. Appendix B illustrates the organization of each type of division and its major subordinate units.

3-2. Division Headquarters and Headquarters Company

a. The division headquarters provides com-

mand, control, and supervision of the tactical operations of the division and its organic, attached, or supporting units. It also furnishes command, control, and supervision of the administration of organic and attached units.

b. The headquarters company provides logistical support and personnel for the division headquarters staff sections. The headquarters company is normally located with the main echelon of the division command post.

3-3. Brigade Headquarters and Headquarters Company

a. General.

(1) The brigade headquarters provides the command and control facilities necessary to employ attached and supporting units. The headquarters company furnishes logistical support, to include limited aerial and ground command vehicle support; personnel for the brigade headquarters staff sections; and security.

(2) The only unit permanently assigned to the brigade is the brigade headquarters and headquarters company. The necessary combat, combat support, and combat service support units to accomplish the brigade mission are attached or placed in support of the brigade.

(3) The brigade normally controls from two to five attached maneuver battalions.

(4) The brigade can be employed on independent or semi-independent operations when properly organized for combat.

b. *Employment.* FM 7-30 and FM 17-30 contain details on the employment of the brigade.

3-4. Division Cavalry Squadron

a. General.

(1) The division cavalry squadron is a combat unit organized to perform reconnaiss-

ance and security missions over wide frontages and to extended distances. It provides security for the unit to which assigned or attached, and can engage in offensive, defensive, and retrograde operations as an economy of force measure. It does not possess the strength and armament to participate in sustained offensive or defensive combat operations without reinforcement.

(2) The squadron is armored cavalry in the airborne, armored, infantry, and mechanized divisions and air cavalry in the airmobile divisions. Applicable tables of organization and equipment contain organization, capabilities, limitations, and equipment of this unit.

b. *Employment.* FM 17-36 contains details on the employment of the cavalry squadron.

3-5. Division Artillery

a. General.

(1) The division artillery provides combat support to the division by accurate delivery of fires of appropriate type, caliber, and density under all conditions of weather, visibility, and terrain. It also provides target acquisition support through the use of forward observers, radar, and the target acquisition platoons organic to the division artillery headquarters and headquarters battery and each direct support artillery battalion. The division artillery of the armored, infantry, and mechanized divisions can deliver nuclear, chemical, or conventional fires. The airborne and the airmobile division artillery have no organic nuclear capability and only a limited chemical capability. Corps or army units normally provide these divisions with the necessary nuclear capability.

(2) The division artillery provides the fire support element of the division tactical operations center.

(3) The division artillery normally coordinates the operations of attached or supporting artillery units and integrates their fires into the overall fire support plan.

(4) Artillery battalions or batteries attached to brigades for independent or semi-independent operations may require augmentation of personnel and equipment.

(5) Firing batteries can operate independently for several days. Normally attachments

from the headquarters and service battery are provided for extended independent or semi-independent operations.

(6) The Honest John battalion of the armored, infantry, and mechanized divisions is normally employed as separate batteries with extended distances between firing elements.

(7) The division artillery of the airmobile division includes an organic aviation battery. This is not a firing battery although its helicopters can be armed for self-defense and can provide aerial fire support when it does not interfere with the battery's primary mission. The mission of this battery is to increase the effectiveness of the division artillery by providing immediate, responsive aviation support to the division and its elements. The battery is 100 percent air transportable in Army or Air Force aircraft. Capabilities of the battery include—

(a) Continuous operations, either day or night, during visual weather conditions.

(b) Limited operations under instrument weather conditions.

(c) Aerial observation, reconnaissance, and surveillance of enemy areas to adjust artillery fire, to assist in terrain studies, and to locate, verify, and evaluate targets.

(d) Command, liaison, reconnaissance, and transportation.

(e) Aerial wire laying, radio retransmission, and psychological warfare support operations.

b. *Employment.* FM 1-100, FM 6-20-1, FM 6-20-2, FM 6-40, and FM 6-140-1 contain details on the employment of division artillery.

3-6. Division Air Defense Artillery Battalion

a. General.

(1) The division air defense artillery battalion provides air defense for the division against low-altitude hostile aircraft using Chaparral air defense missiles and Vulcan automatic weapons. Although the Chaparral air defense missile system has only a surface-to-air capability, the Vulcan automatic weapons system can provide high-volume direct fire support against hostile ground targets. The air defense artillery battalion provides the air defense artillery section of the airspace control

element for the division tactical operations center and establishes and operates the division army air defense command post. The division army air defense command post is located where it can exercise the most effective control of its organic units and other attached or supporting air defense means.

(2) Chaparral missiles and Vulcan automatic weapons provide limited area air defense for forward combat elements, areas, or installations against low-altitude hostile aircraft.

(3) The organic air defense artillery battalion coordinates the operations of air defense units attached or supporting the division.

(4) Air defense artillery units or elements may be attached to brigades for independent or semi-independent operations.

(5) Air defense artillery automatic weapons units may be assigned a ground support role.

b. Employment. FM 44-1 and FM 44-3 contain details on the employment of the organic air defense artillery battalion.

3-7. Divisional Aviation Battalion and Group

a. General.

(1) Each division is organized with the necessary Army aviation resources to meet the requirements of its anticipated operational environment. A division may request additional Army aviation support from corps to meet increased or unexpected requirements.

(2) The airborne and infantry divisions receive Army aviation support from the organic aviation battalions. The airmobile division receives Army aviation support from the organic aviation group. The armored and mechanized division aircraft are primarily command and control aircraft except for the aircraft of the armored cavalry squadron. Since these divisions have fewer organic aircraft than other divisions, they frequently receive additional aircraft support from corps and field army resources.

(3) Chapter 4 discusses Army aviation support of division operations.

(4) Personnel for the aviation section of the airspace control element for the division tactical operations center are provided as follows:

<i>Airmobile Division</i>	<i>Airborne and Infantry Divisions</i>	<i>Armored and Mechanized Divisions</i>
Aviation Group -----	Aviation Battalion -----	Division Headquarters and Headquarters Company.

b. Employment. FM 1-15 contains details on the employment of the divisional aviation battalion and group.

3-8. Division Engineer Battalion

a. General.

(1) The division engineer battalion performs general and special engineer tasks to increase the combat effectiveness of the division. The battalion can fight as infantry when required; however, it must be reinforced with weapons to provide indirect and antitank fire support.

(2) The engineer battalion provides the personnel and equipment for the engineer section of the division special staff.

(3) Engineer support of the division includes—

(a) Engineer staff planning for the division.

(b) Construction, rehabilitation, and maintenance of roads, bridges, fords, culverts, air-landing facilities, obstacles, camouflage, deception devices, and field fortifications.

(c) Removal of obstacles to include assisting combat elements in breaching fortifications and mined areas.

(d) Technical assistance to other division troops.

(e) Demolition assistance to include planning and use of conventional explosives and equipment, and atomic demolition munitions (ADM).

(f) Personnel and equipment for purifying and dispensing potable water.

(g) Engineer reconnaissance and intelligence.

(h) Support of river-crossing operations.

(i) Supervision of organic and attached engineer units and coordination of all engineer effort supporting the division.

(j) Assistance in the decontamination of small vital areas of terrain contaminated with chemical or biological agents.

b. *Employment.* FM 5-135 and FM 5-136 contain details on the employment of divisional engineer battalions.

3-9. Division Signal Battalion

a. General.

(1) The division signal battalion provides signal communications support to the division to include—

(a) Staff planning, supervision, and coordination of division signal operations.

(b) Distribution and direct support maintenance of all division cryptomaterial.

(c) Provision of photographic and still picture laboratory services. These services do not include processing photography produced by aerial sensors or developing motion picture and color film.

(d) Installation and operation of its assigned portion of the division communications system.

(e) Technical assistance on signal communications.

(2) The signal battalion furnishes personnel and equipment for the signal section of the division special staff.

(3) The signal battalion usually requires augmentation to furnish adequate cryptosupport. The division signal officer coordinates with the G3 and requests this additional support.

b. *Employment.* FM 11-50, FM 11-57, and FM 61-24 contain details on the employment of divisional signal battalions.

3-10. Division Support Command

a. General.

(1) The support command is a major subordinate command of the division and is organized and equipped to provide most of the com-

bat service support to all assigned and attached units of the division. The support command, when required, can furnish limited combat service support to nondivisional units in the division area, even though these units are not assigned or attached to the division.

(2) The support command provides combat service support to include—

(a) All items of supply except ammunition, water, and cryptomaterial. It must also institute procedures for the control of ammunition and for the requisitioning, receipt, storage, and distribution of maps. The airborne and airmobile division support commands store and distribute limited stocks of ammunition. All divisions may be required to store and distribute ammunition during stability operations. Equipment required for airdrop of personnel, supplies, and equipment is supplied by the airborne and airmobile division support commands.

(b) Medical service support to include—

1. Intradivision evacuation of patients.

2. Medical, expedient dental, and limited psychiatric treatment.

3. Medical supply.

4. Organizational maintenance of medical and dental equipment.

5. Optical service.

(c) Direct support maintenance, except for medical, cryptomaterial, individual and organizational clothing, and automatic data processing, equipment.

(d) Organizational maintenance of automatic data processing equipment.

(e) The airborne and airmobile division support commands furnish organizational maintenance of airdrop equipment.

(f) Advice to commanders and staffs on all supply, maintenance, and transportation service support matters except water supply and maintenance of cryptomaterial.

(g) Operation of instrumented airfields in the armored, mechanized, and airmobile divisions. In the airmobile division, the aviation group furnishes the necessary ground control teams for instrumented control.

(h) Limited motor transport support to include bulk petroleum distribution.

(3) The division G4 has general (coordinating) staff responsibility for logistical planning. The commander of the support command is the principal combat service support operator of the division. The relationship between the division G4 and the support command commander must be extremely close because of the similarity of their interests. Each must keep the other informed of his requirements and plans.

(4) The commander of the support command exercises full command authority over the organic units of the support command; however, he is not responsible for the technical operations of the special staff sections organic to the administration company.

(5) The division staff must be careful to recognize the command responsibilities of the commander of the support command as the principal combat service support operator. He should not be required to develop division-level plans, policies, or priorities; however, this does not relieve him of the responsibility for advising the division staff during the formulation of plans, policies, and priorities.

(6) The personnel and equipment for the transportation section of the division special staff are provided by the support command.

(7) Units of the support command, primarily the administration company, provide personnel and equipment for several of the division special staff sections. These sections are identified in appropriate tables of organization and equipment of support command units.

(8) The combat service support responsibilities of the support command are organized on a functional basis.

(9) The support command is normally located in the division rear area. It usually establishes a division support area and locates combat service support elements well forward in the division area to support committed brigades. Support can be provided on an area, unit, or task basis; however, either area support or a combination of these systems is generally employed. Support command units can be fragmented to allow attachment to division elements operating independently or assigned missions which cannot be supported otherwise;

however, units are not fragmented unnecessarily.

b. Organization. The basic organization of the support command is the same in all divisions except the airborne and airmobile divisions. These divisions have additional units to meet the special requirements of airborne assaults and airmobile operations. The organization of all division support commands is fixed by tables of organization and equipment; however, the support command requires augmentation when the mission and number of units being supported exceed the capability provided by tables of organization and equipment.

c. Employment. FM 54-2 contains details on the employment of the support command.

3-11. Division Military Police Company

a. General.

(1) The military police company provides military police support to the division, to include the committed brigades. The company requires reinforcement to furnish adequate support when all brigades are committed, when independent operations are of extended duration, and when the division is engaged in extensive stability operations.

(2) The military police company is functionally organized to provide for—

- (a) Ground traffic control.
- (b) Custody, evacuation, and limited processing of prisoners of war.
- (c) Internal security of the division main command post.
- (d) Straggler control.
- (e) Enforcement of military laws, orders, and regulations.
- (f) Protection of persons and property.
- (g) Prevention and investigation of crime.

(3) The provost marshal is a member of the military police company; however, he does not command the company. The company commander commands the company. The provost marshal section of the division special staff is provided and operated by personnel from the military police company.

(4) The military police company is lo-

cated where it can best accomplish its mission, normally adjacent to the division main command post.

b. Employment. FM 19-1 contains details on the employment of the military police company.

Section II. MANEUVER BATTALIONS

3-12. General

The primary maneuver battalions of the divisions are the infantry, airborne infantry, mechanized infantry, airmobile infantry, and tank battalions. These battalions are the basic tactical units of the division. These battalions normally are attached to a brigade and employed in coordination with other combat and combat support elements in offensive and defensive operations.

3-13. Infantry Battalion

a. General.

(1) The infantry battalion closes with the enemy by fire and maneuvers to destroy or capture him or repels his assault by fire, close combat, and counterattack.

(2) Infantry battalions are particularly well suited for holding terrain, operating in difficult terrain and in adverse weather, moving by aircraft, breaching fixed defenses, destroying antitank defenses, and for closing with enemy forces.

(3) Infantry battalions are limited to foot mobility unless motorized, mechanized, or airmobile. When motorized, mechanized, or airmobile, their mobility increases the scope and tempo of their operations.

(4) The infantry battalion can be attached to the mechanized or armored divisions to increase their infantry strength. When attached to these divisions, the infantry battalion's role is essentially the same as the mechanized infantry battalion's. However, the infantry battalion must be furnished additional transportation if the mobility of the mechanized and armored divisions is to be maintained.

(5) The infantry battalion can participate in the air-landed phase of an airborne assault.

b. Employment. FM 7-20 contains details on the employment of the infantry battalion.

3-14. Airborne Infantry Battalion

a. General.

(1) The principal differences between the infantry and the airborne infantry battalion are as follows:

(a) Personnel of the airborne infantry battalion receive special training and equipment to enable them to make parachute assaults.

(b) The airborne infantry battalion has less firepower than the infantry battalion.

(c) Equipment of the airborne infantry battalion can be airdropped.

(d) The airborne infantry battalion cannot participate in sustained combat operations without reinforcement.

(e) The airborne infantry battalion can make airborne assaults by parachute.

(2) Other than the qualifications stated above, the airborne infantry battalion is organized and operates in the same manner as the infantry battalion. The remarks contained in paragraph 3-13 are applicable to the airborne infantry battalion.

b. Employment. FM 7-20 contains details on the employment of the airborne infantry battalion.

3-15. Airmobile Infantry Battalion

a. General.

(1) The principal differences between the airmobile infantry and other infantry battalions are as follows:

(a) The airmobile infantry battalion has approximately 10 percent fewer personnel than other infantry battalions.

(b) The airmobile infantry battalion has less firepower than other infantry battalions.

(c) The airmobile infantry battalion normally requires reinforcement for sustained combat operations.

(d) Personnel of the airmobile infantry battalion receive intensified training in airmobile operations.

(e) The airmobile infantry battalion has less equipment and fewer types of equipment than other infantry battalions.

(2) Other than the differences listed above, the airmobile infantry battalion is organized and operates in the same manner as the infantry battalion. The remarks contained in paragraph 3-13 are applicable to the airmobile infantry battalion.

b. Employment. FM 7-20 contains details on the employment of the airmobile infantry battalion.

3-16. Mechanized Infantry Battalion

a. General.

(1) In general the mechanized infantry battalion performs the same types of missions and has the same capabilities as the infantry battalion, except that its organic armored personnel carriers provide it additional firepower, greater mobility, protection, and communications. The battalion is especially suited for employment in exploitation, pursuit, and mobile counterattack operations.

(2) The mechanized infantry battalion requires more combat service support than infantry or airborne infantry battalions. It is also more sensitive to difficult terrain, obstacles, and barriers than other infantry battalions. Over trafficable terrain, its organic armored personnel carriers allow the battalion to be employed more rapidly and on a wider front than the other infantry battalions.

(3) The mechanized infantry battalion in the armored and mechanized divisions is normally attached to a brigade. The brigade can employ the battalion without attachments or can cross-reinforce the battalion to form a combined arms task force.

(4) When attached to the infantry or airborne divisions, the mechanized infantry battalion increases the infantry strength, improves the division's tactical mobility, and provides the division a force trained and equipped for mobile operations.

b. Employment. FM 7-20 and FM 17-20 con-

tain details on the employment of the mechanized infantry battalion.

3-17. Tank Battalion

a. General.

(1) The tank battalion closes with and destroys enemy forces using fire, maneuver, and shock effect.

(2) The tank battalion is well suited to operations that require mobility, direct firepower, and armor protection. It is well adapted for exploitation, pursuit, disruption of the enemy's rear, and mobile defense. It contributes mobility, firepower, and shock effect to the tank-infantry team. Armor shielding reduces the vulnerability of personnel to hostile fire and permits rapid exploitation through contaminated areas.

(3) A tank battalion requires more combat service support than infantry, mechanized infantry, and airborne infantry battalions. The tank battalion has more difficulty than infantry battalions in crossing difficult terrain and barriers.

(4) The primary fighting vehicles (tanks) of the tank battalion are not air transportable.

(5) The tank battalion of the armored division is normally attached to a brigade. It can be employed without attachments or it can be cross-reinforced to form a combined arms task force.

(6) The tank battalion in the infantry and mechanized divisions is employed in roles that take advantage of its firepower, armor protection, and mobility. In the infantry division the tank battalion is normally attached to a brigade to add to the brigade's firepower and to the depth of antitank defense. In the mechanized division, the tank battalion is normally cross-reinforced to form a combined arms task force. The tank battalion of the armored division can be employed to reinforce other units in offensive and defensive operations, can be cross-reinforced to form a combined arms task force, or can be employed without attachments.

b. Employment. FM 17-1 and FM 17-15 contain details on the employment of the tank battalion.

Section III. ORGANIZATION FOR COMBAT

3-18. Division Organization for Combat

a. Control of the division is exercised through 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 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 maneuver battalion.

b. Division troops include those units and commands not attached to a brigade, support command, or division artillery.

c. In making his estimate of the situation, the division commander analyzes each factor to decide which grouping of maneuver battalions and support units within each brigade can 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 opera-

tions. The organization for combat is covered in the division operation order. FM 101-5 contains examples of methods of showing the division organization for combat.

d. Particular considerations in division organization for combat in offensive, defensive, and retrograde operations are discussed in chapters 6, 7, and 8.

3-19. Brigade Organization for Combat

a. Combat elements attached to brigades and combat support elements placed in support of brigades are employed as pure units or are cross-attached to form task forces or teams built around battalions or companies. The brigade commander normally organizes battalion task forces consisting of tank-infantry teams supported by artillery and engineers. Mission, terrain and weather, enemy situation, troops available, current location and disposition of units, and maneuver space are considered in determining the organization.

b. FM 7-30 and FM 17-30 contain details on organization of the brigade for combat.

CHAPTER 4

COMBAT SUPPORT

(NATO STANAG 2031, CENTO STANAG 2031, SEATO SEASTAG 2031, ABCA SOLOG 43; NATO STANAG 2044, CENTO STANAG 2044, SEATO SEASTAG 2044, ABCA SOLOG 22R; NATO STANAG 2088, CENTO STANAG 2088, ABCA SOLOG 108)

Section I. GENERAL

4-1. General

a. Combat support is the operational assistance furnished combat elements by other designated units.

b. Tables of organization and equipment (TOE) authorize the necessary personnel and equipment to support division combat operations in either a nuclear or nonnuclear environment. These tables of organization and equipment are designed for worldwide application. They provide the division with the minimum essential personnel and equipment necessary to accomplish its mission in a conventional combat environment. In stability operations or unusual operational environments or situations, the division requires additional personnel and equipment, special skills, and special-purpose equipment. These additional requirements are met by backup support units, modification of tables of organization and equipment, or attachment of cellular teams.

c. The division may be required to support elements of other Services attached to or supporting the division. The degree of support is as prescribed in the order of attachment or as directed by higher headquarters.

4-2. Organic Combat Support

The organic combat support units of the division are division artillery; the air defense artillery, engineer, and signal battalions; the aviation battalion in the airborne and infantry divisions; and the aviation group in the airmobile division.

4-3. Nonorganic Combat Support

a. Combat support units are normally availa-

ble from corps and field army to furnish special skills, special-purpose equipment, or additional support. These units may be attached to, or placed in support of, the division as required by the division mission and area of operations.

b. Combat support units normally attached to, or in support of, the division include field artillery, military intelligence, and Army Security Agency units. Other attachments or support may include Army aviation, air defense artillery, chemical, engineer, psychological operations, signal, and additional intelligence units.

c. The division normally also receives combat support from the Air Force and may receive close air support and naval gunfire support from the Navy.

4-4. Stability Operations

a. Conventional battle positions are seldom established in stability operations; therefore, operations against insurgent forces involve special support considerations. These considerations include developing, improving, and maintaining base camp complexes; centralizing combat service support activities in base camps; placing a high degree of reliance on air lines of communications; increasing the use of airmobile operations; and providing maximum mobility to combat support units.

b. Combat support problems of the division are magnified during stability operations. The manuals applicable to combat support units of the division, listed in appendix A, discuss these problems in detail.

Section II. FIRE SUPPORT

4-5. General

a. Firepower is one of the principal elements of combat power of the division. It is composed of all fires under the direct control of the commander as well as those supporting fires that are available to him.

b. The primary function of fire support units is to provide continuous and timely fire support to combat units by locating, identifying, and neutralizing or destroying those targets most likely to impede movement and to hinder the division mission.

c. The division artillery is the division's primary organic source of indirect fire support. The firepower of the division artillery is augmented by close air support, armed helicopters, air defense artillery fire support means, artillery resources of higher headquarters, and, when feasible, naval gunfire. The units providing this additional firepower can be attached to the division, or they can be assigned tactical missions that require them to support the division with all or a part of their fires.

d. FM 6-20-1 and FM 6-20-2 contain detailed fire support techniques and procedures.

4-6. Fire Support Coordination

a. The division commander is responsible for coordinating all supporting fires. He gives his personal attention to the planning, coordination, and employment of the organic and supporting nuclear, biological, chemical, and conventional fires since these fires compose a major part of the division's combat power.

b. The division artillery commander is the principal adviser to the division commander on fire support matters and is normally the fire support coordinator. In brigade and lower headquarters, the commander or liaison officer from the supporting artillery unit performs this function.

c. The fire support coordinator is responsible for preparation of the fire support plan based on the commander's concept and established policies. He coordinates all fire support. FM 6-20-1, FM 6-20-2, and FM 101-5 discuss fire support coordination and the duties of the fire support coordinator in detail.

d. The fire support coordinator normally carries out his functions through the fire support element of the tactical operations center. FM 6-20-2 and FM 101-5 discuss the operation of the fire support element and the representatives normally located therein.

4-7. Fire Support Plan

a. Development.

(1) The fire support element prepares the division fire support plan. When the fire support plan is approved by the commander, it becomes an annex to the operation order. The plan provides for coordination of all fire support available to the division. It contains the commander's concept of fire support and provides specific orders and instructions to fire support agencies.

(2) The formality of the fire support plan varies with the echelon of command and available planning time. At company level, the plan usually consists of no more than a target list. At battalion level, the plan becomes more formal. It includes all artillery fires and may include nuclear fires, aerial fires, and naval gunfire; however, nuclear fires, aerial fires, and naval gunfire are not normally included as a part of the fire support plan below brigade level.

(3) Fire requests initiated by the companies are coordinated and integrated with the battalion fire support plan. 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 and fire support plans developed by subordinate echelons are coordinated with the division's requirements and formalized into the division 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, air fire plan, and armed helicopter fire plan. The artillery fire plan includes plans for use of air defense artillery in the ground role. These plans are published as appendixes to the fire support annex of the operation order. Normally, nuclear fires

are included in the fire support plans of the appropriate fire support agency, and no separate nuclear fire plan is prepared. However, the nature and quantity of information may warrant preparation of a separate nuclear fire plan. When prepared, the nuclear fire plan becomes an appendix to the fire support plan and is referenced in other appendixes of the fire support annex. FM 101-5 contains an example of a division fire support plan.

4-8. Nuclear Fires

a. Nuclear munitions are allocated to commanders for planning purposes. The allocation is for a specific period, a specific mission, or a selected phase of an operation. It is expressed as a specific number of complete rounds in terms of the delivery system and yield. These munitions are employed only after receipt of specific authorization for expenditure. Release authority is a command action. This authority may be delegated to subordinate commanders within prescribed limits.

b. Commanders may have releasing or executing authority. A releasing commander is a commander who has the authority to approve the expenditure of nuclear munitions. An executing commander is a commander who has the authority to expend nuclear munitions against a specific target or in accordance with approved plans.

c. Execution authority normally is delegated to the lowest commander whose area of operations encompasses the predicted probable area of significant fallout, contamination, and downwind hazard. Casualty-producing levels of fallout and contamination from nuclear munitions can extend to greater distances, can cover larger areas, and can prevail for longer periods than the effects of other munitions. Accordingly, when these effects extend into an adjacent commander's area of responsibility, the concurrence of the affected commander must be obtained or the matter decided at the appropriate higher headquarters. When nuclear munitions are to be delivered by other Services, the supported ground commander must specify the target, time of attack, troop safety measures, and prediction of fallout or contamination patterns.

d. FM 101-31-1 provides doctrine and procedures for the employment of nuclear weapons.

4-9. Fire Support Requests

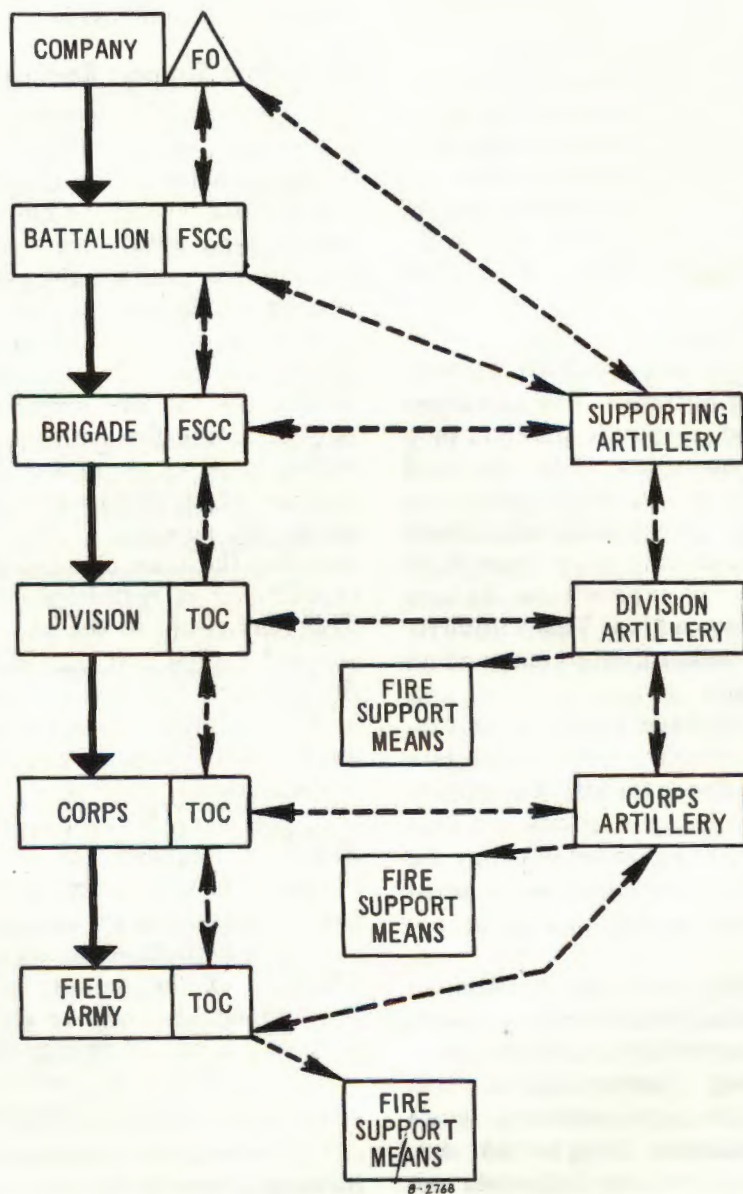
a. *General.* The lowest fire support echelon possessing the means to meet the needs of the requester satisfies the request for fire support. The fire support coordinator is responsible for determining which fire support means will be employed to produce the results desired by the requester. The commander requesting fire support states the location of the target and the results desired. The fire support coordinator determines the fire support means to be employed. If the fire support coordinator is permitted to select the means used he can take advantage of all skills available and can provide better fire support. If the combat commander specifies the type of support, the fire support coordinator is restricted to certain resources. This may result in the use of less effective fire support means and may delay the delivery of fire support. The types of requests, techniques, and procedures for requesting each type of fire support are discussed in detail in the subparagraphs below.

b. *Nuclear, Biological, and Chemical Fire Requests.* Requests for nuclear, biological, or chemical fires are transmitted through command channels to the commander or his representative authorized to act on the request. Notification of the request is also sent through fire support channels to alert the fire support units and to insure prompt delivery of fire. Figure 4-1 illustrates nuclear, biological, and chemical fire request channels.

c. *Conventional Artillery Fire Requests.* The forward observer of the supported unit sends requests for conventional artillery fires and illumination direct to the fire direction center (FDC) of the supporting artillery. This FDC requests any additional fires or illumination required from a reinforcing artillery unit or from the FDC of the next higher echelon. Figure 4-2 illustrates conventional artillery and illumination fire request channels.

d. *Close Air Support Requests.*

(1) Requests for close air support can be initiated at any level of command. These requests can be either immediate or preplanned.



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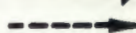
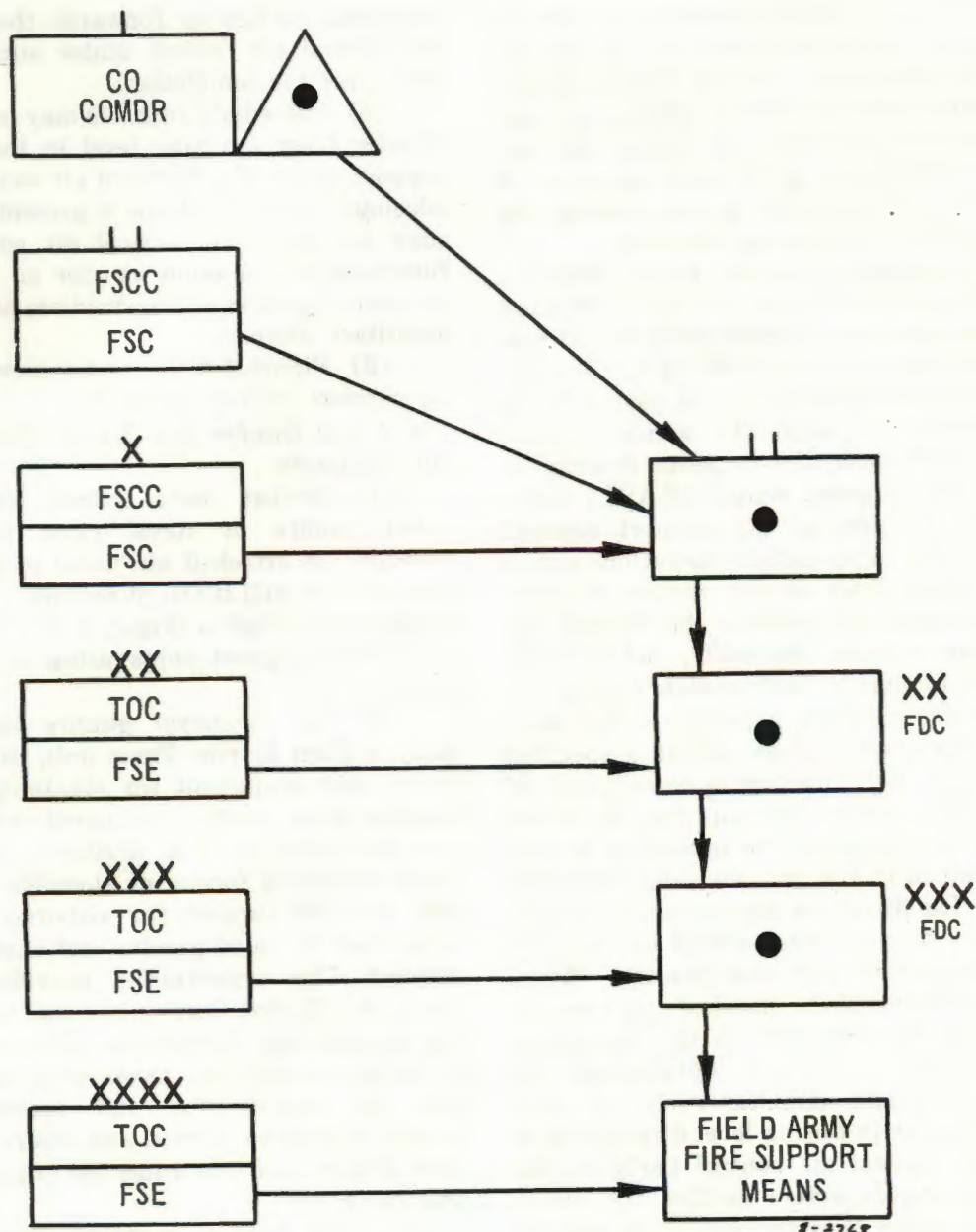
-  Fire support request through command channels.
 Notification of request through fire support channels.

Figure 4-1. Nuclear, biological, and chemical fire request channels.

(2) The supported ground commander or his representative approves or disapproves all requests. Members of the air element providing close air support act in an advisory capacity only.

(3) Requests for preplanned close air support missions are submitted through command channels to the tactical operations center at division and higher echelons or to the fire support coordination center at battalion and bri-



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→ Conventional artillery and illumination requests.

Figure 4-2. Conventional artillery and illumination fire request channels.

gade level. They form the basis for the air fire plan. The tactical operations center or fire support coordination center at each level of command evaluates, consolidates, and, if approved,

assigns a priority, and forwards the requests to the next higher echelon. The tactical air support element of the tactical operations center at field army level normally makes the final

consolidation and obtains approval of the requests. After obtaining approval of the requests, the tactical air support element passes the requests to the Air Force tactical air control center for execution and notifies the originator of the approval through channels. If the request is disapproved at any echelon, the requester is notified through channels.

(4) Immediate requests below battalion level are forwarded to the battalion command post by the most rapid means available. At battalion level, requests are validated by the commander or his representative and passed to the tactical air control party. The tactical air control party transmits the requests directly to the direct air support center (DASC) collocated with the tactical air support element (TASE) of the corps tactical operations center (CTOC). Tactical air control parties at intermediate headquarters monitor the request and acknowledge receipt. Normally, acknowledgment of the request by intermediate tactical air control parties indicates approval by the associated headquarters; unless, within a specified period of time, a disapproval is transmitted. If a commander desires that approval be stated by specific transmission, the procedure is normally contained in the unit standing operating procedure. The direct air support center passes the requests to the corps tactical air support element for action and coordination. Meanwhile, the intermediate tactical air control parties pass the requests to the associated headquarters for action and coordination. All echelons coordinate simultaneously. If any echelon above the initiating level disapproves a request, the tactical air control party at the disapproving headquarters notifies the direct air support center and the initiating tactical air control party, and the request is canceled. If the headquarters where the direct air support center is located or a higher headquarters disapproves the request, the direct air support center notifies the originator and the request is canceled. If the request is approved by the commander or his representative at the direct air support center level, the direct air support center orders the mission to be flown from allocated sorties. If all allocated sorties are committed, the direct air support center obtains

additional sorties or forwards the request to the tactical air control center supporting the field army for completion.

(5) Immediate requests may be forwarded directly from company level to the direct air support center if a forward air controller with adequate communications is present. If this occurs, the battalion tactical air control party functions in the same manner as the tactical air control parties of intermediate headquarters described above.

(6) Figure 4-3 illustrates immediate close air support request channels.

e. Naval Gunfire and Naval Close Air Support Requests.

(1) Combat units submit requests for naval gunfire or naval close air support through the attached 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.

(2) The air/naval gunfire liaison company, a Fleet Marine Force unit, provides personnel and equipment for obtaining and controlling naval gunfire and naval close air support furnished to U.S. divisions. Allied divisions, combined forces, or elements thereof. It also provides support for airborne operations supported by naval gunfire and naval close air support. This organization provides qualified Navy and Marine Corps personnel to advise on the capabilities, limitations, and employment of naval gunfire and naval close air support and the organization and communications needed to request, direct, and control this support. Figure 4-4 illustrates the organization of this company.

(3) FM 6-20-2 contains detailed techniques and procedures for the employment of naval gunfire.

f. Armed Helicopter Fire Support Requests.

(1) Any level can initiate requests for armed helicopter fire support. These requests are either immediate or preplanned. Requests are satisfied at the lowest echelon possessing the organic, attached, or supporting aircraft capable of fulfilling the requester's needs.

(2) Requests for preplanned armed helicopter fire support are submitted to the fire

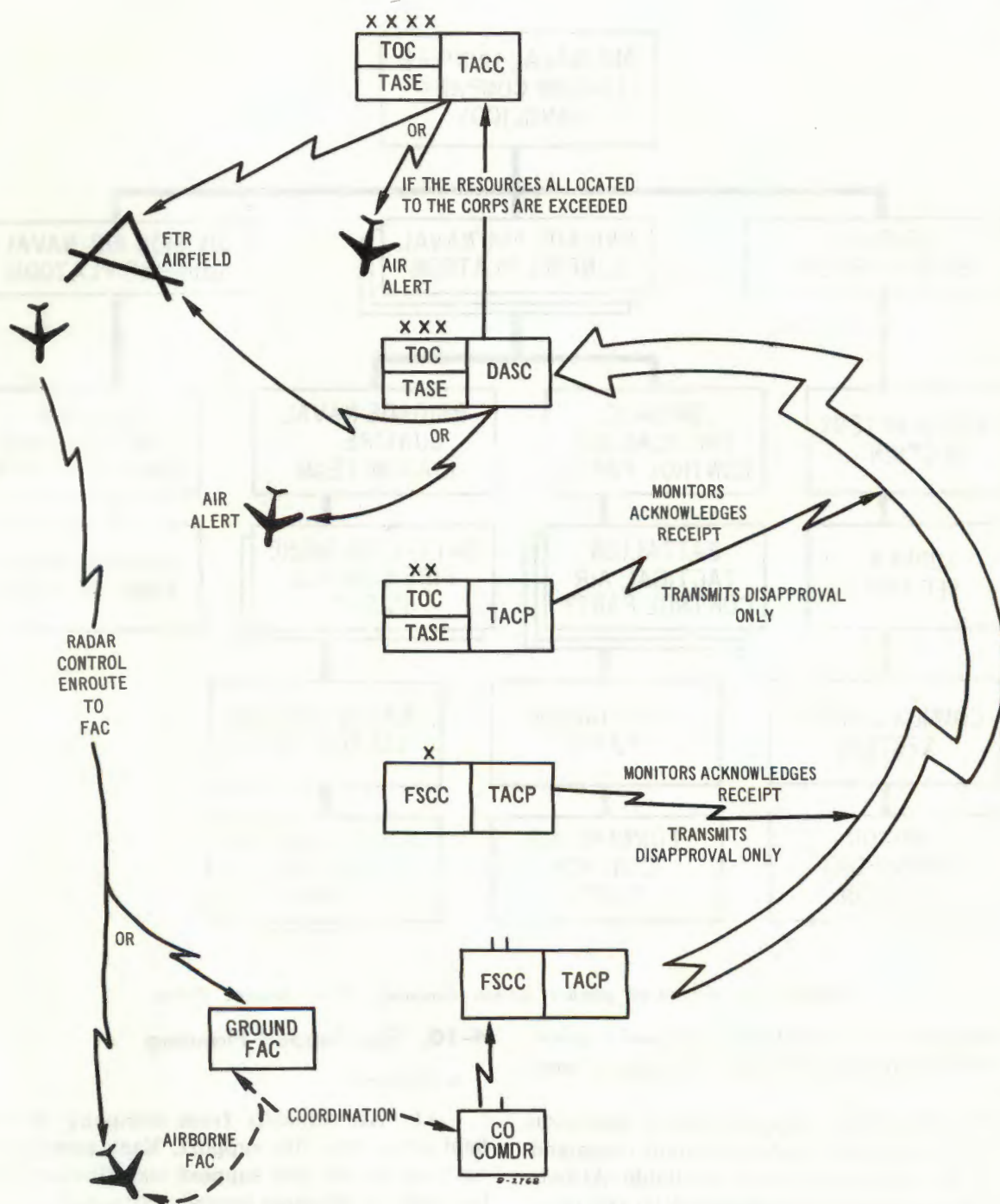


Figure 4-3. Immediate close air support request channels.

support coordination center at battalion and brigade level or the tactical operations center at division and higher echelons. They form the

basis for the armed helicopter fire support plan. If the requests are not within the capability of aerial resources immediately availa-

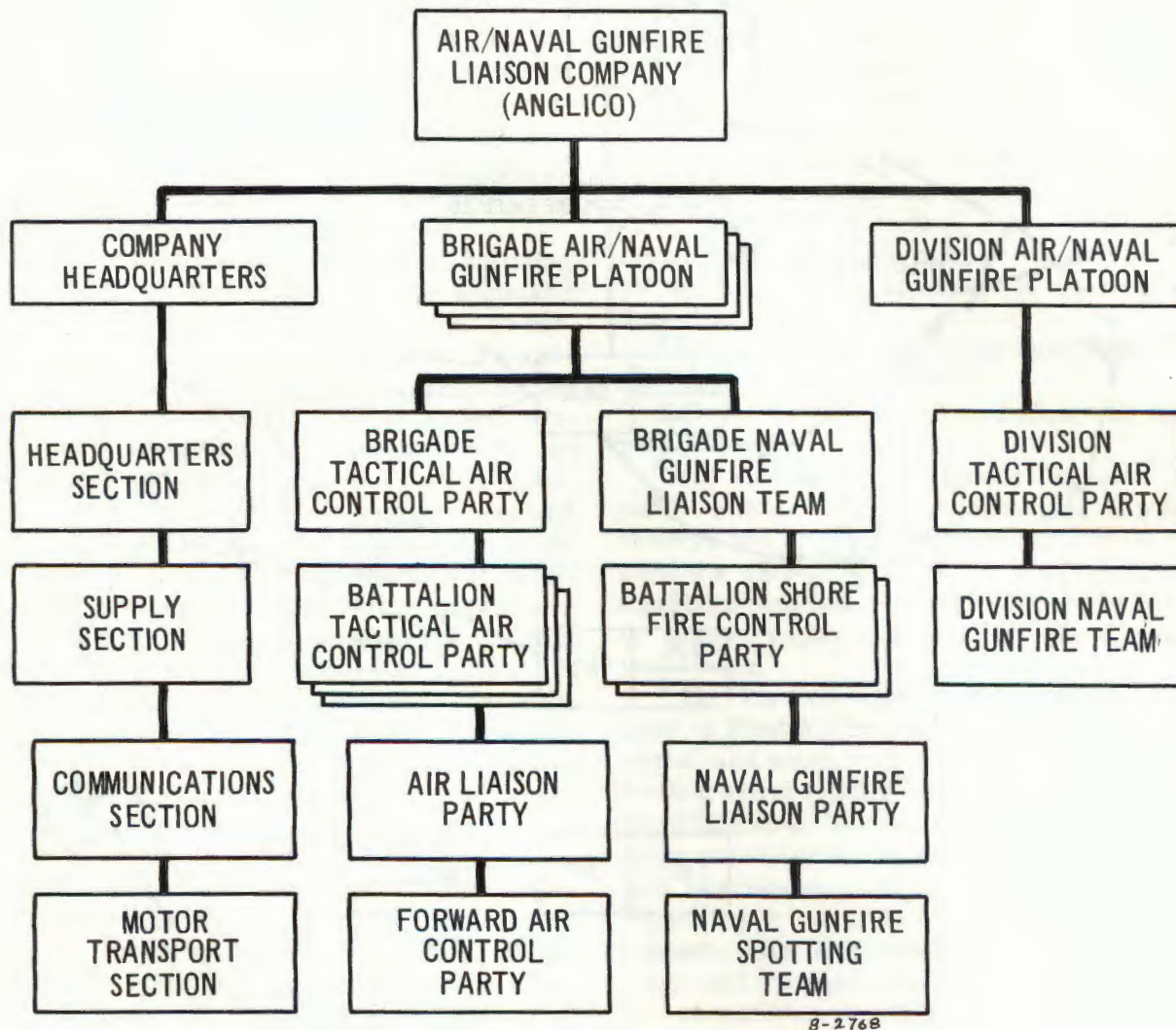


Figure 4-4. Air/naval gunfire liaison company, Fleet Marine Force.

ble, requests are consolidated, assigned a priority, and forwarded to the next echelon of command.

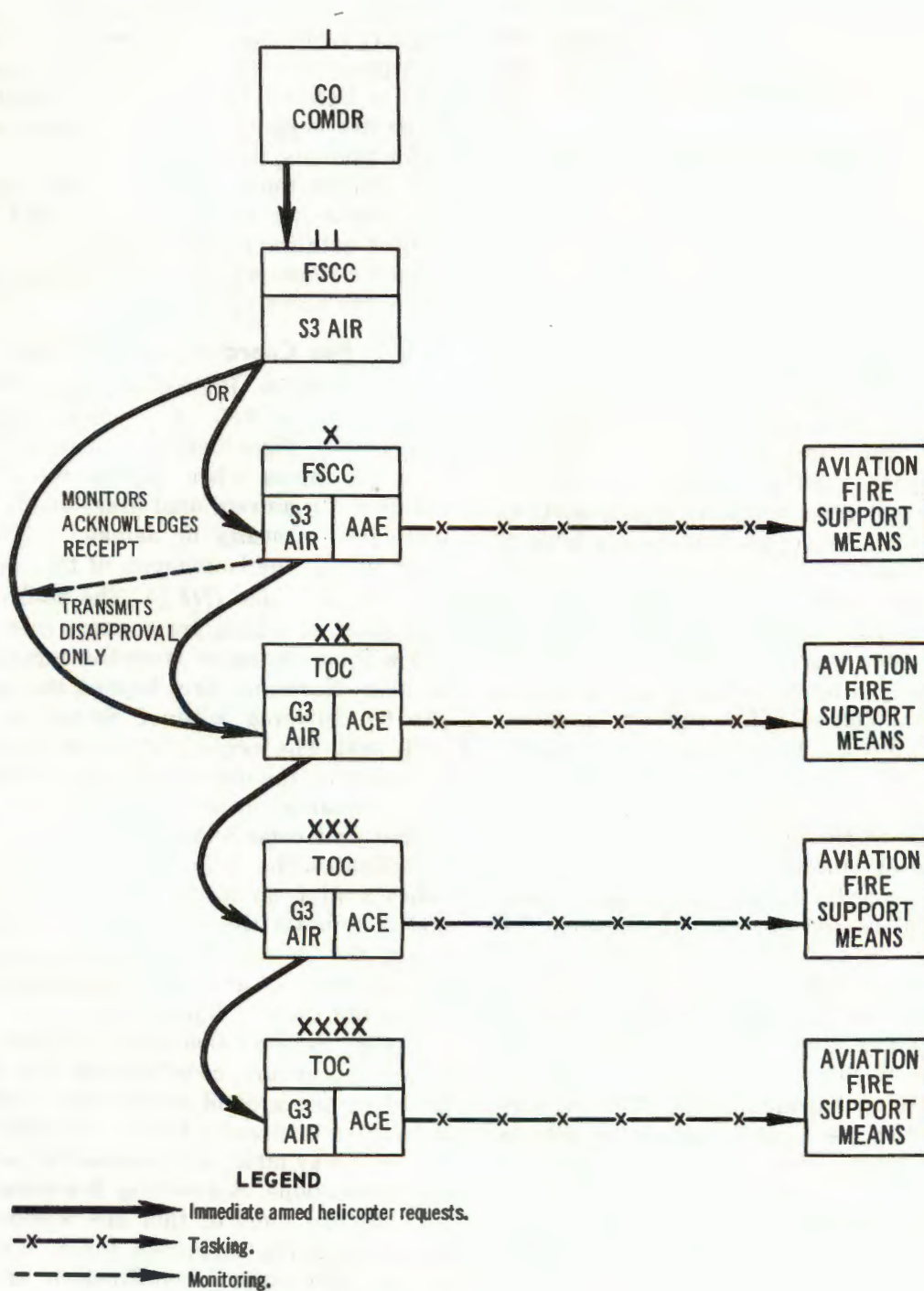
(3) Immediate requests below battalion level are forwarded to the battalion command post by the most rapid means available. At battalion level, requests are validated by the commander or his representative and forwarded to brigade or division. Brigade or division satisfies the request from organic, attached, or supporting aircraft resources or forwards the request to the next higher echelon.

(4) Figure 4-5 illustrates immediate armed helicopter fire request channels.

4-10. Fire Support Planning

a. General.

(1) All echelons from company through field army plan fire support. Each commander, assisted by his fire support coordinator, plans the fires of weapons organic, attached, or supporting his command. He requests any additional fires required from the next higher echelon. The higher echelon may make additional fire support units available or may plan fires on targets selected by the subordinate commander. Fire support plans of subordinate commands are coordinated and approved at



NOTE: Requests are satisfied at the lowest echelon capable of fulfilling the requester's needs.

Figure 4-5. Immediate armed helicopter fire request channels.

each echelon to insure integration with the scheme of maneuver or plan of defense. Fire support planning is a continuous process and does not cease with the publication of the fire support plan.

(2) The completed fire support plan is published as an annex to the operation order. Details concerning the employment of artillery, armed helicopters, close air support, naval gunfire, and other fire support means are published as appendixes to the fire support annex.

b. Development.

(1) Fire support planning begins simultaneously at all levels. At company, the company commander, the forward observers from the direct support artillery battalion and the heavy mortar platoon, and representatives from any other fire support means available to the company prepare the company fire plan. At battalion, the company fire support plan is coordinated with the plans of other companies of the battalion and a battalion fire support plan is developed by the artillery liaison officer located in the battalion fire support coordination center (FSCC). Fire support requirements in the form of battalion fire support plans are forwarded to the S3 of the direct support artillery battalion of the brigade and to the brigade artillery liaison officer. The brigade artillery liaison officer coordinates the fire support plans of the battalions and prepares the brigade fire support plan in coordination with the brigade S3, other fire support representatives, and the S3 of the direct support artillery battalion. The brigade fire support plan is forwarded to the division artillery S3 through the direct support artillery battalion and to the fire support element in the division tactical operations center. Any known requirements for additional fires are forwarded with the brigade fire support plan. After requirements are integrated in the division plan, the plan becomes an annex to the brigade operation order.

(2) The fire support element, in coordination with the G3, the division artillery S3, the chemical officer, and other fire support representatives, determines the division's requirements for fire support. The division's fire support requirements, including nuclear and

chemical fires, are integrated with brigade fire support requirements and the division fire support plan is prepared. The division fire support plan is disseminated to the corps artillery; the corps fire support element; organic, attached, and supporting fire support agencies; and adjacent combat units. Additional fire support requirements not previously submitted are forwarded with the fire support plan.

c. Fire Planning Channels. Figure 4-6 illustrates fire planning channels.

4-11. Fire Coordination Measures

a. Boundaries. Boundaries are used to coordinate fires as well as to assign areas of responsibility. Fires must be coordinated with the adjacent forces when the effects of nuclear, chemical, or conventional fires employed by one force have casualty or damage producing effects outside the boundaries of the using force.

b. No-Fire Line (NFL). The no-fire line is a line short of which fire support means cannot fire without clearance from the supported commander. Normally, fires beyond the no-fire line can be delivered without danger to friendly personnel. The location of the no-fire line is established by the direct support artillery battalion commander in coordination with the supported unit commander. The division artillery consolidates the brigade no-fire lines, establishes a division no-fire line when necessary, and distributes the information on the no-fire line to the division fire support element and to higher, organic, attached, supporting, and adjacent fire support units.

c. Fire Support Coordination Line (FSCL). The fire support coordination line is established by the ground commander to insure coordination of fires by forces not under his control that may affect his command's current tactical operations. Supporting fire support units will not fire short of this line without coordinating with the supported force. When possible, the fire support coordination line follows well-defined terrain features. Normally the fire support coordination line is established by the corps commander in coordination with the fire support coordinator, the tactical air commander, and the commanders of other fire support means, based on recommendations of sub-

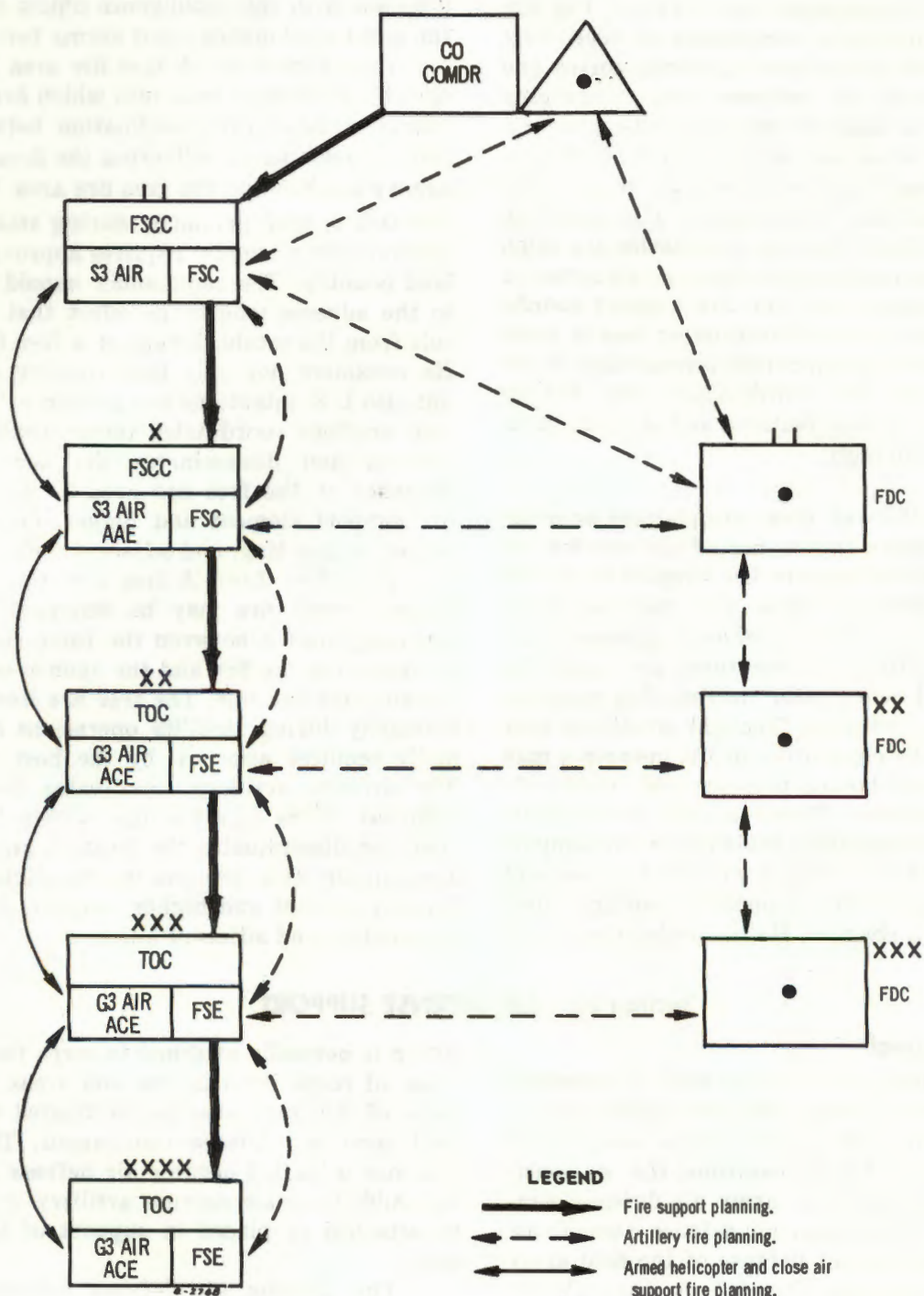


Figure 4-6. Fire planning channels.

ordinate commanders. When the division is engaged in independent operations, the division

commander establishes the fire support coordination line.

d. Fire Coordination Line (FCL). The fire coordination line 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, high-angle, close air support, and other supporting fires. Units will not fire beyond this line without first coordinating with units on the other side of the line. Boundaries are often used as fire coordination lines in airborne or airmobile operations. The fire support coordinator selects the fire coordination line in coordination with the supported commander. When possible, the fire coordination line follows well-defined terrain features and is easily identifiable on the map.

e. Planned Fires. Fires are planned on areas or points where the supported commander anticipates he will require fire support to accomplish his mission. These fires may be either scheduled or on call. Although planned fires and fire coordination measures are used, the fire support coordinator insures that plans do not become inflexible. Tactical situations may change or the momentum of the operation may be such that planned fires are not feasible or are not required. Therefore, the fire support coordinator constantly reviews the fire support plan, looks ahead, and is prepared to reorient the command's fire support capability when the situation changes. He maintains close coordination with the intelligence officer to obtain the latest intelligence about enemy forces.

dination with the intelligence officer to obtain the latest intelligence about enemy forces.

f. Free Fire Area. A free fire area is a specifically designated area into which fire may be placed without any coordination between the force requesting or delivering the fires and the agency establishing the free fire area. The free fire area is used primarily during stability operations and normally requires approval by the host country. The commander should be alert to the adverse long-range effect that may result from the establishment of a free fire area. He considers not only host country attitudes but also U.S. intentions and guidance. The division artillery coordinates these areas for the division and disseminates the location and guidance on the free fire area to the division fire support element and higher, organic, attached, supporting, and adjacent units.

g. Free Fire Line. A free fire line is a line beyond which fire may be delivered without any coordination between the force requesting or delivering the fire and the agency establishing the free fire line. The free fire line is used primarily during stability operations and normally requires approval by the host country. The division artillery coordinates the establishment of the free fire line within the division and disseminates the location and guidance on the free fire line to the division fire support element and higher, organic, attached, supporting, and adjacent units.

Section III. AIR DEFENSE SUPPORT

4-12. General

a. The field army commander is normally responsible for control and operational employment of Army air defense means assigned to the field army. He accomplishes this responsibility through the field army air defense commander. The field army air defense commander is responsible for air defense of the field army forces. He provides this defense through the field army air defense organization—normally an air defense artillery brigade.

b. The field army air defense units, in coordination with theater air defense units, provide air defense of vital areas, installations, and units of the field army. An air defense artillery

group is normally attached to corps for air defense of corps installations and areas. Air defense of the corps area is coordinated with the field army air defense commander. The division has a limited organic air defense capability. Additional air defense artillery units may be attached or placed in support of the division.

c. The division air defense artillery commander develops plans for the employment of organic, attached, or supporting air defense elements, coordinates the plans with adjacent and higher headquarters, and prepares the air defense annex. If no air defense representative is available from organic, attached, or sup-

porting air defense units, the G3 advises the commander on air defense matters.

d. The air defense intelligence means of all air defense artillery units are integrated with the air defense intelligence system for early warning information, transmission of flash messages, and dissemination of information and instructions.

e. During an air attack of a defended area, air defense units engage enemy aircraft in accordance with the rules for engagement in effect in the command.

f. When not required for air defense, air defense artillery units that possess a surface-to-surface capability provide additional fires in support of ground tactical operations. These fires are integrated with other fire support and are coordinated by the fire support coordinator.

4-13. Employment of Air Defense Artillery

a. The division normally retains air defense artillery support under its control. The organic air defense artillery commander is the division air defense officer and is responsible for control and operational employment of organic and attached air defense means. He coordinates the employment of any additional air defense means supporting the division.

b. Air defense artillery units defend areas, installations, or units in accordance with priorities established by the division commander.

c. When the division is in reserve, divisional air defense forces normally contribute to the overall rear area low-altitude air defense as well as to the defense of divisional areas, installations, and units.

d. Air defense artillery is provided to the division during movement and at critical points along the route of march. Air defense artillery units move in the column or move by bounds to selected sites along the route of march. Normally the division uses a combination of these means of employment.

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

f. FM 44-1 contains doctrine for the employment of air defense artillery. FM 44-3 dis-

cusses procedures for the employment of air defense artillery weapons organic to the division.

4-14. Division Air Defense

a. Air defense of the division area is provided by organic, attached, or supporting air defense artillery organizations, Redeye air defense weapons, and individual and crew-served automatic weapons.

b. The organic air defense artillery unit provides air defense for the division against attack by low-altitude hostile aircraft.

(1) The air defense artillery automatic weapons (Vulcan) normally provide local air defense to combat, combat support, and combat service support area, installations, and units in the division area. These weapons provide air defense for fixed and mobile installations against low-flying hostile aircraft when these aircraft can be engaged visually. Their mobility and firepower can also be exploited by assigning them a mission of ground support. This mission should not interfere with their primary mission of air defense. Support of ground tactical operations normally is assigned only in the absence of an air threat.

(2) The air defense artillery missile weapons (Chaparral) provide area air defense for combat, combat support, and combat service support units and installations in the division area. These weapons are deployed forward and along likely low-altitude avenues of approach. If avenues of approach are not clearly defined, air defense artillery missile weapons are distributed throughout the division area. Particular attention is given to folds of the earth where other air defense weapons might not be able to detect or engage a hostile aircraft.

(3) The two weapon systems use different concepts of employment to take maximum advantage of their capabilities. The two systems complement each other: each system overcomes or reduces the limitations of the other system. Therefore, the preferred method of employment is to integrate the two weapons systems.

(4) FM 44-1 and FM 44-3 provide details of employment for the Vulcan and Chaparral weapons.

c. The Redeye air defense weapons, organic to combat and combat support battalions, operate near the forward edge of the battle area to provide a fair weather capability for air defense against low-altitude hostile aircraft. FM 7-20, FM 17-20, FM 23-17, FM 23-17A, and FM 44-1 contain techniques and procedures for the employment of the Redeye air defense weapons system.

d. The air defense capability of non-air defense weapons should not be overlooked when planning for air defense. A substantial low altitude threat in the combat theater may be partially countered by the aggressive use of the large volume of fire from non-air defense weapons such as individual small arms and automatic weapons. Exercise of the individual and collective right of self-defense against hostile aircraft must be emphasized in all training, and rules for engagement must be in all standing operating procedures; however, indiscriminate use of non-air defense weapons must be prevented. Engagement of hostile aircraft in immediate self-defense should be emphasized in training.

(1) In the absence of orders to the contrary, individual and crew-served weapons personnel engage attacking aircraft; all other hostile aircraft are engaged on order or as prescribed in the unit standing operating procedure. Commanders issue such orders through the chain of command and insure that engagement is supervised by unit leaders. Action is

not taken which is prejudicial to the primary mission of the unit.

(2) Low-speed enemy aircraft are engaged with aimed fire employing the maximum rate of fire.

(3) High-speed enemy aircraft are engaged with maximum fire aimed well in front and above the flightpath of the aircraft. This forces the aircraft to fly through a pattern of fire.

(4) Automatic weapons use the highest practical proportion of tracer ammunition to enhance the deterrent or disruptive effect.

(5) Units employ a massed fire technique when using small arms and automatic weapons in air defense roles, i.e., unit leaders direct fires to mass the available fires against a selected target.

(6) FM 23-65 contains aerial gunnery techniques generally applicable to all individual small arms and automatic weapons.

4-15. Air Defense Early Warning

The division army air defense command post or the airspace control element (ACE) at the division tactical operations center provides early warning of hostile aircraft. This warning normally is received externally from air defense channels and internally from elements of the organic air defense artillery unit. Air defense early warning information is disseminated as quickly as possible over the division warning broadcast net to alert the Redeye air defense weapon system and to permit non-air defense units to take passive air defense actions.

Section IV. INTELLIGENCE SUPPORT

4-16. General

a. Intelligence agencies of higher echelons supplement the division's intelligence capabilities. FM 30-5, FM 32-10, and other appropriate field manuals listed in appendix A and referenced in this section prescribe detailed intelligence procedures.

b. The G2 collects information, processes it into intelligence, and insures its timely dissemination to all staff sections, and higher, lower, supporting, and adjacent units. Information

collection is continuous. Intelligence is disseminated as it is processed to allow concurrent planning. Planning is initiated when the division mission is received and continues throughout an operation. The transmission of target acquisition information to the fire support element normally takes precedence over the dissemination of intelligence.

c. An operations and intelligence net provides direct communication between division headquarters and the major subordinate tactical units.

4-17. Reconnaissance

a. General. Effective reconnaissance provides necessary information about the enemy, terrain, and weather. All division units must fully exploit their organic reconnaissance capabilities. The G2 insures that these activities are coordinated and integrated into the division's reconnaissance program and tactical plans. To accomplish this, he prepares the division collection plan and supervises the intelligence collection effort of the division. He uses all available information-gathering means. One information-gathering means must not be relied on exclusively.

b. Ground Reconnaissance. The division cavalry squadron is the principal ground reconnaissance unit of all divisions. In addition, each maneuver battalion has an organic ground reconnaissance capability. The range of these ground reconnaissance elements can be extended by providing them with air transportation. 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 ground reconnaissance patrols can penetrate enemy positions and obtain information. Mobility and the availability of sophisticated aerial sensors do not eliminate the need for aggressive ground reconnaissance.

c. Air Reconnaissance.

(1) *General.* Air reconnaissance must be coordinated with ground reconnaissance. It is continuous to the extent permitted by resources. The G2 exploits all air reconnaissance means.

(2) *Army aviation.*

(a) Army aviation supports and reinforces ground reconnaissance. Army aircraft have the range, speed, and special sensory equipment to cover large areas rapidly. This capability to cover large areas rapidly allows ground reconnaissance elements to concentrate on areas of greatest intelligence productivity. Army aviation extends the range of ground reconnaissance elements by providing them with air transportation to their starting point and picking them up at prearranged locations.

(b) Organic rotary-wing aircraft give the division a visual observation capability; however, none of these aircraft, except those of the cavalry squadron, has the primary mission of visual air reconnaissance. The G2, in coordination with the G3, develops procedures to take advantage of the information-gathering capability of Army aircraft without interfering with their primary missions of command, control, and combat support.

(c) Attached or supporting aerial surveillance units from corps or field army provide day and night aerial photography, near all-weather aerial radar and infrared imagery, and daylight visual reconnaissance. This support includes transmission of infrared and radar images to the supporting ground sensor terminals. Processing is very rapid and interpretation can be accomplished almost immediately. Aerial photography requires normal film processing prior to interpretation. FM 30-20 and FM 30-20-1 (Test) contain details of organization and techniques of employment for Army aerial surveillance units.

(d) The cavalry squadron provides visual reconnaissance and surveillance of the division area of interest as one of its primary tasks.

(e) FM 1-5, FM 1-15, FM 17-36, and FM 30-20 contain detailed procedures for the employment of Army aviation air reconnaissance and surveillance aircraft.

(3) *Other Services.* The capabilities of air reconnaissance elements of the Air Force, Navy, and Marine Corps complement those of Army aviation. Aircraft of these Services possess a wide variety of sensors, have great speed, and can provide radar mapping, aerial photography, electronic surveillance, and weather reconnaissance. These air reconnaissance elements perform reconnaissance missions over the forward combat area and penetrate the airspace over and behind enemy forward combat elements. The greater speed and the capacity of the sensors of the aircraft of these Services enable them to cover large areas more rapidly than Army aircraft; however, their speed requires them to operate at higher altitudes and reduces the information gained by visual observation. The attached Air Force tac-

tical air control party and the Fleet Marine Force air/naval gunfire liaison company (ANGLICO) provide advice and detailed information concerning the employment of Air Force, Navy, and Marine reconnaissance resources as appropriate.

(4) *Requests.*

(a) The G2 air of the tactical air support element in the tactical operations center receives, processes, and coordinates requests for air reconnaissance support. Requests for air reconnaissance support are satisfied by the lowest echelon possessing the means to meet the needs of the requester. When processing the request, the G2 air coordinates with the airspace control element to resolve any conflicts involving simultaneous use of airspace by aerial fire support means, air reconnaissance aircraft, or other aerial vehicles and to arrange for protection of the air reconnaissance vehicle. The G2 air, in coordination with the airspace control element and attached tactical air control parties, determines which sensor will produce the desired information.

(b) The commander requesting air reconnaissance support states the location of the target area, route, or object and the results desired. The G2 air selects the sensor or sensors that will produce the results desired by the requester. This allows the G2 air to take advantage of the variety of sensors and skills available to him and enables him to provide more satisfactory reconnaissance to the combat commander. When the commander asks for a specific type of sensor, the G2 air is restricted in the resources he can use, and receipt of information is often delayed.

(c) The types of requests, the principles, and the procedures for requesting air reconnaissance are the same as those for requesting close air support and armed helicopter support described in paragraph 4-9. 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 through the airspace control element to the Army aviation unit providing support. Requests that are beyond the capability of supporting Army aviation are forwarded to the corps G2 air to be fulfilled by corps or

field army air reconnaissance elements or by reconnaissance aircraft of other Services. Figure 4-7 illustrates air reconnaissance request channels.

4-18. Surveillance

a. *General.* Surveillance is all-weather, day and night, systematic observation of the battle area by visual, electronic, photographic, or other reconnaissance means for intelligence purposes. Combat surveillance is one of the principal means of detecting and locating enemy units, installations, and activities. It includes all techniques necessary to accomplish continuous, all-weather watch over the battle area or over selected portions of the battle area in order to provide timely information for tactical ground operations. Continuous surveillance requires extensive resources and is costly since it normally will require all organic, attached, and supporting air and ground surveillance resources be made available to the G2. Therefore, this technique is employed only when justified by the tactical situation, and then normally over small, selected areas rather than over the entire battle area. The decision to establish a surveillance program is a command decision. Implementation of a surveillance program requires initiative, imagination, and close coordination between the G2 air and aviation elements.

b. *Ground Surveillance.* Ground surveillance is characterized by generally severe line-of-sight limitations, dependence on terrain for movement routes and site locations, and a generally inadequate capability of surface transport to displace surveillance means in time to be responsive to immediate requirements in new areas. Despite these limitations, ground surveillance is essential to all-weather day and night surveillance of the battle area.

c. *Aerial Surveillance.* Aerial surveillance complements ground surveillance since it overcomes the limitations of ground surveillance. Aerial surveillance is characterized by a capability to extend line of sight, to become independent of terrain for movement routes, and to adjust to new requirements rapidly. The mobility of aerial surveillance platforms and their freedom from terrain restrictions provide a ca-

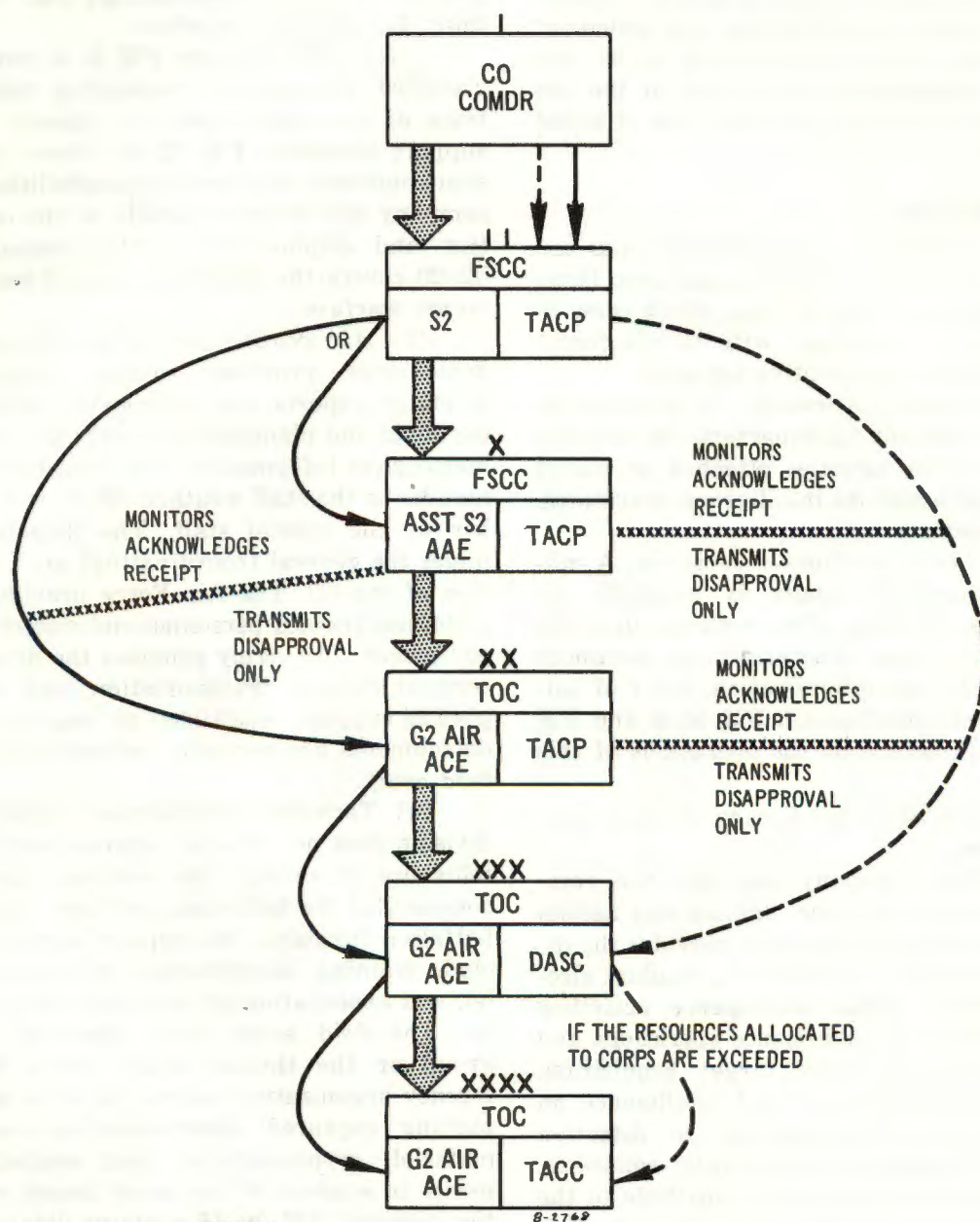


Figure 4-7. Air reconnaissance request channels.

pability to conduct surveillance over large areas and to adjust to new situations rapidly. Generally, visibility restrictions and inclement weather reduce the effectiveness of aerial surveillance. Coordination and control of the use of the airspace may also limit the use of aerial surveillance.

4-19. Agencies

a. Division Agencies. All division units are potential information collecting agencies. However, those units of the division which come in proximity to or in contact with hostile forces are the principal contributing agencies.

b. Nondivisional Agencies. In addition to higher and adjacent headquarters, the division has several other agencies attached or placed in support to assist its intelligence operations. Some of these are:

(1) *Military intelligence company.* A military intelligence company is normally attached to the division. This company provides specialists in image interpretation, document translation, limited interrogation, order of battle, and counterintelligence. FM 30-9 and FM 30-17 contain details on the operations of this unit.

(2) *Army Security Agency division support company.*

(a) This company provides the commander signal intelligence, advises and assists on signal security matters, and provides the division commander a capability to conduct electronic warfare. Signal intelligence activities extend the depth of intelligence operations and contribute to long-range target acquisition. They furnish information and intelligence on hostile forces and locations by the detection and study of hostile electromagnetic emissions. The signal security activities contribute to the counterintelligence effort and to the protection of communications and electronic systems operated within the division. Division electronic warfare activities include active and passive electronic countermeasures against hostile forces and support of division counter-countermeasures operations.

(b) The G2 has primary general (coordinating) staff responsibility for those operations that support intelligence, counterintel-

ligence, and security requirements. The G3 has primary general (coordinating) staff responsibility for electronic warfare.

(c) FM 30-5 and FM 30-9 contain unclassified information concerning the operations of the Army Security Agency division support company. FM 32-10 covers the division command and staff responsibilities of the company and contains details on the organization and employment of the company. FM 32-20 covers the details of ground-based electronic warfare.

(3) *Air weather service detachment.* This detachment provides weather observation, briefings, reports, and summaries; detailed operational and planning forecasts; and other climatological information. The detachment commander is the staff weather officer and a member of the special staff. The detachment is under the general (coordinating) staff supervision of the G2. The Air Force provides meteorological trained personnel and meteorological equipment. The Army provides the detachment communications, transportation, and other logistical support. Additional air weather service detachments are normally located at corps and field army.

(4) *Technical intelligence support.* The division does not have an organic technical intelligence capability. The technical intelligence company of the field army military intelligence battalion furnishes this type of support to include training, identification of enemy materiel, and exploitation of captured enemy materiel. The field army Army Security Agency group or the theater army Army Security Agency organization assists the division in exploiting captured communications-electronics materiel, cryptomaterial, and related documents in support of the army target exploitation mission. FM 30-15 contains details on interrogations pertaining to technical intelligence. FM 30-16 contains detailed information on the employment of technical intelligence units.

4-20. Target Acquisition

a. Target acquisition is that part of combat intelligence that pertains to detection, identification, and location of a ground target in suffi-

cient detail to complete target analysis and to permit effective employment of weapons. The target acquisition platoons in division artillery are specifically organized, trained, and equipped to accomplish target acquisition. These platoons are located in the division artillery headquarters and headquarters battery and in each direct support field artillery battalion. Additional units of this type are available from corps and army resources.

b. Other reconnaissance and surveillance resources available to the division are employed in the target acquisition effort. Targets may be developed from information collected by multiple sources and agencies or may result from data collected by a single source or agency. Targets must be detected, identified, and located with sufficient accuracy and speed to permit effective delivery of fire.

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

4-21. Counterintelligence

a. Effective counterintelligence increases the security of the division and aids in achieving surprise by denying information to the enemy. Defensive measures may be active and passive.

b. Active defensive measures block the enemy's attempts to gain information, to engage in sabotage, or to conduct subversion. Active defensive measures include counterreconnaissance, countersubversion, and counterespionage. The attached Army Security Agency division support company conducts signal security operations and participates in electronic counter-countermeasures in support of the division counterintelligence mission. FM 32-5 describes these activities in detail.

c. Passive defensive measures conceal information from the enemy. These measures include local security, security discipline, security of classified documents and material, communications security, concealment and camouflage, censorship, and control of civil populations. Defensive counterintelligence measures employed with the support of specialized agencies include electronic countermeasures and civil security measures.

d. Counterintelligence special operations, normally conducted and controlled by higher headquarters, include offensive measures directed against hostile espionage, sabotage, and subversive efforts. FM 30-17 contains details on counterintelligence. The effective execution of both active and passive measures requires close liaison and well-coordinated effort with local civilian and military forces.

e. Counterintelligence personnel are not organic to the division. A counterintelligence section containing counterintelligence personnel is organic to the military intelligence company attached to the division. The senior officer of the counterintelligence section is usually designated chief of the security branch of the G2 section. He assists the G2 in planning and supervising the division's overall security program. FM 30-5 and FM 30-17 contain detailed information on counterintelligence measures.

4-22. Intelligence Support of Tactical Cover and Deception Operations

Tactical cover and deception operations are G3 responsibilities; however, the intelligence aspects of these operations are coordinated with the G2. The division G2 insures that the intelligence aspects of tactical cover and deception operations are compatible with intelligence operations of the next higher headquarters. Additional coordination with the division engineer is necessary to obtain specialized camouflage deception materials and engineer support in constructing facilities. FM 31-40 contains detailed information on tactical cover and deception operations.

4-23. Chemical Detection and Radiological Monitoring and Survey

a. Chemical detection and radiological monitoring and survey are integral parts of the overall intelligence effort. Collection of chemical, biological, and radiological data is planned and coordinated by the division nuclear, biological, and chemical center.

b. Chemical detection and radiological monitoring and survey teams are trained by division units authorized detection, monitoring, and survey equipment. Divisional aviation units and the cavalry squadron are the princi-

pal division agencies that conduct aerial radiological surveys. All units are responsible for monitoring. Pathfinder teams in the airborne

and airmobile divisions perform monitoring activities in the objective areas to provide current chemical and radiological information.

Section V. ENGINEER SUPPORT

4-24. Organic Engineer Support

a. The engineer battalion provides equipment and individual skills for engineer tasks. Projects are normally accomplished by companies or platoons of the battalion, reinforced when necessary with engineer construction equipment and operators from the headquarters and headquarters company.

b. The companies or platoons of the battalion are normally placed in direct support of committed units of the division. Engineer units are not held in reserve.

c. River-crossing support is available in the bridge company of the division engineer battalions of the armored, infantry, and mechanized divisions. Additional river-crossing support is obtained from supporting nondivisional engineer units.

d. The engineer battalion organic to the airborne or airmobile divisions has neither a bridge company nor organic river-crossing equipment. Any river-crossing support required during airborne or airmobile operations is obtained from supporting nondivisional engineer units.

e. The division may require support from nondivisional engineer units when conducting hasty or deliberate river-crossing operations with the entire division.

f. When engineer troops are committed as infantry, engineer unit integrity should be maintained. Engineer units have fewer supporting infantry weapons and less extensive infantry combat training than an infantry unit of similar size; therefore, in the infantry role, the force commander must furnish forward observers and additional fire support. Usually engineer units are assigned smaller frontages than infantry units of corresponding size.

g. When maneuver battalions or task force organizations are committed on independent or semi-independent missions, engineer support is normally attached.

h. The engineer battalion is responsible for water supply of the division.

4-25. Nondivisional Engineer Support

a. Additional engineer support is provided to the division by the next higher echelon of command, normally by corps engineer troops. Engineer groups, battalions, separate companies, or special teams may be placed in direct support of, or attached to, the division to provide additional combat support means, to conduct river crossings, to aid in the employment of atomic demolition munitions (ADM), to assist in emplacing minefields, to support decontamination of vital terrain, and to improve terrain obstacles.

b. The division engineer coordinates all engineer support for the division. He assigns missions on an area, a task, or a mission basis. FM 5-142 contains detailed information on nondivisional engineer support.

c. Nondivisional engineer units supply maps to the division and supplement divisional water supply operations.

4-26. Atomic Demolition Munitions

a. At brigade level, the S2, S3, and supporting engineer commander normally develop potential targets for atomic demolition munitions (ADM). They recommend the potential targets approved by the brigade commander to the G3 for integration in the division tactical plan.

b. At division level, the G2 and the engineer develop potential targets for atomic demolition munitions and recommend them to G3 for integration with the tactical plan. Factors influencing the decision to employ atomic demolition munitions include the time and resources required to prepare the emplacement site and to emplace the munition, enemy capability to interfere with the mission, troop safety, and target analysis.

c. When requested by the G3, the engineer performs detailed target analysis of selected atomic demolition munition targets.

d. In coordination with the fire support element and under staff supervision of the G3, the engineer prepares the atomic demolition plan (ADP). The atomic demolition plan contains the commander's decision for the selective employment of atomic demolition munitions. When approved, the plan may be announced verbally, transmitted electrically, or published as an appendix to the engineer annex of the operation order. This planning may also be published as an appendix to the barrier annex or the fire support annex. The atomic demolition plan normally is prepared in detail for pre-planned targets only. An atomic demolition plan contains as a minimum:

- (1) Target locations and descriptions.
- (2) Target designation number or code word.
- (3) Model and yield of the atomic demolition munitions, locations of ground zero, emplacement configurations, and depths of burst.
- (4) Units to be designated task responsibility for each atomic demolition munition mission.
- (5) Firing options.
- (6) Times of emplacement and final arming, if applicable.
- (7) Times or conditions for execution of each target, if applicable.
- (8) Designation of the source of authority to arm and fire each atomic demolition munition.
- (9) Designation of the source of authority to change or cancel each mission or to institute emergency atomic demolition munition evacuation or destruction.

e. The commander who has received execution authority makes the decision to employ an atomic demolition munition. Subordinate commanders plan for the use and integrate atomic demolition munitions into the overall tactical plan. Each echelon of command establishes procedures for processing atomic demolition munition requests to the commander who has release authority. This established procedure should be uniform throughout the division. 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 these units in the mission. The principles outlined in paragraph 4-8 are applicable to atomic demolition munitions.

f. The G3 coordinates tactical security and troop safety for atomic demolition munition missions. The executing commander is responsible for the physical and local security of the munition including the time it is en route from the special ammunition supply point (SASP). At the designated time, responsibility for physical and local security passes to the demolition guard commander. Command of an atomic demolition munition operation normally is exercised by the tactical commander in whose area the emplacement is located. This commander is usually designated executing commander by the releasing commander. The commander to whom the weapon is allocated designates a demolition guard to assume responsibility for the atomic demolition munition. The demolition guard commander is responsible for physical and local security, liaison, and communications. He gives the order to detonate the munition only after he receives the authority to expend the munition. The demolition firing party, drawn from the appropriate engineer atomic demolition munition unit, is attached to the demolition guard for the proper execution of the mission in accordance with the atomic demolition firing order (DA Form 3065-R). The demolition firing party commander directs all technical operations at the emplacement site, detonates the munition on order from the demolition guard commander, and conducts the necessary operations if the mission changes.

g. Normally there will be an atomic demolition munitions qualified staff officer in the tactical operations center to process atomic demolition munitions requests and to coordinate atomic demolition munition missions with other elements of the tactical operations center, higher headquarters, and subordinate units.

h. FM 5-26 contains detailed information on atomic demolition munition employment, procedures, responsibilities, and target analysis.

Section VI. SIGNAL SUPPORT

4-27. General

a. The division communications depicted in figure 4-8 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) Integration with corps and field army communications systems.

b. Division communications consist of—

(1) Signal centers at each division command post installation (main, alternate, and rear), at the support command headquarters, and at three forward area signal centers. These signal centers provide message center, messenger, crypto, teletype, telephone, and radio (excluding internal radio nets) service for all units in their vicinity. This support supplements organic facilities. The signal center at division main provides facsimile service to higher echelons for all divisions except the airmobile division. The airmobile division does not have any facsimile equipment.

(2) Multichannel communications links (radio relay and/or spiral four cable and carrier) to interconnect the signal centers listed above, the headquarters of the division artillery, and the headquarters of each brigade.

(3) Daily scheduled intradivision ground messenger and air messenger service 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 4-8 illustrates a recommended configuration for division communications. Final determination of communications employment is made by the division signal officer based on the tactical situation, frequencies and equipment available, and desires of the division commander.

d. The organic signal battalion controls and coordinates communications support within the division; operates its assigned portion of the division communications system; furnishes the signal section of the division special staff; distributes cryptomaterial to organic and attached units of the division; and performs limited direct support maintenance of cryptomaterial. The signal battalion normally requires augmentation by signal cellular teams to provide adequate direct support maintenance of cryptomaterial.

e. The signal battalion headquarters is located where it can best control signal support, normally near the division main command post.

f. Appendix B illustrates the organization of the signal battalion of each type of division. FM 11-50, FM 11-57, and FM 61-24 contain information on the operation of divisional signal battalions.

4-28. Communications Employment

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

b. *Communications Centers.* Communications centers are operated as components of each signal center within the division. Cryptomaterial, teletypewriter, and messenger facilities are associated with each communications 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. *Multichannel Radio.* Multichannel radio provides trunking and direct circuits for communication between units in the division and also telephone service between major headquarters in the division. Division terminal equipment and operating personnel for the multichannel radio circuits in the corps and army communications systems are provided by corps and army units. Type multichannel networks for each type of division are illustrated in figures 4-9, 4-10, and 4-11.

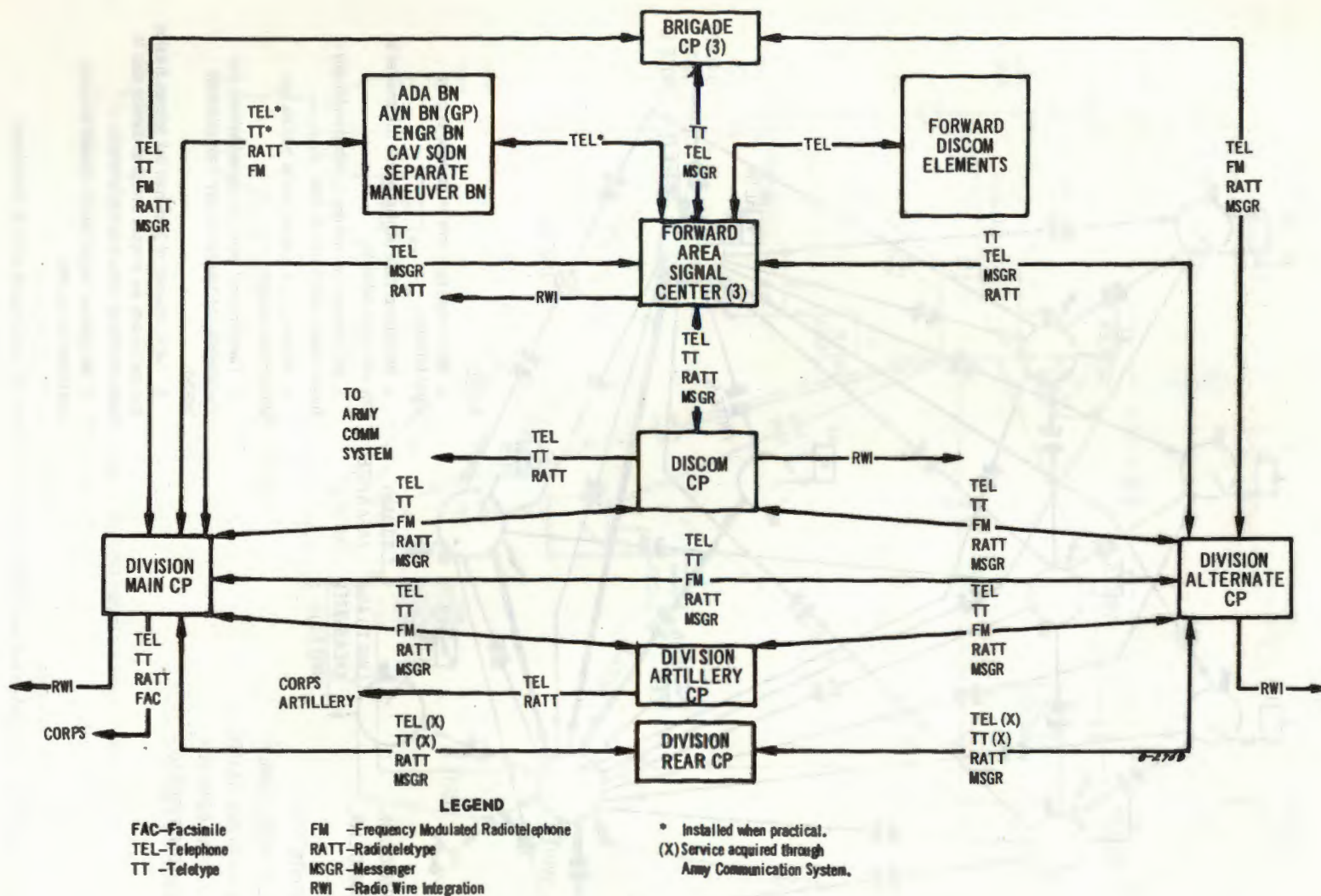


Figure 4-8. Type division communications system.

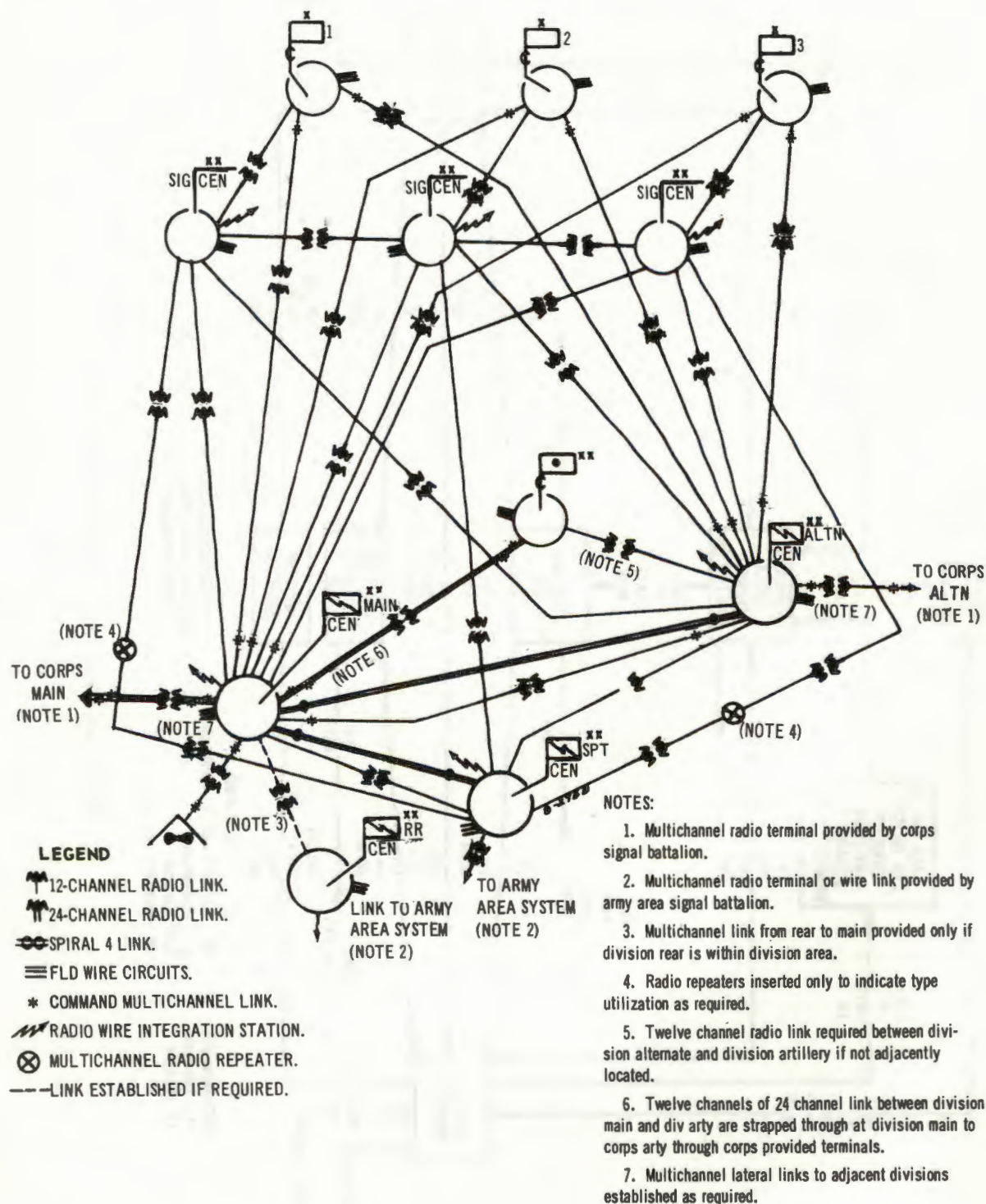


Figure 4-9. Type multichannel networks, armored, infantry, and mechanized divisions.

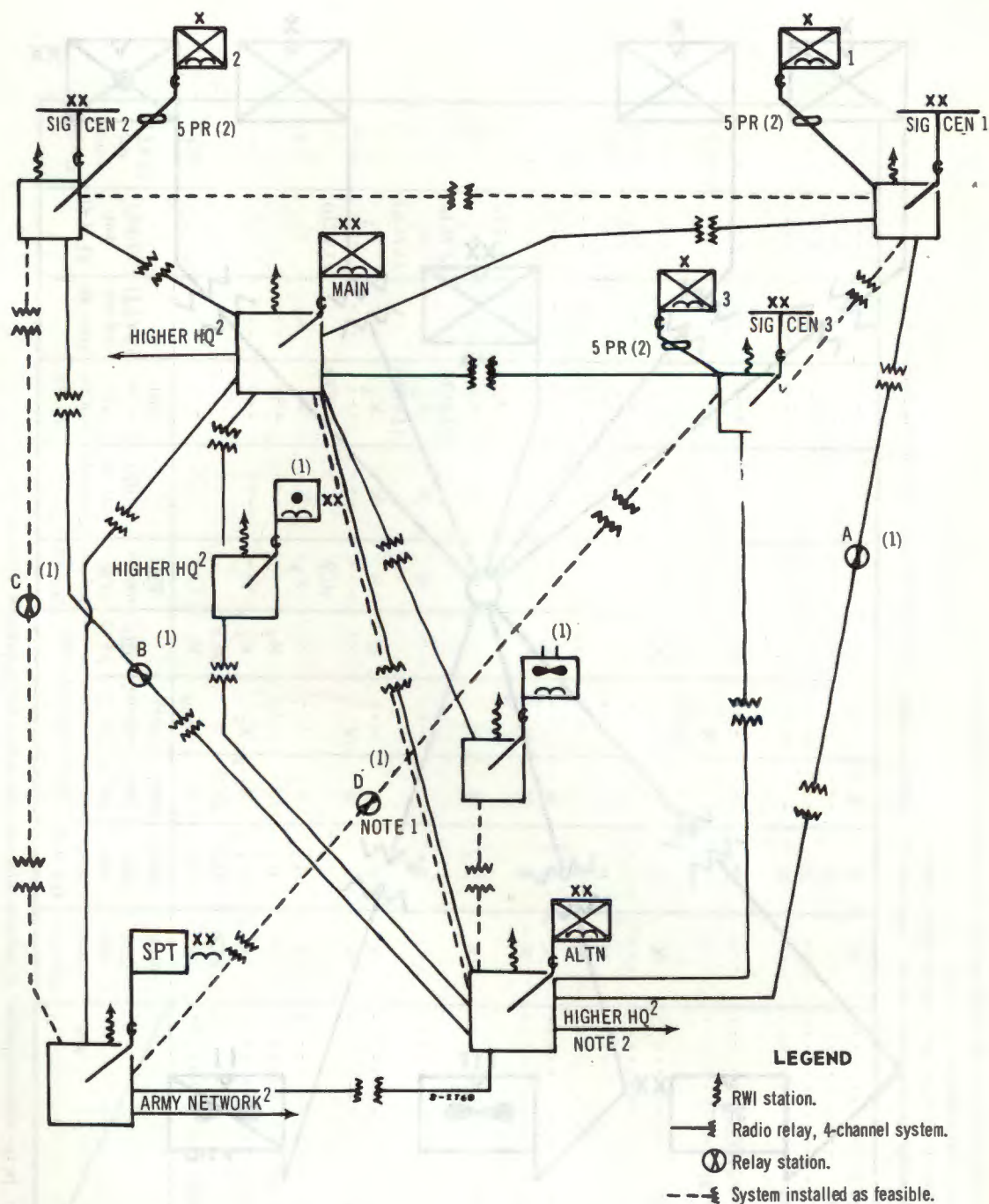
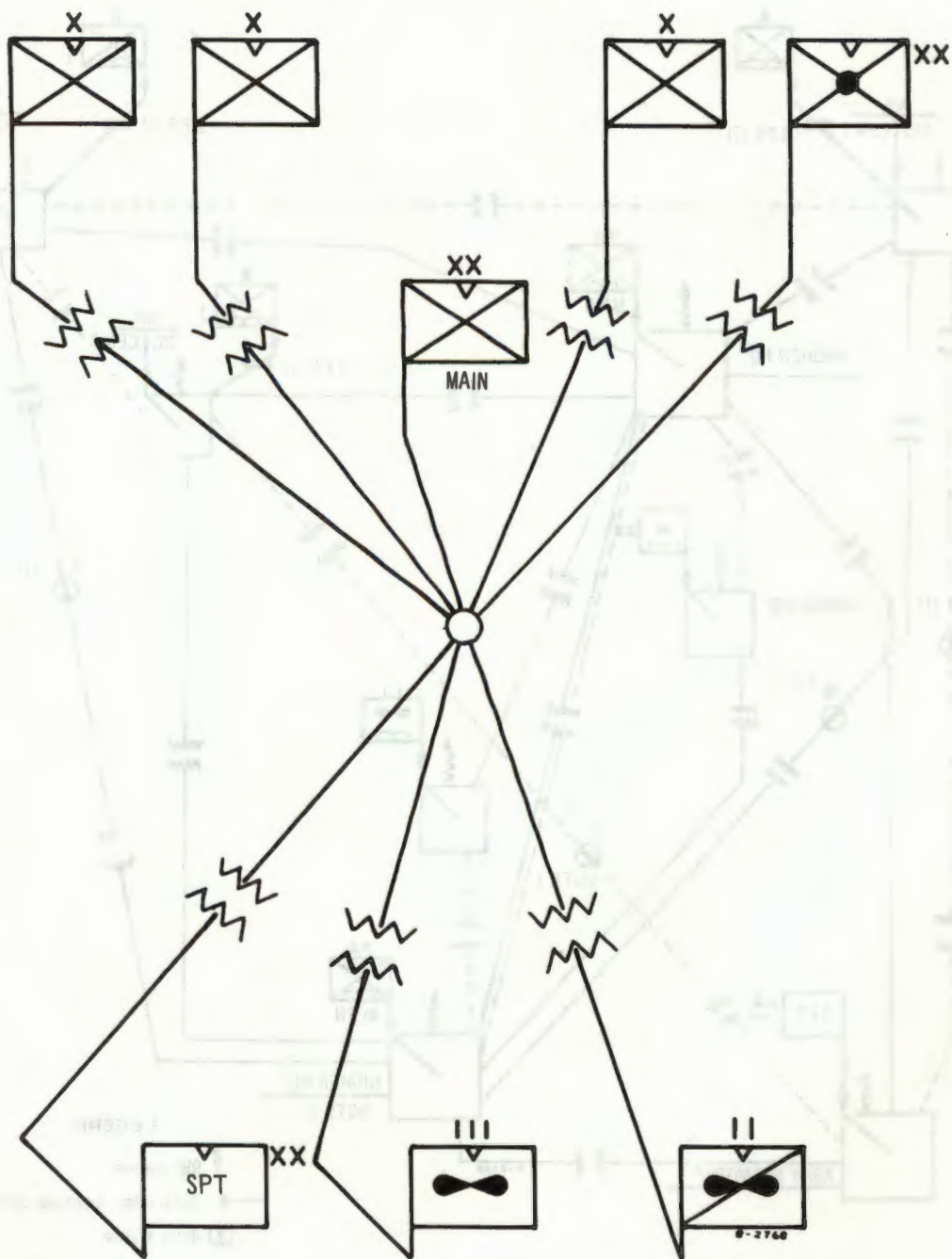


Figure 4-10. Type multichannel networks, airborne division.



NOTE: When required, this system may be installed between division base and division forward

Figure 4-11. Type multichannel networks, airmobile division.

Table 4-1. Type radio nets, armored, infantry, and mechanized divisions.

NOTE: In the columns below, X denotes receiver-transmitter and R denotes receiver only.

Elm	Net	Div CG/ comd net (FM-voice) ¹	Div wng bcst net (AM-voice)	Internal RATT nets			Div air req net (AM-voice-CW)	Spot rept rcvr net (UHF)	AF air req net (AM-voice-CW)	Army air req net (RATT)	AF TAD net (UHF)	Corps comd net (RATT)
				No. 1 (op/ intel)	No. 2 (admin/ log)	No. 3 (GP)						
Div main - - - - -	X	X ²	X ²	X ²	X ^{2 3}	X ²	---	---	---	---	---	X ⁴
	NCS	NCS	NCS	NCS	NCS	NCS	---	---	---	---	---	---
Div altn - - - - -	X	X ^{2 3}	X ^{2 3}	X ²	X ^{2 3}	X ^{2 3}	---	---	---	---	---	---
Div rr - - - - -	---	R ²	---	---	---	X ²	---	---	---	---	---	---
DTOC - - - - -	X	R ²	X ²	---	---	---	X ²	X ²	X ⁷	X ²	X ⁷	X ⁴
							NCS		(TACP)		(TACP)	
Div arty - - - - -	X	X	X	X	---	---	---	---	---	---	---	---
Bde (3) - - - - -	X	R	X	---	X	X	X	X	X ⁷	---	X ⁷	---
									(TACP)		(TACP)	
Mvr bn - - - - -	---	R	---	---	---	---	X	X	X ⁷	---	X ⁷	---
									(TACP)		(TACP)	
Cav sqdn - - - - -	X	R ⁵	X	X	---	X	X	X	X ⁷	---	X ⁷	---
									(TACP)		(TACP)	
Avn bn ⁶ - - - - -	X	R	X	X	---	---	---	---	---	---	---	---
Engr bn - - - - -	X	R	X	---	X	---	---	---	---	---	---	---
Sig bn - - - - -	X	R ²	---	---	---	---	---	---	---	---	---	---
MP Co - - - - -	X	R	---	---	---	---	---	---	---	---	---	---
DASC - - - - -	---	---	---	---	---	---	---	---	X ⁷	---	X ⁷	---
DISCOM - - - - -	X	R ²	---	X ²	X ²	---	---	---	---	---	---	---
					NCS							
Bde tm (3) - - - - -	---	---	---	X	---	---	---	---	---	---	---	---
Fwd area SIGGEN - - - - -	---	R ²	---	---	X ²	---	---	---	---	---	---	---
(3)												
Maint bn - - - - -	---	R	---	---	---	---	---	---	---	---	---	---
Med bn - - - - -	---	R	---	---	---	---	---	---	---	---	---	---
S&T bn - - - - -	---	R	---	---	---	---	---	---	---	---	---	---
Div ADA bn - - - - -	X	X	X	---	X	---	---	---	---	---	---	---

¹All possible stations are not shown. Additional radio stations may be directed to operate in this net, as required.

²Radio set provided by the division signal battalion.

³Alternate net control station (NCS).

⁴Radio set provided by the corps or army signal battalion, as appropriate.

⁵If transmitting in this net is required, the cavalry squadron will employ the AN/GRC-106 that is normally used in the division air request net.

⁶Organic to the infantry division only.

⁷Radio set provided by the Air Force.

Table 4-2. Type radio nets, airborne division.

NOTE: In the columns below, X denotes receiver-transmitter and R denotes receiver only.

Elm \ Net	Div CG/ comd net (SSB voice)	Internal RATT nets			Div op/ intel net (FM- voice)	Div wng bcst net (AM- voice)	Div air req net (AM- voice- CW)	AF air req net (AM- voice- CW)	AF TAD net (UHF)	Army air req net (RATT)	Higher ech comd net (RATT)	Spot rept rcvr net (UHF)
		No. 1 (op/ intel)	No. 2 (admin/ log)	No. 3 (GP)								
Div main - - - - -	X ¹ NCS	X ¹ NCS	X ¹	X ¹	X ¹ NCS	X ¹ NCS	X NCS	X ³ (TACP)	X ³ (TACP)	X	X ²	X
Div rr - - - - -	---	---	---	X ¹	---	R ¹	---	---	---	---	---	---
DTOC - - - - -	X	---	---	---	X	R ¹	---	---	---	---	---	---
Div altn - - - - -	X ¹	X ¹	X ¹	X ¹	X ¹	X ¹	---	---	---	---	---	---
Div arty - - - - -	X CO & FDC	X ¹	X ¹	---	X FDC	R	---	---	---	---	---	---
Bde (3) - - - - -	X CO & CP	X ¹	---	X ¹	X CP	R	X	X ³ (TACP)	X ³ (TACP)	---	---	X
Mvr bn (9) - - - - -	---	---	---	---	---	R	X	X ³ (TACP)	X ³ (TACP)	---	---	X
DISCOM - - - - -	X	---	X ¹ NCS	X ¹ NCS	---	R	---	---	---	---	---	---
Avn bn - - - - -	X CP	X ¹	X ¹	---	X CP	R	---	---	---	---	---	X
Cav sqdn - - - - -	X CO & CP	X	X	---	X S3 & CP	R	X	X ³ (TACP)	X ³ (TACP)	---	---	X
Sig bn - - - - -	X DSO	---	---	---	X S3	R	---	---	---	---	---	---
Engr bn - - - - -	X CP	X	X	---	X S3 & CP	R	---	---	---	---	---	---
MP co - - - - -	X CP	---	---	---	X Monitor	R	---	---	---	---	---	---
Fwd area spt (3) - - - - -	---	---	X ¹	---	---	---	---	---	---	---	---	---
Div ADA bn - - - - -	X	X	---	X	X	X	---	---	---	---	---	---
DASC - - - - -	---	---	---	---	---	---	---	X ³	X ³	---	---	---

¹Radio set provided by the division signal battalion.²Radio set provided by the corps or army signal battalion, as appropriate.³Radio set provided by the Air Force.

Table 4-3. Type radio nets airmobile division.

NOTE: In the columns below, X denotes receiver-transmitter and R denotes receiver only.

Net Elm	Internal RATT nets					Div op/ intel net (FM- voice)	Div comd/ op net (FM- voice)	Div org acft req net (AM- voice- CW)	Div wng bcst net (AM- voice)	Spot rept rcvr net (UHF)	Div air req net (AM- voice- CW)	AF air req net (AM- voice- CW)	AF TAD net (UHF)	Army air req net (RATT)	Higher ech comd net (RATT)
	Div comd No. 1 (SSB RATT voice CW)	Div comd No. 2 (SSB RATT voice CW)	Div ¹ admin/ log No. 1 2, 3 (SSB RATT voice CW)	Div admin/ log No. 4 (SSB RATT voice CW)	Div G2 Air info (SSB RATT voice CW)										
Div main - - - - -	X ²	X ² NCS	---	X ²	---	---	X ² NCS	---	X ² NCS	---	---	---	---	---	---
DTOC - - - - -	X ² NCS	---	---	---	X ² NCS	X ² NCS	---	X ^{2 3}	R ²	X ²	X ²	X ⁵ (TACP)	X ⁵ (TACP)	X ⁴	X ⁴
Div altn - - - - -	X ^{2 3}	X ^{2 3}	---	---	---	X ^{2 3}	X ^{2 3}	---	R ²	---	---	---	---	---	---
Div arty - - - - -	X ²	X ²	---	X ²	---	X ²	X	X	X	X	X	---	---	---	---
Bde (3) - - - - -	X ²	X ²	X ²	---	---	X ²	X	X	R	X	X	X ⁵ (TACP)	X ⁵ (TACP)	---	---
Mvr Bn (8) - - - - -	---	---	X	---	---	---	---	X	R	X	X	X ⁵ (TACP)	X ⁵ (TACP)	---	---
DISCOM - - - - -	X ²	---	X ² NCS	X ² NCS	---	X	X ²	---	R ²	---	---	---	---	---	---
Div rr - - - - -	---	---	---	X ²	---	---	---	---	R ²	---	---	---	---	---	---
Avn Gp - - - - -	---	---	---	---	X	X	X	X	R ²	X	X	---	---	---	---
Cav sqdn - - - - -	X	X	---	X	---	X	X	X	X	X	X	X ⁵ (TACP)	X ⁵ (TACP)	---	---
Engr bn - - - - -	X	X	---	X	---	X	X ³	---	R	---	---	---	---	---	---
Sig bn - - - - -	X ²	---	---	---	---	---	X ^{2 3}	---	R ²	---	---	---	---	---	---
MP Co - - - - -	---	---	---	---	---	X	---	---	R	---	---	---	---	---	---
Fwd area spt - - - - -	---	---	X	---	---	---	---	---	R	---	---	---	---	---	---
Div ADA Bn - - - - -	---	X	---	X	---	---	---	---	X	---	---	---	---	---	---
DASC - - - - -	---	---	---	---	---	---	---	---	---	---	---	X ⁵	X ⁵	---	---

¹One net per brigade.

²Radio set provided by the division signal battalion.

³Normally monitor.

⁴Radio set provided by the corps or army signal battalion, as appropriate.

⁵Radio set provided by the Air Force.

d. Wire and Cable Installations. Division signal battalions have a limited capability for installing field cable. Assistance from corps or army units is requested as required. The amount of cable authorized by the tables of organization and equipment 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 establishes firm but flexible operational controls to meet changing requirements in the field. Recommended division radio configurations are illustrated in tables 4-1, 4-2, and 4-3. Final determination of radio net configurations is made by the division signal officer based on the tactical situation, availability of frequencies and equipment, and desires of the division commander.

f. Radio Wire Integration Stations. An FM-voice radio wire integration station is operated at each signal center except the division rear command post. These stations establish communications between mobile FM radio stations and elements connected to the division by telephone. The stations can also be used for telephone service from the signal center to using units until local wire can be installed and FM radio-transmission stations established to communicate between FM stations operating beyond line-of-sight FM range.

4-29. Tactical Application of Communications

a. Communications Planning. The unit signal officer is kept informed of plans for current or proposed operations to allow him to insure adequate communications support.

b. Signal Communications Support.

(1) The mission assigned to a unit and the tactical situation dictate the communications to be used: offensive operations rely primarily on radio and defensive operations use wire extensively. Multiple means are used when time and the tactical situation permit. Communications security is stressed throughout all operations.

(2) Terrain and weather influence the effectiveness of communications means. Plans to overcome limitations caused by these factors include the use of vehicles and Army aircraft for messenger transport, radio-retransmission, 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 communications. Supplementary and multiple means of communications should be used to counteract such interference.

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

d. Communications in Assembly and Bivouac Areas. Radio communications are held to a minimum in assembly and bivouac areas. Principal means of communication are either messenger or wire, depending on the time spent in the area.

e. Communications During Offensive Operations.

(1) *Preparation for offensive operations.* Plans for signal communications support of an offensive operation are based on the unit operation plan. Organization for combat and mission indicate the type and extent of signal support needed. The commander indicates priority of support, and the G3 allocates available means based on the recommendations of the signal officer. Communications plans insure support if the plan of action is changed or if an uncommitted portion of the force is employed. Radio traffic is held to a minimum during preparations for the offensive. However, if such preparations are made during a defensive operation, normal communications traffic is maintained to avoid warning the enemy of the attack. Signal orders, signal operation instructions, extracts, and prearranged signals or codes are prepared and disseminated to all units concerned. A physical reconnaissance is conducted or as a minimum a map reconnaissance is made for

probable wire routes to key control points and proposed headquarters locations.

(2) *Communications during attack.*

(a) During the attack maximum use is made of radio. Listening silence, if in effect, is usually lifted when units begin their attacks. In certain instances, however, the commander may continue listening silence until contact with the enemy is made. Wire can be used; 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, nuclear, biological, or chemical munitions attack or of friendly employment of nuclear, biological, or chemical munitions 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. Signal operation instructions information is exchanged between units concerned. The unit making the passage will use the existing communications of the unit through which it is passing whenever possible.

(b) During a relief in place, the relieving unit takes over the wire lines of the relieved unit. For security reasons, it is mandatory that the radio nets of the outgoing units be the only nets used while the relief is in progress. The relieved units will operate the normal radio nets of the outgoing unit for a limited time as a deception measure.

(4) *Communications during exploitation and pursuit.* During exploitation and pursuit, radio facilities, aircraft, and 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 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 and to provide additional alternate means.

(2) *Communications in mobile defense.* Communications for a 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 strongpoints. Prior to enemy contact, the use of radio may be restricted.

(3) *Communications in area defense.* Wire communications are used extensively. Use of radio nets is normally restricted except during periods of enemy contact.

g. Communications During Retrograde Movement. 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 on 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 is 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 consideration be given to communications between units involved. Communications in rear positions should be established early.

h. Communications During Special Operations and Operations in Adverse Terrain and Climate. Appendix A contains a list of manuals that cover communications during special operations and operations in adverse terrain and climate.

i. References. FM 11-50, FM 11-57, FM 24-1, and FM 61-24 discuss communications operations and employment in detail.

Section VII. ARMY AVIATION SUPPORT

4-30. General

Army aviation provides aviation support to the division. This support includes aerial fire sup-

port; mobility for airmobile operations; airlift of combat, combat support, and combat service support units; resupply operations; movement

to remote areas or over terrain not trafficable to ground vehicles; and platforms for visual observation and sensory devices.

4-31. Divisional Aviation

a. *General.* Aviation units organic to a division are referred to as divisional aviation. Organic aviation provides the division commander with readily available aviation support on which to base future planning and with responsive aviation support for rapidly developing situations. FM 1-5, FM 1-15, FM 1-100, FM 1-105, FM 1-110, FM 32-20, FM 55-46, and FM 57-35 contain details on Army aviation employment.

b. *Aviation Group, Airmobile Division.*

(1) The aviation group provides aviation support for the airmobile division, to include—

(a) Providing the aviation section of the airspace control element for the division tactical operations center, command and staff support for the aviation group, and pathfinder and terminal approach support for subordinate and attached units.

(b) Furnishing light observation and utility helicopters to support divisional units without organic aircraft and medium observation aircraft for air reconnaissance missions.

(c) Airlifting brigade tactical elements, combat supplies, and other combat elements of the division within the division area.

(d) Augmenting aeromedical evacuation from the battle area.

(e) Transporting combat support and combat service support elements within the division area.

(2) Chapter 11 discusses the employment of the aviation group in airmobile division operations. FM 1-15 contains details on the employment of the airmobile division aviation group.

(3) Appendix B illustrates the organization of the airmobile division aviation group.

c. *Aviation Battalion, Infantry and Airborne Divisions.*

(1) The aviation battalion organic to the infantry and airborne divisions provides aviation support for the division headquarters, division support command, and other divisional

units not assigned organic aircraft. In addition, the battalion provides—

(a) General support and reinforcement to units possessing organic aircraft.

(b) The aviation section of the airspace control element of the division tactical operations center.

(c) Personnel and equipment for operation of the division instrumented airfield.

(d) Command, control, administration, communications, and supply for the aviation battalion.

(e) Airlift, in a single lift, of one rifle company.

(f) Aerial movement of troops, supplies, and equipment in the division area.

(g) Light observation and utility helicopters to support divisional units without organic aircraft.

(2) FM 1-15 contains details on the employment of the airborne and infantry aviation battalions. Appendix B illustrates the organization of the aviation battalion of the airborne and infantry divisions.

d. *Aviation Elements, Armored and Mechanized Divisions.*

(1) In addition to the organic aviation support elements of the division artillery, the cavalry squadron, the brigades, and the support command, the armored and mechanized divisions have three other elements that provide aviation support to the division and the headquarters. These are the command aviation section and division aviation section organic to the division headquarters and headquarters company and an aviation support detachment organic to the supply and transport battalion.

(2) The division aviation section provides the personnel for the aviation section of the airspace control element of the division tactical operations center, coordinates aviation support for the division, and supervises the aviation safety program for the division.

(3) The command aviation section provides command and control aircraft for the division headquarters.

(4) The aviation support detachment controls and operates the instrumented airfield for the division.

4-32. Nondivisional Aviation

Not all Army units require the support of Army aviation on a continuing basis. To support these units when required and to augment the organic aviation assets of divisions and other Army units, separate aviation companies, battalions, groups, and brigades are included in the Army force structure. These separate Army aviation organizations are referred to as nondivisional aviation. Often such units have a mix of aircraft or special-purpose aircraft for which there is an essential requirement. These aviation organizations are normally assigned to a field army with further attachment to subordinate corps. Such an arrangement allows the field army commander to allocate critical aviation resources according to the priorities he establishes. Divisions requiring additional aviation, request it from corps. Paragraphs 4-5 through 4-11 and 4-6 through 4-23 chapter 5, and chapter 13 contain procedures for requesting this support. FM 1-20 (Test) contains details on the employment of the nondivisional combat aviation battalion, group, and brigade.

4-33. Employment of Army Aviation

a. Army aviation can assist ground elements to—

- (1) Exploit the effects of nuclear, biological, and chemical munitions.
- (2) Envelop defended areas and traverse barriers.
- (3) Secure key terrain features, particu-

larly in pursuit, exploitation, and movement to contact.

- (4) Reinforce or evacuate isolated units.
- (5) Transport reserves and light artillery pieces.
- (6) Supply critically needed items.
- (7) Concentrate dispersed forces for execution of a tactical operation.
- (8) Disperse forces.
- (9) Combat guerrilla or other irregular forces.
- (10) Move reconnaissance forces and patrols.
- (11) Provide ship-to-shore movement in amphibious operations.
- (12) Perform radiological monitoring and survey.
- (13) Establish aerial radio retransmission facilities.
- (14) Furnish traffic control.
- (15) Conduct reconnaissance and surveillance operations.
- (16) Locate targets and adjust artillery fire.
- (17) Disperse chemical agents.
- (18) Support psychological operations.

b. Army aviation provides aerial fire support and augments aeromedical evacuation of patients.

c. The division and higher echelons of Army aviation have a limited capability for battle area illumination.

CHAPTER 5 COMBAT SERVICE SUPPORT

(NATO STANAG 2055, CENTO STANAG 2055, SEATO SEASTAG 2055, ABCA SOLOG 29; NATO STANAG 2057, CENTO STANAG 2057, SEATO SEASTAG 2057, ABCA SOLOG 40R; NATO STANAG 2058, CENTO STANAG 2058, SEATO SEASTAG 2058, ABCA SOLOG 41R; NATO STANAG 2065, CENTO STANAG 2065, SEATO SEASTAG 2065, ABCA SOLOG 42R; NATO STANAG 2067, CENTO STANAG 2067, SEATO SEASTAG 2067, ABCA SOLOG 68)

Section I. GENERAL

5-1. General

a. Tables of organization and equipment (TOE) authorize the necessary combat service support personnel and equipment to support division operations in either a nuclear or nonnuclear environment. These tables of organization and equipment are designed for worldwide application. They provide the division with the minimum essential personnel and equipment necessary to accomplish its mission in a conventional combat environment. In stability operations or unusual operational environments or situations, the division requires additional personnel and equipment, special skills, and special-purpose equipment. These additional requirements are met by backup support units, modification of tables of organization and equipment, or attachment of cellular teams.

b. Combat service support is the assistance provided operating forces primarily in the fields of administrative services, chaplain service, civil affairs, finance, legal service, maintenance, medical service, military police, replacements, supply, transportation, and other logistical services.

c. The division may be required to support elements of other Services attached to, or supporting the division. The degree of support is as prescribed in the order of attachment or as directed by higher headquarters.

5-2. Organic Combat Service Support

The military police company and the units of

the division support command are the principal organic combat service support units of the division. Divisional aviation, engineer, and signal units are primarily combat support units; however, they perform certain combat service support functions.

5-3. Nonorganic Combat Service Support

a. Special skills, special-purpose equipment, and additional support are normally available from corps or field army resources. These resources are attached to, or placed in support of, the division as required by the mission and the area of operations.

b. A civil affairs company is normally attached to the division.

c. Combat service support is functionally organized at levels above division. Normally non-divisional combat service support is provided on an area support basis. However, this support may be provided on a unit or task basis.

d. The division can also use local civilian labor and materials for such combat service support functions as construction, road and airfield maintenance, and handling and moving supplies.

e. Whenever feasible, the division uses captured supplies and equipment, locally available materials, and natural resources to increase its capabilities and to reduce the supplies that must be brought from rear areas.

5-4. Stability Operations

a. Conventional battle positions are seldom established in stability operations; therefore, operations against insurgent forces involve special combat service support considerations. These considerations include developing, improving, and maintaining base camp complexes; centralizing combat service support activities in base camps; placing a high degree of

reliance on air lines of communications; and increasing the use of airmobile operations.

b. Combat service support problems of the division are magnified during stability operations. FM 54-2 and the manuals applicable to combat service support units of the division, listed in appendix A, discuss these problems in detail.

Section II. MILITARY POLICE SUPPORT

5-5. General

a. The military police company maintains discipline, law and order in the division.

b. The provost marshal supervises the military police company and coordinates all attached and supporting military police units and activities. The subordinate elements of the company are employed as follows:

(1) The security platoon provides the security for sensitive installations of the division main and alternate and assists in the defense of the division main and tactical command posts.

(2) A military police platoon normally supports a committed brigade 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 to brigades operating independently is the normal method of employment.

(3) One military police platoon operates a prisoner of war collecting point, a straggler control collecting point, a civilian internee collecting point, and a temporary confinement facility for military prisoners. This platoon also evacuates prisoners of war from brigade to division as required.

(4) When available, one military police platoon normally provides general military police support on an area basis in the division rear area. Additional military police units are requested from corps or army when the requirements for support exceed the company's capability.

5-6. Divisional Military Police Functions

a. *Traffic Control.* Military police platoons support the division's traffic control and traffic

regulation plans with direction, enforcement, accident investigation and prevention, and highway traffic security measures, to include route security and in transit security support. Functionally, the traffic control mission is accomplished by operating traffic control points and information posts; patrolling roadways; securing key points on roadways such as bridges, defiles, and intersections; and escorting movements.

b. *Circulation Control of individuals.*

(1) Military police patrols and posts control the circulation of individuals.

(2) Each subordinate commander is responsible for straggler control within his own area. Commanders of units located within the division rear area control the movement of stragglers 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, exclusive of unit areas of responsibility. All traffic control posts, information posts, and roving military police patrols also perform straggler control. Special straggler control posts, when required, are located at critical points on the main roads and on other natural lines of drift within the division area. These posts control stragglers, traffic, and refugees.

(4) The military police company operates a central division straggler collecting point. Stragglers collected at the collecting point are screened and sorted for return to their units, evacuation to a medical facility, or other disposition.

c. *Confinement of Military Prisoners.* Convicted military prisoners are not normally 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 U.S. military prisoners.

d. Prevention and Investigation of Crime.

(1) Military police augment and extend the command crime prevention program. They conduct crime prevention surveys and other crime prevention operations.

(2) The division military police company has a limited capability for criminal investigations. The division provost marshal supervises the criminal investigation program and arranges for the transfer of cases to nondivisional supporting units.

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

f. Discipline, Law and Order. Each subordinate commander is responsible for discipline in his unit and for the enforcement of law and order in his area of responsibility. Division military police assist subordinate commanders.

g. Prisoners of War.

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

(2) *Evacuation.* Enemy prisoners of war are evacuated by capturing unit to the nearest division prisoner of war collecting point where limited processing, including interrogation, is accomplished. Division military police evacuate prisoners of war from forward collecting points to the division central collecting point. Wounded prisoners of war are evacuated through medical channels. Military police from field army units evacuate prisoners of war from the division prisoner of war collecting points.

h. 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 prisoner of war collecting point, the division straggler collecting point, and the temporary confinement facility for military prisoners. Civilian internees are evacuated from division by military police units from field army.

5-7. Nondivisional Military Police Support

a. The division provost marshal coordinates all military police support of the division.

b. Military police support is regularly provided to the division by higher echelons—normally by field army military police troops. This support is provided when—

(1) The prisoner of war capture rate exceeds the capabilities of the division military police company.

(2) Additional units are attached to the division.

(3) There are extensive requirements for physical security.

(4) All three brigades are committed.

(5) The division is executing river-crossing operations.

(6) Additional military police support is required.

Section III. CHEMICAL

5-8. General

Authority for the division to use chemical agents is received through command channels. The employment of toxic chemical agents is

planned and executed by the division subject to policy restrictions of higher headquarters. The division commander can delegate the authority to employ toxic chemical agents to subordinate

units. Normally, corps and higher commands plan and execute operations involving the use of biological agents.

5-9. Dissemination of Chemical Agents, Smoke, and Flame

a. Tactical units can disseminate riot control and defoliant agents; employ screening, signaling smokes, and flame; and lay chemical land mines when equipped with appropriate weapons and munitions and trained in their use. Chemical smoke generator companies accomplish large-scale smokescreening operations.

b. The division artillery normally delivers chemical agents for the division. The division artillery can also establish smokescreens and blind observation posts, and can use smoke ammunition for signaling. Chemical agents can also be delivered by smoke generator units, naval gunfire, and Army, Air Force, or Navy aircraft.

c. The division engineer furnishes technical advice and assistance to the division in laying and clearing composite minefields which include chemical land mines.

Section IV. GROUND TRANSPORTATION

5-10. General

a. The armored and mechanized divisions have organic transport to move approximately 100 percent of their personnel in one lift. Movement of the airborne, airmobile, and infantry divisions by motor transport requires the attachment of truck companies from higher headquarters.

b. The G4 has general (coordinating) staff responsibility for traffic control and traffic regulation planning within the division. The provost marshal supervises the implementation of the traffic control plan. The transportation officer prepares and supervises the execution of the traffic circulation and regulation plans. The

division engineer provides reconnaissance data and makes recommendations concerning the use of the division road net. He is responsible for road maintenance and for road and bridge construction required to support division traffic plans. FM 55-35 and FM 101-5 discuss the duties and the functions of these individuals.

c. The supply and transport battalion furnishes vehicles for combat service support missions. The supply requirements for each type of division dictate the number of these vehicles.

5-11. Division Transportation

Chapter 13, FM 54-2, FM 55-6, and FM 55-35 discuss division transportation operations.

Section V. SUPPLY AND MAINTENANCE

5-12. General

a. The support command commander accomplishes his supply and maintenance responsibilities through the commanders of the organic supply and maintenance units.

b. The support command organization varies among divisions because of their special needs for accomplishing missions in a particular environment. These organizational differences are shown in the figures in appendix B.

c. Many of the supply and maintenance activities of the support command are routine. These activities are standardized within the division and are promulgated by standing operating procedures. Deviations from standard procedures appear in the division administrative plan (order), the administrative annex to

the operation plan (order), or paragraph 4 of the operation plan (order). For support command units, the support command commander disseminates these deviations and additional instructions in an operation order.

d. Supply and maintenance support can be provided on an area, unit, or task basis. Unit support is preferred; however, this method is usually beyond the capability of the support command, particularly in the airborne and airmobile divisions. Therefore, area support or a combination of methods is used. FM 54-2 is the primary reference for details of division supply and maintenance procedures and the employment of division supply and maintenance units.

Classification	Classes of Supply Description	Subclassification ¹
I	Subsistence.	A-Air (inflight rations) R-Refrigerated subsistence S-Nonrefrigerated subsistence (less combat rations) C-Combat rations ²
II	Clothing, individual equipment, tentage, organizational tool sets and tool kits, hand tools, and administrative and housekeeping supplies and equipment	B-Ground support materiel ³ E-General supplies F-Clothing and textiles M-Weapons T-Industrial supplies ⁴
III	Petroleum, oils, and lubricants: petroleum fuels, lubricants, hydraulic and insulating oils, preservatives, liquid and compressed gases, bulk chemical products, coolants, deicing and antifreeze compounds, together with components and additives of such products; and coal.	A-Air W-Ground (surface)
IV	Construction: construction materials, to include installed equipment and all fortification/barrier materials.	
V	Ammunition: ammunition of all types including chemical, biological, radiological, and special weapons, bombs, explosives, mines, fuzes, detonators, pyrotechnics, missiles, rockets, propellants, and other associated items.	A-Air W-Ground
VI	Personal demand items (nonmilitary sales items).	
VII	Major end items: a final combination of end products which are ready for their intended use; e.g., tanks, launchers, mobile machine shops, and vehicles.	A-Air B-Ground support materiel ³ D-Administrative vehicles ⁵ G-Electronics K-Tactical vehicles L-Missiles M-Weapons N-Special weapons
VIII	Medical materiel, including medical peculiar repair parts.	
IX	Repair parts (less medical peculiar repair parts): all repair parts and components, to include kits, assemblies, and subassemblies, repairable and nonrepairable, required for maintenance support of all equipment.	A-Air B-Ground support materiel ³ D-Administrative vehicles ⁵ G-Electronics K-Tactical vehicles L-Missiles M-Weapons N-Special weapons T-Industrial supplies ⁴
X	Materiel to support nonmilitary programs; e.g., agricultural and economic development not included in classes I through IX.	

¹The ALPHA Code for subclassification of classes II, VII, and IX represents material category designators used in supply management, with the exception of A (Air) which is used throughout all classes of supply as applicable. ALPHA Codes not utilized as material category designators have been assigned to the subclassifications for class I, III, and V. The subclassification material designators (A through T) may be used in combination with the designated subclassifications, when appropriate and if desired, to definitize further a portion of a class of supply for planning purposes; e.g., use of class V AL to designate ammunition, air missile. Additional codes may be utilized by the Services to satisfy a specific requirement; for example, to designate repairable or nonrepairable, high-dollar items, or for other selective management purposes. This additional permissive coding is not to be utilized in lieu of that designated for the major classification and subclassifications.

²Includes gratuitous health and welfare items.

³Includes power generators and construction, barrier, bridging, firefighting, petroleum, and mapping equipment.

⁴Includes bearings, block and tackle, cable, chain, wire rope, screws, bolts, studs, steel rods, plates, and bars.

⁵Commercial vehicles utilized in administrative motor pools.

Figure 5-1. Classes of supply.

5-13. Supply

a. The division maintains only those supply levels necessary to sustain operations until additional supplies can be delivered. These levels include a small reserve for use during short interruptions in supply schedules. Whenever possible, supplies are delivered directly from the

corps or field army supply installations to the using unit. Airborne and airmobile divisions have a critical need for delivery to the unit because of the relatively small quantity of wheeled vehicles available for resupply missions. These divisions rely heavily on air lines of communications.

b. During stability operations, the division frequently establishes a base camp and maintains supply levels at the base camp in excess of those maintained during conventional warfare. These operations place heavy reliance on resupply by air and encourage the delivery of supplies directly to the unit. The division requires additional air or ground transportation or both to adopt the unit distribution system.

c. Supplies are organized into common groupings for ease of control and reference. The classes of supply are illustrated in figure 5-1.

5-14. Maintenance

a. The maintenance battalion furnishes direct support maintenance and repair parts supply for all equipment, except cryptomaterial and automatic data processing, medical, textile, and airdrop equipment, as well as individual

and organizational clothing. Personnel from this unit assist the commander in inspections of organizational maintenance activities and, when necessary, may augment unit organizational maintenance capabilities.

b. Because of the large number of organic aircraft and the high maintenance requirements of aircraft, the airmobile division is authorized an aircraft maintenance and supply battalion to provide repair parts supply and direct support maintenance of aircraft, aircraft armament, avionics, and ground control approach equipment.

c. Direct support maintenance and repair parts supply for individual and organizational clothing and automatic data processing, medical, and airdrop equipment are provided by nondivisional units. The division signal battalion furnishes direct support maintenance of cryptomaterial.

Section VI. AIRLIFT

5-15. General

a. Airlift of troops, cargo, and supplies is accomplished through the use of cargo helicopters of Army aviation units or cargo aircraft of the tactical air force supporting the field army.

b. Requests for airlift can be initiated at any level of command. Requests are satisfied at the lowest echelon capable of fulfilling the requester's needs. Chapter 13 discusses request procedures for airlift of troops. Paragraph 5-16 discusses request procedures for airlift of cargo and supplies.

c. The supported commander or his designated representative approves or disapproves all requests. Members of the air element providing airlift support act in an advisory capacity only.

d. FM 100-27 contains doctrine for joint airlift operations. FM 1-100 discusses airlift using Army aviation aircraft.

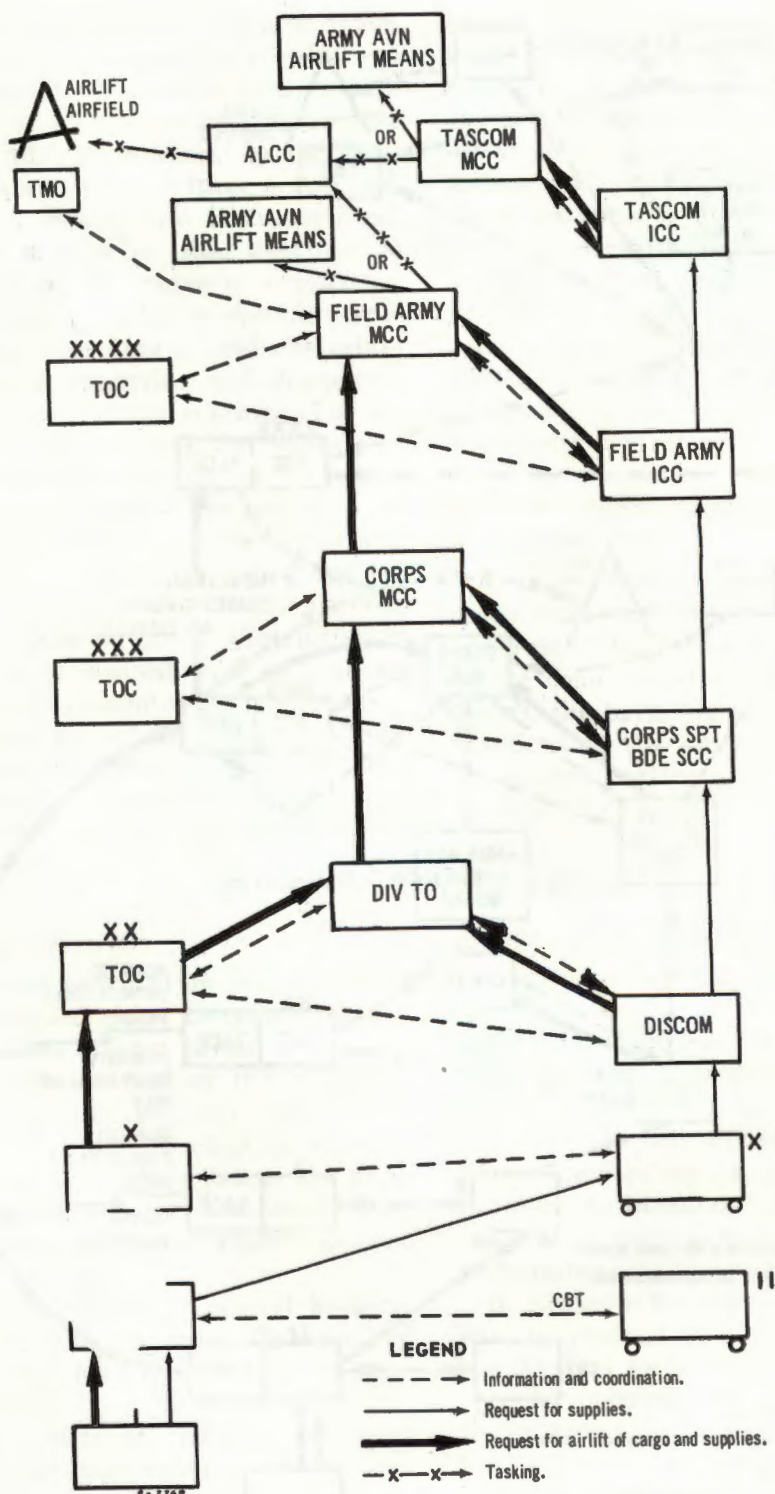
portation officer evaluates, consolidates, and, if approved, assigns a priority and forwards the requests to the corps movements control center (MCC). The corps movements control center evaluates, consolidates, and, if approved, assigns a priority and forwards the request to the field army movements control center. The field army movements control center normally makes the final consolidation and obtains approval of the requests. After receiving approval of the requests, the field army movements control center tasks the appropriate Army aviation unit or the Air Force airlift control center to perform the mission and notifies the originator of the approval through channels. If the request is disapproved at any echelon, the requester is notified through channels. Figure 5-2 illustrates preplanned request channels for airlift of cargo and supplies.

c. Immediate requests below battalion level are forwarded to the battalion command post by the most rapid means available. At battalion level, requests are validated by the commander or his representative and passed to the tactical air control party. The tactical air control party transmits the requests directly to the direct air support center (DASC) collocated with the corps tactical operations center

5-16. Airlift Requests

a. Requests are either immediate or preplanned.

b. Preplanned requests are submitted through command channels to the division transportation officer (TO). The division trans-



NOTE: Requests are satisfied at the lowest echelon capable of fulfilling the requester's needs.

Figure 5-2. Preplanned request channels for airlift of cargo and supplies.

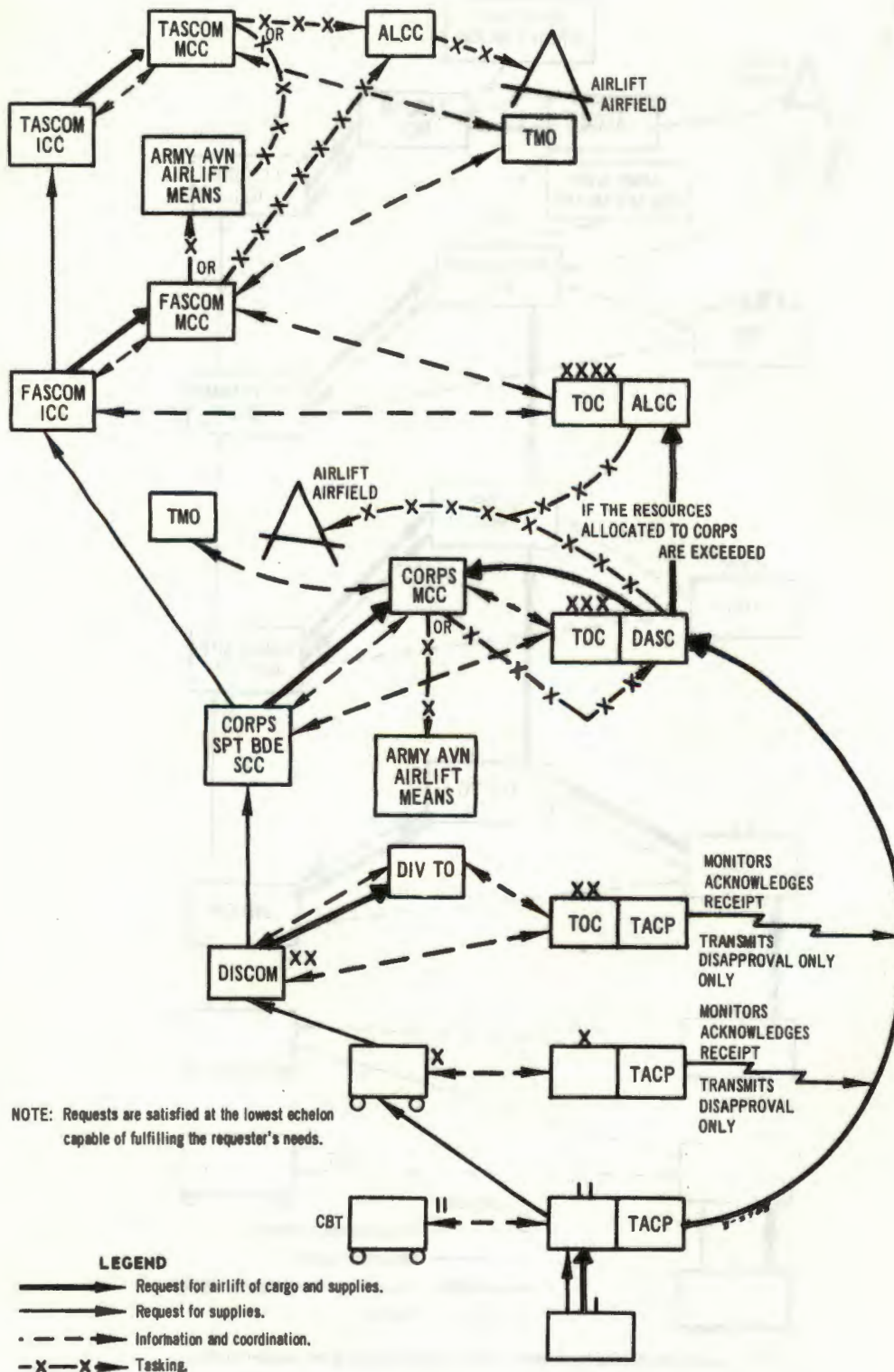


Figure 5-3. Immediate request channels for airlift of cargo and supplies.

(CTOC). Tactical air control parties at intermediate headquarters monitor the request and acknowledge receipt. Normally, acknowledgment of the request by intermediate tactical air control parties indicates approval by the associated headquarters unless, within a specified period of time, a disapproval is transmitted. The commander may desire that approval as well as disapproval of requests originating within his command be stated by specific transmission. Standing operating procedures establish procedures for approving and disapproving requests at intermediate echelons. The direct air support center passes the requests to the corps movements control center for action and coordination. Meanwhile, the intermediate tactical air control parties pass the requests to the associated headquarters for action and coordination. All echelons coordinate simultaneously. If any echelon above the initiating level disapproves a request, the tactical air control party at the disapproving headquarters notifies the direct air support center and the initiating tactical air control party, and the request is canceled. If headquarters where the direct air support center is located or a higher

headquarters disapproves the request, the direct air support center notifies the originator and the request is canceled. If the request is approved by the commander at the direct air support center level, the corps movements control center tasks the appropriate Army aviation unit or the direct air support center to perform the mission and notifies the originator of the approval. The direct air support center orders the mission flown from allocated sorties. If all allocated sorties are committed, the direct air support center obtains additional sorties or forwards the request to the airlift control center supporting the field army for completion. Figure 5-3 illustrates immediate request channels for airlift of cargo and supplies.

d. Immediate requests may be forwarded directly from company level to the direct air support center if a forward air controller with adequate communications is present. When this occurs, the battalion tactical air control party functions in the same manner as the tactical air control parties of intermediate headquarters described above.

Section VII. MEDICAL SUPPORT

5-17. General

a. The treatment provided by division medical service is designed either to return the patient to duty within a short period or to prepare him for further evacuation. If the tactical situation permits, some patients with short-term illness may be kept in clearing stations for 2 or 3 days to avoid their loss to the division. Normally patients are evacuated from brigade trains areas by higher echelon medical units.

b. Usually a mobile army surgical hospital is located in the division area. This facility provides field army level medical service support to the division.

c. The division surgeon, under the general (coordinating) staff supervision of the G1, prepares the medical plan. The medical battalion executes the medical plan under the staff su-

pervision and technical control of the division surgeon.

5-18. Medical Service

a. The medical battalion furnishes division-level medical service to the division. This service includes intradivision evacuation of patients, medical supply, optical service, organizational maintenance of medical and dental equipment, medical and expedient dental care, and limited psychiatric treatment.

b. Requests for medical resupply and for repair of medical equipment are forwarded to the division medical supply officer.

c. Aeromedical evacuation of patients from the brigade trains areas is the responsibility of the field army support command.

d. FM 8-15 and FM 54-2 contains details on division medical service.

Section VIII. PERSONNEL AND ADMINISTRATION

5-19. General

a. The G1 exercises general (coordinating) staff supervision over all division personnel activities. Commanders and the following special and personal staff officers work in close coordination with the G1:

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

b. The administration company serves as a carrier unit for elements of the division staff that furnish the personnel and administrative services needed to sustain the division. These services include replacement support and a centralized personnel service for all units assigned and attached to the division. FM 12-2, FM 14-3, and FM 54-2 contain details on the employment of the administration company.

c. The personnel service division in the adjutant general section provides personnel and administrative services for all organic and attached units of the division. During combat, most of the personnel of the personnel service division operate in the division rear command post. Personnel sections of attached nonorganic units operate as a part of the personnel service division. Personnel sections of nonorganic units supporting the division may operate as a part of the personnel service division.

5-20. Personnel Services

a. The adjutant general section provides personnel and administrative services to the division. It operates in accordance with doctrine in FM 12-2, FM 14-3, FM 100-10, and FM 101-5. It has the following principal functions:

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

b. Automatic data processing equipment is

integrated into the adjutant general section to support personnel services and other applicable activities in the division.

c. Personnel services at unit levels.

(1) Brigade and battalion commanders are responsible for the personnel and administrative functions of their commands as directed by the division commander.

(2) At brigade level, the brigade commander is responsible for effective overall management of his command but normally does not enter the personnel and administrative channels between division and the battalions attached to the brigade. The brigade S1, however, maintains normal staff channel contacts with battalion S1's and keeps the brigade commander informed of personnel problems, trends, and accomplishments. The brigade personnel staff noncommissioned officer assists the S1, provides liaison with the adjutant general sections for the brigade headquarters and headquarters company, and furnishes assistance to his counterparts in the battalions. For an independent or semi-independent operation, personnel and administrative teams are attached to the brigade.

(3) At battalion level, the battalion commander is responsible for effective overall management of his command. The battalion S1 supervises the personnel and administrative activities of the battalion and keeps the battalion commander informed of personnel problems, trends, and accomplishments. Personnel and administrative actions that the battalion commander has no need to influence personally are handled directly between companies and division. The battalion personnel staff noncommissioned officer assists the S1 and maintains personal liaison with company clerks and first sergeants of the battalion, special staff sections of the division rear command post, and other personnel and administrative elements.

(4) At company level, the company commander is the primary manager of army personnel. His assistants for personnel and administration are the executive officer, first sergeant, and company clerk. The actions that can be accomplished best in the company, battery,

and troop are defined as company-level personnel and administration.

5-21. Replacements

a. The replacement detachment is organic to the adjutant general section of the administration company. This detachment normally operates at the division rear command post and takes part in the defense and security of the division rear command post. It processes all replacements received by the division. The normal capacity of the detachment is three hundred replacements; however, it can process more if provided additional control personnel and equipment.

b. The replacement detachment receives and handles both unit and individual replacements. Incoming units assigned to the division normally provide their own administration, e.g., messing, unit supply, and strength reporting. The replacement detachment performs these functions for individual replacements. For both unit and individual replacements, individual personnel records are processed by in-processing teams composed of personnel from the personnel service division of the division adjutant general section and from the division finance 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 on table of organization and equipment position vacancies as shown in unit morning reports. Replacements are provided from personnel arriving from the zone of interior, hospital returnees, personnel being rotated from other areas, and casualties being returned to duty from various sources. FM 12-2 and FM 100-10 contain details on replacement operations.

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

5-22. Division Band

The band provides military and recreational music as part of the morale and personnel services program. The adjutant general coordinates the activities of the band. In addition to

furnishing music, the band may be employed to provide security for the support command command post; furnish supply handlers, litter bearers, and guides; or perform such other combat, combat support, and combat service support tasks as the support command commander directs. The band can also provide entertainment to the local population as part of the military civic action program. FM 54-2 contains details of the band operation.

5-23. Morale and Personnel Services

a. The division support command operates the exchange functions in the division. Exchange supplies are normally distributed by the division supply and transport battalion. Gratuitous issue items are normally distributed with class I supplies.

b. The adjutant general administers the postal service, special services including the establishment of rest camps, and awards and decorations programs.

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

d. FM 12-2, FM 100-10, and FM 101-5 contain details on providing these morale and personnel services.

5-24. Legal Services

The division staff judge advocate is the legal adviser to the command and supervises all legal services within the command. He is a member of the commander's personal staff. His responsibilities are outlined in FM 101-5 and include military justice, legal assistance, claims, foreign law, international law, status of forces agreements, and domestic law. The division staff judge advocate exercises technical control and supervision over attached judge advocate general service organization teams.

5-25. Financial Service

a. The division finance officer is a special staff officer responsible for the finance functions outlined in FM 101-5. He directs the operations of the finance section which include making determinations of entitlements and preparing, computing, and paying all pay and allowances due division personnel. He is also custodian of financial data records folders. He

advises the commander and the staff on financial matters. On request of the replacement detachment commander, he furnishes personnel to process financial data records folders of incoming replacements. FM 14-3 and FM 101-5 describe finance officer responsibilities.

b. Forward service teams or finance personnel support teams provide finance services to units of the command that operate independently or semi-independently. When the services are required on a basis other than temporary, a class B agent office is established and the finance section is provided additional personnel from local resources. If these personnel are not available locally, a modification to the table of organization and equipment must be submitted in accordance with AR 310-31.

c. When forces are located outside the continental United States, the finance section provides currency exchange facilities insofar as the assigned finance personnel capability permits. When the volume of transactions exceeds this capability, the commander uses foreign currency exchange cashiers as provided for by AR 37-103.

d. FM 14-3 contains the details of finance service support in the division.

Section IX. MISCELLANEOUS SERVICES

5-28. Graves Registration

a. Deceased personnel are normally evacuated from the division area for interment.

b. A graves registration platoon, organic to the division, is responsible for evacuation of deceased personnel from division medical facilities and forward collecting points. Collecting and evacuation sections 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 collecting, identification, and evacuation section which operates the division graves registration collecting point.

c. The division graves registration collecting point is located a short distance from the main supply route, normally near the supply and transport battalion. It is isolated from the view of other activities. Field army units evacuate deceased personnel from the division graves registration collecting point.

5-26. Chaplain Activities

Most of the chaplains authorized the division are assigned to, and normally operate in, subordinate units. The division chaplain coordinates and supervises their collective efforts to insure denominational area coverage. The nature and extent of his supervision will depend on the desires of the commander, the situation, and the number and denominations of the chaplains available. The chaplain may be designated a personal staff officer. FM 16-5 contains details on the employment of the chaplains of the division.

5-27. Inspector General Activities

The inspector general section is organic to the administration company. The inspector general is a member of the commander's personal staff. He inquires into and reports on matters pertaining to performance of the division mission. His sphere of responsibility embraces every phase of activity which is within the sphere of responsibility of the division commander. AR 20-1 and inspector general training bulletins contain responsibilities and activities of the inspector general.

d. Deceased personnel are identified as early and as fully as possible. Units normally evacuate these personnel and their personal effects from forward areas in unit transportation returning from other tasks. In mass casualty situations, special graves registration task groups may be formed, including sufficient transportation to evacuate deceased personnel promptly or to take other appropriate measures.

e. Mass burials are used only when necessitated by sanitary and morale considerations. Mass burials are authorized by the theater commander and reported through graves registration channels. Chaplains will perform appropriate religious burial services.

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

g. The chemical officer furnishes technical advice on the disposition of contaminated bodies.

h. FM 10-63, FM 54-2, and AR 638-30 contain details on graves registration services. FM 101-5 prescribes staff responsibilities for graves registration activities.

5-29. Maps

a. The appropriate supply unit of the division support command requisitions, receives, stores, and distributes maps to the division. This responsibility includes storing division reserve map stocks.

b. The G2 determines map requirements; prepares plans, policies, and priorities for the division map program; and exercises staff supervision over division map activities.

5-30. Bath Service and Clothing Exchange

The service element organic to the appropriate supply unit of the division support command can provide bath service in nine separate locations. This element can establish a clothing exchange service at the bath points; however, additional operating personnel and clothing stocks are required.

5-31. Recovery and Evacuation of Materiel

All units are responsible for the recovery and evacuation of unserviceable and abandoned materiel, to include captured enemy materiel. Recovered materiel must be protected from deterioration and pilferage and should be evacuated to the nearest collecting point. To assist in receipt, segregation, and proper disposition of unserviceable, recovered, and captured equipment, a maintenance and salvage collecting

point normally is established in each brigade area and in the division support area. These collecting points are operated jointly by elements of the appropriate supply and maintenance units.

a. Maintenance personnel in the collecting points receive, segregate, and make final disposition of economically reparable items of equipment.

b. Supply personnel in the collecting points receive, segregate, and make final disposition of serviceable and unserviceable, uneconomically reparable equipment and scrap.

c. All captured enemy materiel is evacuated to the nearest collecting point or safeguarded and reported to the G2 and technical intelligence personnel, who will furnish disposition instructions. FM 30-5, FM 30-16, and FM 54-2 contain procedures for safeguarding, handling, and reporting captured materiel.

(1) On approval of the division commander, usable captured materiel is distributed through normal supply channels. Prior to issue, this materiel must be carefully inspected for boobytraps and contamination.

(2) The division surgeon receives and inspects captured medical supplies and turns them over to technical intelligence teams. These teams release captured medical supplies to medical supply installations for issue. Captured medical supplies are particularly valuable in fulfilling civil affairs requirements and in treating sick and wounded prisoners of war. FM 27-10 contains detailed procedures for processing captured medical supplies.

Section X. CIVIL AFFAIRS

5-32. General

During combat, division-directed civil affairs (CA) activities support division operations, secure necessary civilian assistance, and fulfill the division commander's legal obligations toward the civilian population. The division's civil affairs operations further the civil affairs objectives of the division and higher echelons and assist in future military operations. Field manuals of the 41-, 54-, and 101-series cover details on civil affairs operations and policy.

5-33. Organization

a. The G5 exercises general (coordinating) staff supervision over civil affairs activities within the division. He is primarily concerned with planning, coordinating, and supervising civil affairs operations and civil-military relationships. He provides the G2 items of civil affairs interest for dissemination as essential elements of information or other intelligence requirements.

b. A civil affairs company from the field

army support command civil affairs brigade is normally attached to the division to provide civil affairs support. This company is composed of a company headquarters and three platoons, one per brigade. Functional teams appropriate to the situation and the area of operations are attached to the company to provide the special skills required for division civil affairs operations.

5-34. Operations

a. Activities During Combat.

(1) Civil affairs activities during combat are designed to prevent civilian interference with military operations, to discharge the commander's legal obligations toward the civilian population, and to assist in exploiting the civil affairs capability of other military units. Priority is usually given to public order and safety.

(2) The civil affairs company attached to the division performs recurring civil affairs operations. In a fluid or moving situation, it normally initiates only limited emergency activities. These civil affairs activities are transferred to a designated civil affairs area support unit or to local civilian agencies, if functioning, as soon as possible. In a static situation, the civil affairs company may perform many or all of those activities normally conducted by an area support unit within the division area.

(3) Support for division operations in the form of intelligence, counterintelligence, operations against irregular forces, labor, supplies, housing, transportation, provision of buildings suitable for conversion to U.S. Army medical facilities, and maintenance can be secured from the local population.

(4) Supplies and equipment required in discharging civil affairs responsibilities to the civilian population are procured locally when possible. Combat operations resources are diverted to civil affairs activities only when required by the combat mission and only when directed by the division or higher commander.

(5) In stability operations, civil affairs activities are oriented toward separating the guerrilla from the population and gaining the loyalty of the people for their government. This is done by fostering mutual respect, trust, and loyalty between military forces and the host government on one hand, and the population on the other. Civic action projects, psychological operations, and population and resources control measures are some of the means used by the division to accomplish civil affairs objectives. FM 31-23 and FM 41-10 discuss these functions in detail. Commodities and technical assistance to support these programs may be available from country team resources.

b. Activities Other Than Combat.

(1) During noncombat periods, civil affairs are directed toward the preparation of contingency plans to cover potential activities such as civic action for stability operations; joint contingency operations; civil emergencies resulting from disasters, epidemics, disorders, or other conditions threatening the successful functioning of civil authority; and full or partial executive, legislative, and judicial authority over an assigned area of responsibility.

(2) In peacetime or in areas where hostilities are not likely to occur, the civil-military relationship is one of cooperation and coordination.

Section XI. PSYCHOLOGICAL OPERATIONS

5-35. General

a. Psychological operations (PSYOP) units are attached to the division from field or theater army when required.

b. Psychological operations should be used to support the division mission. Psychological operations support tactical, strategic, and civil affairs operations. At division level, support can range from loudspeakers and leaflets to induce individuals to surrender to face-to-face

communication by individual soldiers to influence a target audience.

c. FM 33-1 and FM 33-5 contain details of psychological operations units and capabilities.

5-36. Planning

a. The G3 has general (coordinating) staff responsibility for planning and integrating psychological operations to support the division tactical mission. Requests for support are

submitted to the corps psychological operations officer. The division psychological operations officer, an officer in the G3 section with psychological operations as an additional duty, plans and coordinates the conduct of psycho-

logical operations as an integral part of tactical operations.

b. FM 31-5 and FM 33-5 contain detailed doctrine and procedures for psychological operations.

CHAPTER 6

OFFENSIVE OPERATIONS

(NATO STANAG 2029, CENTO STANAG 2029, SEATO SEASTAG 2029,
ABCA SOLOG 34R; NATO STANAG 2088, CENTO STANAG 2088,
ABCA SOLOG 108; NATO STANAG 2099, CENTO STANAG 2099,
SEATO SEASTAG 2099)

Section I. GENERAL

6-1. General

This chapter provides guidance for the employment of the division in offensive operations. Certain operations, i.e., stability, amphibious, airborne, airmobile, etc., and certain climate or terrain conditions, i.e., desert, arctic, jungle, mountains, riverine, etc., dictate modification of techniques or development of new procedures. However, the principles of the offense remain the same. Chapter 12 and the applicable publications listed in appendix A discuss the techniques peculiar to special operations and operations in adverse terrain and climate.

6-2. Concept of the Offense

a. The division is organized for combat to make the best use of the capabilities of all its elements. It employs a combination of fire and maneuver to accomplish offensive missions. Its fires include nuclear, chemical, and conventional munitions.

b. When nuclear, biological, or chemical munitions are employed, the division exploits the effects of these fires. Combat forces move through, over, or around the effects of these

fires to dominate, neutralize, capture, or destroy enemy forces, to control terrain objectives, or to disrupt enemy rear areas.

c. Under conditions of nonactive nuclear warfare, the firepower available to the division is substantially reduced. In this environment the possibility exists that the enemy may employ special munitions. The enemy may also possess an air arm capable of dominating some or all of the airspace for appreciable periods. Therefore, the division must avoid concentrations of units, activities, or installations that present lucrative targets for attack by these means.

d. When the use of nuclear, biological, and lethal, incapacitating chemical munitions is authorized, they materially increase combat power of the division. Normally, chemical agents used along the division route of advance are nonpersistent since persistent effect agents would create obstacles to the attacking forces. Persistent effect agents can be used for flank protection if the friendly unit does not plan to occupy or pass through the contaminated areas.

Section II. FUNDAMENTALS OF OFFENSIVE ACTION

6-3. General

a. Combat power in the offense is achieved by organizing responsive, combined arms forces that 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 commander exploits all available means to gain the division objective in the shortest possible time.

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

e. Successful offensive action requires the

concentration of superior combat power at the decisive point and time. This requires that the division mission be analyzed and, if possible, translated into specific objectives, which when secured permit control of the area or facilitate destruction of the enemy force. When it can be determined that the seizure of a single objective will contribute most to the accomplishment of the division mission, this objective is called the decisive objective. The division main attack is directed against it. The main attack is given priority in the allocation of both maneuver and fire support units. Main and supporting attacks are not mandatory when there is no decisive objective. This occurs infrequently.

f. Fire superiority must be gained early and maintained throughout the attack to permit freedom of maneuver without prohibitive loss.

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

h. Plans provide for the exploitation of any favorable advantage that develops during the attack. This may require the commander to retain a mobile reserve of troops and fire support to exploit successes. When an 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 chance to recoup losses, and the opportunity to gain the initiative. Failure to capitalize on opportunities results in slow, indecisive attacks in which the attacker usually suffers heavy losses.

i. Terrain is important in division offensive combat and often provides advantages that can be exploited. Operations often are directed toward the early control or neutralization of key terrain features. This is done to—

- (1) Gain an advantage in observation.
- (2) Provide cover and concealment.
- (3) Obtain better fields of fire.
- (4) Enhance maneuver and support.
- (5) Secure routes used by friendly forces.

(6) Allow freedom of movement.

(7) Afford additional security.

(8) Gain control of routes useful to the enemy.

j. After the enemy has been located, there are three principal tasks in the attack: holding the enemy in position, maneuvering to gain an advantage, and delivering an overwhelming attack at the decisive time.

k. Surprise is always sought. It can be gained by deceiving the enemy defense and by choosing an unexpected time, place, direction, and form of maneuver. Cover and deception operations aid in achieving surprise.

l. An aggressive attack inherently provides security.

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

n. Forces are dispersed to reduce vulnerability to attack but only to the extent that the performance of the mission is not impaired.

o. Offensive operation plans must provide for adequate combat support and combat service support to sustain the attack.

p. Electronic warfare is an integral part of operations planning.

6-4. Fire Support

a. General. Firepower and maneuver complement each other and are used in many combinations. Fire support planning is concurrent and integrated with maneuver planning.

(1) Preparatory fires aid the attack in gaining momentum, weaken the enemy physically, destroy or reduce his means to resist, and prepare him psychologically for the assault.

(2) Mobile fire support means assist in maintaining momentum of the attack.

(3) Fires cover the reorganization of the assault forces, impede enemy attempts to organize a counterattack, and assist in securing the objective.

b. Artillery Fires. Artillery provides close continuous fire support to the attacking forces. It is suited to the neutralization and destruction of enemy personnel and equipment during the movement of attacking forces to assault positions. Artillery normally furnishes most of the division's preparatory fires, supports the attack, and covers the reorganization of the force. Artillery weapons can deliver nuclear, biological, chemical, or conventional fires.

(1) *Nuclear.* In an active nuclear environment, the use of nuclear munitions permits courses of action which otherwise would not be feasible. These munitions produce multiple effects. In support of the attack, the blast, nuclear radiation, and thermal effects rupture enemy positions and reduce the requirements for combat units; fallout can be employed to blanket areas of poorly defined targets. Nuclear radiation can cause personnel casualties within various time frames. Such an effect can influence the commander's plan of action. Prior to making a decision to employ nuclear fallout, the commander considers the expected advantages, troop safety, effect on adjacent commands, future use of the area that will be contaminated, and restrictions imposed by higher headquarters. Sufficient friendly nuclear fires and suppression of local enemy nuclear capabilities will allow the attacking force to exploit immediately. Nuclear munitions held in reserve can reduce the requirements for troop reserves and provide the commander a powerful means of influencing the action. The decisiveness of nuclear fires can eliminate the need for mutual support between widely separated units.

(2) *Biological.* Biological agents cause death or disability in man and his animals, damage crops, and cause certain types of material to deteriorate. The range of susceptible targets, coupled with the large area coverage and delayed effects of this weapon system, make it more practical for strategic than tactical employment. Therefore, corps or higher levels of command normally plan, control, and coordinate the employment of biological weapons systems. Biological weapon systems can be used by themselves; however, their effects are

maximized when integrated with other types of fires.

(3) *Chemical.* A toxic chemical agent attack produces casualties without creating the destructive effects of nuclear munitions; however, persistent agents can create obstacles. Normally, nonpersistent chemical agent attacks are made against target areas occupied by personnel. These objectives include those in the path of the attacking friendly troops and those to be occupied by friendly forces. Persistent chemical agents are normally employed on target areas that friendly forces do not intend to enter immediately. Toxic chemical agents, used in conjunction with nuclear fires, increase the casualties inflicted on the enemy and impede his efforts to organize his defense.

c. Aerial Fires. Tactical air support can deliver nuclear, biological, chemical, or conventional munitions against enemy forces and positions. Armed helicopters, organic, attached, or supporting the division, attack appropriate targets with conventional fires. They also have a limited chemical delivery capability.

d. Other Fires.

(1) *Air defense artillery.* The primary mission of divisional air defense artillery units is to provide air defense for division areas, installations, and units against low-altitude hostile aircraft. This mission requires that elements of these units possess the necessary mobility to accompany units of the division during movement. Air defense artillery automatic weapons (Vulcan) can also deliver surface-to-surface fires. When these elements are not required for air defense or when air attack is not imminent, they can be assigned a mission of fire support of ground tactical operations.

(2) *Naval gunfire.* Naval gunfire can deliver accurate, close fire support to attacking ground forces. When available, naval gunfire is used against targets and for missions similar to those assigned to artillery units. Naval gunfire resources can deliver nuclear, biological, chemical, or conventional munitions.

6-5. Frontages and Formations

a. The division's mission and combat power

are major considerations in determining the frontage to be assigned an attacking unit. Other factors include:

- (1) Anticipated enemy resistance.
- (2) Terrain.
- (3) Space required by the unit for maneuver and dispersion.
- (4) Road nets.
- (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 communications capability.
- (9) Unit reconnaissance capability.
- (10) Enemy nuclear, biological, and chemical capability.

b. The mission, terrain and weather, enemy situation, and troops available indicate the most suitable attack formation. The formation selected must provide the combat forces the flexibility to react promptly to changing situations. Divisional formations are—

(1) *Column of brigades.* This formation provides maximum depth to the attack, facilitates retention of the initiative, provides flexibility, enhances security, and is the easiest formation to control. Following brigades can move through, around, or over the leading brigade to maintain the momentum of the attack or to meet threats to either flank; however, deployment of forces is time consuming and the formation provides limited firepower to the front.

(2) *Line of brigades.* There are two variations of this formation:

(a) *Two brigades abreast.* This variation may be adopted when the division attacks on a relatively broad front and does not require great depth. The uncommitted brigade, as the division reserve, provides flexibility, security, and moderate depth to the attack.

(b) *Three brigades abreast.* This variation is difficult to control and offers less depth, security, and flexibility but may be used when division desires the maximum combat power forward on a broad front and requires little or no reserve. It may also be used when division

has considerable intelligence about the enemy and speed is essential.

(3) *Echelon of brigades.* This formation furnishes security in depth and protection to the flank; however, it provides limited firepower to the front and deployment to another formation is time consuming.

c. Figure 6-1 lists factors favoring adoption of a type of formation.

d. Figure 6-2 illustrates formations and variations of the formations the division employs.

e. The principles used in determining frontages and formations at division level are applicable at brigade level.

6-6. Designation of Forces

a. *General.* Forces may be designated as the main attack, the supporting attack, or the 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. The commander must be flexible in designating the main attack and must be prepared to react to changes in the situation. Although one course of action may appear to be the best during planning, a better one may develop prior to or during the attack. The division commander must be prepared at any time to exploit success in a particular area by shifting the weight of his combat power.

b. *Main Attack.* The main attack is directed to secure the objective or objectives that contribute the most to the accomplishment of the division mission. The main attack is accorded first priority in the allocation of combat power. It must be provided the means to gain decisive superiority over the enemy.

c. *Supporting Attack.*

(1) A supporting attack contributes to the success of the main attack by accomplishing one or more of the following:

(a) Controls terrain that enhances the maneuver of the main attack.

(b) Destroys enemy forces that hinder the main attack.

(c) Confines enemy forces to selected, terrain features.

COLUMN OF BRIGADES	LINE OF BRIGADES	ECHELON OF BRIGADES
Deep objectives	Shallow objectives strongly held by enemy forces	Exposed flank
Vague enemy information	Enemy dispositions well known	Limited time available for deployment
Restrictive terrain	Multiple routes of advance available	Requirement for security in depth
Light, disorganized enemy resistance	Requirement to defeat the enemy in detail	
Relatively narrow zone of action	Secure flanks	
	Little or no requirement for a reserve	
	Presence of four or more maneuver brigades	
	Relatively wide zone of action	

Figure 6-1. Factors favoring adoption of a type formation.

(d) Deceives the enemy as to location of the main attack.

(e) Forces the enemy to commit reserves prematurely or in an indecisive area.

(f) Prevents reinforcement against the main attack.

(2) Sufficient combat power is allocated for these tasks. Nuclear and chemical munitions may be used to accomplish tasks that otherwise might require large forces.

d. Reserve.

(1) *General.* The division normally retains a reserve to be committed at a decisive time and place to exploit success and insure the accomplishment of the mission. A reserve provides the commander with a means of dealing with unforeseen contingencies. The reserve is not used to redeem the failure of other units. It adds to security, although this is not the principal reason for its retention. Reserves may consist of troops, nuclear fires, or chemical munitions, or any combination of these means. A highly mobile reserve is preferred. The reserve may be used to—

- (a) Exploit success.
- (b) Reinforce or maintain the momentum of 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, and inability to visualize the attack to its final objective require a stronger reserve than when 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. The ability of the airmobile division to extricate or redeploy its forces frequently allows it to retain a smaller reserve than other divisions.

(3) *Location of the reserve.* Dispersal of the reserve by combined arms teams into multiple assembly areas or march columns reduces vulnerability to nuclear attack. The reserve is located—

(a) To permit rapid movement to points of probable employment. Availability of the reserve for employment is based on 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 munitions.* The commander normally holds some of his nuclear munitions in reserve. Nuclear munitions in reserve may

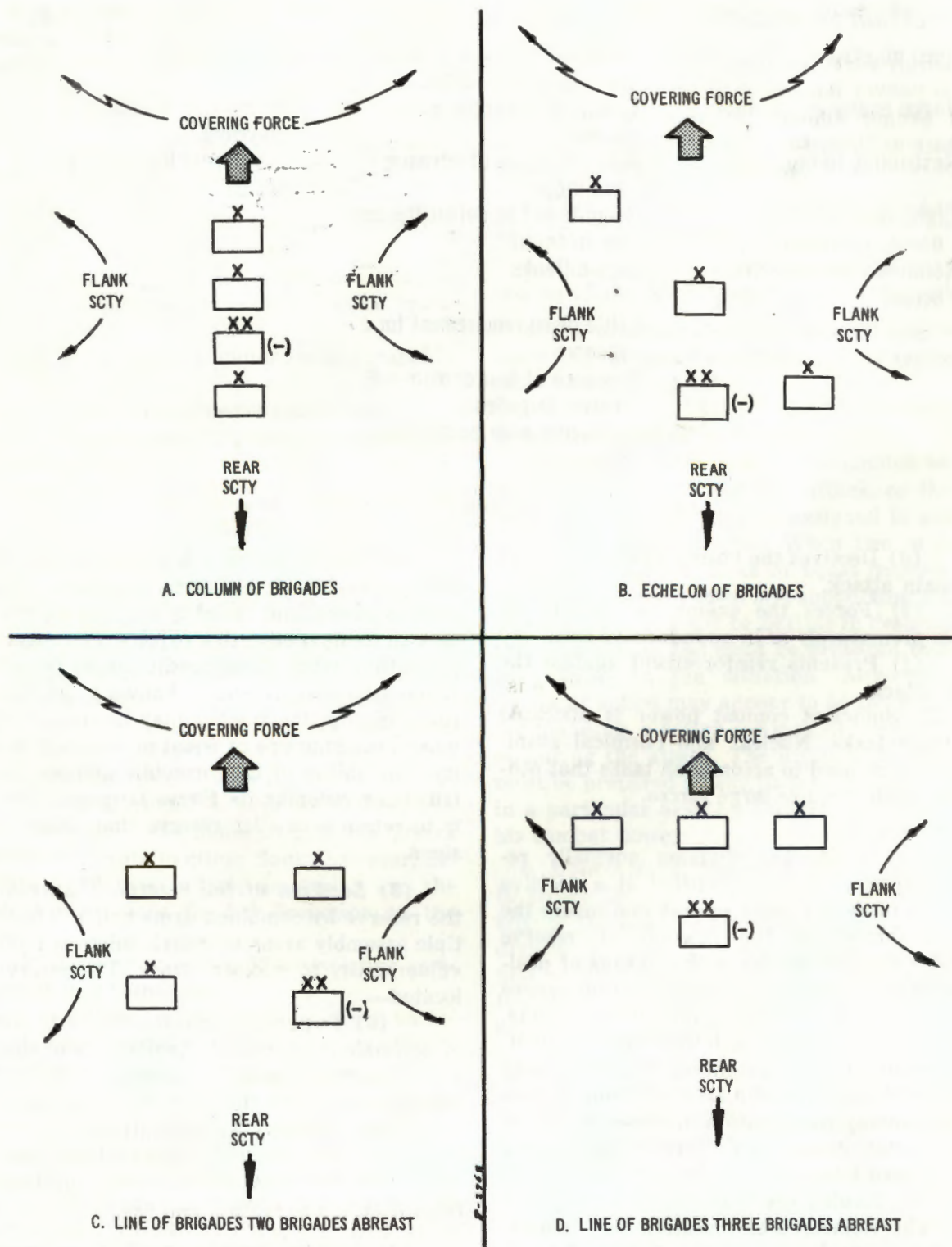


Figure 6-2. Combat formations.

reduce the requirement for a large troop reserve.

(5) *Reconstitution of reserve.* Prior to the attack, plans are made to reconstitute a reserve at the earliest opportunity after the reserve is committed. Once the reserve is committed, a reserve is reconstituted with minimum delay.

6-7. Security

a. The purpose of security in the offense is to avoid unexpected interference by enemy forces, 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. The commander has the inherent responsibility to destroy, contain, or force to withdraw, those enemy forces which pose a threat to the accomplishment of his mission. Forces which are contained may be destroyed later by the attacking unit or other forces designated. If the elimination of all enemy forces in zone is desired, the operation order must so specify. A directed mission of exploitation or the authority to bypass relieves the attacking commander of his inherent responsibility for bypassed forces in his zone of action. The next higher commander may use a follow and support unit, the reserve, or fires alone to destroy these forces.

c. 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. Early warning of impending enemy countermeasures and the collection of timely and accurate information are essential to security. Divisional reconnaissance resources, such as the cavalry squadron and Army aviation, are used extensively in this role. The Army Security Agency division support company furnishes early warning information and supports reconnaissance forces by

conducting signal security and electronic countermeasures operations as directed by the division commander. In addition, the division exploits the reconnaissance and other intelligence capabilities of committed units.

d. The division adopts passive measures to protect itself from nuclear, biological, and chemical attacks. These measures include 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.

e. The division actively provides for security by using covering forces and advance, rear, and flank guards or by assigning additional missions to combat units. The division frequently assigns one or more of these missions to the cavalry squadron. The division commander specifies the units to be protected or the zone of responsibility. The responsibility of the flank guards usually begins at the rear of the leading battalion or task force and ends at the rear of the other division elements exclusive of the rear guard. Field manuals of the 7-series and 17-series contain principles and techniques for accomplishing security missions.

6-8. Offensive Operations

a. *Types of Offensive Operations.* There are five types of offensive operations: the movement to contact, the reconnaissance in force, the coordinated attack, the exploitation, and the pursuit. As with the forms of maneuver, the types of offensive operations may look different at each echelon of command; however, each operation will normally use one or more of the types of offensive action. The types of offensive operations are discussed in detail in paragraphs 6-9 through 6-32.

b. *Forms of Maneuver.* In offensive operations, attacking forces are maneuvered to gain an advantage over the enemy force in order to close with and to destroy or capture it. To accomplish this, the commander may orient his attack on the front or flank of the enemy force. The three basic forms of maneuver in offensive operations are the penetration, the frontal at-

tack, and the envelopment. The turning movement and a double envelopment are variations of the envelopment. These forms may look different at each echelon of command; however, all offensive operations will normally be a part of one of these forms of maneuver. The attack-

ing force normally uses a combination of the forms of maneuver. The division normally conducts a frontal attack only as part of a larger force. Paragraphs 6-33 through 6-37 discuss the forms of maneuver in detail.

Section III. MOVEMENT TO CONTACT

6-9. General

a. Movement to contact is an offensive operation to gain or to reestablish contact with the enemy. Its purpose is the early development of the situation to provide an advantage prior to decisive engagement.

b. The preferred method of movement is to advance on a broad front using the techniques of the tactical column or approach march. Figure 6-3 illustrates a suggested organization for this type of offensive operation.

c. 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.

d. Movement to contact may frequently be made at night or during periods of reduced visibility. Under these conditions, security from enemy observation is improved; however, the problems of identification and orientation are increased. These problems can be overcome by training and the establishment of standing operating procedures for route marking, identification of checkpoints and key personnel, and exercise of command and control during periods of reduced visibility. Conditions of reduced visibility provide passive protection from enemy air and special weapons and restrict enemy observation. Friendly visibility is also reduced under these conditions. This factor may result in the division failing to establish contact; therefore, the division places increased reliance on nonvisual reconnaissance and surveillance means.

6-10. 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.

b. Primary components are the covering force; advance, flank, and rear guards; and 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.

(4) Rapid, coordinated employment when decisive contact is made with enemy forces.

c. Any of the basic formations or combinations of formations may be used. Normally movement is conducted in multiple columns. Subordinate combat units adopt one of the basic formations or a variation of these formations that best enables them to accomplish their assigned missions.

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 fires permit more rapid movement because they allow the covering force to eliminate enemy resistance that otherwise might require the deployment of sizable elements. Nuclear fires, to include use of fallout, can provide security by blocking enemy avenues of approach or by restricting the enemy's access to terrain essential to the advance. Persistent toxic chemical agents can be used in a similar manner. The vagueness of the enemy situation normally requires that the bulk of nuclear fires be on-call.

f. Tactical air support aircraft furnish close

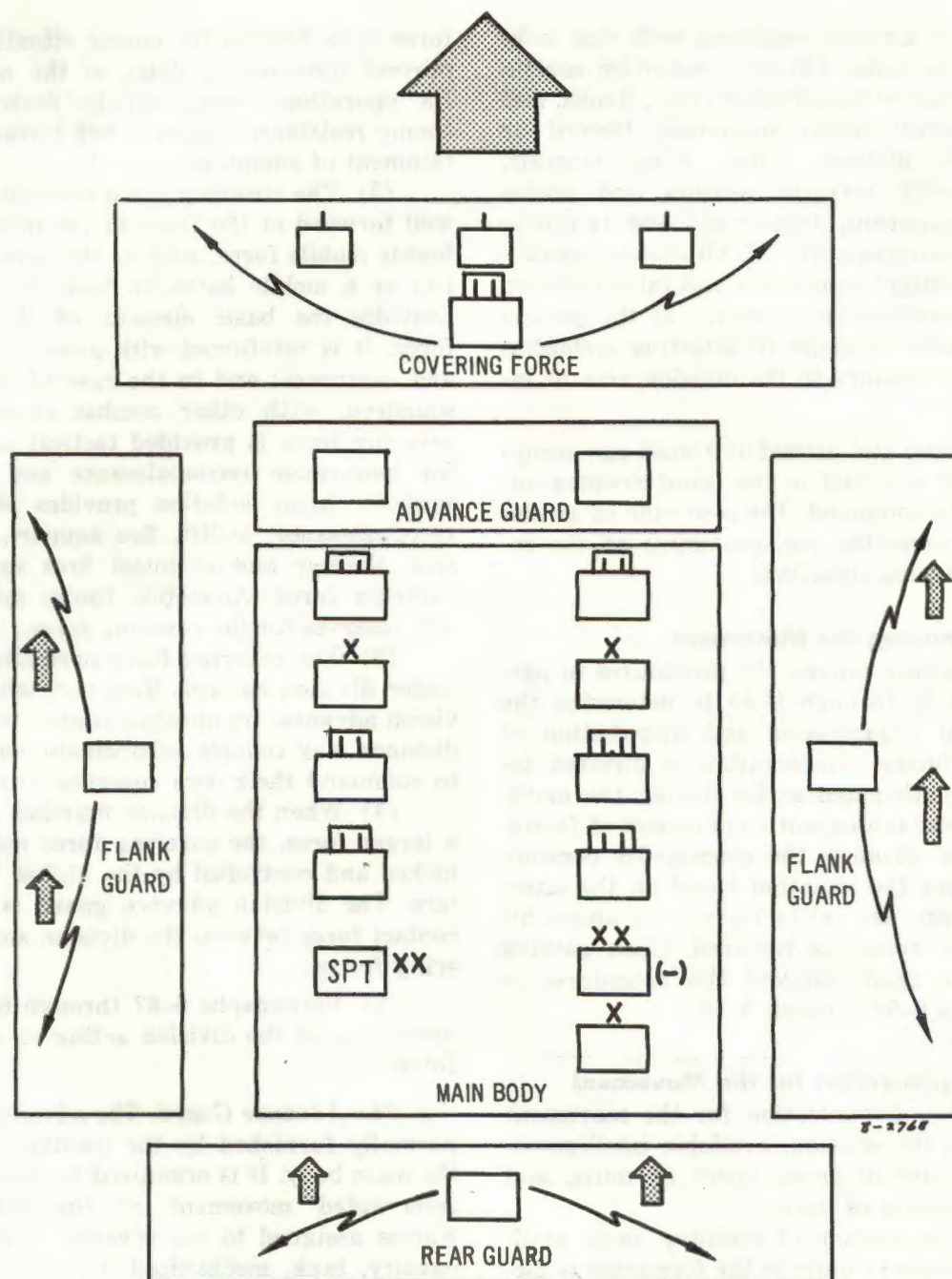


Figure 6-3. Type organization for movement to contact.

air support; airlift corps, troops, and supplies; and perform day and night visual, photographic, and electronic reconnaissance missions to detect enemy units, obstacles, ambushes, or movement into the area and to provide information on the terrain to be traversed.

Tactical air support aircraft reinforce security efforts. The use of column cover or air-alert aircraft is habitual when contact is imminent.

g. Army aircraft furnish aerial fire support; airlift cargo, troops, and supplies; and perform visual and photographic reconnaissance mis-

sions. Army aircraft, equipped with side looking airborne radar (SLAR), maintain continuous coverage of the division front, flanks, and rear to detect enemy movement toward or around the division. Other Army aircraft, equipped with infrared sensors and photographic equipment, supplement and reinforce the SLAR coverage. The SLAR system capabilities for in-flight processing and interpretation and for simultaneous reception at the ground terminal stations assist in detecting ambushes and enemy buildups in the division area of interest.

h. Airborne and airmobile forces can secure key terrain essential to the uninterrupted advance of the command. The provision of airmobility increases the responsiveness of the reserve to varying situations.

6-11. Planning the Movement

The commander follows the procedures in paragraphs 6-38 through 6-45 to determine the best initial organization and distribution of forces. 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 on the latest developments. He shifts forces and alters his plan of movement as required. Upon gaining contact, he again employs the procedures in paragraphs 6-38 through 6-45.

6-12. Organization for the Movement

a. General. Organization for the movement depends on 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 in the formation is 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 without interfering with tactical movements. Normally, these units follow combat echelons.

b. The Covering Force.

(1) The mission assigned the covering

force is to develop the enemy situation and to prevent unnecessary delay of the main body. Its operations may include destruction of enemy resistance, securing key terrain, or containment of enemy forces.

(2) The covering force normally operates well forward of the front of the main body. A highly mobile force, such as the cavalry squadron or a mobile battalion task force, usually provides the basic element of the covering force. It is reinforced with aviation, artillery, and engineers; and in the case of the cavalry squadron, with other combat elements. The covering force is provided tactical air support for long-range reconnaissance and close air support. Army aviation provides short-range reconnaissance, airlift, fire support, and control. Nuclear and chemical fires support the covering force. Airmobile forces make excellent reserves for the covering force.

(3) The covering force normally operates under division control. However, when the division advances on multiple routes, terrain and distance may require subordinate commanders to command their own covering forces.

(4) When the division marches as part of a larger 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) Paragraphs 6-67 through 6-69 cover operations of the division acting as a covering force.

c. The Advance Guard. The advance guard is normally furnished by the leading element of the main body. It is organized to secure the uninterrupted movement of the main body. Forces assigned to the covering force include cavalry, tank, mechanized infantry, airmobile infantry, or motorized infantry units in the proper proportion to accomplish its mission. Necessary combat support, such as engineers and artillery, is integrated into the advance guard. Emphasis is placed on the use of the air cavalry troop of the division cavalry squadron and on the employment of reconnaissance and surveillance systems to assist the advance guard in detecting enemy activity in advance

of actual contact. The advance guard normally operates under the control of the leading element of the main body.

d. Flank and Rear Guards.

(1) Flank and rear guards protect the main body from ground observation and surprise attack. These forces must be strong enough to defeat minor enemy forces or to delay a strong enemy attack until the main body can deploy.

(2) The flank guard travels on routes parallel to the route of the main body. The flank guard moves by continuous marching or by successive or alternate bounds and occupies key positions on the flanks of the main body. The rear guard follows the main body.

(3) The rear and flank guards are similar to the advance guard in strength and composition. Airmobile forces and elements of the cavalry squadron are well suited to flank and rear guard missions. If the flanks or rear of the division are secured by adjacent or following units, the size of divisional security forces can be reduced.

(4) Flank and rear guards operate under the control of either the division or the adjacent element of the main body.

e. The Main Body.

(1) The main body contains the bulk of the division's combat power. It is immediately available to attack major enemy forces.

(2) Units of the main body are organized for combat and positioned in the advancing columns to permit maximum flexibility for employment during the movement or after contact with the main enemy force has been established.

f. Air Defense. Air defense must be established over both the forward ground combat forces and the main body. This is accomplished by having air defense artillery elements move with the flank guard to occupy preselected sites along the route of march and by placing mobile air defense artillery elements within the moving column. These elements provide low-altitude air defense. Higher air defense command echelons located to the rear of the division provide high-altitude coverage. Figure 6-4 illustrates a type of plan for air defense of

the division during movement to contact. FM 44-1 and FM 44-3 contain detailed discussions of army air defense procedures applicable to this type of offensive operation.

6-13. Command

a. The division command element moves in the position where it can best carry out its command and control tasks. Normally it 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 made known to all subordinate commanders. Minimum tactical control measures are used. These measures may include boundaries, axes of advance, phase lines, checkpoints, and fire coordination measures. The move is executed aggressively by subordinate commanders acting on their initiative in accordance with the commander's concept. As the situation progresses and contact with the enemy force is made, the division commander resumes more centralized control of the division.

c. Maximum, rapid dissemination of all information is essential. When additional security is required, security forces transmit information to the division, while other stations maintain listening silence.

6-14. Security

Security is obtained through the use of the security forces. Security is enhanced by rapid, aggressive movement and continuous ground and air surveillance of the division area of interest. The use of dispersed formations reduces vulnerability to nuclear or chemical attack but may increase the difficulty of maintaining control and furnishing adequate mutual support between the various tactical groupings. This difficulty may be overcome by the use of nuclear and chemical fires, reconnaissance, and liaison between units.

6-15. Combat Service Support

a. The movement to contact is normally characterized by increased consumption of POL, increased vehicular maintenance requirements, reduced ammunition expenditure, and relatively few casualties. It is complicated by

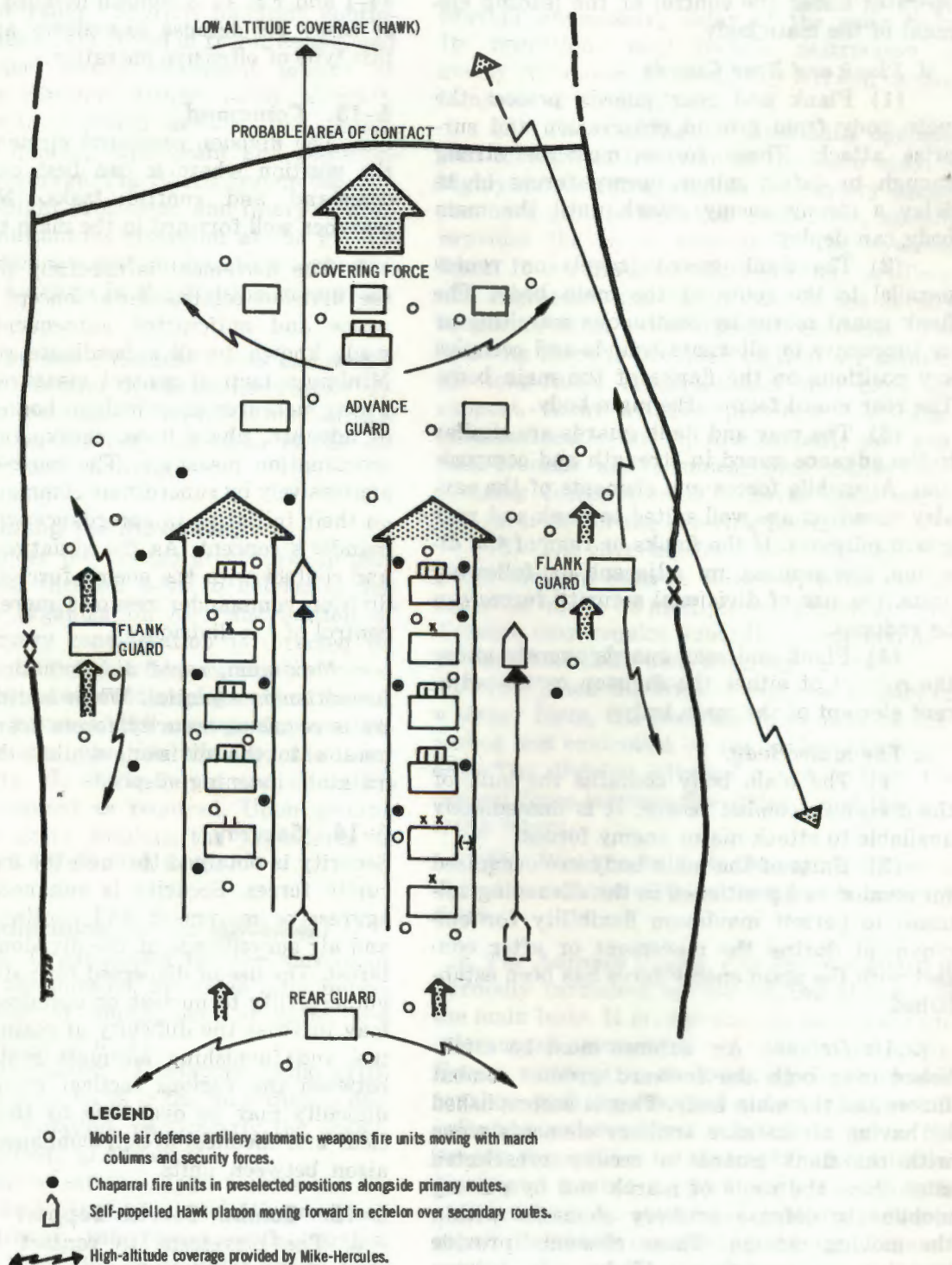


Figure 6-4. Type plan for air defense of division during movement to contact.

dispersed operations, speed of forward movement, and enemy and terrain variables. The speed of the operation and the high POL consumption necessitate careful planning of combat service support. The division must have adequate combat service support to sustain its uninterrupted movement. Mobile distribution points and airlift aircraft speed delivery of supplies. Organic combat service support means may require augmentation from higher headquarters.

b. Maintenance and traffic control on routes for forward movement are particularly important to combat service support elements. These needs may conflict with the requirements of combat units for engineers and military police. Additional support from higher headquarters may be required.

6-16. Conduct of the Movement

The movement to contact is marked by rapid, aggressive action. Local situations are rapidly developed and dealt with by the covering force. Within its capability, the covering force destroys enemy forces that may interfere with the movement of the main body and contains those that it cannot destroy. The main body commits elements to reduce pockets of resistance contained or bypassed by the covering force or, when required by the mission, leaves them for engagement by follow and support units. Elements of a covering force assigned containing missions are relieved as rapidly as possible and rejoin the covering force to avoid dissipating its strength. The division commander is kept informed of the progress of the various combat units and their anticipated actions. When resistance is encountered, the division commander commits forces from the main body as they become available to maintain the momentum of the advance. Nuclear and chemical munitions are used to attack targets of opportunity, to destroy enemy forces, to prevent movement against the division, and to deny key terrain to the enemy. The division directs all efforts to keep the enemy off balance and to prevent small elements from establishing an effective defense or mounting a counterattack.

6-17. 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 is developed and subsequent planned and coordinated operations are undertaken.

b. Meeting engagements may occur 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 limited time for the commander to develop the situation and to formulate and execute plans.

6-18. Conduct of Meeting Engagements

a. The basic principle in conducting a meeting engagement is to seize and retain the initiative. By retaining the initiative, a commander can subsequently adopt the best course of action to accomplish his mission.

b. The following actions assist the commander to seize the initiative:

(1) Make a rapid estimate of the situation and issue fragmentary orders.

(2) Commit units from march column.

(3) Organize the advance guard with mobile forces capable of communication, reconnaissance by fire, rapid deployment, and speed in the attack.

(4) Intersperse artillery in the column to insure supporting fires during the initial action.

c. The enemy situation is developed vigorously and aggressively. The envelopment of an assailable flank will generally disclose the enemy's disposition 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. At all

times, brigade and division commanders must be aware of the disposition of their commands

and must be prepared to react rapidly to any situation.

Section IV. RECONNAISSANCE IN FORCE

6-19. General

The reconnaissance in force is a limited objective operation to discover and test the enemy's disposition and strength and to obtain other intelligence. Although its primary purpose is reconnaissance, the reconnaissance in force may discover weaknesses in the enemy dispositions which, if promptly exploited, would permit tactical success. The reconnaissance in force may be part of either defensive or offensive operations.

6-20. Basic Considerations

a. The reconnaissance in force normally develops information more rapidly and in more detail than other reconnaissance methods. When deciding to reconnoiter in force, the commander considers—

- (1) His knowledge of the enemy situation.
- (2) The urgency and importance of additional information.
- (3) The efficiency and speed of other intelligence collection agencies.
- (4) The extent to which his plan of action may be divulged by the reconnaissance in force.
- (5) The possibility that the reconnaissance may lead to a general engagement under unfavorable conditions.

b. When the commander desires information about 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 along the front employing strong aggressive probes to determine the enemy situation at critical points. Securing a terrain objective is not in itself the purpose of the reconnaissance in force. Rather the operation has the objective of gaining maximum information of the enemy. The depth of any terrain objective assigned de-

pends on the purpose of the reconnaissance in force.

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 on the mission 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 weaknesses. If the situation permits, the task force is equipped with tanks.

d. The division may use several task forces simultaneously or 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 and prepares to render all possible assistance to any exploiting force. 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 has weak control and communications. Planning should include arrangements for withdrawal or extrication of the force.

6-21. Organization for Combat

Units designated to make the reconnaissance in force require sufficient combat power to uncover main enemy positions. Tanks furnish added combat power and, when permitted by the tactical situation, are provided.

6-22. Conduct of the Reconnaissance in Force

a. Although a reconnaissance in force is a type of offensive operation, the commander may be instructed to avoid actions that might precipitate a general engagement.

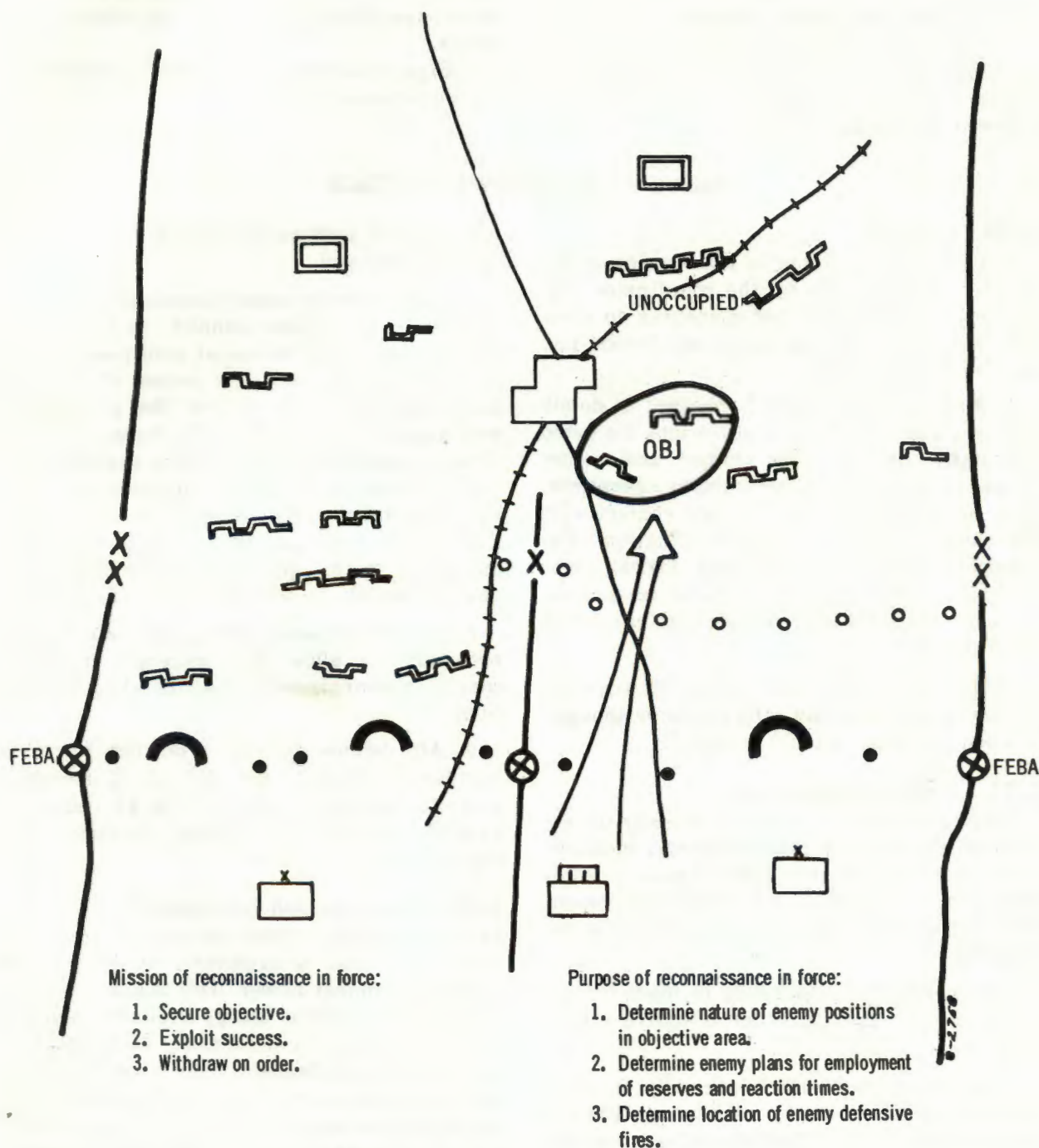


Figure 6-5. Division conducting a reconnaissance in force.

b. The division commander exploits the success gained by the reconnaissance in force primarily to continue the attack or to retain control of terrain secured by the force. When the use of nuclear or chemical munitions is autho-

rized, they are employed against suitable targets discovered by attacking forces. The destruction of these targets is completed during local exploitation by the reconnoitering force.

c. The division commander orders a with-

drawal and assists 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 the reconnoitering force may continue the attack.

e. Figure 6-5 depicts a division conducting a reconnaissance in force.

Section V. COORDINATED ATTACK

6-23. General

a. The offensive action of the division is habitually characterized by the coordinated employment of firepower and maneuver to close with and destroy or capture enemy forces, i.e., the coordinated attack.

b. A coordinated attack is planned in detail. The two types of offensive operations discussed previously, movement to contact and reconnaissance in force, are preliminary operations. They are conducted either to gain contact with the enemy or to develop the situation. The coordinated attack is the next logical step; however, movement to contact and reconnaissance in force are not required before every coordinated attack.

c. The coordinated attack is the offensive operation most frequently referred to or thought of when the term "attack" is used.

6-24. Basic Considerations

a. The coordinated attack is normally undertaken after thorough reconnaissance, methodical evaluation of relative combat power, acquisition and development of targets, and systematic analysis of all other factors affecting the situation.

b. A coordinated attack may be made before, after, or as a part of other offensive operations.

c. A coordinated attack normally involves overcoming major enemy resistance. When a highly organized, well-fortified enemy position must be destroyed or penetrated, a coordinated attack is normally required.

d. This type of offensive operation requires the maximum application of combat power; strict adherence to the fundamentals of offensive operations; thorough, detailed planning;

and positive, aggressive leadership at all echelons of command.

e. Such attacks occur frequently in either nuclear or nonnuclear conflict. In conflict involving nuclear or chemical munitions, reducing vulnerability and the period of risk are major considerations during the preparation and massing of the attacking force. In a nuclear environment, plans must be developed for rapid dispersal of forces immediately after they accomplish the mission. Mobility is essential in this environment for rapid assembly, movement to the objective, speedy dispersion, and reassembly to counter enemy threats.

f. In a coordinated attack, adequate time is necessary to allow for thorough planning, careful reconnaissance, and detailed evaluation.

g. Air defense for the attacking forces is mandatory. Priority for defense is normally given to the main attack. See FM 44-1 and FM 44-3 for details of air defense operations during offensive operations.

6-25. Organization for Combat

The coordinated attack requires a combined arms force that is organized to develop the maximum combat power. The mission, terrain and weather, enemy, troops available, and the many other factors influencing each situation in which a coordinated attack must be made, prevent development of a type or suggested organization for combat. Each situation is different. The commander must consider the recommendations of his staff; apply the principles contained in this chapter and, when appropriate, chapter 12; and use his judgment to develop the best organization for combat for each tactical situation requiring a coordinated attack.

6-26. Conduct of the Coordinated Attack

The coordinated attack is conducted in accordance with the principles discussed in this chapter and in chapter 12. The commander is granted maximum freedom and support in

carrying out a coordinated attack. The only restrictions imposed are those necessary to maintain control and to insure noninterference with adjacent units.

Section VI. EXPLOITATION**6-27. 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 conduct an orderly withdrawal in the face of threatened destruction or capture.

b. The exploitation is initiated when an enemy force is having recognizable difficulty in maintaining its position. Although local exploitations may appear insignificant, their cumulative effects can be decisive.

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

6-28. Basic Considerations

a. Exploiting forces can have the mission of securing objectives deep in the enemy rear, cutting lines of communications, surrounding and destroying enemy forces, denying escape routes to an encircled force, and destroying enemy reserves.

b. Exploiting forces require mobility and combat power. Tanks, mechanized or motorized infantry, and cavalry normally make up the forward elements. Transportation units and airlift aircraft furnish mobility for foot elements. Engineer support is provided to overcome obstacles. The exploiting force requires adequate, reliable signal communications means.

c. Preparation for the exploitation entails planning, warning orders, grouping of exploiting forces, providing combat service support, and establishing communications.

d. The commander exploits opportunities afforded by the situation. Opportunities for exploitation are indicated by an increase in prisoners captured; an increase in abandoned ma-

teriel; and the overrunning of artillery, command facilities, signal installations, and supply dumps. G2 will be called on to furnish more positive indicators and to provide information-gathering agencies with appropriate and timely essential elements of information. The transition from the coordinated attack to the exploitation may be so gradual that it is hardly distinguishable, or it may be abrupt. The abrupt transition occurs most frequently when nuclear or chemical munitions are used or when surprise is achieved.

e. When nuclear and chemical fires are not available or are limited, the exploitation normally occurs after the division objective is secured. With adequate nuclear or chemical support, the exploitation can be launched with the initial assault or at any time thereafter depending on 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. The exploiting force secures terrain only as necessary to accomplish its mission.

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 must be flexible. Combat service support operations are normally decentralized.

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

i. Tactical air reconnaissance and Army air-

craft maintain contact with the enemy, locate enemy movements, and keep the commander advised of enemy activities.

j. Close air support aircraft and armed helicopters inflict maximum damage by attacking enemy reserves and withdrawing enemy columns.

k. Petroleum consumption rates are high; therefore, provision for rapid resupply is essential. Security of ground supply columns must be considered since forward elements may be operating behind bypassed enemy forces. Aerial resupply is frequently necessary.

l. Adequate air defense must be provided to the exploiting force. The principles outlined for the movement to contact are applicable to this type of offensive operation. FM 44-1 and FM 44-3 contain detailed procedures on air defense operations during the exploitation.

m. The exploiting force performs aggressive air reconnaissance to the front and flanks to maintain contact with enemy forces, to assist in locating enemy strongpoints, and to avoid ambushes.

6-29. Conduct of the Exploitation

a. Employment of forces in the exploitation is similar to the movement to contact. Attack from multiple march columns is normal.

b. Exploiting forces advance rapidly and arrive at their objectives with maximum strength. The exploiting force clears only enough of its zone to permit it to advance. Commanders avoid dissipation of forces to achieve minor tactical success. Enemy forces that interfere, or can interfere, with the mission are contained and bypassed or destroyed. Exploiting forces bypass or contain, with minimum forces, enemy pockets of resistance which are of insufficient strength to jeopardize the mission. Bypassed enemy forces are reported to adjacent units, to follow and support units, and to higher headquarters.

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 and report this fact to the main body. Succeeding elements in the column 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 to overrun enemy forces that cannot be bypassed or contained. Exploitation continues day and night regardless of the weather. Employment of active electronic countermeasures can inhibit enemy reaction at critical phases. Reconnaissance elements—both ground and air—inform commanders of enemy action. The rapid advance of exploiting forces reduces their vulnerability to enemy counteraction.

e. As enemy forces become demoralized and begin to disintegrate under pressure, exploitation may develop into pursuit. The corps commander assigns additional forces the mission of following and supporting the exploiting divisions. These forces are referred to as follow and support units.

f. Follow and support units initially prevent the enemy from closing the gap in a penetration, and secure key terrain gained during the penetration or envelopment. As the exploiting force advances, the follow and support units secure lines of communications, mop up or destroy bypassed pockets of resistance, expand the area of exploitation from the axis of advance of the exploiting force, and block the movement of enemy reinforcements into the area. Follow and support units must relieve elements of the exploiting force that have been left to block or contain enemy forces or to protect areas or installations. This relief maintains the effectiveness of the exploiting force. If elements of the exploiting force left to block or contain enemy pockets of resistance are not relieved, the exploiting force soon becomes too dispersed or dissipated to maintain the momentum of the exploitation and the enemy force can reorganize and gain the initiative. The assignment of combat service support tasks to the follow and support force reduces the force's ability to execute combat tasks and should be avoided. These tasks should be accomplished by other units to allow the follow

and support units to carry out their primary mission.

g. Follow and support units must be able to keep up with exploiting forces. They can use nuclear and chemical fires to accomplish their missions.

h. Commanders of the follow and support units and the exploiting force maintain close li-

aision. Elements of the follow and support unit may be attached to the exploiting force.

i. The corps commander normally retains control of both the follow and support force and of the exploiting force. The corps commander prescribes how the follow and support commander will receive or determine his specific tasks.

Section VII. PURSUIT

6-30. General

a. The pursuit normally follows 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 enveloping 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, cuts off, and destroys enemy elements, provided such actions do not interfere with its primary mission.

(2) The mission of the enveloping force is to get in rear of the enemy and block his escape so that he can be destroyed between the direct pressure and enveloping forces. The enveloping force 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, airmobile, armored, and mechanized units are particularly effective as enveloping forces. If the enveloping force cannot outdistance the enemy, it attacks the enemy main body on its flank.

(3) The division can conduct a local pursuit or can be used as the direct pressure or enveloping force of a higher echelon in the pursuit.

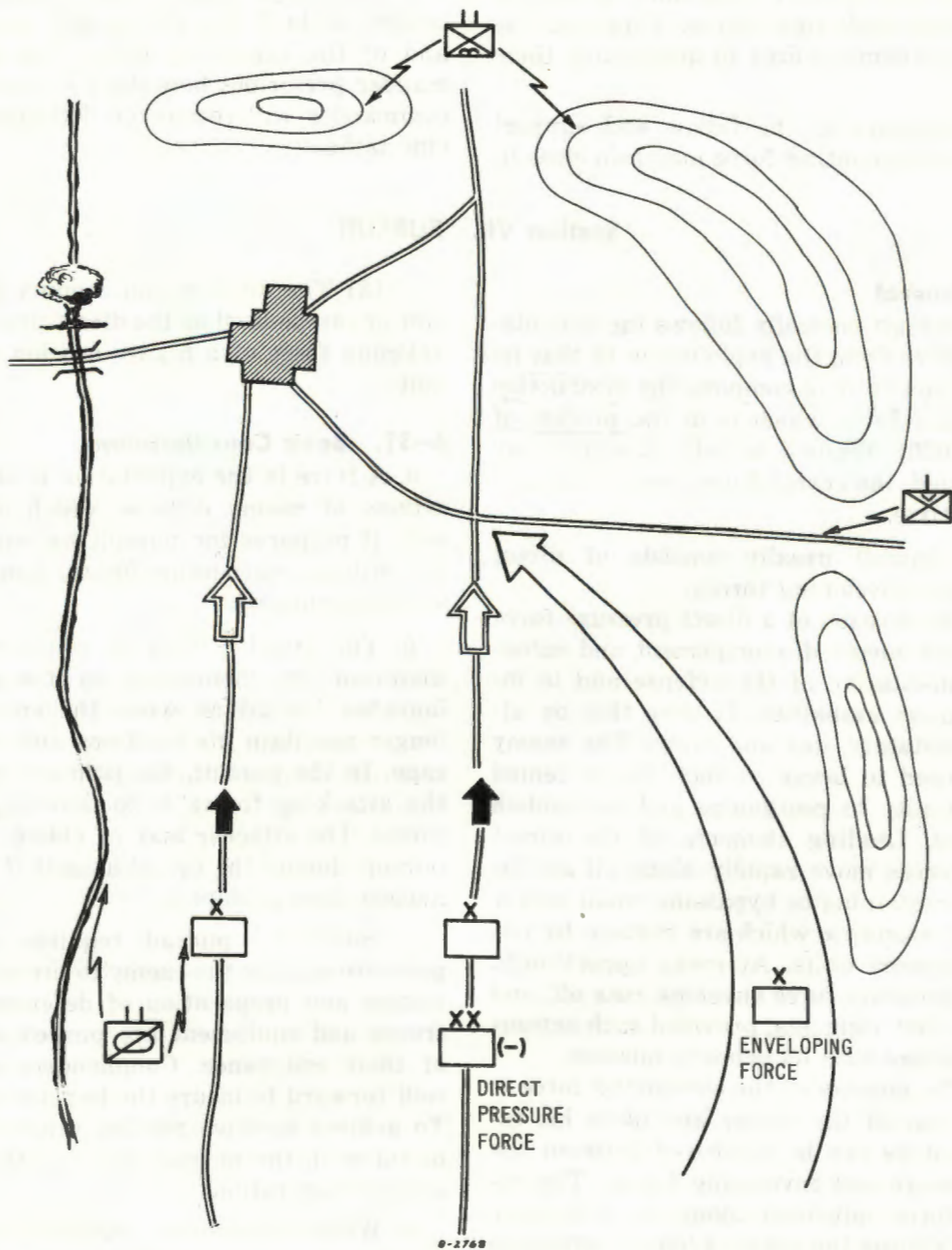
6-31. Basic Considerations

a. A force in the exploitation is alert to indications of enemy collapse which enable pursuit. It prepares for pursuit by issuing warning orders, regrouping forces, and providing logistical support.

b. The attacker uses all possible means to maintain the momentum of the attack. He launches his attack when the enemy can no longer maintain his positions and seeks to escape. In the pursuit, the primary objective of the attacking forces is to destroy the enemy forces. The attacker may be able to launch the pursuit during the initial assault if he exploits nuclear fires promptly.

c. Successful pursuit requires unrelenting pressure against the enemy to prevent reorganization and preparation of defenses. Friendly troops and equipment are pushed to the limit of their endurance. Commanders are located well forward to insure the impetus of advance. To achieve decisive results, greater risks can be taken in the pursuit than in other types of offensive operations.

d. When the division conducts local pursuit operations, a direct pressure force of sufficient size and composition to maintain continuous pressure is organized. The enveloping 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



NOTE: Airborne force is normally employed by higher headquarters.

Figure 6-6. Division conducting a pursuit.

support. Direct pressure and enveloping forces require engineer units to clear obstacles to 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. POL consumption is particularly high. Air transportation delivers supplies to forward units. Maximum use is made of captured enemy materiel—particularly transportation—and stocks of supplies.

g. The speed of advance, the enemy's inability to react effectively, and the dispersion of forces contribute to the security of the pursuing force.

h. Air defense is provided in much the same manner as for the movement to contact. The intelligence situation will determine the amount of air defense required. Frequently a higher percentage of air defense weapons is employed in support of ground operations. FM 44-1 and FM 44-3 contain detailed discussions of air defense techniques in pursuit operations.

6-32. Conduct of the Pursuit

a. The pursuit is conducted on as broad a front as possible. Forces engaged in direct pressure and enveloping maneuvers are given deep objectives, mission type orders, and minimum controls. Subordinate commanders are free to exercise their initiative. Control of combat support and combat service support means is usually decentralized.

b. Direct pressure forces advance relentlessly while the enveloping force cuts the enemy's lines of retreat. Double envelopment of the retreating main force or its elements is accomplished when conditions permit. Hostile rearguards or forces on flank positions are not permitted to divert the main force from its mission. Airborne or airmobile units are used to envelop enemy rearguards and to expedite their destruction. This allows the pursuing force to move more rapidly. If the enemy's main force establishes itself on a position from which it cannot be quickly dislodged, the commander attacks immediately.

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

d. Air support is desirable in the pursuit. Reconnaissance and surveillance aircraft inform commanders of enemy locations and activities. Armed helicopters and close support aircraft inflict maximum damage on the retreating enemy, concentrating on his lines of withdrawal, columns, and reserves. Airlift aircraft provide rapid mobility for pursuing forces.

e. The pursuing force employs all available means of electronic countermeasures to confuse the enemy, to deny him use of his command and control communications, and to hinder his attempts to consolidate and reorganize.

f. Figure 6-6 depicts the division conducting a pursuit.

Section VIII. FORMS OF MANEUVER

6-33. General

a. The basic forms of maneuver are the envelopment, the frontal attack, and the penetration. The envelopment and the penetration are the primary forms employed by the division. The frontal attack is normally employed by corps and higher echelons. A double envelopment and a turning movement are variations of the envelopment. The distinction in the forms

of maneuver employed by the division exists primarily in the intent of the division commander since the subordinate elements of the division may use all the forms of maneuver. Infiltration is a technique of movement that may be used with all forms of maneuver and in all types of offensive operations. The exploitation is a type of offensive operation that frequently takes place during a successful pene-

tration or envelopment. The pursuit is an extension of a successful exploitation.

b. Paragraphs 6-9 through 6-32 discuss in detail the types of offensive operations employing the forms of maneuver.

c. The division requires adequate air defense during execution of all forms of maneuver. FM 44-1 and FM 44-3 discuss the division's air defense requirements.

6-34. Choice of Maneuver

A higher commander seldom dictates the form of maneuver to be adopted by the division. However, the mission assigned, including the tasks 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 relative combat power of the opposing forces are analyzed to determine the best form of maneuver. Normally, terrain, available time, own dispositions, ability to support the attack, and enemy situation are the principal factors in choosing the form of maneuver.

6-35. Penetration

a. General.

(1) In the penetration, the attacking force passes through the enemy's principal defensive position; ruptures it completely; destroys or neutralizes forces, installations, and control means; and secures objectives that break up the continuity of the defense. This maneuver divides the enemy force and allows it to be defeated in detail. Mobile forces exploit through the penetration deep into the enemy's rear areas. If sufficient combat power is available, a multiple penetration can be launched. Figure 6-7 illustrates a division conducting a penetration.

(2) The penetration consists of three stages: rupturing the enemy's defensive position, widening the gap, and overrunning or securing objectives that destroy the continuity of the enemy's defense. These stages may be followed by the exploitation. The stages of the penetration and the subsequent exploitation frequently overlap and blend into a continuous

operation. When overwhelming fire support is applied and the division is sufficiently mobile, the phases may be so condensed as not to be distinguishable.

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

b. Basic Considerations.

(1) A penetration is made when enemy flanks are unassailable or when time does not permit another form of maneuver.

(2) A penetration is favored when the enemy is overextended, when weak spots in his position are detected, when terrain and observation are favorable, or when strong fire support, especially nuclear fire support, is available.

(3) The penetration of a well-organized position requires a preponderance of combat power and continued momentum of the attack. The attack moves rapidly to destroy the continuity of the defense. If the attack is slowed or delayed, the enemy has time to react. If the rupture is not made sharply and objectives are not secured promptly, the penetration is likely to resemble a frontal attack. This may result in high casualties and afford the enemy an opportunity to fall back to secondary defensive positions or along his routes of communication, thereby avoiding destruction.

(4) Selection of the location of the penetration depends on—

(a) *Terrain.* Terrain must support the mobility of the division. An evaluation of trafficability, nature and extent of obstacles, and the road net is necessary to determine suitability of terrain. Fields of fire and observation for the control of fire are necessary.

(b) *Strength and depth of the enemy position.*

(c) *Maneuver room.* Lateral movement by the attacking force should not be unduly restricted by boundaries or obstacles.

(d) *Distance to the objective.* A short

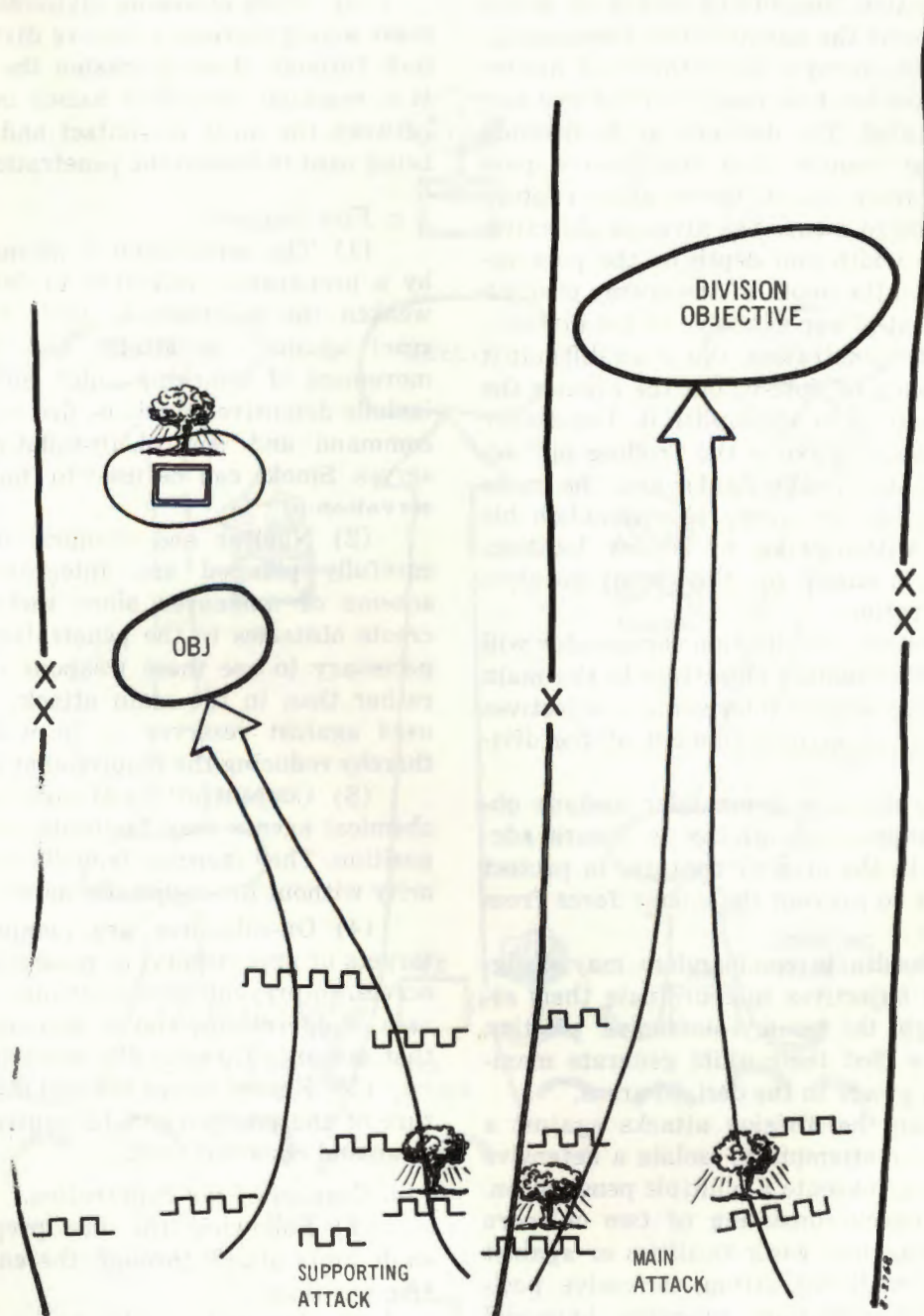


Figure 6-7. Division conducting a penetration.

direct route to the division objective is desirable.

(e) *Surprise.* Surprise is obtained by penetrating in an area that affords more rapid and decisive results.

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

(5) The main attack is made on a relatively narrow front and is directed toward the

decisive objective. Supporting attack(s) widen the gap, prevent the enemy from disengaging, or hamper the enemy's commitment of his reserve. 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 secure the division objective.

(6) The width and depth of the penetration depend on 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.

(7) Normally the division commander will not assign intermediate objectives to the main attack. He may assign intermediate objectives when essential to accomplishment of the division mission.

(8) The division commander assigns objectives to supporting attacks to insure adequate width in the area of rupture, to protect the flanks, or to prevent the enemy force from disengaging.

(9) Subordinate commanders may designate close-in objectives to coordinate their attacks through the enemy defensive position and to insure that their units generate maximum combat power in the desired areas.

(10) When the division attacks against a weak enemy or attempts to isolate a 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 but strong defensive position. As the penetrations progress, bypassed forces are reduced and the attacks may be combined into a single attack.

(11) The division may have the mission of making the corps penetration. Other divisions attack to roll back the enemy flanks and complete the rupture of enemy positions all along the corps front. Figure 6-8 illustrates the division making a corps penetration.

(12) When attacking divisions of the corps make slow progress, a reserve division may 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.

c. Fire Support.

(1) The penetration is normally preceded by a preparation delivered to demoralize and weaken the defender, to limit his ability to react against the attack, and to cover the movement of attacking units. Suitable targets include defensive positions, fire support means, command and control installations, and reserves. Smoke can be used to limit enemy observation.

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

(3) Concentrations of toxic, nonpersistent chemical agents may facilitate rupture of the position. They increase friendly combat superiority without producing obstacles.

(4) On-call fires are planned to attack targets of opportunity, to neutralize enemy reserves, to prevent movement into or out of the area of operations, and to destroy any targets that seriously threaten the mission.

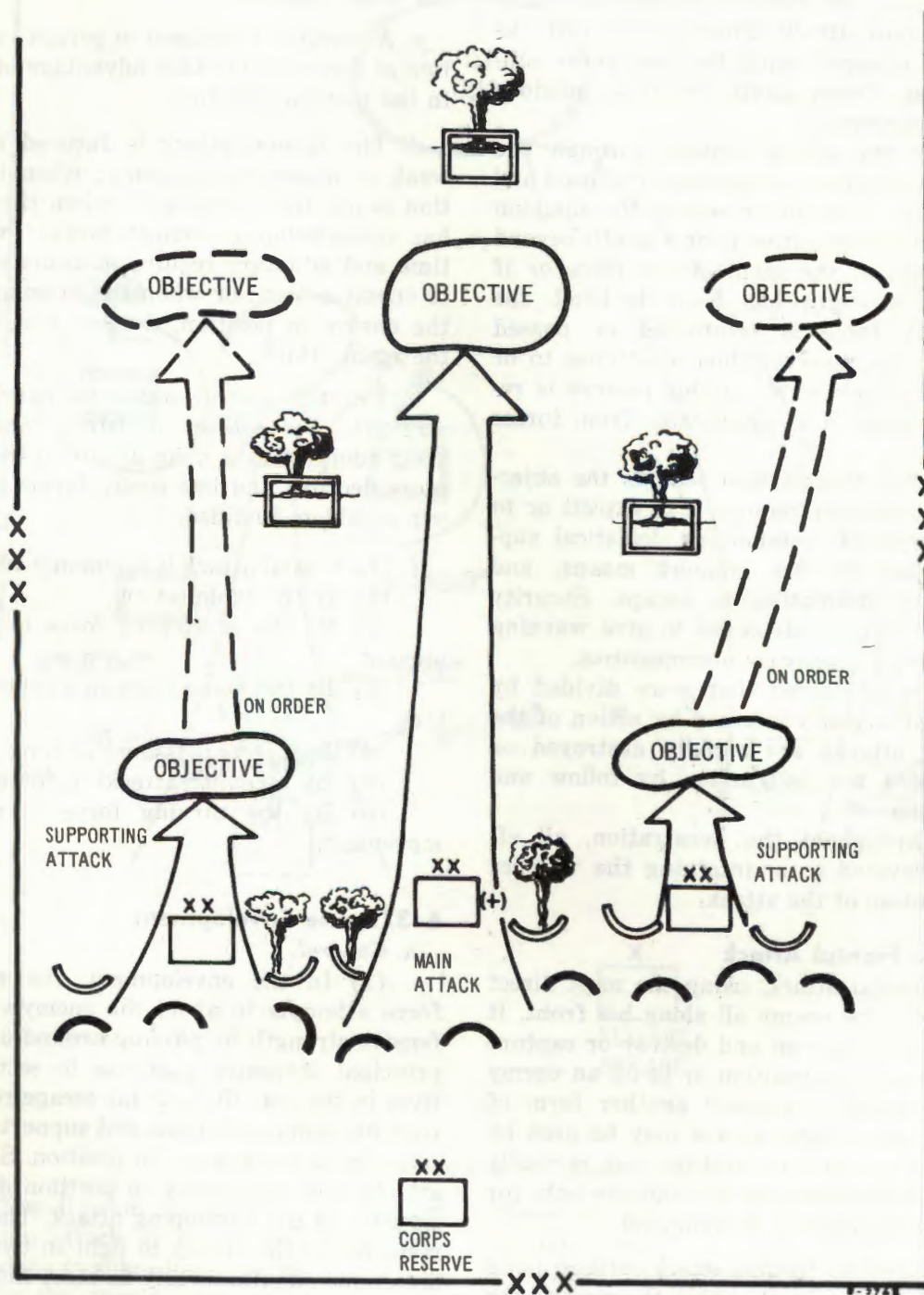
(5) Enemy forces isolated during the rupture of the position can be neutralized by nuclear and chemical fires.

d. Conduct of the Penetration.

(1) Following the fire preparation, assault units attack through the enemy's defensive positions.

(2) Supporting attacks can neutralize enemy fire support means and command facilities by infiltration. They can also secure terrain that blocks the movement of reserves against the main attack or that promotes continuous movement of the attack.

(3) As the attack progresses, units of the supporting attack or the follow and support force secure the flanks of the main attack or



NOTE: Diagram is schematic only. Overlay techniques such as boundaries, phase lines, lines of departure, etc., are not shown.

Figure 6-8. Division making the corps penetration.

widen the gap by breaking through other enemy defenses. The reserve exploits success or assists the main attack. Enemy counterattacks are rapidly engaged using the reserve or supporting fires. Troop safety requires judicious use of nuclear fires.

(4) As the attack breaks through the main enemy defenses, it increases its speed and momentum to overrun or secure the division objective. If the objective is at a depth beyond the capability of the main attack force or if the force's 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.

(5) After the division secures the objective its mission may require it to exploit or 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 to delay, enemy countermeasures.

(6) Enemy forces that were divided by the penetration and contained by action of the supporting attacks are rapidly destroyed or are contained for destruction by follow and support units.

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

6-36. The Frontal Attack

a. The frontal attack, using the most direct route, strikes the enemy all along his front. It is employed to overrun and destroy or capture a weaker enemy in position or to fix an enemy force in position to support another form of maneuver. The frontal attack may be used by the division in the exploitation, but normally this form of maneuver is appropriate only for corps and higher levels of command.

b. Although the frontal attack strikes along the enemy's entire front within the zone of the attacking force, it does not require that all combat forces be employed in line or that all combat forces conduct a frontal attack. During a frontal attack, the commander seeks to create or take advantage of conditions that

will permit a penetration or envelopment of the enemy position.

c. A reserve is retained to permit redistribution of forces and to take advantage of changes in the tactical situation.

d. The frontal attack is favored against a weak or disorganized enemy; when the situation is not fully developed; when the attacker has overwhelming combat power; when the time and situation require immediate reaction to enemy action; or when the mission is to fix the enemy in position, deceive him, or assist the main attack.

e. Frontal attacks, unless in overwhelming strength, are seldom decisive; consequently, their adoption as a main attack in the place of more decisive and less costly forms of maneuver is seldom justified.

f. The frontal attack is commonly employed—

- (1) In the exploitation.
- (2) By the enveloping force in an envelopment.
- (3) By the fixing force in a supporting attack.
- (4) In a reconnaissance in force.
- (5) By a counterattacking force.
- (6) By the turning force in a turning movement.

6-37. The Envelopment

a. General.

(1) In the envelopment, the enveloping force attempts to avoid the enemy's main defensive strength by passing around or over his principal defensive positions to secure objectives in the rear that cut his escape routes, disrupt his communications and support, and subject him to destruction in position. 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. Figure 6-9 illustrates a division conducting an envelopment.

(2) In a corps envelopment, the division may be the fixing force or it may conduct the envelopment as shown in figure 6-10.

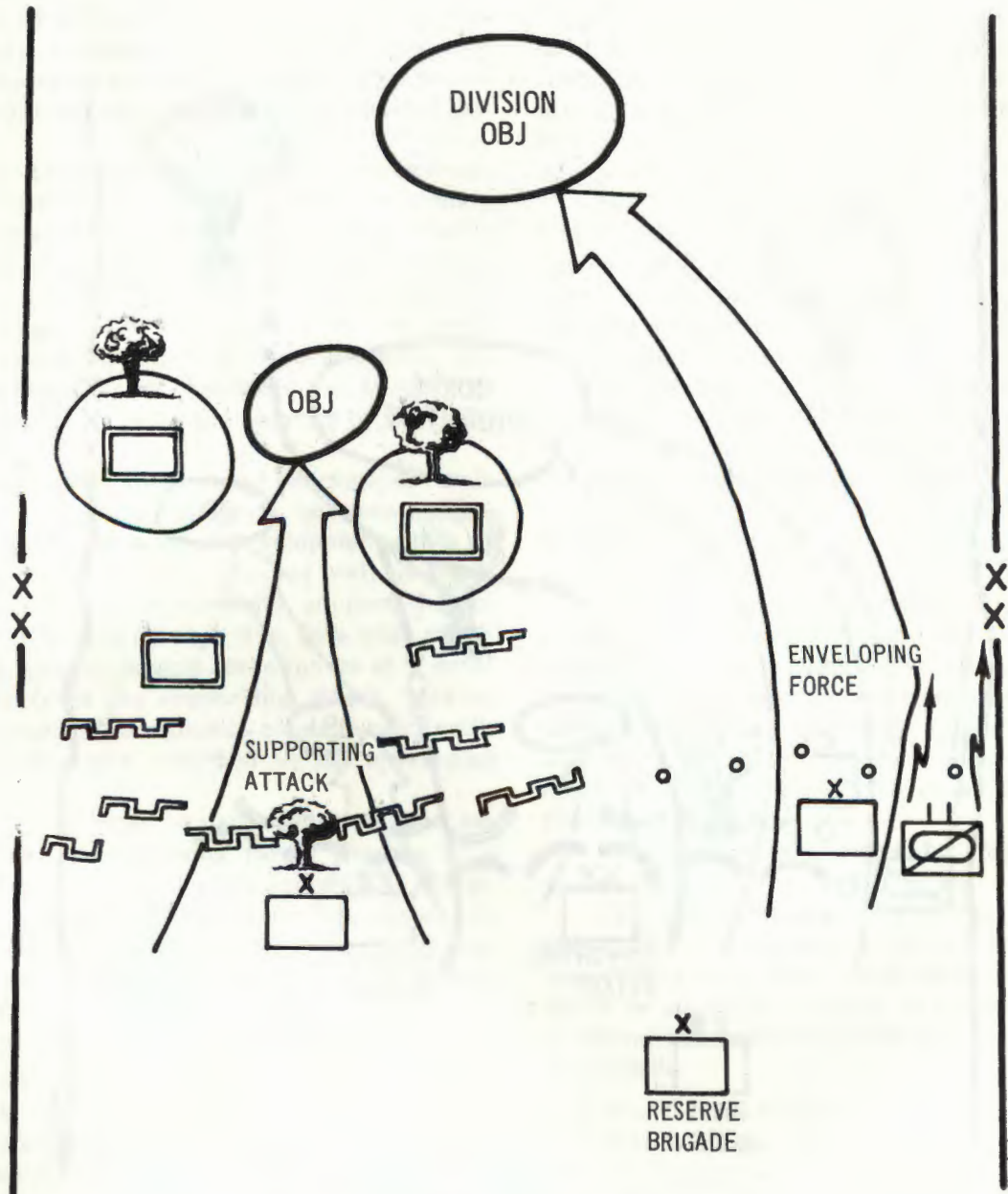


Figure 6-9. Division conducting an envelopment.

(3) The division can use the envelopment for its main attack or it can assign envelopment missions to subordinate units.

(4) In the turning movement—a variation of the envelopment—the attacking force passes around or over the enemy's main force to secure an objective deep in the enemy's rear. This forces the enemy to abandon his prepared position, to divert major forces to meet the

threat of the turning force, and to fight on ground chosen by the attacker.

b. Basic Considerations.

(1) The ground envelopment requires that the enemy force have an assailable flank. An assailable flank is one that can be circumvented without fighting a major engagement.

(2) An aerial envelopment requires that adequate suppressive fires be available or that

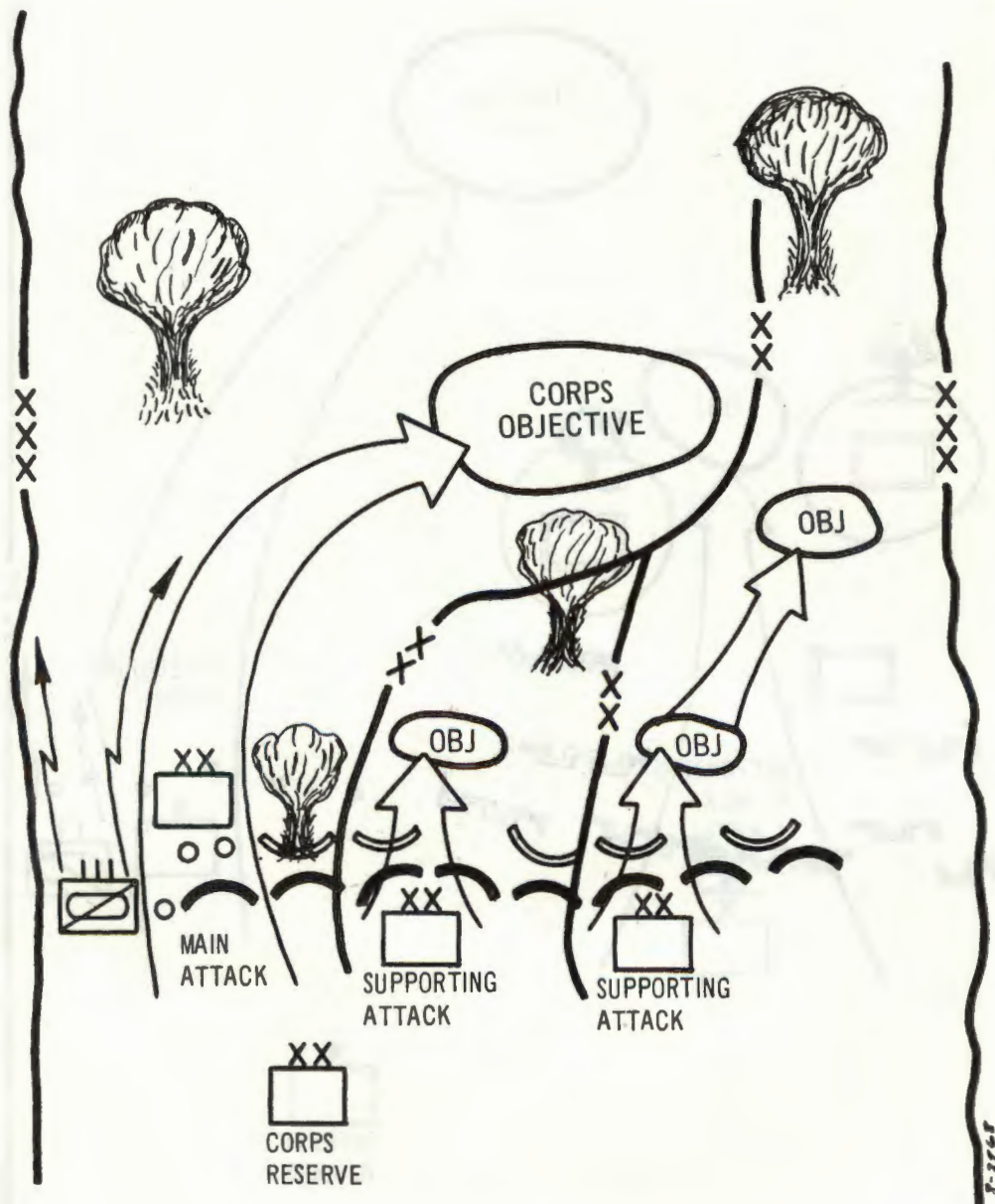


Figure 6-10. Division as corps enveloping force.

the enemy's dispositions or capabilities not interfere materially with the flights of large numbers of aircraft. Ground patrols and infiltrating forces can reconnoiter and secure the flight routes. Airmobile assault landings against fortified or heavily defended objectives are not normally attempted. Plans for the use of airmobile, parachute, or air-landed forces should provide for link-up with ground attack forces.

(3) The success of the envelopment depends on 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 cavalry, airborne, airmobile, tank, mechanized, and motorized units.

(4) Rapid movement of the enveloping force to its objective is essential to prevent the

enemy's reserves from countering it or from occupying prepared positions. Vigorous supporting attacks prevent the enemy from reconstituting reserves from other portions of his front.

(5) The commander executing an envelopment must be alert to insure 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 munitions in reserve, continual reconnaissance, and careful selection of objectives for supporting attack forces increase the security of the main attack.

(6) Envelopment may be close or wide based on the initial distances between attacking elements. In a close envelopment, fires of the supporting attack force, as well as other division fire support elements, support the enveloping force to its objective. In a wide envelopment, the enveloping force moves at a great distance from the supporting attack, making fire support more difficult; consequently, artillery is frequently attached to the enveloping force.

(7) 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.

(8) The enveloping force's requirements for mobility, firepower, and security are considered when organizing the division. Normally a brigade, heavy in tanks, will be the enveloping force.

c. Conduct of the Envelopment.

(1) The enveloping force moves rapidly into the attack. Diversionary actions can be used to mask the noise and direction of the force's movement.

(2) The attacks may be launched simultaneously or the times of the supporting and enveloping attack may be staggered; supporting attacks normally will be launched first to increase deception.

(3) A preparation may not be fired in

support of the enveloping force because of the need for secrecy, the limited targets, and the inability of local enemy forces to impede the attack. If fired, the preparation will be violent but of short duration. The supporting attack may be preceded by a preparation.

(4) The enveloping force moves rapidly and directly to its objective, bypassing enemy forces that might delay it. These forces are reduced by fires or contained and reduced by follow and support units. Security forces protect the enveloping force's exposed flanks.

(5) Supporting attacks and fires fix the enemy in position and hinder or prevent his use of reserves against the enveloping force. Infiltrated forces block the movement of enemy reserves, attack his fire support and command and control means, or secure terrain that will assist the enveloping force.

(6) If the enemy force attempts to cut off or to extend its flank beyond the enveloping force, the division commander may decide to penetrate the enemy's overextended front. An attempt to outflank the enemy's extension may lead to overextension of the division or to a dangerous separation of the enveloping force from the supporting attack.

(7) The reserve normally follows the main attack.

(8) The division commander must exploit opportunities for success with his reserve. This opportunity may result from either the enveloping or supporting attack. When the reserve is committed, another is constituted as soon as practicable.

d. The Double Envelopment.

(1) A double envelopment is executed by two enveloping forces and a supporting attack force. It requires great combat power and is difficult to control. Nuclear and chemical munitions may be a significant part of the required combat power. The force executing a double envelopment must be able to deploy on a broad front against an enemy who is on a narrower front or who has limited mobility.

(2) The amount of combat power required for two enveloping forces, a supporting attack force, and the reserve may prevent the division from executing this type of maneuver

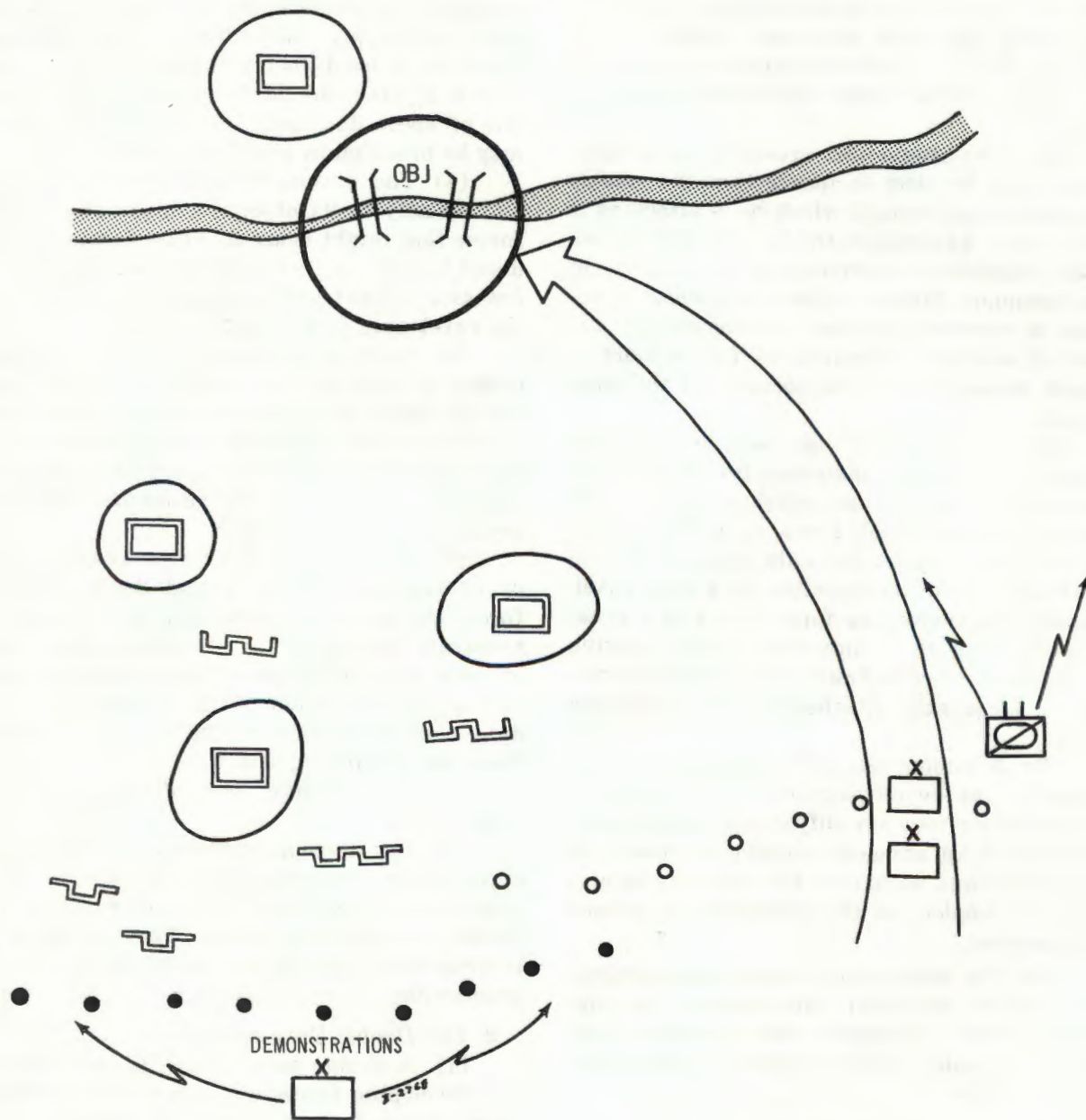


Figure 6-11. Division conducting a turning movement.

unless it has very strong nuclear support or is opposed by an inferior enemy. Frequently the supporting attack will be frontal. Nuclear fires may be used with a supporting attack to reduce the requirement for troops.

(3) Depending on mutual support considerations, simultaneous envelopments by ground attack and airborne or airmobile forces may offset the undesirable aspects of a double sur-

face envelopment and reduce the size of the force required.

(4) 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.

(5) When all brigades are committed, an uncommitted maneuver battalion can be used as a control headquarters to allow the division

to maintain a reserve. If used in this manner for an extended period, the battalion requires personnel and equipment augmentation.

e. The Turning Movement.

(1) In the turning movement—a variation of the envelopment—the attacking force passes around or over the enemy's main force to secure objectives deep in his rear, forcing him to abandon his position or to divert major forces to meet the threat created by the turning movement. 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, as shown in figure 6-11.

(2) 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 secures 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 secure vital areas in the enemy's rear before his main force can escape or be rein-

forced. 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.

(3) The division is normally the turning force for a higher echelon. Under certain conditions, the division may execute a turning movement within its own resources; however, it normally lacks adequate combat power. It usually participates as part of a larger force.

(4) Under most conditions, infantry battalions require ground or air mobility when part of a turning force. The cross attachment of tanks is desirable.

(5) A fixing force must apply sufficient combat power against the enemy force to prevent it from interfering with the turning force. This combat power can be a supporting attack, firepower, or any other available means. Because the turning force and the fixing force frequently operate beyond mutual supporting distance, each force must have sufficient combat power and mobility to avoid defeat in detail. The turning movement requires secrecy, mobility, and deception.

Section IX. PLANNING THE ATTACK

6-38. Sequence of Commander and Staff Actions

a. The planning sequence begins with the receipt of a mission. Based on 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.

b. Based on the commander's guidance, the staff prepares and presents estimates and recommendations.

c. The commander then completes his estimate by analyzing the opposing courses of action. He 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. The commander may decide to amplify his decision by giving his overall concept of the operation. His decision, together with his con-

cept, if given, furnishes the staff a basis for developing the implementing plans and orders.

d. Based on the commander's decision and concept, the staff members complete planning in their respective fields of responsibility.

e. At division level, oral orders are usually issued first, followed as soon as feasible, by written orders.

f. The commander and the staff supervise the execution of the commander's orders.

6-39. Planning Guidance

a. 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 use of nuclear and chemical munitions, and any courses of action he may wish developed. Guidance in the employment of nuclear

and chemical munitions is normally confined to the type of targets to be attacked, the suballocations, and the reserve desired. Damage criteria and troop safety considerations are standing operating procedure matters. Command guidance in these matters is appropriate only when deviation from standing operating procedure is desired.

b. FM 101-31-1, FM 101-31-2, and FM 101-40 contain detailed guidance for the employment of nuclear, biological, and chemical munitions.

6-40. Basic Considerations of Offense

a. Mission.

(1) The mission is normally assigned by higher headquarters but may, in some situations, be developed by the division commander. The assigned mission should be carefully analyzed to determine all of the tasks which must be executed.

(2) Mission accomplishment is the goal toward which the effort of the command is directed. At division and lower levels, the mission may be to secure, dominate, or neutralize a terrain feature or area, or to destroy or capture an enemy force. Additional tasks may be derived from the stated mission received from higher headquarters. Normally, however, few if any such tasks are derived from the stated mission at division level and below. A mission normally states the objective to be secured. The objectives assigned subordinate elements of the division contribute to the accomplishment of the division's mission.

(3) Subordinate units normally are assigned only final objectives. Intermediate objectives are assigned only when their capture or neutralization is essential to accomplishment of the division mission.

(4) Commanders must arouse aggressiveness in subordinates and permit them to use their initiative. Unforeseen opportunities to destroy the enemy may arise. Procedures must permit exploitation of such opportunities.

b. Terrain.

(1) *Observation.* Air observers and reconnaissance equipment may reduce the importance of high ground for observation. Ground reconnaissance equipment is normally line of

sight and depends on high ground for maximum effectiveness. When weather or other conditions prevent the use of air observers or air reconnaissance equipment, other means such as visual observation posts, listening posts, and patrols must supply essential information.

(2) Obstacles.

(a) Obstacles, both natural and artificial, must be considered in organizing the division for combat. Small enemy forces may determinedly defend obstacles and delay attacking forces or cause them to mass. Nuclear fires may have to be used to destroy these forces which might otherwise not be considered remunerative targets.

(b) Nuclear fires can produce obstacles by fallout, fires, cratering, or blowdown. Nuclear and chemical fires must be coordinated with maneuver to minimize the impact of obstacles created by nuclear effects or persistent chemical agents. An acceptable scheme of maneuver may have to be rejected or the use of nuclear fires avoided because of the probable effects of nuclear or chemical fires. Engineer support and additional means of mobility may be required to overcome the obstacles so produced.

(c) The employment of persistent chemical agents produces obstacles. Close coordination is essential to minimize their effects on the maneuver of other friendly forces.

(3) Cover and concealment.

(a) Skillful use of cover and concealment helps to achieve surprise and to reduce losses.

(b) 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 munitions. Certain areas offer good concealment as well as good cover from nuclear effects and favor tactical plans. For example, areas containing numerous mineshafts, caves, and tunnel-type fortifications afford good protection from nuclear munitions and also provide concealment.

(c) Areas containing numerous small patches of woods, underbrush, or small villages may provide good concealment for dispersed small units.

(d) Darkness, fog, snow, dust, smoke, and rain provide concealment. Movement and attack under these conditions are an integral part of the division's operations.

(e) FM 5-20 covers the basic principles of camouflage.

(4) *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.

(5) *Key terrain.* The commander's plan is directed toward the early control or neutralization of terrain that allows the division to accomplish its mission in the shortest possible time and to maintain the speed and momentum of its attack. Complete control of specific terrain is maintained when necessary to create favorable conditions for fire and maneuver. Although occupation of key terrain is not always feasible or even desirable, nuclear and chemical weapons may be used to deny the enemy use of the terrain.

(6) *Avenues of approach.* At division level, an avenue of approach is terrain that provides a relatively easy route of advance for a deployed brigade-size force at least two battalions abreast to reach an objective.

(a) Possible avenues of approach are analyzed based on the availability of observation, cover and concealment, fields of fire, space for dispersion and maneuver, obstacles, cross-country trafficability, and road and trail network; the effect of adverse weather; the type of force being employed; and the length and directness of the avenue to the objective. Nuclear and chemical munitions employment increases the requirement for dispersion. The possible intensification of nuclear effects in valleys and the creation of obstacles by nuclear fires and persistent chemical agents must also be considered.

(b) Avenues of approach that make rapid movement to objectives possible and that have the necessary space for dispersion are selected. Enemy defenses and capabilities along the better avenues of approach and the possi-

bility of increasing surprise by the use of other less desirable avenues warrant careful consideration in the selection of an avenue of approach for the attacking force. Fires can be used to neutralize forces occupying terrain that dominates an avenue of approach.

(c) Considerations in selecting flight routes for airmobile operations are concealment and known or suspected enemy positions, particularly antiaircraft defensive positions. Routes are selected that 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 aircraft.

c. 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 climate or visibility. 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) In addition to permitting surprise, poor visibility presents several other advantages to attacking troops. Attacking troops will probably suffer fewer losses than during clear visibility attacks. Enemy plans may be disrupted because of the enemy's uncertainty.

(b) Ground resupply operations during poor visibility are less vulnerable to enemy action.

(c) Although 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 movement is more difficult and traffic control operations must be carefully planned and executed.

(g) Poor visibility conditions may frequently have to be produced artificially when the enemy has air superiority or good observation. Smoke limits visibility as well as reduces the thermal effects of nuclear munitions.

d. *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 evaluate the advantages and disadvantages of each course of action. Operational planning considers the impact of enemy use of nuclear munitions and provides for contingency action to reduce the disruption caused by such an enemy attack.

e. *Forces Available.*

(1) The capabilities of forces available must be evaluated before realistic plans can be made and action taken. The allocation of combat forces, fires, other combat support, and combat service support provides the commander with the means of developing combat power. The manner in which he organizes for combat and employs these forces determines the degree of combat power that will be developed.

(2) The means available are seldom all that a commander desires. He must use what is available in the most effective manner to accomplish his mission. The commander seldom possesses sufficient forces to permit all elements of the attacking force and the reserve to be weighted equally; therefore, he must allocate his means where they will produce the most effective results. This normally requires the commander to designate a main attack and one or more supporting attacks. If the commander allocates resources equally, main and supporting attacks may not be identifiable.

(3) The capabilities of a force depend on the—

- (a) Number of units.
- (b) Types of units.
- (c) State of training.
- (d) Morale.

(e) Number of personnel and amount of equipment.

(f) Location and disposition.

(g) State of maintenance and supply.

(h) Adequacy of combat support and combat service support.

(i) Personalities of commanders.

6-41. Estimate of the Situation

a. The commander and staff must prepare individual estimates of situation. These estimates are developed separately but concurrently. The commander completes his final estimate after receiving all staff estimates. The elements of the estimate—mission, situation and courses of actions, analysis of opposing courses of action, comparison of own courses of action, and the decision or recommendation—are essential to effective offensive planning.

b. FM 101-5 contains a detailed discussion and examples of command and staff estimates.

6-42. Commander's Concept

a. After stating his decision, the commander normally provides the staff with his concept of how the operation will be conducted. He may elaborate on his decision explaining any aspects deemed necessary. In addition, he may provide guidance and instructions that will permit issuance of an oral order. His concept may include, as appropriate:

- (1) Development and phasing of the operation.
- (2) Scheme of maneuver.
- (3) Use of nuclear, biological, chemical, and conventional fires.
- (4) General control measures.
- (5) Any other measures he considers significant.

b. Based on the commander's decision and concept, the staff completes planning and prepares the operation plan and supporting plans for the commander's approval.

6-43. Fire Support

a. *General.* Planned fires include preparatory fires, counter mortar and counterbattery fires, interdiction and harassing fires, fires in sup-

port of the attack, and defensive fires to repulse counterattacks. All nuclear, biological, chemical, and conventional fires are integrated. Conventional fires are used to block reinforcements or as economy of force measures in areas not attacked by ground forces or nuclear, biological, or chemical fires. These fires are also used on targets that cannot be attacked by nuclear, biological, or chemical fires or on targets that have escaped the effects of nuclear, biological, and chemical fires. Normal fire support activity is maintained prior to firing a preparation to preserve secrecy.

b. Conventional Preparation.

(1) *General.* Considerations in determining whether a conventional preparation should be fired include fire support means available, target information, surprise, and firing of a nuclear, biological, or chemical preparation and its expected results.

(2) *Effect of a nuclear, biological, or chemical preparation.* Even though a nuclear, biological, or chemical 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 conventional preparation to supplement these fires. When fired in conjunction with a nuclear, biological, or chemical preparation, the conventional fires normally follow the nuclear, biological, or chemical fires.

c. Nuclear, Biological, or Chemical Preparations.

(1) *General.* Considerations involved in determining whether a nuclear, biological, or chemical preparation should be fired include higher headquarters policy on the use of these munitions, means available, existence of suitable targets, effect on surprise, requirements for troop safety, relative combat power of opposing forces, and creation of obstacles. For toxic chemical fires, consideration should be given to the effects of maximum surprise and to troop safety.

(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. Nuclear, biological, and chemi-

cal fires may reduce the enemy's strength to a more favorable balance.

(3) *Obstacles.* The creation of obstacles by nuclear munitions and the effect of these obstacles on maneuver must be considered. Physical obstacles are more difficult to traverse during the night than during the day. Large, thick dust clouds that 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 landmarks are used as control measures.

6-44. Organization for Combat

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

b. Tanks. A brigade should be 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 should be 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.

(5) The force is to employ units in an air-mobile operation.

d. Mechanized Infantry. A brigade should be strong in mechanized infantry under the conditions listed in *c* above, and 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. Cavalry. The cavalry squadron is normally used under division control on reconnaissance and security missions. However, the squadron or elements of the squadron may be attached to brigades. The squadron will be reinforced as required by its mission. If it is necessary to control terrain or to destroy large enemy forces, the squadron may require the attachment of infantry and tank elements, and artillery and engineer support. The squadron may be used as the nucleus of a task force.

g. Field Artillery. Normally, a battalion of field artillery is assigned the mission of direct support of each committed brigade. When a brigade is not committed, the battalion that supports it is normally assigned a general-support reinforcing or a general support mission. Infrequently it may be assigned a reinforcing mission. The battalions and other artillery elements not in direct support are given reinforcing, general support, or general support reinforcing missions. If a brigade makes 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. Air Defense Artillery. The air defense artillery battalion is normally retained under division control and is assigned priorities of protecting units, installations, or areas. Vulcan units or composite Chaparral/Vulcan task forces may be attached to brigades for an air defense or surface role, when conditions preclude centralized control. The organic air defense artillery provides low-level air defense to the division as described in chapter 4 and FM 44-3.

i. Engineers. Engineer units are normally placed in direct support of or attached to committed brigades in the offense; however, some situations may require centralized control of all engineer effort at division level. Engineer

elements are designated to furnish direct support or to be attached to the reserve when its early commitment is anticipated.

j. Signal. The signal battalion provides communications support for the division as outlined in chapter 5.

k. Supply, Transportation, and Maintenance. The brigades' requirements for supply, transportation, and maintenance support are met by support under centralized control or, less frequently, by attachment of appropriate units. FM 54-2 discusses techniques and procedures for providing this support.

l. Military Police. The military police company maintains discipline, law and order for the division as outlined in chapter 5.

m. Medical. Unit level medical support is furnished by medical personnel organic to the maneuver battalions of the brigades. Division level medical support is supplied by medical companies of the medical battalion. One company is normally placed in support of each brigade. FM 8-15 and FM 54-2 discuss techniques and procedures for providing this support.

6-45. Combat Service Support

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

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

c. Adequate combat service support provides attacking forces the resources 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 civil affairs and prisoners of war. During fast-moving actions, such as the exploitation, use of captured enemy supplies and materiel—particularly transportation

and fuel—may ease the burden on the supply system and increase the division's mobility.

d. FM 54-2 discusses division combat service support.

Section X. COORDINATION AND CONTROL

6-46. General

Unity of effort is achieved in the attack by using appropriate control measures. The division commander must avoid overcontrolling or restricting the authority of subordinate commanders to react to unforeseen situations. The control measures discussed in paragraphs 4-5 through 4-11 are applicable to offensive operations.

6-47. Orders

Subordinate commanders must be fully aware of the division commander's concept and the part their units play in the division's mission. Warning and fragmentary orders allow subordinate commanders time to plan and prepare for operations. FM 101-5 discusses these orders.

6-48. Objectives

a. Objectives may be used to provide unity of effort, to phase the attack, or to facilitate a change in direction.

b. An objective should be easily identified. Its destruction or capture must be possible within the time and space limitations imposed and must be within the capability of the force to which it is assigned.

c. It is preferable that subordinate division units be assigned only final objectives. Intermediate objectives are designated only when essential to the division's mission. The assignment of an objective requires the unit to secure and until relieved, to maintain control over the objective. The commander's desires in this respect should be specified in orders.

6-49. Line of Departure

a. When units are in contact, the line of contact may be designated as the line of departure. A line of departure may be based on terrain or, as in a passage of lines, the line of contact of the force passed through.

b. A line of departure should be generally perpendicular to the direction of advance, easily recognizable on the ground, and as close as possible to the enemy. For unarmored units it should be protected from small-arms and other flat-trajectory fire. It must be under control of friendly forces. If nuclear munitions are used, the location of the line of departure conforms to the commander's guidance on troop safety.

c. The dispersion of the division laterally and in depth may make it desirable to assign separate lines of departure and times of attack to the various attacking units.

6-50. Time of Attack

a. In selecting the time of attack, consideration is given to requirements imposed by higher headquarters; the possibility of taking advantage of an enemy weakness before the enemy commander can rectify it; and the time required for subordinate units to reconnoiter, prepare and coordinate plans, issue orders, organize the attacking units, and move to attack positions.

b. 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 or to shift his reserve force.

c. Nuclear, biological, and chemical fires may affect the time of attack. Time may be required for tactical damage assessment and to issue necessary modifying orders. Normally, it is desirable that the attack follow the preparation as soon as possible. Under some conditions, however, dust and smoke may delay the attack until adequate visibility exists. A habitual relationship of time of attack to the time of a nu-

clear, biological, or chemical preparation must be avoided.

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

6-51. Boundaries

a. Boundaries are prescribed 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. The splitting of the responsibility for terrain features and avenues of approach is avoided. A boundary extends forward beyond the objective at least to the depth necessary for coordination of fires in the securing and consolidation of the objective. Boundaries are extended rearward from the forward edge of the battle area 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.

b. Units may move and fire across boundaries only after coordination with the adjacent unit and after notification of the next higher commander.

c. Boundaries delineate a zone of action that provides adequate maneuver space for the unit to which it is assigned.

d. In certain operations, boundaries may be used only at the line of departure and in the objective area.

6-52. Axis of Advance

a. The commander designates an axis of advance to indicate the general direction of movement along which he wants a subordinate commander to attack. Normally, it follows well-defined terrain features, such as a series of roads, ridge lines, or valleys extending to the objective area. By the axes of advance, the com-

mander indicates to his subordinate commanders the general scheme of maneuver which he desires in the movement of subordinate elements to the objective area.

b. 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 provided that such maneuver is coordinated with and does not interfere with adjacent units and that his unit remains oriented on its objective. When a major deviation is required, the subordinate command informs higher headquarters.

6-53. Direction of Attack

A direction of attack indicates the route along which the commander issuing the order wants a subordinate commander to center his attack. The direction of attack is a very restrictive control measure and is not normally used to control mounted operations. When no other control measure provides the required degree of restriction, the direction of attack may be used. It is used primarily in counterattacks or to insure that a supporting attack makes the maximum contribution to the main attack. Because of its restrictive nature, a direction of attack is not usually suitable for use in dismounted attacks by commanders above battalion task force level.

6-54. Phasing

a. A phase is a period of an operation with actions of a distinct nature and identifiable characteristics that are distinguishable from successive actions. Phasing aids in planning and controlling an operation. It is normal at corps and army level. At division level, phases may be used to simplify a lengthy operation or to facilitate control if the commander is unable to visualize the operation to the final objective.

b. Phasing of an operation may be described in terms of

- (1) Time—preparatory fire phase.
- (2) Distance—intermediate objective or phase line.
- (3) Terrain—crossing of obstacles.
- (4) Occurrence of a particular event—commitment of reserve.

c. Phase lines are established to control

progress of units, to coordinate an operation, and to assist in executing contingency plans. Phase lines are normally keyed to easily recognizable terrain features. The enemy situation, the terrain, a change in the character of the operation, a requirement for a major reorganization during the attack, the combat service support situation, or other aspects of the friendly situation may necessitate phasing to the final objective.

d. 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.

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

6-55. Assembly Area

a. An assembly area is an area in which a command assembles to prepare for further action. Division indicates the general location of subordinate assembly areas. In the assembly area, orders are issued, maintenance and supply are accomplished, and the organization for combat is completed.

b. The mobility of the force is a consideration in the location of an assembly area. As-

sembly areas for tank, motorized, mechanized, or airmobile units preparing for attack can be located farther to the rear than those for units 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.

c. Assembly areas may be so far to the rear as to require refueling prior to the attack. 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.

d. Assembly areas should afford concealment from air and ground observation and be of such size as to avoid presenting lucrative targets to artillery, air, or nuclear attack. Suitable routes forward should be available. Ground observation and natural protection from tank attack are desirable. When possible, assembly areas should be beyond the effective range of most enemy indirect fire weapons.

e. Assembly areas may be designated for dispersion of units following the attack.

6-56. Attack Position

The division does not use an attack position nor does it assign attack positions to its subordinate elements except for an attack after infiltration.

Section XI. THE ATTACK

6-57. 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 6-9 through 6-18.

b. *Relief in Place and Passage of Lines.* An offensive force may conduct a passage of lines through a unit to continue the attack or may relieve a defensive force in place prior to launching a subsequent attack. Liaison with the unit being relieved or passed through must

be established prior to initiation of the relief or passage. Passage of lines and relief operations are discussed in chapter 9.

c. *Developing the Enemy Position.* The defender will attempt to screen his defensive position with covering forces; therefore, leading friendly forces make a thorough and aggressive reconnaissance to determine the strength and location of the enemy's main position. If this action fails to develop the position, the attack may be initiated by a reconnaissance in force. The command exploits opportunities that occur during the development of the enemy's position.

d. Intelligence. All information-gathering means are used to generate detailed intelligence as the basis of sound plans. Effort is directed to gain information on the identification, size, and composition of targets—especially suitable nuclear targets—and to disseminate target intelligence rapidly to the fire support element in the tactical operation center. In addition, knowledge of the exact location of all friendly elements is important. 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 very valuable.

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

6-58. Conduct of the Attack

a. Considerations affecting the conduct of the attack include the mission, terrain and weather, enemy situation forces available, and time and space. Conduct of the attack applicable to specific forms of maneuver and types of offensive operations has been discussed in preceding sections; therefore, the following discussion is general.

b. Immediately preceding the attack, a nuclear, biological, chemical, or conventional preparation may be delivered. The preparation is coordinated with the movement of attacking units. All units are employed to make the best use of available combat power.

c. Attacking units move rapidly from dispersed locations under cover of preparatory fires and fire in support of the attack. In nuclear conflict, these units maintain their dispersed formations until required to mass to achieve sufficient combat power to overcome enemy resistance. Once the mission that re-

quired the concentration of the force is completed, units again take up dispersed formations.

d. The attack plan is vigorously executed and all favorable developments are 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 alinement 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. The G2 furnishes information on enemy locations, movements, composition of forces, plans, and intentions during the initial and follow-on efforts.

e. The attack may be a single rapid advance and assault until the division objective is secured, 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 close behind their supporting fires, until they are within assaulting distance of the hostile position. If these fires have neutralized effective antitank opposition, 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 and chemical fires may make the assault unnecessary or reduce the casualties during the assault. The assault is a short, well-coordinated effort that overruns or destroys forces on 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 to continue the attack or to 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 depends on 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 a specific short-term mission and the reserve quickly reconstituted. Displacement of fire support means is executed to maintain continuous fire capabilities throughout the attack.

g. The division commander keeps himself informed of the progress of the attack, the status of his units, and the enemy situation. Depending on the battle, he is prepared to alter the organization for combat, maneuver his forces, reallocate and shift fires, or use his reserve. Decentralization of control 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 can be accomplished by changing the division organization for combat and by standing operating procedures within brigades.

6-59. Continuation of the Attack

a. Upon attainment or destruction of the division objective, reorganization is accomplished rapidly and 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 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 frequently depends on the ability to resupply attacking forces. Large quantities of ammunition, petroleum, and equipment expended during the attack have to be replenished. Provision for this logistical support must be an integral part of the attack plan.

6-60. 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. Division actions 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 on probable future employment.

(4) Maintaining contact with adjacent units.

(5) Accomplishing reorganization and supply concurrently with the above.

Section XII. NIGHT COMBAT

6-61. 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, the limited visibility not only offers the division opportunities but also creates

problems. Certain techniques can be used to exploit the opportunities and to overcome the difficulties of night operations. The division considers the effects of darkness on relative combat power to insure that plans are made to exploit any opportunities and to overcome special difficulties.

b. The reduced visibility during night operations affords increased concealment to both friendly and enemy forces. It also complicates the problems of control and coordination in the maneuver of combat forces.

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

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

6-62. 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 to their advantage.

c. Darkness increases difficulty of movement, maintenance of direction, and control; therefore, objectives in night attacks are not as deep as those for daylight attacks. More time is required to execute movements and emplace weapons 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. Navigational aids and combat surveillance equipment, such as ground surveillance radars and night vision devices, assist forces to maintain direction and control. Timing is critical in night operations.

d. Subordinate commanders must have adequate time for reconnaissance. During daylight

they should be able to observe the terrain over which their units will move. This allows these commanders to identify terrain features that will aid in maintaining direction.

e. Coordination of nuclear and chemical 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 more difficult to traverse at night. Nuclear fires may destroy landmarks that 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 munitions may assist in identification of objectives and maintenance of direction but may also silhouette forces of either side.

g. All combat and combat support units can be used at night; however, their effectiveness may be reduced. The effectiveness of armor is increased by the use of illumination. This includes tank-mounted infrared devices and searchlights. Illumination facilitates the adjustment of artillery fire.

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

6-63. The Night Attack

a. General.

(1) The same considerations of planning, preparation, and conduct that apply to daylight attacks also apply to night attacks. Night attacks employ the same types of offensive action and the same forms of maneuver as daylight attacks; however, night attack plans are usually less flexible than those for 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 for planning attacks at night are the same as for daylight attacks; however, reconnaissance receives increased emphasis.

(2) The decision to employ 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 great. Attacks in progress are not discontinued merely because of nightfall. Subordinate units 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 secure 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 to 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 preparation 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, the attack is rehearsed over terrain and under light conditions similar to those expected in the attack.

(8) Since both friendly and enemy forces rely on electronic, navigational, and visual aids during night operations, the division must

provide for electronic countermeasures and counter-countermeasures.

c. Coordination and Control.

(1) Highly restrictive control measures reduce the chances of collision or interference between attacking units. Control measures 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 and to aid in maintaining direction. Battlefield illumination assists in movement and control. It enables a command to secure deeper objectives than would otherwise be possible.

(3) Direction may be indicated by firing tracers, using incendiaries, or other improvisations.

(4) Provisions are made for mutual identification of troops.

d. Battlefield Illumination.

(1) Battlefield illumination aids in maintaining direction, facilitates coordination and control, and increases the effectiveness of fires. It may, however, assist the enemy and reduce surprise. Its use must be carefully coordinated to avoid detrimental effects in adjacent division areas.

(2) Searchlights, illuminating shells, and aerial flares are the principal means of illuminating the battlefield. The decision to employ illumination depends on—

(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.* Illumination may overcome the disadvantages resulting from lack of time for reconnaissance, deep objectives, and difficult terrain. It may permit accelerated cross-country movement and allow rapid exploitation of nuclear fires.

(3) Searchlights in a direct role can blind or hinder enemy observers and gunners.

(4) If the attack is not to be illuminated initially, plans for on-call illumination are prepared.

(5) Terrain, vegetation, structures, weather and atmospheric conditions, and vulnerability of illuminating means to enemy countermeasures are considerations in the selection of illumination means to be used and the method of their employment. FM 20-60 contains details on illumination techniques, means, and doctrine.

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. When a preparation is not fired, on-call fires are planned for use if surprise is lost.

(2) In addition to normal fires, fires are planned to cover the attacking force if it must withdraw and to isolate the area of the attack.

(3) The use of on-call nuclear and chemical fires is carefully considered 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 increase the effectiveness of illumination.

f. Conduct of the Attack.

(1) Simple formations are used at all echelons. The attacking force retains column formations as long as possible. Deployment occurs at the last possible moment. Each attacking unit is given a direction and objective. Contact is maintained between columns, and every precaution is taken to prevent interference or collision.

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

(3) Leaders are well forward to insure rapid aggressive movement of their units, maintenance of direction, avoidance of collision, and coordination with fire support means and other units.

(4) The division reserve is located to exploit success, to replace a unit in the attack, or to cover a withdrawal. At night, the commander commits the reserve in an area where the possibility of collision with friendly troops is remote or when illumination is used.

Section XIII. INFILTRATION

6-64. General

a. Infiltration is a technique of movement used with offensive operations. The division can attack after infiltration or can use infiltration to obtain intelligence and to harass the enemy. Though it is not restricted to small unit or dismounted actions, the division normally employs infiltration techniques with a part of its units in conjunction with offensive operations by the remainder of its units.

b. Because of the intermingling of friendly and enemy units during infiltration, the nuclear vulnerability of both forces is high, and use of any but the smaller nuclear munitions 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.

6-65. 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.

b. Infiltration is aided by use of terrain that

limits the enemy's observation and surveillance of routes. Woods, swamps, and broken ground are examples of areas suitable for 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 actions, the infiltration does not use avenues of approach in the traditional sense. Frequently, by avoiding the best avenues of approach, the infiltrating force increases its chances of success. Conditions of reduced visibility, such as darkness, fog, and falling snow, assist in preventing the discovery of infiltrating groups. Such conditions, however, cause an alert enemy to increase his surveillance.

c. A widely dispersed enemy force with gaps between its defensive positions invites infiltration. Infiltration against an alert enemy equipped with means for 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 means can be neutralized or their effectiveness reduced.

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

e. Small infiltrating groups can be assigned missions of target acquisition or 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 link-up with other attacking forces or for exfiltration, evacuation,

rescue, or overt continuation of the attack are necessary.

g. Control of an infiltrating unit may be centralized at division or decentralized to a unit that 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, the controlling headquarters designates a series of infiltration lanes wide enough to permit the infiltrating groups to move by stealth. 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 are attack positions, objectives, and rallying points or areas.

i. Adequate communications are provided within the infiltrating unit and between that unit and the controlling headquarters. The infiltrating force must observe strict communications security practices and keep its transmissions to a minimum.

j. Infiltrating groups moving on foot generally are limited to hand-carried weapons. Consequently, the division normally provides additional fire support. This requires good observation, reliable communications, and a responsive system for requesting these 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 the plan receive maximum dissemination, including action in the objective area.

l. Suitable recognition signals are provided all units operating in the area of likely link-up to prevent firefights between friendly elements.

m. Figure 6-12 depicts the division attacking subsequent to infiltration.

6-66. Conduct of the Infiltration

a. The infiltrating units subdivided into small groups pass through, over, or around enemy forward defensive positions to avoid detection. If detected, they avoid decisive engagement. They normally move in 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 feints and demonstrations, including preparatory fires, 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; however, this technique requires close and careful coordination.

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 that 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 used for infiltration, the aircraft flying individually or in small groups pass through or over the enemy forward defense area. This passage, when possible, is over unoccupied areas and

may follow routes that ground patrols have found to be clear of enemy units. During and after movement to the attack position, aircraft simulate landings 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 resupply. Normally this can be accomplished only by air. Maximum use should be made of captured enemy stocks, but the success of the operation must not be jeopardized by reliance solely on the seizure of such stocks.

g. Friendly units bypassed during defensive operations can be used similarly to those that have infiltrated enemy positions if they have adequate combat power for the assigned mission or if they are provided additional reinforcements from the attacking force's resources.

Section XIV. THE COVERING FORCE

6-67. General

a. The division may be assigned a covering force mission for a larger force, normally a corps. An armored or mechanized division is normally assigned this mission to insure that adequate mobility is available. The airmobile division may also be employed in this role, particularly in restrictive terrain.

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, secure and control key terrain, or contain large enemy units.

6-68. Control

Since the division normally operates on a broad front, usually covering the entire zone of action of the corps, a well-prepared, coordinated operation plan is required. Covering force operations require measures by which the rate and direction of movement of the covering force can be correlated with the remainder of the force. These measures may include checkpoints or phase lines; boundaries between brigades; and coordinated use of radio, aircraft, and ground messenger communications.

6-69. Conduct of Covering Force Action

The division acting as a covering force normally operates at a considerable distance from

the main force. Normally, the division advances with most of its maneuver battalions forward. When terrain permits, tank-heavy forces lead the advance. Engineers, mobile air defense artillery, and field 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 that 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.

CHAPTER 7

DEFENSIVE OPERATIONS

(NATO STANAG 2029, CENTO STANAG 2029, SEATO SEASTAG 2029,
ABCA SOLOG 34R; NATO STANAG 2079, CENTO STANAG 2079,
SEATO SEASTAG 2079, ABCA SOLOG 48R; NATO STANAG 2118,
SEATO SEASTAG 2118)

Section I. GENERAL

7-1. Introduction

The defense is a temporary measure adopted until force can assume or resume the offensive. Defensive operations prevent, resist, repulse, or destroy enemy attacks. The defender undertakes the defense to develop more favorable conditions for subsequent offensive operations, to economize forces in one area in order to apply decisive force elsewhere, to compel an enemy force to mass, to destroy or trap a hostile force, to deny an enemy entrance to an area, or to reduce the enemy's combat power with minimum losses to friendly forces.

7-2. Concept of Defense

In the defense, the defender takes every opportunity to seize the initiative and to 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.

7-3. Fundamental Considerations

Fundamental considerations for planning, organizing, and conducting the defense are—

- a. Proper Use of Terrain. Terrain is a major factor in selecting the defensive area and disposing defending forces. The defender retains control of terrain features essential to observation, communications, and maneuver of reserves; he denies the enemy the use of terrain that might jeopardize the success of the de-

fense. The defender uses field fortifications and obstacles to increase the natural strength of the area. Chemical agents which remain effective for long periods may be integrated into these obstacles. Obstacles can divert the enemy into areas suitable for counterattack or destruction by nuclear, biological, or chemical munitions. Obstacles in the area strongly influence the general defensive scheme, including the disposition of forces and the positioning of reserves. The defender should visualize all possible enemy avenues of approach into the area. An evaluation of the avenues of approach in conjunction with key terrain features serves as the basis for positioning forces as well as for using surveillance means and for planning fire support. Normally, avenues of approach at division level are those that will accommodate, as a minimum, a deployed enemy regiment at least two battalions abreast. The area selected for defense should afford good observation, fields of fire, and adequate cover and concealment to the defending forces. The defender applies the principles of camouflage and continuously improves camouflage throughout the defensive operation.

- b. Security. The defender must take all possible steps to avoid tactical surprise. He provides for 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 disposed primarily to combat an enemy attack along the most probable avenues of approach, the enemy can attack from an unexpected or unlikely direction. The enemy can also attack the division rear by ground envelopment, airmobile or airborne attack, or large-scale guerrilla action. The defender disposes his forces to prevent the enemy from gaining a decisive advantage by surprise as to direction or location of the attack. The defender plans for all-round defense to reduce the possibility of surprise and prepares for all-round defense by carefully disposing of forces initially, planning the redistribution of troops, shifting fires, and insuring the preparation of all subordinate units for all-round defense.

d. Defense in Depth. Adequate depth is essential to the defense. A strong attack supported by nuclear or chemical munitions may permit the enemy to penetrate the forward defense area. Therefore, the defensive area must have sufficient depth to allow the defender to contain or canalize the enemy and to permit execution of counterattacks. Shallow defenses are inherently vulnerable because the enemy can breach such defenses before the defender can contain him or take effective counteraction. The defender achieves depth to the defense by proper deployment; maneuver of forces; use of blocking positions, field fortifications, and barriers; and proper employment of fires and reserves.

e. Responsiveness. The defense is organized to permit the shifting of forces and fires to counter the developing attack. Mobile reserves and nuclear or chemical munitions provide the division commander greater freedom to conduct the defensive battle.

f. Dispersion. The defender disperses units as permitted by the requirements of his mission to reduce vulnerability to nuclear or chemical munitions; however, the mission may conflict with the requirement to disperse. For example, the retention of specific terrain may be essential to the mission but may permit only limited dispersion. In such cases, the mission is paramount; the degree of risk in accepting less dispersion is secondary. Dispersion in depth is

better than lateral dispersion because it avoids frontages that overextend the defense, 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 disposition of forces for launching a counterattack.

g. Maximum Use of Offensive Action. In the defense, the division takes every opportunity to regain the initiative and to 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. A spoiling attack can keep the enemy off balance and prevent his massing forces, thus permitting the defender to accomplish his mission.

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

(1) Fire support plans, including use of nuclear, chemical and conventional fires, provide support for the forward defense echelon, aid in control of unoccupied areas, cover for barriers, and support for offensive action such as counterattacks. The division integrates planned fires into the overall defensive scheme and coordinates fires of all units.

(2) The division supplements natural barriers and obstacles with artificial barriers and obstacles. These artificial means include minefields, other artificial obstacles, and, when authorized, chemical agents and residual nuclear effects. These obstructions are sited to restrict the enemy's movement without restricting the friendly forces' planned maneuver. The division barrier plan supports the scheme of defense. Higher echelon requirements become a part of the division barrier plan. Careful coordination insures that the plan will accommodate planned maneuver, particularly reserve movement.

(3) The division commander considers mutual support in planning the disposition, maneuver, and fire support for combat elements.

(4) Nuclear and chemical munitions cre-

ate obstacles, canalize enemy movement, disrupt enemy plans, and restrict the use of enemy support installations or forces their relocation.

i. Mutual Support. The positioning of forces and the planning of fires laterally and in depth allow mutual support between forces consistent with the accomplishment of the assigned mission. Achievement of mutual support may require forces to move and assemble. If gaps exist in the defense, they present a particular problem in providing mutual support. The commander controls gaps by using surveillance, obstacles, prearranged fires, patrols, and elements that physically occupy the gaps when the enemy threatens their use. Gaps are normally accepted between rather than within battalions.

j. Use of Time Available. Since the defender can examine the terrain in detail and plan its best use, he makes every effort to prepare the defense in advance. The time available for planning and preparing for the defense will influence the employment of forces, preparation of obstacles, coordination of fires, and priority for performance of tasks. The effectiveness of the defense depends not only on the time avail-

able for its planning and preparation but also on its advantageous use during the preparation phase. This fundamental also applies after the preparation phase because improvement continues during the defense.

7-4. Doctrine of Defense

The doctrine of defense envisions the use of security forces to provide early warning and to delay, deceive, and disorganize the enemy attack; forward defense forces to organize the forward defense area, to repel the attacker, and to develop the situation; and reserve forces to eject or destroy the attack by offensive action. This doctrine envisions capitalizing on mobility, firepower, and offensive action in the defense to retain the initiative; to deny the attacker his decisive objectives; to avoid becoming fixed and destroyed; and to destroy the enemy by firepower and maneuver. When the enemy is a modern mechanized force, the forward defense echelon must contain sufficient tanks and other antitank weapons either to repel the attacker or to develop the situation. Effective defense requires adequate space for maneuver and a high degree of mobility.

Section II. FORMS OF DEFENSE

7-5. General

The basic forms of defense are the mobile defense and the area defense. Defensive postures for a given situation will be some variation of either the mobile or the area defense and will incorporate characteristics of each. The commander establishes the defense that best meets the requirements of the particular situation.

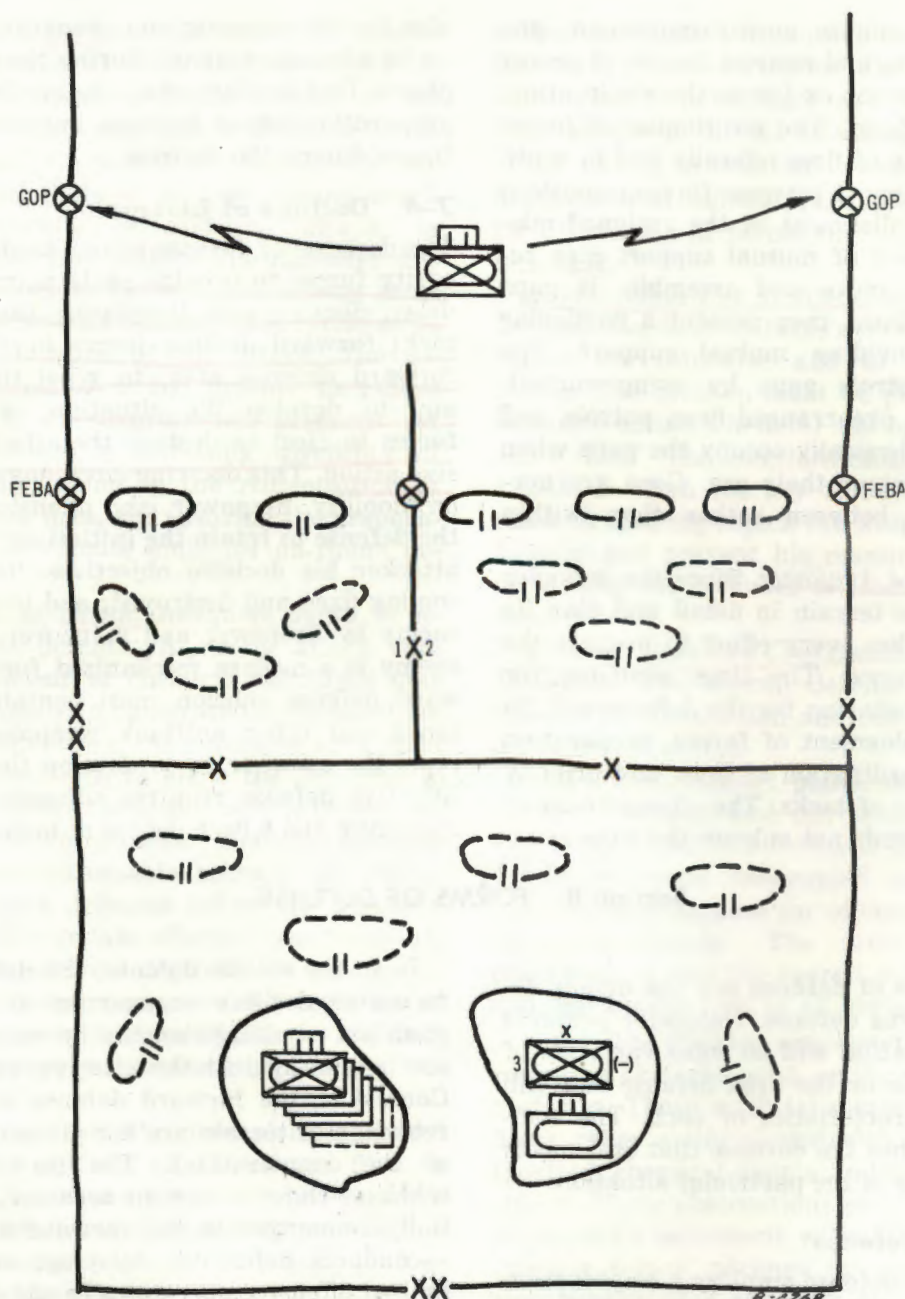
7-6. Mobile Defense

a. The mobile defense employs a combination of offensive, defensive, and delaying actions. In a mobile defense, the commander deploys minimum forces forward and uses maneuver with organization of fires and terrain to seize the initiative from the enemy. This defense emphasizes destruction of enemy forces rather than retention of terrain. It relies primarily on the use of mobile offensive forces to accomplish the principal mission of the mobile defense—destruction of 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 forward defense echelon—those minimum necessary forces initially committed in the forward defense area—conducts defensive, delaying, screening, or limited offensive operations in any combination required to make the attacker vulnerable to counterattack by the reserve. 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.

d. The reserve echelon receives priority in

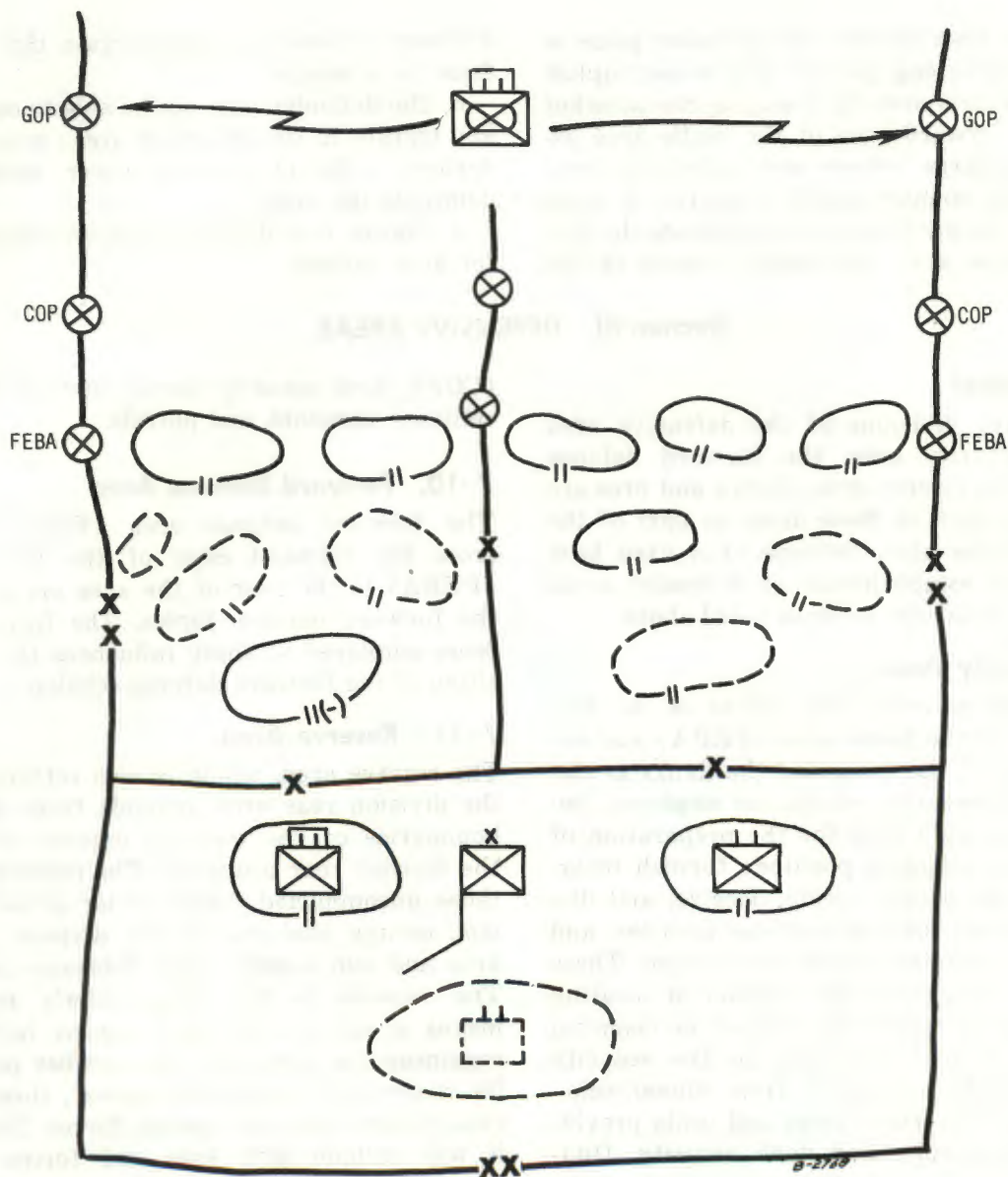


1. Forward defense echelon relatively light. Reserve dispersed in assembly areas.
2. Priority for allocation of combat power to reserve.
3. Blocking positions are located to contain or slow enemy penetrations for subsequent attack by the reserve echelon.
4. GOP force is taken from the reserve echelon or other forces available to the commander.

Figure 7-1. Type organization for mobile defense.

the allocation of combat power in the mobile defense.

e. Figure 7-1 illustrates a type organization for mobile defense.



1. Forward defense echelon contains bulk of combat power.
2. Priority for allocation combat power to forward defense.
3. Defense plans to accept decisive engagement and accomplish mission along forward edge of the battle area.
4. Emphasis is on retention or control of specific terrain.
5. Counterattacks are made to eject or destroy enemy penetrations of the forward edge of the battle area.

Figure 7-2. Type organization for area defense.

7-7. Area Defense

a. The area defense emphasizes the retention or control of specific terrain for a specified period. The defender deploys the bulk of his combat power in the forward defense area to stop enemy forces forward of the forward edge of

the battle area. He relies on the ability of fires and forces deployed on position in the forward defense area to stop and repulse the attacker. The forward defense echelon has a higher priority for combat power than does the reserve.

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 assisted by a large volume and variety of fires. He conducts counterattacks primarily to eject or destroy enemy forces that penetrate the forward defense area and regain control of the

forward defense area and terrain that the defense is to retain.

c. The defender may not be able to occupy all key terrain in the defensive area; however, he deploys sufficient combat power forward to dominate the area.

d. Figure 7-2 illustrates a type organization for area defense.

Section III. DEFENSIVE AREAS

7-8. General

The primary divisions of the defensive area are the security area, the forward defense area, and the reserve area. Forces and fires are allocated to each of these areas as part of the overall defense plan. Defense of a fixed base may require establishment of defensive areas which are variations of those listed above.

7-9. 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 elements of the security echelon are employed. Security forces gain time for the preparation of the division defensive position; furnish information of the enemy; delay, deceive, and disrupt the enemy force as much as possible; and provide a counterreconnaissance screen. These forces also may have the mission of locating and developing targets for nuclear or chemical munitions. Forces operating in the security area may include elements from higher echelons, such as covering forces and units providing air surveillance and flank security. Division forces in the security area consist of the general outpost (GOP), combat outposts

(COP), flank security forces, division air surveillance elements, and patrols.

7-10. Forward Defense Area

The forward defense area (FDA) extends from the forward edge of the battle area (FEBA) to the rear of the area organized by the forward defense forces. The form of defense employed strongly influences the composition of the forward defense echelon.

7-11. Reserve Area

The reserve area, which is also referred to as the division rear area, extends from the rear boundaries of the forward defense forces to the division rear boundary. The reserve forces, those uncommitted forces under division control, occupy positions in the division reserve area and add depth to the defensive position. The reserve is the commander's principal means of influencing the defensive battle and regaining the initiative. The combat power of the reserve may consist of nuclear, chemical or conventional fires or combat forces. Normally it will include both fires and forces. Paragraphs 7-32 through 7-37 discuss rear area security.

Section IV. PLANNING THE DEFENSE

7-12. General

a. The commander develops his plan for the defense after a careful estimate of the situation. The defender has an advantage because he can normally reconnoiter and select the area where he will organize the defense.

b. After he determines the basic form of defense, the commander, with the aid of his staff, develops the plan in detail to include organization of the ground, designation of control meas-

ures, organization for combat, missions of subordinate units, fire support plans, logistical support plans, and counterattack plans.

c. 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 are the bases for the plan. The plan makes provision for security forces, forward defense forces, and reserve forces. The plan also indicates the location of the forward

defense area, provides for fire support to all defensive echelons, and establishes requirements for additional artificial obstacles and barriers to improve the natural defensive strength of the terrain.

d. The defense plan or order includes the situation, mission, organization for combat, control measures, tasks for major subordinate units, and necessary annexes such as—

(1) The operation overlay.

(2) The fire support plan.

(3) The barrier plan.

(4) The air defense plan.

(5) Any others necessary, such as engineer, intelligence, signal, or administrative.

e. The operation overlay portrays a portion of the defensive plan or order graphically and includes the following:

(1) Location of division security forces.

(2) Location of the forward edge of the battle area, forward defense area boundaries, coordinating points, and other control measures.

(3) Location of reserve forces.

(4) Division-directed blocking positions.

(5) Any other instructions that can be more clearly shown graphically.

f. The commander publishes counterattack plans separately and references them in the basic defense plan or order, or he may attach them to the basic plan or order as annexes. In either case it is desirable to issue them with the defense plan or order.

g. Normally a separate administrative plan or order is not necessary at division. Standing operating procedures will apply with changes or specific instructions contained in paragraph 4 of the basic plan or order. When these instructions are too voluminous for paragraph 4 of the plan or order, the commander publishes them as an annex.

h. The discussion of the sequence of commander and staff actions, planning guidance, and commander's concept contained in chapter 6 applies to defense planning.

7-13. Estimate of the Situation

a. As in offensive operations, the commander and staff must prepare individual estimates of the situation. They develop these estimates separately but concurrently. The commander

completes his final estimate after receiving all staff estimates. The elements of the estimate—mission, situation and courses of action, analysis of opposing courses of action, comparison of own courses of action, and the decision or recommendation—are essential to effective defense planning.

b. FM 101-5 contains a detailed discussion and examples of command and staff estimates.

7-14. Selection of the Form of Defense

a. In the initial stages of planning, higher headquarters specifies, or the division commander decides on, the basic form of defense to use.

b. Considerations that influence the commander's choice of the form of defense include the mission, terrain and weather, enemy, and troops available. Analysis of these factors may result in additional considerations. The division G3 evaluates the additional considerations derived from an analysis of these factors before he recommends the form of defense to adopt. Paragraph 7-15 lists factors favoring adoption of a particular form of defense.

(1) *Mission.* The mission may prescribe the form of defense, an analysis of the mission may identify conditions that require adoption of a particular form of defense or the mission may impose restrictions that prevent maneuver to the depth required for a mobile defense. Such restriction 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 forward edge of the battle area together with an effective reserve, it favors the adoption of the mobile defense while a relatively narrow frontage favors the area defense.

(2) *Enemy.*

(a) *General.* The division obtains and evaluates all possible information of the enemy location, strength, disposition, composition, and activity to determine indications of enemy intentions. The collection of information is continued throughout the operation. The G2 exploits all means and sources to furnish the commander with accurate and timely information so that he can make a continuing estimate of enemy capabilities.

(b) *Nuclear, biological or chemical munitions capability.* The commander must consider enemy capabilities to employ nuclear, biological, or chemical munitions. When this capability exists, the commander gives increased attention to passive defense measures such as dispersion, concealment, movement during darkness or other conditions of reduced visibility, cover, stringent traffic control, radio discipline, and individual protective measures. The dispersion desired in a nuclear environment or under the threat of the use of chemical munitions favors the adoption of a mobile defense.

(c) *Air capability.* The division is a high-priority target for enemy tactical air forces. Armored vehicles are relatively invulnerable to all but direct hits by conventional weapons; however, unarmored vehicles and personnel are vulnerable to all types of air-to-ground fires. Therefore, the employment of organic weapons; air defense artillery; all forms of deception, cover, dispersion, and concealment; and, particularly, movement is important. The commander must consider the enemy capability to employ airborne or airmobile forces.

(d) *Firepower capability.* The enemy capability to counter the employment of reserves by firepower is of vital concern and is a consideration in the preparation of plans. Factors to be considered in determining his firepower capabilities are—

1. Location and disposition of his weapons and their fires.
2. Characteristics of his weapons, such as range, rate of fire, mobility, and effectiveness against the various types of vehicles being used in the operation.
- 3 Vulnerability of the enemy weapons to the combat power available to the friendly commander.
4. Number and type of weapons in possession of, and available to, the enemy.

(e) *Mobility.* The relative ability of opposing forces for ground movement throughout the defended area is a consideration. If the defender has a significant mobility advantage, it favors a mobile defense. If the attacker has a significant advantage, it favors an area defense. In assessing the collective effects of

transportation, terrain, weather, and the air situation on mobility, the defender—

1. Considers the quantities and capabilities of combat vehicles and other tactical transportation available to the opposing forces.
2. Evaluates terrain obstacles and relief individually and then collectively to determine their effect on mobility.
3. Assesses the influence of weather on trafficability and movement.
4. Assesses the air and air defense situation as it relates to the ability of a force to move without effective interference from the air.

(f) *Summary.* In defense, a logical assumption is that a superior force opposes the defender. Therefore, the enemy consideration is dealt with in terms of "how superior." As the enemy's superiority increases, the desirability of the mobile defense tends to increase. With the bulk of the combat power in the reserve, the defense can adopt a "wait-and-see" attitude and react to the enemy's thrust, moving at the critical time and place to destroy the attack.

(g) *Reference.* FM 30-5 contains a detailed discussion of the effect of enemy capabilities and indications on defense operations.

(3) *Terrain.* The defender assesses the collective effect of observation and fields of fire, cover and concealment, obstacles, key terrain features, and avenues of approach. Weather may influence these considerations; therefore, the defender should include its effect in the terrain assessment. FM 30-5 contains a detailed discussion of the influence of terrain and weather on defense operations.

(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 that has good trafficability and 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 or either form of defense.

(4) *Troops available.*

(a) The capabilities of forces available must be evaluated before the commander can make realistic plans and take action. The combat, combat support, and combat service support forces available for allocation to the security echelon, the forward defense echelon, and the reserve echelon have a significant impact on the form of defense adopted.

(b) The means available are seldom all that a commander desires. He uses effectively what is available to accomplish his mission. The commander seldom possesses sufficient forces to allow all areas to be weighted equally; therefore, he decides on a form of defense and allocates forces required by the adopted form of defense.

(c) The capabilities of a force depend on the—

1. Number of units.
2. Type of units.
3. State of training.
4. Morale.
5. Strength of units in personnel and equipment.
6. Location and disposition.
7. State of maintenance.
8. Adequacy of combat support and combat service support.
9. Personalities of commanders.
10. Mobility.

(5) *Time.* The time available for planning and organizing the defense may have a significant effect on the selection of the form of defense. The commander must evaluate the time available and allocate it so that the staff and subordinate units have adequate time to complete planning and subordinate units have sufficient time to organize the ground and deploy their forces. Frequently, the limited time available requires concurrent actions with adjustments being made as a phase of planning is completed. The commander uses oral and fragmentary orders and liaison to the maximum. The area defense normally requires more time and more thorough organization of the forward defense area; therefore, when time is limited, the mobile defense is generally fa-

vored. However, the time factor alone does not materially influence the choice of the form of defense.

c. When the mission permits the choice of either form of defense, the commander must evaluate the collective effect of all considerations. In some situations, one or more considerations may clearly govern his choice of defense; in others, each consideration must be carefully analyzed before he selects his form of defense.

7-15. Factors Favoring Adoption of a Form of Defense

a. *General.* The considerations discussed in paragraphs 6-13 and 6-14 are a basis for selection of the form of defense. However, certain factors favor adoption of a particular form of defense.

b. *Mobile Defense.* Adoption of the mobile defense is favored when—

(1) The mission and the area of operation permit the defense to be organized and fought in depth.

(2) The terrain permits the defending force relatively free movement.

(3) The defending force's mobility compares favorably with or is greater than the enemy's.

(4) The enemy has the capability of employing nuclear, biological, or chemical munitions and the defender must employ maximum dispersion and mobility to decrease vulnerability to nuclear, biological, or chemical munitions attack.

(5) The friendly forces have sufficient air capability to permit the defending force relatively free movement.

(6) Minimum time is available for deployment of forces and organization of the ground and defensive positions.

(7) The mission is to destroy enemy forces.

(8) The frontage assigned exceeds the defender's capability to establish an effective defense along the forward edge of the battle area.

c. *Area Defense.* Adoption of the area defense is favored when—

- (1) There is a lack of depth in the defensive area.
- (2) There is a requirement to retain specific terrain.
- (3) Terrain restricts maneuver by the defending force.
- (4) The attacker possesses greater mobility than the defender.
- (5) The attacker possesses air superiority.
- (6) Time is available for the construction of defensive positions to include the preparation of barriers.
- (7) The frontage assigned is relatively narrow.

7-16. Organization of the Ground

a. As a prerequisite to detailed planning for the organization of the defense, the commander must know the specific mission of the defense force including the starting time of the operation, any special requirements, the area, the enemy situation, and the selected form or variation of defense.

b. Detailed reconnaissance of the area is necessary to determine the major avenues of approach into the area, key terrain features that control these avenues of approach, natural obstacles, and routes for the movement of forces within the area. The commander selects areas that the forward defense echelon, security echelon, and the reserve echelon will occupy and organize.

c. Once he has determined the specific location of the forward defense area, the commander divides the division area into sectors, assigning responsibility for these areas to major subordinate units. When possible, he must insure that responsibility for major avenues of approach and the key terrain features that control them is not divided.

d. Organization of the ground involves use of the natural defensive qualities of the terrain and maximum improvement of the natural terrain with the personnel, materiel, and time available. In addition to the preparation of the initial defensive and blocking positions, organization of the defense includes installation of minefields, preparation and execution of demolitions and other artificial obstacles, to include prechambering for conventional or atomic demolition munitions, 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 takes maximum advantage of natural obstacles. When he has authorization, the commander may use chemical agents and nuclear munitions to create, extend, or contaminate barriers and obstacles and to block defiles to further impede enemy movement and canalize his advance. When available and the commander has authority to use them, he may employ air-delivered land mines to create obstacles to enemy movement, to close lanes and gaps in previously prepared or existing obstacles, and to limit enemy penetrations.

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. The siting of minefields and other obstacles are carefully planned and executed to minimize interference with the scheme of maneuver of the defensive force.

7-17. Priority of Work in Organization of the Ground for Defense

In the defense, measures for establishing communications and increasing the effects of fire and movement take precedence over all other work. The goal is to insure rapid reception of information and accurate delivery of fire on the attacker to make his fires ineffective and to impede his movements. The normal tasks associated with organization of the ground, in order of priority, include—

a. Establishment of Early Warning System. The commander emphasizes early detection and warning of enemy approach by establishing observation posts and listening posts and by employing air and ground surveillance and security forces. The G2 tasks intelligence agencies and other units with appropriate essential elements of information to produce this information.

b. Preparation of Defensive Positions.

(1) As soon as defensive positions are occupied, units organize the ground for defense.

They clear fields of fire, place tanks in hull defilade, emplace air defense weapons, and dig emplacements for crew-served weapons and foxholes for personnel. Units plan and prepare alternate and supplementary positions as time permits.

(2) Units may integrate armored personnel carrier machineguns and air defense artillery automatic weapons into the forward defense positions. These vehicular-mounted weapons can be assigned fire missions to augment the long-range, close-in, and final protective fires of other automatic weapons. Armored personnel carriers are usually located to the rear in defilade because of their high silhouette and their vulnerability to certain types of enemy fire. However, these carriers move, as the situation requires, to previously selected firing positions and can augment protective fires. When in defilade, they can provide flank and rear protection.

(3) Units prepare range cards for all crew-served weapons and camouflage all vehicles, weapons, and emplacements.

(4) Units make every effort to deceive the enemy as to the true location of the defense positions. Movement within the forward defense area is kept to the minimum.

(5) Available Army aviation resources should be integrated into the defense plans. In particular, these plans should include the planned use of armed helicopters for specified missions or general support.

c. Preparation of Counterattack Routes. Units conduct a reconnaissance for each counterattack plan to determine the best routes for movement of forces. They reconnoiter and improve routes from primary to alternate and supplementary positions.

d. Preparation of Routes for Supply. Each battalion task force establishes its supply routes. Units coordinate supply routes with the plan of defense to insure that they do not conflict with the maneuver of forces conducting the defense. Alternate supply routes may be required. Units mark supply routes and control traffic entering the forward defense area.

e. Strengthening the Defense Position. Units improve obstacles and use mines to provide close-in protection for each blocking position.

They may install wire entanglements and protective, defensive, and phony minefields. The battalion commander may authorize the installation of protective minefields to the front and flanks of the blocking positions to provide security. This authority can be delegated to company and comparable commanders. The reserve may install phony minefields for use as gaps. If time permits and the division commander grants authority, units may install defensive minefields to add strength to each blocking position. They must report, mark, and record minefields properly. FM 20-32 and FM 31-10 contain detailed procedures for the employment of mine warfare and barriers.

7-18. Control Measures

a. Control measures used in defensive operations include boundaries, coordinating points, fire control measures, blocking positions, and designated assembly areas. Paragraph 7-22 discusses control measures in the counterattack.

b. Coordinating points established by corps designate the forward edge of the battle area. When the commander cannot define the forward edge of the battle area by a terrain feature, he may show it on the map or overlay as a dashed line connecting coordinating points and representing the general trace of the forward edge of the battle area. He should locate the forward edge of the battle area to take advantage of natural obstacles in the area and along a suitable barrier, such as a river line, if one is available.

c. The division commander designates boundaries to define terrain responsibility for major subordinate units. He extends lateral boundaries forward to the range of direct support fires or limits of ground observation, whichever is greater, and to indicate the foremost limit of territorial responsibility. The rearward extension of the lateral boundaries between forward defense forces defines the depth of responsibility of each forward defense area commander. This extension must provide sufficient area to permit adequate maneuver and dispersion of the forward defense forces. Commanders may designate a rear boundary to clearly establish responsibility for specific ter-

rain. Lateral boundaries also serve as a fire control measure. When possible, the commander locates boundaries between major subordinate units to prevent dividing responsibility for key terrain features and major avenues of approach.

d. The commander designates coordinating points on boundaries as specific points for coordination of fires and maneuver between adjacent units. He indicates coordinating points whenever a boundary crosses the forward edge of the battle area and the trace of the security force.

e. The division controls the general location of the reserve by designating assembly areas or blocking positions that are to be occupied by elements of the reserve.

7-19. Organization for Combat

a. The division plan for the defense includes a detailed organization for combat to implement the scheme of defense. The task organization portion of the operation plan or order shows the allocation of forces to the major tactical groupings.

b. The commander attaches combat elements to the major subordinate commands in the proportion best suited to accomplish the mission. He provides combat support and combat service support elements to the security echelon, to the forward defense echelon, and to the reserve echelon, as necessary. These elements may be attached or placed in support. The division commander places forces not allocated under the control of the division support command or retains them directly under division control.

(1) In the mobile defense, the commander allocates minimum essential forces to the forward defense echelon. These forces may be primarily infantry heavy. These forces require mobility equal to or greater than that of the opposing force. The reserve, as the principal element of the defense, has priority in allocation of combat power.

(2) In the area defense, the forward defense echelon has priority in the allocation of forces. The reserve gets sufficient strength to insure continuity of the defense.

c. The division may be involved in another operation when given the mission to defend

and, consequently, will have to reorganize. Time to establish the defense is usually limited. To avoid unnecessary changes and shifting of units, the commander makes only essential changes 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 in the defense may include the general outpost, combat outpost, observation posts, listening posts, patrols, flank guard, and rear area security forces.

(1) *General outpost.* The division organizes and controls the general outpost to intercept, engage, delay, disorganize, and deceive the enemy before he can attack. The general outpost provides security for the division by observation, reconnaissance, attack or defense, or any combination of these methods. The general outpost force may come from the division reserve. The general outpost may be a brigade or elements thereof, the armored cavalry squadron, or a task force as required. Within the division, the armored cavalry squadron is particularly well suited to this type of mission but may require additional aviation, artillery, and engineer support. The corps commander prescribes the general location of the division general outpost 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. Its location provides timely warning of the enemy's approach and denies the enemy close ground observation and direct fires into the forward defense area. Its location permits support by fire from within the brigade. The commander may establish the combat outpost by employing elements of the brigade reserve or by directing the forward battalions to furnish appropriate elements. The strength and composition of the combat outpost in a battalion sector may range from a reinforced platoon to a reinforced company. 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 echelon is organized

to carry out its basic mission of defense or delay. Division designates the trace of the forward edge of the battle area and assigns responsibility to major subordinate units along the forward edge of the battle area by selecting the location of boundaries and coordinating points.

(1) The division usually uses two brigade headquarters to control forward defense forces. However, more than two control headquarters may be necessary 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 control the forward defense area effectively.

(2) In the mobile defense, commanders of the forward defense forces 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. Their location controls terrain and dominates avenues of approach and repels, delays, or canalizes attacking forces. The commander selects, reconnoiters, and prepares defensive positions in depth to the extent permitted by the time available. The forward defense echelon has minimum essential forces to carry out its mission. It is normally infantry heavy. These forces require mobility equal to or greater than that of the opposing force.

(3) In the area defense, the commander organizes the forward defense area into defensive positions to provide good fields of fire, observation, and natural defensive strength. He prepares positions to block avenues of approach at the forward edge of the battle area and in depth to control the area. The commander increases the natural defensive strength of the terrain as time permits by using artificial obstacles, fortifications, and barriers.

f. The commander organizes the reserve to destroy or repulse the enemy by offensive action and prepares it for timely commitment on division order. If the division cannot counterattack, it employs the reserve in a blocking role to assist in containing the enemy penetra-

tion prior to the launching of the corps' counterattack. One brigade headquarters normally controls the reserve. However, in some situations, a provisional task force headquarters may control the reserve.

g. The division may use the armored cavalry squadron in the security echelon, along the forward edge of the battle area as part of the forward defense forces, to provide security for its flanks or within its area, or as part of its reserve. When the division commits the squadron along the forward edge of the battle area, it is normally attached to one of the brigades in the forward defense area; however, the squadron can occupy a sector independently as an economy of force measure.

h. The division normally retains control of engineers in the defense. It furnishes direct support engineer elements to major subordinate units in the forward defense echelon. Normal support is one engineer company per brigade. The division attaches engineers to forces in the security echelon and to other combat elements when distances and communications preclude centralized control of the engineer effort. Division directs the aspects of engineer operations that contribute to the overall defense and which are beyond the capability of major subordinate elements, such as installation of major or key segments of the division barrier system.

i. Division normally retains control of artillery but provides direct support artillery to major subordinate units in the forward defense area. Division attaches artillery units to combat elements when distances and communications are so extended that attachment is preferable to centralized control. Division should support the division general outpost with artillery fires that are representative of all calibers available to it to provide the necessary fire support and to aid in deceiving the enemy. Division normally attaches direct support artillery to the general outpost and provides medium and heavy artillery support either by the assignment of an appropriate tactical mission or by attachment. Nuclear delivery means may be attached to the division general outpost. The reserve is provided artillery support when it is committed.

j. Division normally retains control of air defense artillery and provides support throughout the division area. Elements may be attached when distance and communications preclude effective control. The general outpost force normally receives air defense support through attachment.

7-20. Combat Support

a. Fire Support.

(1) The division prepares fire plans to support the scheme of defense to include both long-range fires to engage the enemy as early as possible and fires in direct support of the defending forces. Close fire support is furnished to the security echelon, the forward defense echelon, and the reserve echelon in the execution of counterattacks. Field artillery units are located within the defense area so that fires can be massed on likely avenues of approach and areas to be denied the enemy.

(2) The commander determines early in the planning stage the number of nuclear and chemical munitions that he will employ on targets of opportunity or preplanned targets forward of the forward edge of the battle area and the number that he will retain to support counterattacks. Delivery means must be available and properly located to deliver these fires as needed. In the mobile defense, the commander normally reserves the bulk of these munitions for support of counterattacks.

b. Air Defense Support.

(1) In addition to its organic air defense artillery, field army or corps may provide the division additional air defense units. It also derives protection from air defense weapons in or near the division area.

(2) Division normally retains control of attached air defense artillery and uses it to provide defense of the division area. Division establishes priorities for the protection of installations or areas such as nuclear delivery means, division reserve, support command, and critical areas.

c. Engineer Support.

(1) The primary combat support missions of the division engineer forces 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 counterattack. 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. Execution of the division barrier plan, construction of obstacles and rear defense positions, and road maintenance usually dictate a centralized engineer effort. Units in contact with the enemy may require the attachment of engineers. Brigades may place engineers in support of battalion task forces. Unless additional engineer support is furnished by higher headquarters, the effectiveness of the engineer effort may be decreased because of the attachment of engineers to combat units.

(2) One of the most important engineer functions is to provide advice and assistance for the formulation and implementation of the barrier plan. Barriers are used by the commander to delay the enemy or to canalize him for destruction by offensive action or with nuclear, chemical, or conventional fires. Well-planned and widespread use of barriers, to include chemical munitions, assists in gaining time. 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 or plan.

(3) Subsurface or surface nuclear detonations may create craters, fallout patterns, and contaminated areas, and slow or impede the enemy's advance. Detailed plans are prepared for demolitions along enemy avenues of approach and along routes that 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) Covering by fire, including nuclear fires, those obstacles created by demolition.

Chapter 4 indicates engineer responsibilities for atomic demolition munitions.

(4) When the requirements for engineer support within the division exceed the capability of the organic engineer battalion, division requests additional engineer support from the next higher headquarters. In the defense, such nondivisional engineers are normally placed in support of the division rather than being attached; however, they work under the supervision of the division engineer. Work is assigned on a mission, task, or area basis with the divisional engineer elements well forward in support of tactical units.

(5) FM 5-26, FM 5-135, FM 5-136, and FM 5-142 contain more detailed information.

d. Signal Support. Chapter 4 discusses signal support.

e. Chemical Support.

(1) The commander prepares detailed plans to insure the close integration of chemical agents with other fire plans, barrier plans, and the scheme of defense.

(2) The commander may use toxic chemical agents in support of forces along the forward edge of the battle area, on enemy forces concentrating for an attack, and in support of the reserve in the execution of counterattacks. The commander can use chemical concentrations 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. If he uses persistent agents, he employs them in areas where they will not restrict the maneuver of counterattack forces for future offensive action. When the commander has authorization to use toxic chemical agents, he normally integrates chemical mines into high-explosive minefields to increase their obstacle value and to make clearance more difficult.

(3) The commander can use smoke to obscure operations from the enemy by blinding enemy observation posts and by hindering enemy air observation and tactical air operations within the defense area. He uses smoke 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 chemi-

cal agents by the enemy requires decontamination support from higher headquarters.

(5) FM 3-8, FM 3-10, FM 20-32, FM 20-33, and FM 101-40 provide detailed discussions on chemical support.

f. Army Aviation Support.

(1) Use of aviation in the defense is similar to its use in other types of operations as discussed in chapter 4.

(2) An organic aviation battalion normally remains under division control. Flight elements may be placed in support of subordinate units. Flight elements are usually attached to the security echelon.

(3) Reconnaissance and surveillance are particularly important in the defense. Constant surveillance of the battle area and effective reconnaissance are necessary to obtain early and continuous information of the enemy, to acquire targets, and to verify and evaluate potential targets.

7-21. 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. The division support command commander exercises tactical control over all division support units located in the division support area.

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

c. In the defense, combat service support facilities are usually farther to the rear than in offensive operations to avoid possible interference with tactical operations and undue congestion in the forward areas. Combat service support facilities located to the rear are less likely to be damaged or destroyed by enemy penetrations of the forward defense area. However, the combat service support units and facilities must be 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 and relatively light expenditures of fuel and lubricants. In the mobile defense, however, the expenditure of fuel and lubricants may become heavy because of the maneuvering of the forward defense forces and the reserve.

e. The commander plans for supply and evacuation routes including alternate supply routes. He takes measures to regulate and control traffic within the division area, particularly traffic entering the forward defense area.

f. Normally, each brigade trains area contains elements of the support command to provide combat service support on an area basis. These 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 usually located in the division support area.

g. Chapter 4 and FM 54-2 provide further discussion of combat service support.

7-22. 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 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 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 that the enemy may employ on the avenue of approach; the character of the 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 effect that each

penetration will have on the division mission is the basis for the priority for the preparation of these plans.

c. Division prepares basic counterattack plans and disseminates them to all major subordinate headquarters in sufficient time to permit subordinate commanders to complete detailed planning. If possible, counterattack plans are distributed with the defense plan. Detailed counterattack planning is the responsibility of the reserve force commander to include reconnaissance, selection of routes, determination of time and space factors, and coordination with elements of the forward defense forces. The reserve force commander should conduct rehearsals as soon as time permits to acquaint all concerned with the terrain and planned scheme of maneuver for the counterattack. Based on the rehearsals, the commander makes specific adjustments required in control, coordination, support, and scheme of maneuver. He perfects counterattack plans as soon as possible.

d. The division counterattack plan normally includes—

(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 force in the penetrated area.

(c) The status of the forces in the forward defense area including their capability to contain the penetration.

(d) The strength and responsiveness of the division reserve at the time of the counterattack's execution.

(e) The availability and capabilities of nuclear, biological, and chemical munitions 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, the commander develops a

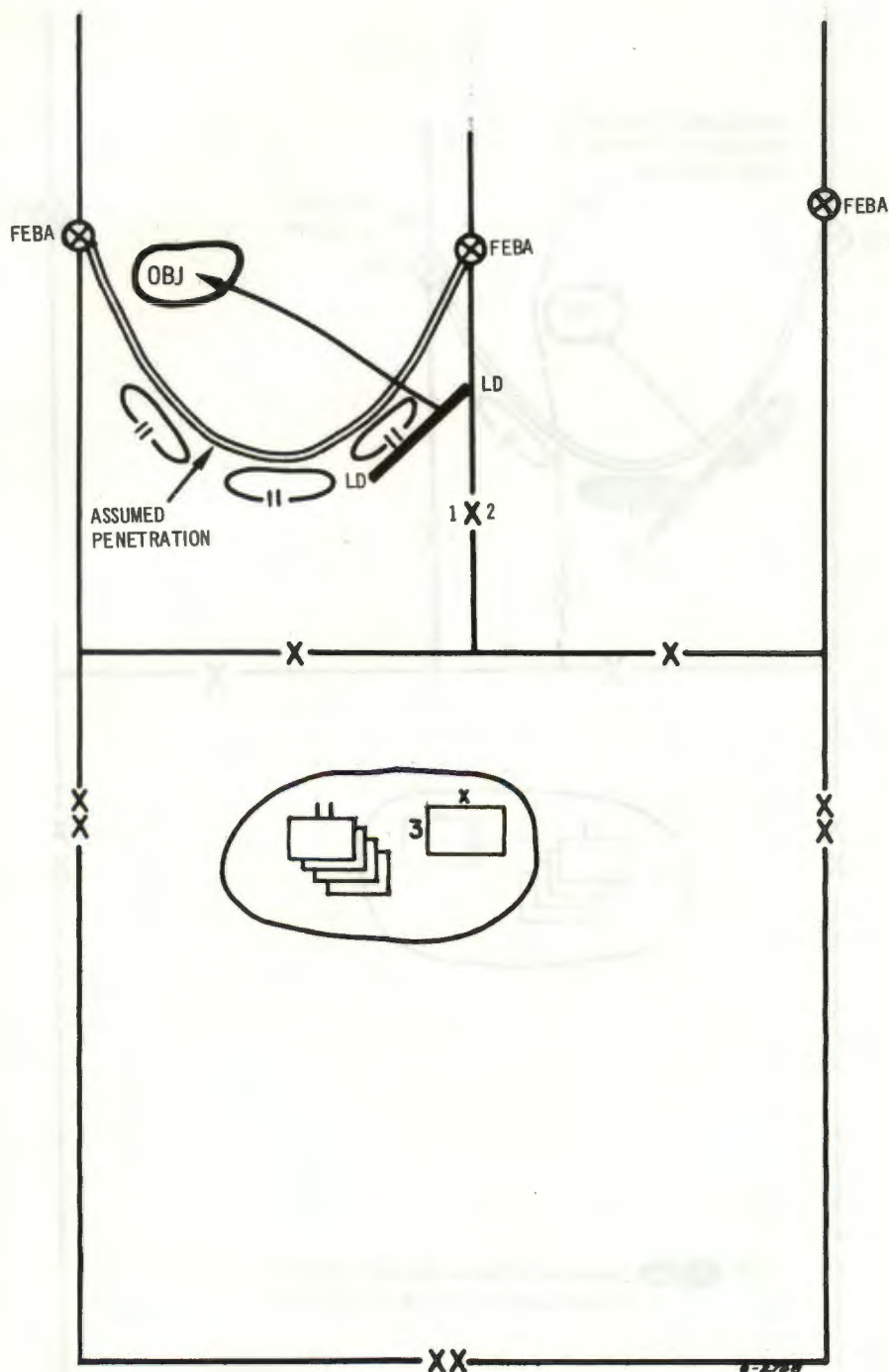


Figure 7-3. Division counterattack plan without a boundary change.

concept of operations to accomplish the overall objective of the counterattack. Consideration of the mission, the division organization, the terrain, and the enemy capabilities assist in determining whether to strike the penetration on

the nose or the flank. The concept of operation includes the scheme of maneuver and provisions for fire and electronic warfare support.

(4) *Control measures.*

(a) *Objective.* Normally, the division

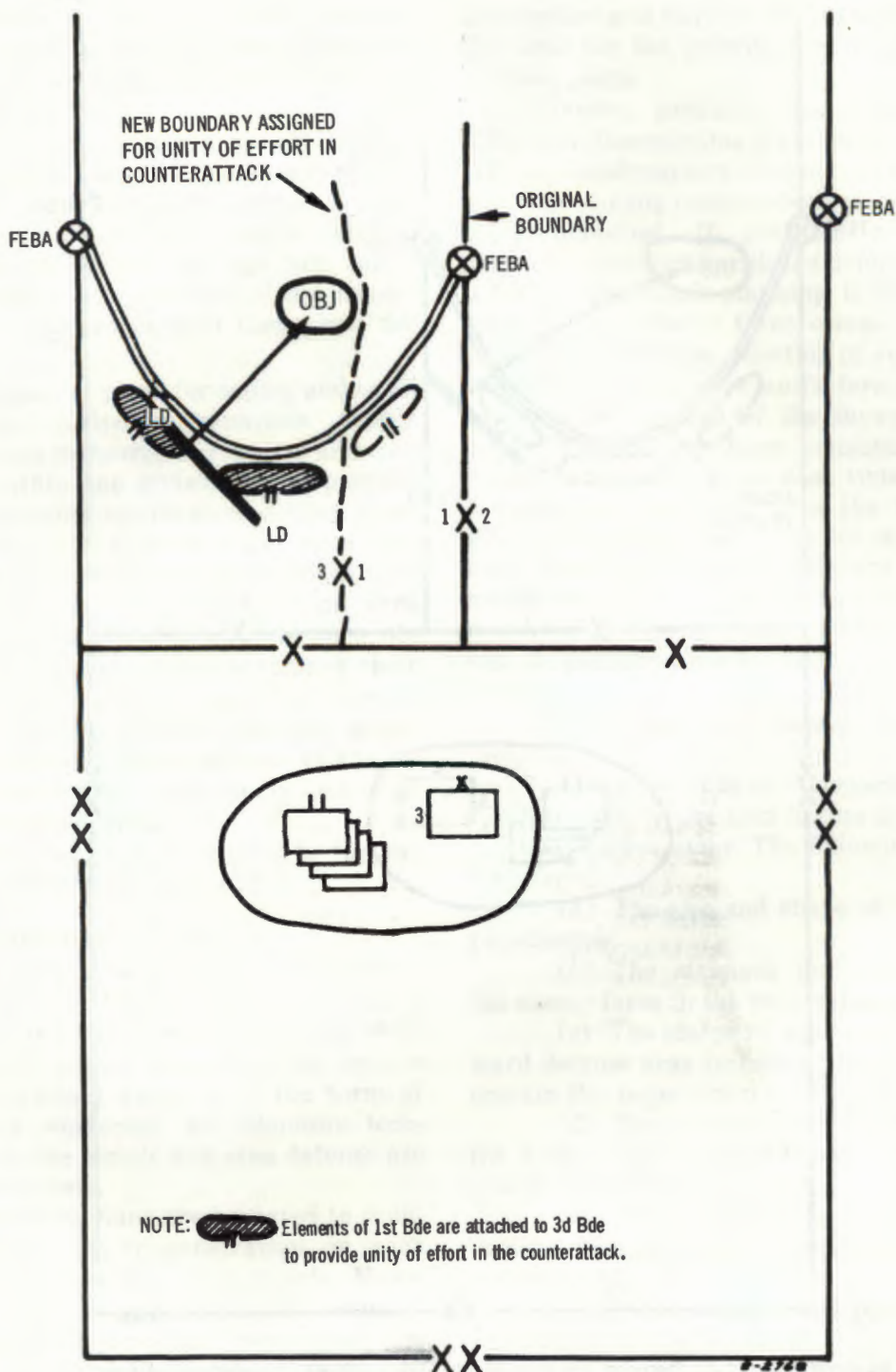


Figure 7-4. Division counterattack plan with a boundary change.

assigns a single terrain objective to the counterattacking force. The objective should be within the capabilities of the counterattacking

force to secure and should contribute to the overall objective of the counterattack.

(b) *Direction of attack.* A direction of

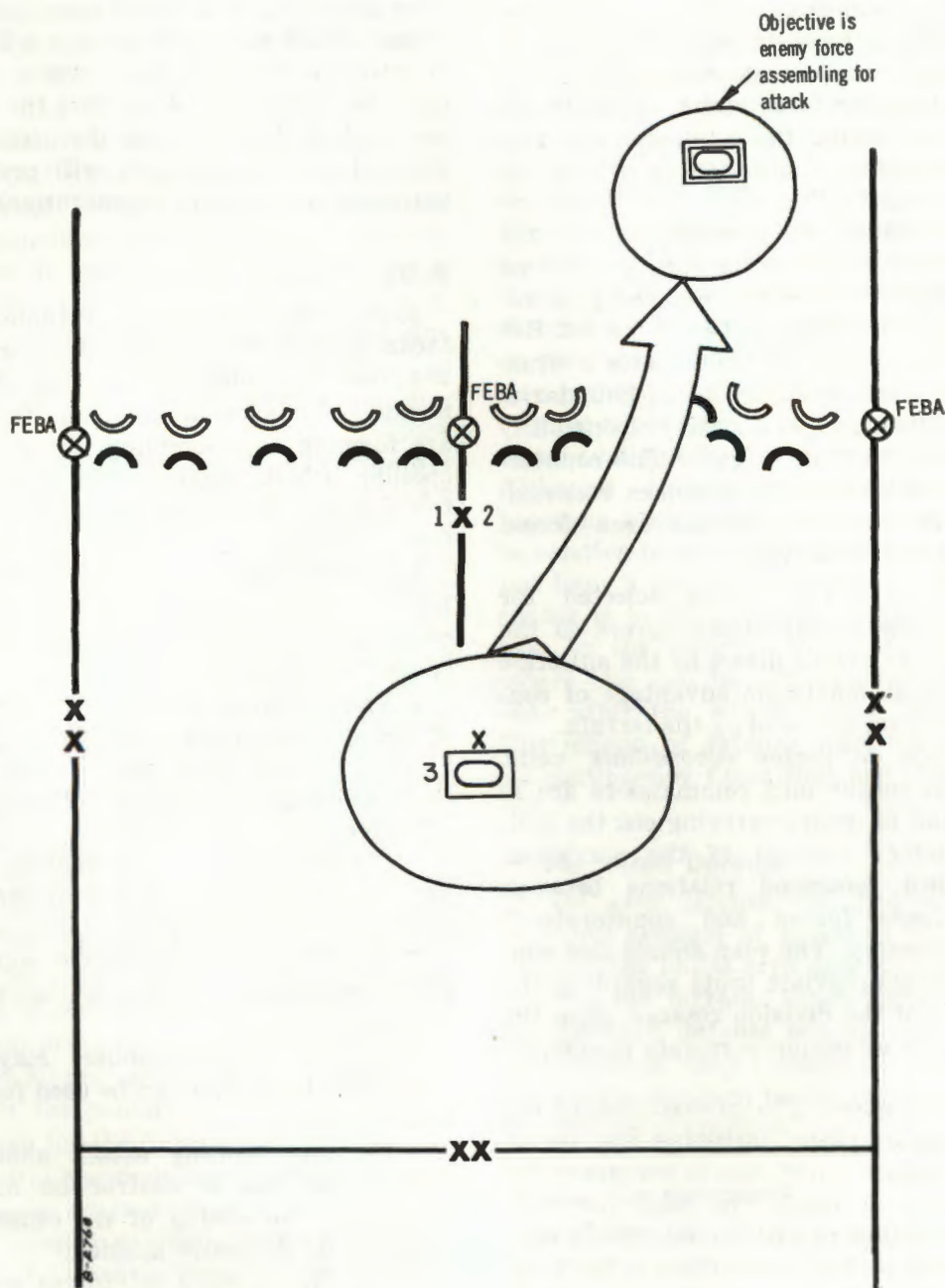


Figure 7-5. Division spoiling attack.

attack orients the main effort of the counterattack force. The direction of attack arrow runs from the line of departure into the objective.

(c) *Line of departure.* The commander prescribes a line of departure (LD) for planning and rehearsal purposes. He selects it on the basis of assumed locations of the forces in

the forward defense area and the location of easily identifiable terrain features. On execution, the line of contact (LC) may become the line of departure.

(d) *Boundaries.* The commander may use boundaries in the counterattack when he needs additional control; however, he should

make as few changes as possible in existing boundaries. He adjusts boundaries, as necessary, to control the passage and maneuver of the counterattacking force and to assist in the control of fires during the counterattack. Figure 7-3 illustrates a situation in which the counterattacking 3d Bde has no territorial responsibility outside the penetration nor any command and control over the forward defense area forces. The trace of the assumed penetration serves as a boundary between the 1st Bde and the 3d Bde. Figure 7-4 illustrates a situation that dictates a realignment of boundaries and the assignment of territorial responsibility to the counterattacking brigade. The counterattacking force commander assumes responsibility for the forward defense area forces within the new boundary.

(e) *Routes.* The routes selected for movement of the counterattack forces to the line of departure are as direct as the situation permits and take maximum advantage of concealment and cover afforded by the terrain.

(5) *Orders to major subordinate units.* Orders to the major unit commanders are in sufficient detail to insure carrying out the division commander's concept of the operation. Clearly defined command relations between forward defense forces and counterattack forces are necessary. The plan should also contain orders to appropriate units regarding the reconstitution of the division reserve when the original reserve or major segments counterattack.

(6) *Fire support.* The preparation of detailed fire support plans, including the use of nuclear or chemical munitions, is necessary for each counterattack plan. The plan normally specifies the number of nuclear munitions allocated to support each counterattack.

e. The success of a counterattack depends on the ability of the commander and staff to visu-

alize situations that might exist and, when the enemy attack occurs, to select a suitable course of action to defeat it. Basic counterattack plans must be highly flexible so that the commander can modify them to meet the actual situation. The actual counterattack will probably be a variation of one of the counterattack plans.

7-23. Spoiling Attack

a. Plans for defense may include spoiling attacks to prevent or delay enemy attacks. Figure 7-5 illustrates the spoiling attack. It is normally launched against enemy forces that are forming or assembling for an attack. The spoiling attack can be carried out by troops, fire support means, or a combination of the two.

b. Commanders make and coordinate plans for the spoiling attack with the same care and coordination as for a coordinated attack as discussed in chapter 6.

c. The following considerations affect the use of the spoiling attack:

(1) The spoiling attack delays, disrupts, or destroys the enemy capability to launch an offensive.

(2) The object of the spoiling attack is to destroy enemy personnel and equipment, not to secure terrain or other physical objectives.

(3) The objective selected must facilitate the accomplishment of the defensive mission of the unit.

(4) Higher commanders may limit the size of the force that can be used for a spoiling attack.

(5) The spoiling attack should not be used if the loss or destruction of the force jeopardizes the ability of the command to accomplish its defensive mission.

(6) The mobility of forces available for the spoiling attack should exceed that of the enemy force.

Section V. THE DEFENSE

7-24. General

a. A successful defense depends on timely and accurate information of the enemy and the ability of forces within the defense 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. The division requires effective communications to

transmit information and instructions without delay. All units must be prepared to move rapidly to support the scheme of defense.

b. Other than the air reconnaissance elements, the security echelon is normally the first element of the division to gain contact with advancing enemy forces. The security echelon reconnoiters to establish and maintain contact; once it gains contact, it transmits a continuous flow of information to the division commander. As enemy strength develops, the general outpost conducts a delaying action to inflict casualties and to delay, deceive, and disorganize the enemy. The general outpost avoids decisive engagement with the enemy but maintains contact until it is withdrawn through the combat outpost, if established, or the forward edge of the battle area. The elements of the general outpost then accomplish other assigned missions.

c. Once the security forces have withdrawn through the forward edge of the battle area, the attacker can engage forward defense forces. As the enemy comes within range, maximum supporting fires slow and disrupt his attack. As they gain contact with the enemy, the commanders of the forward defense forces initiate action to stop, repel, contain, or disorganize the enemy. If they cannot stop or contain the attack, the commanders take action to slow or channel the enemy into an area that permits the reserve to counterattack. The forward defense echelon prevents an enemy breakthrough and employs all means available to impede consolidation of the penetrated area. This action sets the stage for the counterattack.

d. Successful accomplishment of the forward defense echelon mission requires a combination of actions: holding ground, delaying, and containing. The forward defense force commander retains flexibility and carefully controls the operation in the forward area. In general, he orders units in danger of being overrun 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, the commander may order some units to hold specific terrain, being bypassed if necessary, to canalize the attacking

forces. Safe lanes and gaps in the division barrier and obstacles systems are closed as required to enhance the effectiveness of the defense and to prevent expansion of enemy penetrations.

7-25. Mobile Defense

With the relatively light fixing forces in the forward defense echelon in the mobile defense, the division can anticipate that a strong and determined enemy will penetrate the forward defense area. At the appropriate time, the division launches a strong counterattack using the reserve supported by nuclear munitions and all other available fires to destroy the penetration. Although division counterattack plans are based on probable enemy avenues of approach in relation to key terrain, the fixing forces cannot have a preconceived plan as to where the enemy is to be canalized or fixed for destruction by the reserve; the determination as to where this can be accomplished can be made only after the situation has been developed. The scheme of defense must not be restricted by contingency plans that are rigid or inflexible.

7-26. Area Defense

In the area defense, the division emphasizes blocking avenues of approach at the forward edge of the battle area and defending in depth to hold the terrain. When forces assigned to the forward defense echelon cannot eliminate penetrations, they contain the penetrations to permit the division to counterattack to restore the defensive position.

7-27. Counterattack

a. When the division commander commits the reserve, he knows that the division is decisively engaged and that, for a time, he will not possess a major troop reserve. Therefore, he must base his decision to execute a division counterattack on a reasonable chance for success. Once he completely commits the reserve, the division commander reconstitutes a reserve from other available forces.

b. Although he expects penetrations and plans for them in the overall defense planning, the commander realizes that it is unlikely that

the action will correspond to the prepared counterattack plans. As the situation develops, the division commander must answer these basic questions:

(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 the commander considers a counterattack feasible, he launches it with the full power of all available resources necessary to insure success. He avoids piecemeal commitment of the reserve. Among other things, success depends on surprise, speed, and boldness. The commander may commit his entire resources to include all available nuclear munitions.

d. His most difficult decision is to determine when to execute the counterattack.

(1) The commander does not launch a counterattack as an automatic reaction to an enemy penetration, nor does he commit the reserve solely by virtue of the enemy's having reached a certain phase line or area. When possible the counterattack is launched when the enemy presents his flanks or rear, when he becomes overextended, or when his momentum dissipates. The commander requires a continuous flow of accurate information on the current situation and enemy forces. He must know the status of the forward defense forces, whether they can contain enemy forces in the penetration, and for how long and how much time the reserve needs to attack. He needs to know the power and rate of the enemy advance and the enemy reinforcing capability. To this, he adds his knowledge of enemy tactical doctrine and procedures.

(2) Ideally, the commander counterattacks when the enemy attack has been slowed, stopped, or disorganized. However, these conditions are not essential prerequisites for the counterattack. Launching of a counterattack should precede the time when the attacking enemy can consolidate his gains and reorganize or regroup his forces.

e. If multiple penetrations have occurred, the commander may have to deal with them

simultaneously. In such a case, he determines which penetration poses the greatest threat to the division. He commits the reserve to destroy the major threat, while he applies sufficient force to contain other threats. The commander may have to detach a portion of the reserve and attach it to the forward defense echelon, or release nuclear munitions, or a combination of both to assist in containing secondary threats.

f. The preferred method of attack of a penetration is on the shoulder or flank because it will usually strike the enemy's most vulnerable point and will offer the best chance of cutting him off, disrupting his attack, and destroying him in place. However, considerations of time and space, terrain, maneuver room, and the enemy's capability of striking the division counterattack force on the flank with second-echelon assault forces may make attacking the penetration on the nose more desirable. Employment of nuclear or chemical munitions assists in overcoming enemy resistance and increases the feasibility of a head-on direction of attack. The commander normally bases the counterattack on an existing counterattack plan that he modifies to fit the actual situation.

g. The mission of the forward defense force is to block, delay, and canalize the enemy. As a minimum, the fixing force will support the passage of the counterattack force. The operation order will include any additional support required and the command relations between the fixing force and the counterattack force.

h. Tactical air and air defense artillery support is important in insuring freedom of movement for the reserve. Ideally, tactical air forces should achieve local air superiority to prevent enemy air interference with the counterattacking force and to disrupt and delay any additional movement of enemy reinforcements into the penetration.

i. The division provides nuclear or chemical munitions support for the counterattack. The use of these munitions is part of the commander's basic decision on the employment of his forces. He may use nuclear and chemical fires to facilitate the action of the reserve in destroying the enemy in the penetration; to protect the flank of the reserve; to prevent

enemy reinforcement of the penetration during the counterattack; and to help contain a secondary penetration. Nuclear and chemical munitions not employed to support the counterattack provide an additional division reserve to meet contingencies.

j. In some situations, the division commander may determine that he cannot counterattack with a reasonable chance of success; e.g., 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 one is reduced. When

the division cannot counterattack successfully, the commander uses his resources to contain or to delay in order to gain time for employment of reserves of a higher echelon. Once the division loses or is in danger of losing its power to counterattack, it reports this fact to the higher commander immediately.

k. Once launched, the counterattack has priority on all available resources. Having accomplished its mission, the counterattacking force may return to its original or alternate positions as division reserve, receive 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

7-28. General

a. The division is normally employed as a major tactical element in implementation of the defense plan of the corps commander. 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 an area defense. The form of defense that corps conducts, however, does not dictate the form of defense that a division within the corps will adopt.

b. The principal roles of the division in furtherance of the corps defense plan are—

- (1) To act as the corps covering force.
- (2) To conduct an area or mobile defense of a portion of the corps forward defense area.
- (3) To be the corps reserve or the counterattack force.

c. The division conducting independent operations applies the principles of corps defensive operations except as noted in the following paragraphs.

d. FM 100-5 and FM 100-15 contain a discussion of defensive operations by corps and larger units.

e. Figure 7-6 is an example of corps in the defense.

7-29. The Division as the Corps Covering Force

a. The corps commander recommends the location of the initial corps coordinating points to the field army commander, who designates such points. Corps prescribes the composition of the covering force. The mission of the covering force is to delay the enemy forward of division security echelons or in a designated area for a specified period to provide time for the preparation of defensive positions, to disorganize attacking enemy forces, and to deceive the enemy as to the location of the forward edge of the battle area.

b. The ability of the airmobile, 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. When available, they are normally given this mission. As the covering force, these divisions require additional fire support means, to include an allocation of nuclear and chemical munitions.

c. The covering force carries out its mission primarily by delaying actions. After the covering force withdraws, it normally becomes part of the corps reserve.

d. Chapter 6 contains a discussion of control and conduct of covering force operations. Chapter 8 contains a discussion of control and conduct of retrograde operations.

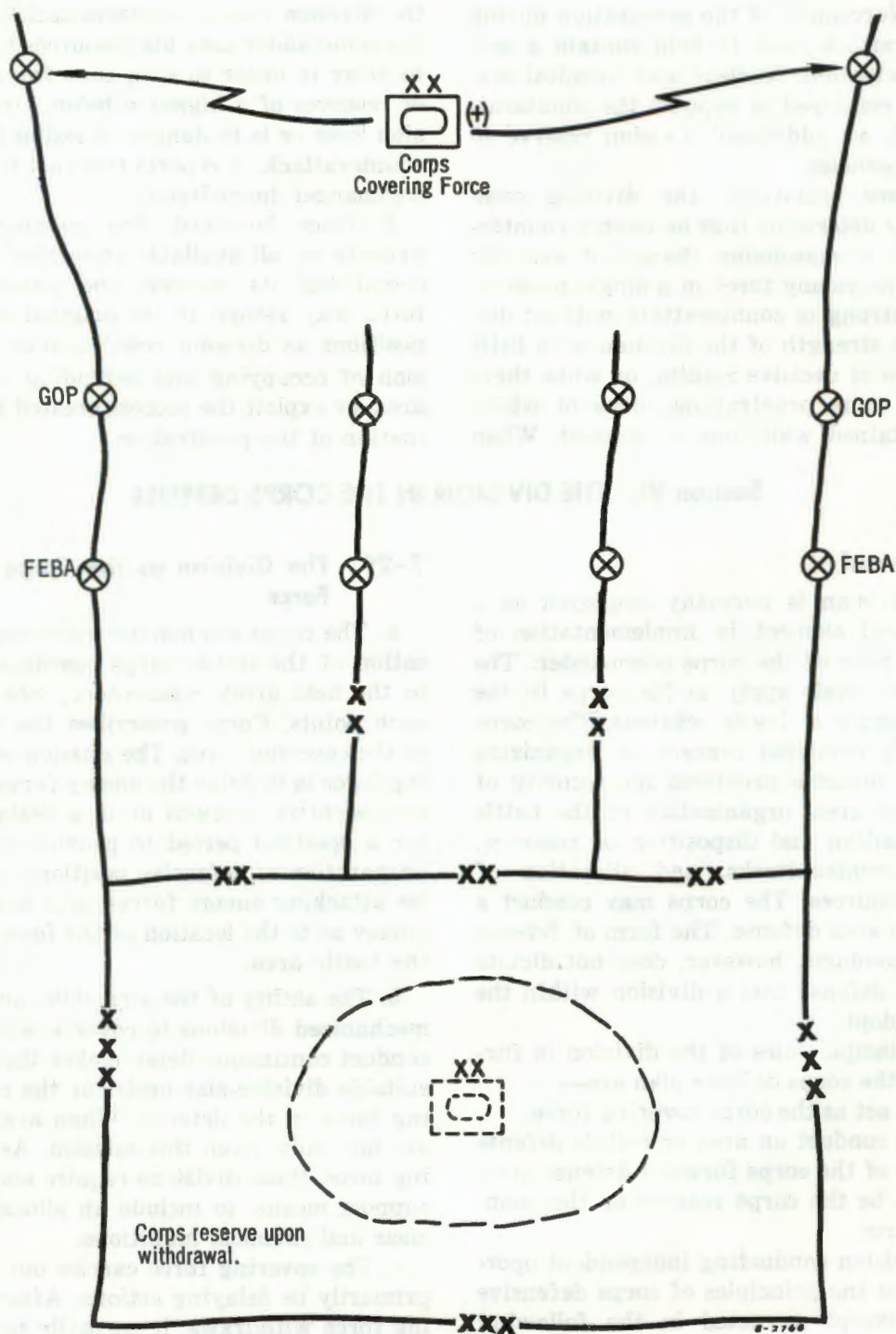


Figure 7-6. Example of corps in the defense.

7-30. The Division Assigned a Sector of the Corps Forward Defense Area

a. The division may conduct an area or mobile defense of a sector of the corps forward defense area. Usually sectors in the corps defense area are assigned to infantry and mechanized divisions. However, armored divisions may be assigned a sector, especially when the corps must adopt the defense from an attack with armored divisions in the attack echelon.

b. The corps plan for the mobile defense normally provides that at least one division in the forward defense area is assigned the mission of delaying. This division delays in its sector until it reaches a specified position where the enemy force will be decisively engaged. The division conducting the delay is assigned one of the following missions:

(1) Defend the position specified in the corps plan. In this role, the division must be prepared for a passage of lines by the corps counterattack force.

(2) Withdraw through the specified rearward position occupied by a unit of the corps reserve. Having completed the withdrawal through a rearward position, the division reverts to corps reserve.

c. Control measures for the delay within the corps defense area are normally spelled out in detail in the corps defense plan. They may include the specification of positions to be retained, adjustment of coordinating points between the delaying division and the units on its flanks, instructions as to the time each phase of the operation is to be initiated, the passage of lines when appropriate, and counterattack measures to include the employment of counterattack forces and supporting fires.

d. Adjacent divisions prepare blocking positions to guard against possible expansion of the penetration into their sectors. If the delaying division is on the corps flank, the terrain adjacent to the corps flank is considered and the operation is coordinated with the adjacent corps.

e. The armored and mechanized divisions are particularly effective in the delaying role because of their mobility, firepower, and extensive communications resources.

f. The delay phase of the mobile defense is conducted as outlined in chapter 8.

7-31. The Division as Corps Reserve

a. In the defense, the corps plans for a suitable reserve. This normally is a combination of mobile combat forces and nuclear or chemical munitions. The armored and mechanized divisions are well suited for this mission.

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. The reserve must be far enough to the rear both to prevent interference with the maneuver of the divisions in the corps forward defense area and to preclude involvement in the battle until the desired time of commitment. The location must allow commitment of the reserve to any portion of the corps area; and it also must provide sufficient area for dispersion to avoid undue vulnerability to nuclear and chemical attacks.

c. The counterattack force develops counterattack plans in detail, based on the corps counterattack plan. In the mobile defense, the bulk of the nuclear munitions allocated to corps normally support the reserve in the execution of counterattacks.

d. Corps controls the execution of corps counterattacks. Corps launches the counterattack as the decisive move in the engagement when a reasonable chance of success exists. Having initiated the counterattack, corps carries it out rapidly and violently, employing all combat power necessary to achieve success. The division executing the corps counterattack employs the principles discussed in chapter 6.

Section VII. SPECIAL DEFENSIVE CONSIDERATIONS

7-32. General

When a constant threat of enemy armor, air-mobile, airborne, guerrilla, or infiltration ac-

tions exists within the division area, the division must prepare plans to counter it. The nature of the threat will often require locating or

organizing mobile combat forces in the division rear area. The enemy may undertake any of the actions above to harass the division and reduce its combat capability in conjunction with a major attack. If the threat endangers the accomplishment of the division's mission, it may have to employ major combat units. Effective security within the division area requires each unit and installation to plan, prepare, and rehearse for its own defense.

7-33. Defense Against Armor

a. Antitank defenses cover likely avenues of armor approach. No area can be overlooked, however, because an aggressive enemy frequently will employ armor over other than ideal terrain.

b. Early detection of enemy tank units is essential. The establishment of warning systems insures the employment of antitank weapons against enemy armor to destroy it outside the area of friendly troop dispositions, preferably in the enemy tank unit assembly areas.

c. Maximum use of natural obstacles, atomic demolition munition craters, and antitank minefields facilitates the destruction of enemy armor by canalizing it into the fields of fire of antitank weapons. Division uses all antitank weapons systems including individual weapons, mines, tanks, artillery, nuclear and chemical weapons, and aerial fire support means. Division establishes antitank defense in depth throughout the defended area. Artillery fires, including nuclear or chemical fires, may be used against tanks to destroy the crews, to force them to operate with reduced visibility, and to separate or destroy any accompanying infantry.

d. If enemy armor succeeds in overrunning the forward area, antitank weapons located in depth seek to stop further advances. Forces in forward areas may remain in position to prevent the enemy infantry from accompanying its armor and to destroy enemy tanks. The reserve forces then destroy enemy forces in the penetration.

7-34. 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. Airborne or airmobile elements usually are dispersed during the initial phases. They can be dealt with most effectively during this period before they can consolidate. To insure rapid reaction to such an attack, planning, including detailed reconnaissance of the area to locate probable drop and landing zones, is necessary. Mobile reserves are located within striking distance of these areas. Armored or mechanized forces are particularly effective against airborne and airmobile forces, especially 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 reliable communications are essential.

c. Units or forces located in the rear area may handle small-scale enemy airborne and airmobile operations. Small-scale attacks that threaten the security of combat service support activities in the division support area are the responsibility of the support command commander. Combat elements, if available, assist the support command commander 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 is a part of the main battle, and major combat forces committed against it are under direct control of division.

7-35. Defense Against Infiltration

a. Enemy infiltration is a constant threat, particularly when forces in the forward defense area are dispersed. The enemy may attempt infiltration as a means of disrupting operations and harassing installations in the rear area, or he may attempt massive infiltration as a type of offensive action. Specific measures to aid in controlling infiltration include extensive counterreconnaissance, combat patrols, anti-personnel obstacles, warning devices, and electronic surveillance devices.

b. The danger of infiltration is particularly critical during 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 reconnaissance, including the use of listening posts, observation posts, roadblocks, mounted and dismounted patrols between defensive positions, air reconnaissance, and electronic surveillance devices, if necessary.

c. If the threat of attack by infiltration exists, a mobile combat force, such as the armored cavalry squadron, may have the primary mission of combating infiltrating forces within the division area. Such forces maintain ground and air surveillance of likely enemy infiltration lanes into the area and of likely assembly or rallying points.

7-36. 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. Units in the rear area handle small-scale attacks with their own resources. Operations against small-scale attacks that threaten combat service support activities or the division support area are the responsibility of the support command commander. If the threat is great, combat forces are provided the support command commander for protection of the division support area and supply lines including escort of convoys.

c. Although a commander can seldom divert major combat elements for protection within the division area, he may have to divert mobile combat elements to combat a serious guerrilla threat. He may alert the division reserve for possible employment in the event of a large-scale attack in the division rear.

d. FM 31-15, FM 31-16, FM 31-21, FM 31-22, and FM 31-23 contain additional information on defense against guerrilla action.

7-37. Rear Area Protection

a. General.

(1) Rear area protection is the term used to describe those actions taken by rear area forces to preserve themselves or to minimize the effects of hostile action or natural or man-made disasters. Rear area protection is divided into two functional areas: rear area security and area damage control.

(2) At all levels of command, commanders divide their areas into manageable areas and subareas. The area damage control areas do not necessarily coincide with the areas established for rear area security. Area damage control areas and subareas tend to be oriented on installations, while rear area security areas and subareas tend to be oriented on troop units and terrain. For this reason, the subordinate commander designated as an area damage controller is not necessarily designated as the rear area security commander.

(3) FM 19-45-1 (Test) contains detailed information on rear area protection.

(4) The support command commander integrates the division rear command post into the support command rear area security and area damage control plans when the division rear command post is located in the division support area. When the division rear command post is located outside the division area, the officer-in-charge insures that the division rear command post rear area security and area damage control plans are integrated with those of the local area commander.

b. Rear Area Security.

(1) The term "rear area security" refers to measures taken before, during, or after hostile action to neutralize or destroy localized enemy forces that constitute threats to units, activities, and installations in the rear area and to minimize their effects.

(2) The division rear area extends from the division rear boundary forward to the rear boundary of the forward defense forces. Overall area responsibility rests with the division commander for the territory within his assigned boundaries. Each commander is responsible for rear area security operations within his area of responsibility.

(3) Security of the division support area in which the combat service support functions of the division are conducted is the responsibility of the support command commander. The brigade S4 coordinates the security of support command elements operating in the brigade trains area. Support command units train their own personnel for local security. The support command furnishes communications, establishes warning systems, and develops and practices defensive standing operating procedures. It provides protection for personnel and key activities. The support command disperses operations as necessary and prepares defensive positions consistent with the effective execution of unit missions. If rear area security requirements are beyond the capability of support command units, the division commander may provide combat units. Combat units, if provided, maintain surveillance over crucial areas, patrol routes, escort convoys, reinforce units under attack, and attack to destroy the enemy.

(4) Designated forces under division control accomplish the security of the division rear except for the division support area. The G3 plans for security of the rear area. He exercises staff supervision over rear area security operations and coordinates the assignment of definite areas of responsibility to major subordinate commanders.

(5) Depending on the threat to security and the availability of combat forces, the division commander may assign to a separate combat unit or to the reserve echelon, rear area security tasks or full responsibility for rear area security of the division rear. In these cases, responsibilities of the force commander include coordination of security planning with commanders of other units and installations situated in the division rear area.

(6) Enemy operations and threats that endanger successful accomplishment of the mission of the command become operational matters and are beyond the scope of rear area security operations.

(7) If the rear echelon of the division command post is located outside the division rear area, it coordinates its security operations

with the commander responsible for overall security of the area.

(8) Areas occupied by combat and combat support units, as well as combat service support units or installations not under the control of the division support command, are the responsibility of the unit or installation commander concerned.

c. Area Damage Control.

(1) The term "area damage control" refers to measures taken before, during, or after hostile action or natural or manmade disasters to avoid or reduce the probability of damage and to minimize its effects on combat, combat support, and combat service support operations.

(2) All division units organize control and assessment teams (CAT). When a unit has been subjected to a nuclear, biological, or chemical attack, the commander sends a control and assessment team to the location. The senior member of this team determines the operational effectiveness of the unit, 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 control and assessment team 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.

(3) Each commander is responsible for area damage control operations within his area of responsibility. 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 support 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 (coordinating) staff responsibility for area damage control. He supervises the preparation of plans, exercises staff supervision over area damage control operations, and coordinates the assignment of definite areas of responsibility to major subordinate commanders.

(4) The division area damage control forces consist of elements of support command units and other designated units. Damage control teams from these units perform area damage control functions in their own units or reinforce other units or installations as the division commander directs or if the situation warrants.

(5) The action taken to prevent damage and to establish readiness for dealing with attacks is of primary importance in area damage control operations. This action includes planning, training, practice alerts, dispersion, and camouflage. If an attack occurs, the objective is to resume normal operations in the shortest possible time. This includes maintaining or restoring control, evacuating casualties, isolating danger areas, and reducing personnel and materiel losses. The division support command

moves damage control teams to the unit or installation attacked, accomplishes chemical detection and radiological monitoring and survey, begins salvage operations, carries out fire prevention and firefighting plans, gives casualties first aid, conducts evacuation, establishes traffic and personnel movement control, undertakes decontamination, executes bomb disposal as necessary, provides emergency supplies, reestablishes communications, and accomplishes fallout prediction and warning to threatened areas. Available combat and combat support units may assist by providing emergency communications and controlling traffic and personnel movement.

(6) FM 54-2, FM 100-5, and FM 100-10 contain further details on area damage control operations.

CHAPTER 8

RETROGRADE OPERATIONS

(NATO STANAG 2029, CENTO STANAG 2029, SEATO SEASTAG 2029,
ABCA SOLOG 34R; ABCA SOLOG 82)

Section I. GENERAL

8-1. Introduction

a. A retrograde operation is an organized movement to the rear or away from the enemy. The operation may be forced by enemy action or it may be executed voluntarily; but in either case, it must be approved by the higher commander. A well-planned, well-organized, and aggressively executed retrograde operation provides opportunities for inflicting heavy damage to enemy troops and materiel.

b. In retrograde operations, the division employs a combination of offensive, defensive, and delaying tactics which may be supported by nuclear, biological, or chemical munitions. Because of their mobility and extensive communications, the airmobile, armored, and mechanized divisions can cover wider frontages in retrograde operations than can an infantry or airborne division.

8-2. Types of Retrograde Operations

Retrograde operations are classified as withdrawals, delaying actions, and retirements. These are defined as follows:

- a. Withdrawal—an operation in which a deployed force disengages from an enemy force.
- 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 avoids combat under existing conditions by conducting an orderly withdrawal according to its own plan and without pressure by enemy forces.

8-3. Purpose

A retrograde movement can accomplish one or more of the following:

- a. Harass, exhaust, inflict punishment on, resist, and delay enemy forces.
- b. Draw the enemy into an unfavorable situation.
- c. Permit the employment of all or a portion of the command elsewhere.
- d. Avoid combat under undesirable conditions.
- e. Gain time and avoid fighting a decisive engagement.
- f. Disengage a force.
- g. Conform to movements of other friendly troops.
- h. Shorten lines of communications.

Section II. BASIC CONSIDERATIONS

8-4. Terrain and Weather

a. *Terrain.* Except during a retirement, the retrograde force can inflict heavy punishment and cause considerable delay to enemy force by proper use of terrain. The force selects positions that provide long-range observation and

fields of fire. This permits friendly forces to engage the enemy at long-range and to bring him under increasingly heavy fires as he maneuvers toward friendly positions. Delaying forces seek concealment and cover for delaying positions, assembly areas, and routes of move-

ment. They create artificial obstacles by the use of mines, nuclear and conventional demolitions, and toxic chemical agents. Barrier systems are sited to make maximum use of natural barriers and obstacles. Good road nets facilitate control of the operation and expedite movement. When possible, use of road nets is denied to the enemy. Terrain with good cross-country trafficability permits greater dispersion of forces; this reduces their vulnerability to enemy air, nuclear, and chemical attacks.

b. Weather. Clear weather conditions permit good observation and increase the effects of nuclear and chemical fires. Adverse weather conditions may limit observation; reduce the effects of nuclear and chemical 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 planning and employing nuclear fallout and persistent or nonpersistent toxic chemical agents to create obstacles, canalize enemy forces, and disrupt enemy plans.

8-5. Control and Coordination

a. The division conducting a retrograde operation may be deployed on an extended front especially during a withdrawal or a delaying action. Operations consist of a series of independent unit actions within the framework of the overall plan. Missions issued to subordinate elements and their sequence of execution are more detailed and more restrictive than in other types of operations. However, each subordinate commander requires freedom of maneuver to permit him to exploit any advantages that develop at his level. The enemy is not permitted to bypass the retrograde force, to envelop elements of the force, or to make a penetration that might threaten the overall mission. Commanders control and coordinate a retrograde operation by the use of phase lines, boundaries, checkpoints, delaying positions, time and routes for withdrawal, and traffic control. Plans for combat service support are detailed and provide for the disposition of excess supplies and equipment. Subordinate commanders need to be aware of the overall con-

cept of operation to insure effective and intelligent execution.

b. All echelons use radio communication for control and coordination. Careful communications planning is essential to preclude premature disclosure of the retrograde movement. In assigning missions and sectors to subordinate units, commanders must consider the capabilities of unit signal equipment. Chapter 4 contains information on signal communications support.

c. Movement of civilians is not allowed to interfere with the tactical operation. Civilian control measures must be easily understood and enforceable with minimum number of troops. The plan for control of civilians includes—

(1) Early issue of directives for the overall plan of civilian control. These directives 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 the specific routes to be used.

(2) Maximum use 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 mutual support.

8-6. Reconnaissance and Security

a. In retrograde operations, reconnaissance gathers information for the production of intelligence. The division exploits all information-gathering agencies to collect information of the enemy. Division may assign the brigades specific route and area reconnaissance missions within their assigned sectors.

b. The division's intelligence collection plan includes essential elements of information. Examples are—

(1) Location of enemy nuclear, biological, or chemical delivery means.

(2) Numbers and yields of nuclear munitions available to enemy forces.

(3) Direction of enemy 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) Enemy plans to use airborne or air-mobile forces, air attack, amphibious attack, guerrilla action, or infiltration to interfere with the retrograde operation.

c. Early intelligence of enemy movement permits the adjustment of plans to minimize enemy interference with the retrograde operation. A withdrawing or delaying force carefully plans and forcefully executes offensive action to exploit available intelligence.

d. Nuclear or chemical fires, coupled with offensive action and other fires, assist in providing security during retrograde operations. These fires can create obstacles, canalize enemy movement, and disrupt enemy plans. Knowledge of the intent to conduct a retrograde operation is denied the enemy as long as possible. Division adopts strict passive security and deception measures 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 other conditions of reduced visibility, and retention of sufficient troops in position to indicate the presence of the entire force.

e. By withdrawing on a broad front, using dispersed assembly areas, and denying the enemy observation and information about the movement, the division reduces its vulnerability to nuclear, biological or chemical attack.

f. The commander takes positive measures to provide protection from ground or air attack. Organic and supporting aerial reconnaissance aircraft locate enemy units and maintain surveillance of them. Artillery units are positioned to support the security elements.

g. The division commander relies on organic and supporting reconnaissance and surveillance means to maintain contact with the

enemy when required by his mission and in anticipation of future operations.

h. Planners consider the defense of rear areas. Security detachments secure defiles that are to be traversed by division elements. Air defense artillery units protect these areas from enemy air attack.

i. Deception measures assist the main body and security forces to withdraw with minimum enemy interference. These measures are also used to trap and destroy the enemy.

8-7. Combat Support

a. Air Support.

(1) Close air support aircraft attack hostile aircraft and delay the enemy advance by harassing and interdicting hostile ground forces at critical localities. Column cover aircraft protect the withdrawing forces and aid security forces in accomplishing their mission. Close air support aircraft support counterattacks and other offensive action. The division allocates tactical air control parties (TACP) to security elements and to other elements in accordance with the overall operation plan. It provides tactical air control parties to each major command. Operation orders prescribe the location of fire support coordination lines (FSCL). During retrograde operations, the fire support coordination line is closer to friendly units and may be shifted more frequently than during offensive operations.

(2) High-performance reconnaissance aircraft provide distant reconnaissance and information on the location and disposition of enemy forces. These aircraft attempt to detect enemy efforts to envelop the division. In a withdrawal or a delaying action, enemy concentrations are located by reconnaissance aircraft and are destroyed by nuclear or chemical attack or by other offensive action.

(3) Cargo aircraft move cargo, troops, and supplies to rearward positions. These aircraft permit the division commander to move a large amount of supplies and equipment over great distances rapidly.

(4) Army aviation units transport troops, supplies, and equipment; conduct aerial reconnaissance and surveillance; and furnish aerial fire support. Such units assist the commander

to overcome terrain barriers, to shift troops rapidly, to supply units away from the main body, to evacuate personnel and materiel, to provide limited aerial fire support, to provide security, and to collect information.

b. Field Artillery.

(1) In retrograde operations except for a retirement, field artillery brings the enemy under fire at extreme ranges and forces his early deployment. It can interdict enemy avenues of approach, deliver harassing fire, destroy enemy concentrations with nuclear, chemical, or conventional fires, and support the division combat elements. Field artillery can give continuous support during all types of retrograde operations.

(2) When the division operates on an extended front or against a strong enemy force, additional field artillery units are frequently attached. Field artillery is retained under centralized control when such control permits effective support of the division. Retrograde operations over a wide front often dictate the attachment of field artillery to subordinate elements of the retrograde force. When so deployed, artillery battalions may be attached to committed brigades. Additional field artillery units may be attached to these artillery battalions to insure adequate artillery support. The range capability of the field artillery Honest John battalion normally permits its retention under division control and its employment in general support role.

(3) The operation plan for the delay or withdrawal provides for field artillery support of the division reserve and other committed elements. The division reserve is furnished forward observers and liaison officers so that it can be committed with minimum delay.

c. Air Defense Artillery. Air defense artillery units may be retained under centralized control or elements may be attached to subordinate commands. Centralized control is the preferred method of employment, particularly of Chaparral resources. Priorities for air defense normally is given to nuclear delivery means, critical avenues of low-altitude approach, the support command, and command installations. FM 44-1 and FM 44-3 discuss

the employment of air defense artillery in retrograde operations.

d. Engineers.

(1) Engineers may be placed in support of, or attached to, combat units. Execution of the division barrier plan, construction of obstacles and rear defensive or delaying positions, and road maintenance may dictate a centralized engineer effort. In the withdrawal or the delay, units in contact with the enemy may require the attachment of engineers. Brigades may place engineers in support of battalion task forces. Unless additional engineer support is furnished by higher headquarters, the effectiveness of the engineer effort may be decreased because of the requirement to attach engineers to combat units.

(2) One of the most important engineer functions in the withdrawal or the delay is providing advice and assistance for the formulation and implementation of the barrier plan. Withdrawing or delaying forces use barriers to delay the enemy or to canalize him for destruction with nuclear, chemical, or conventional fires. Well-planned and widespread use of barriers, to include chemical munitions, assist in gaining time and in avoiding close pursuit. Barrier plans are coordinated with higher headquarters to insure timely implementation and to prevent interference with future operations. The barrier plan is an annex to the operation order or plan.

(3) Surface or subsurface nuclear detonations create craters, fallout patterns, and contaminated areas to slow, canalize, or impede the enemy's advance.

(4) In the withdrawal or the delay, detailed plans are prepared for demolitions along enemy avenues of approach and along routes that lead into the division zone. Planners give particular attention to the destruction of bridges and tunnels. Units place demolitions in defiles and on routes traversing natural and artificial obstacles. Demolition plans include—

(a) Provisions for placing and firing the necessary demolitions.

(b) Provisions for adequate guards to prevent premature firing of charges or seizure by enemy infiltrators.

(c) Fixing responsibility for the destruction of bridges.

(d) Schedule for destroying bridges and tunnels no longer needed by friendly forces.

(e) Covering by fire, including nuclear fire, those obstacles created by demolition.

(5) The withdrawing or delaying force commander is vitally interested in the destruction of bridges. He is careful to insure that bridges are not destroyed prematurely and that they are not seized intact by the enemy. Normally, the tactical commander has the responsibility for destroying bridges in his zone. This authority is often subject to specific restrictions by the higher commander. The commander designates a demolition firing party and a demolition guard for each bridge to be destroyed. The guard commander has the authority to destroy the bridge, subject to restrictions imposed by the higher commander. The guard commander has a list of all units that are to use the bridge. Each unit commander notifies the guard commander when his unit has cleared. After the main body has crossed, most of the bridges in the zone are destroyed. Certain predesignated bridges are retained for the use of 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 demolition plan or to prevent its capture by enemy forces.

e. Signal. Because of the type of support furnished, division normally retains signal units under centralized control. The communications centers of the command operations and forward communications companies supplement the organic communications means of subordinate units to provide an effective signal communications system. Signal facilities in areas to the rear are prepared well in advance of their occupation by the main combat elements.

8-8. Combat Service Support

a. Division retains combat service support units under centralized control when this procedure provides effective support for major subordinate units. However, brigades operat-

ing over extended distances may require the attachment of combat service support units.

b. Plans for a retrograde operation include the following:

(1) Adequate support for the operation.

(2) Evacuation of supplies and disabled equipment.

(3) Destruction of all supplies and equipment (except medical) not evacuated.

(4) Prompt evacuation of patients.

c. To avoid unnecessary destruction, loss, or hauling of supplies, division limits the flow of supplies into the forward areas and initiates early evacuation of excess supplies. Supply economy 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 to reduce the enemy's ability to interfere with supply operations, to simplify supply procedures, and to permit early withdrawal of supply units.

d. Commanders expedite medical evacuation during retrograde operations. Field army units normally furnish aeromedical evacuation. When such units are not available or cannot evacuate all patients, division aircraft are used. Clearing stations are established in the rear of committed brigades to provide effective support. Sick and wounded personnel are evacuated to mobile army surgical hospitals or evacuation 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.

e. In a withdrawal or delaying action forward support elements of the maintenance battalion furnish maintenance support for committed units. These elements may require augmentation with additional maintenance personnel. Each forward support element supports a designated unit, a group of units, or all units in a specified area. To maintain combat

effectiveness and to reduce evacuation requirements, the forward support companies repair equipment on-site when possible. Badly damaged material is evacuated to the rear to prevent its capture and to make necessary repairs. Equipment, except medical, that cannot be repaired or evacuated, is destroyed.

f. Division locates combat service support units and installations well to the rear during retrograde operations to insure uninterrupted service, maximum protection, and minimum displacement. Maximum dispersion consistent with control and local security is maintained. Combat service support units are displaced early and normally under cover of darkness or other conditions of reduced visibility. This reduces traffic congestion and avoids interference with the movement of combat units. High priority items, such as nuclear or chemical munitions, may require added protection to prevent loss, capture, or emergency destruction. FM 54-2 contains details on division combat service support.

8-9. Leadership, Command, and Morale

a. To maintain the offensive spirit commanders display aggressive leadership during retrograde operations. High morale is especially important during retrograde operations. All troops are oriented on the purpose of the operation. Commanders inspire an aggressive, offensive spirit by emphasizing opportunities for destroying the enemy. Every opportunity for successful offensive action is seized and the results are 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 is thorough and complete. Plans provide for the withdrawal of all units and the prompt evacuation of casualties. Planners compute supply requirements and prescribe measures to insure receipt of supplies by the smallest unit. Plans are closely supervised, effectively controlled, and vigorously executed. Great competence is demanded at all echelons.

Section III. WITHDRAWAL

8-10. General

a. Withdrawals may be executed when forced by enemy pressure or when the commander desires to withdraw in furtherance of future tactical operations without being forced to do so by enemy pressure. They may be execute during daylight or darkness.

b. Withdrawals without enemy pressure are favored over withdrawals because of enemy pressure. They provide freedom of action since the commander selects the time of withdrawal. They facilitate deception and reduce the effectiveness of observed enemy fires since the commander can take advantage of darkness or other conditions of reduced visibility.

c. The division avoids withdrawing during daylight, when possible, because observed enemy fires may result in heavy casualties and loss of freedom of action.

d. Delaying actions provide security and deception and prevent a rapid enemy advance. During a corps withdrawal, corps may employ

the division as a covering force to provide security for the remainder of the corps.

e. The withdrawal plan requires subordinate units to develop contingency plans for both types of withdrawals. The success of a withdrawal not under enemy pressure depends on deception. A withdrawal under enemy pressure envisions fighting to the rear. When secrecy of movement is lost, the division conducts a withdrawal not under enemy pressure like a withdrawal under enemy pressure. If smoke is used, or if other conditions reduce enemy observation, a withdrawal under enemy pressure may be based on deception as in a withdrawal not under enemy pressure. The division develops illumination plans to support a night withdrawal in case the withdrawal is discovered by the enemy.

8-11. Plans and Orders

a. The division commander and his staff formulate a withdrawal plan. This plan includes

the scheme of maneuver and a fire support plan. These are developed concurrently and are closely integrated. The plan of withdrawal provides for security, combat service support, and communications. 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 on preserving the integrity of the force.

(3) Sectors, phase lines, and routes of withdrawal for subordinate units.

(4) The covering force and its location.

(5) Tactical cover and deception measures.

(6) Organization for combat and time phasing of attachments and support.

(7) Disposal or destruction of supplies and equipment, except medical, in a manner and at a time that will not compromise the withdrawal plan.

(8) Fire support.

(9) Combat service support.

(10) Evacuation of patients.

(11) Contingency plans in case the withdrawal is discovered and the enemy attacks during the withdrawal.

(12) Traffic control measures.

(13) Communications plan.

(14) Instructions concerning preparation of demolitions and other obstacles.

(15) Electronic warfare support.

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. Aggressive, limited objective attacks facilitate a withdrawal. Such attacks force the enemy to delay his attack or to assume the defense, thus permitting the withdrawal to be conducted with minimum interference.

d. Division reserves cover the withdrawal of the division, perform route and area reconnaissance missions, or secure and hold key terrain essential to the success of the withdrawal.

e. Nuclear or chemical munitions may be used to assist in the withdrawal of units and to

support the security forces by firing against enemy concentrations. During withdrawal operations, nuclear and chemical delivery means require protection from hostile action. This protection may be accomplished by—

(1) Early withdrawal of delivery means to rearward positions from which they can continue to deliver fire.

(2) Assigning specified combat units the mission of protecting these delivery means.

(3) Locating uncommitted reserve elements sufficiently near these delivery means to afford them security. This protection must neither detract from the reserve's ability to perform its primary mission nor so concentrate forces as to present a lucrative target for enemy fires and risk the loss of both the reserve elements and the delivery means.

8-12. Conduct of A Withdrawal Not Under Enemy Pressure

a. Division normally specifies the time of withdrawal. To gain the utmost advantage from secrecy and deception, the commander takes maximum advantage of darkness and other conditions of reduced visibility. The withdrawal should commence as soon as enemy observation is reduced to the point where the enemy cannot effectively deliver observed fires.

b. The division commander controls the movement of subordinate units to successive delaying positions by—

(1) Designating times and specific routes of withdrawal.

(2) Including alternate routes.

(3) Designating priority of movement.

(4) Enforcing traffic control measures.

c. All daylight activities that 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. Units must 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. These forces are provided with mobility equal to or greater than that of the enemy.

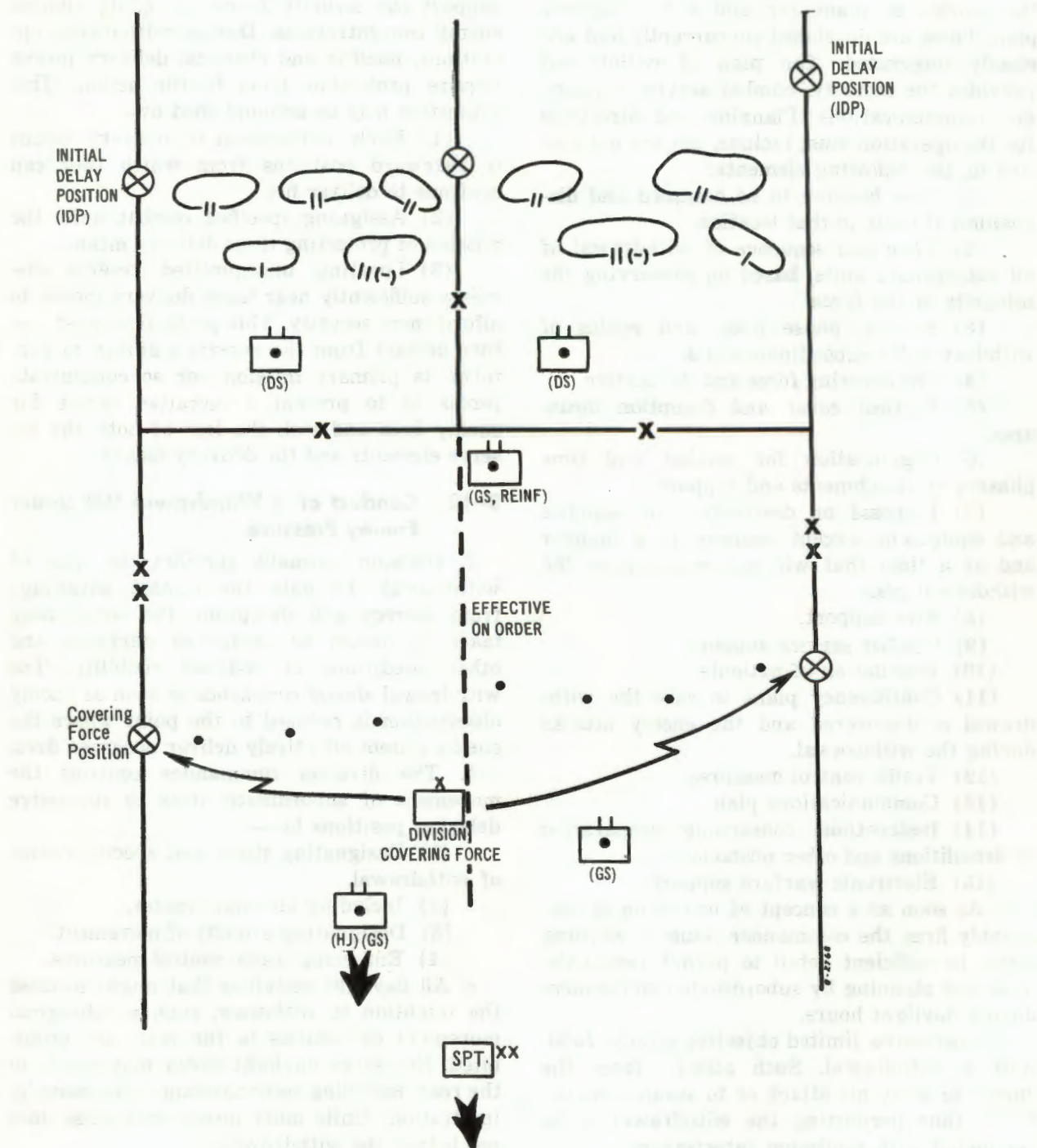
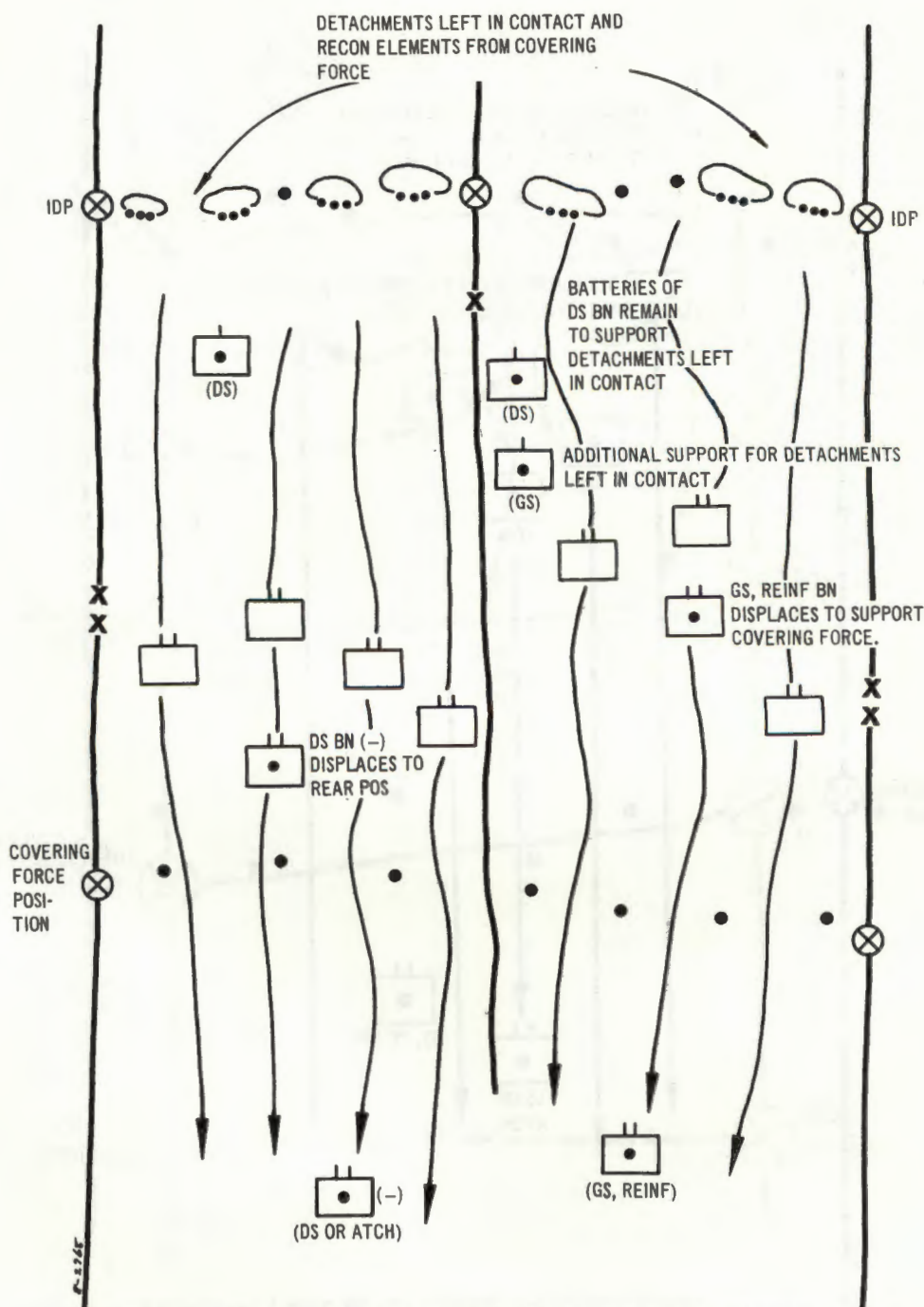


Figure 8-1. Withdrawal Not Under Enemy Pressure—first phase.

e. The withdrawing force moves to the rear in the following sequence:

(1) Elements to reconnoiter and prepare the next position, combat service support units,

artillery not essential to the support of detachments left in contact, and the division covering force (fig. 8-1). Normally the reserve becomes



NOTE: Brigade assembly area are normally not assigned. Battalions move individually to next position. If move is over extended distance, control points are established for traffic control and to allow brigade commanders to regain control.

Figure 8-2. Withdrawal Not Under Enemy Pressure—second phase.

the division covering force. These units move by infiltration.

(2) Main body (fig. 8-2).

(3) Detachments left in contact and direct support artillery for the detachments left in contact (fig. 8-3).

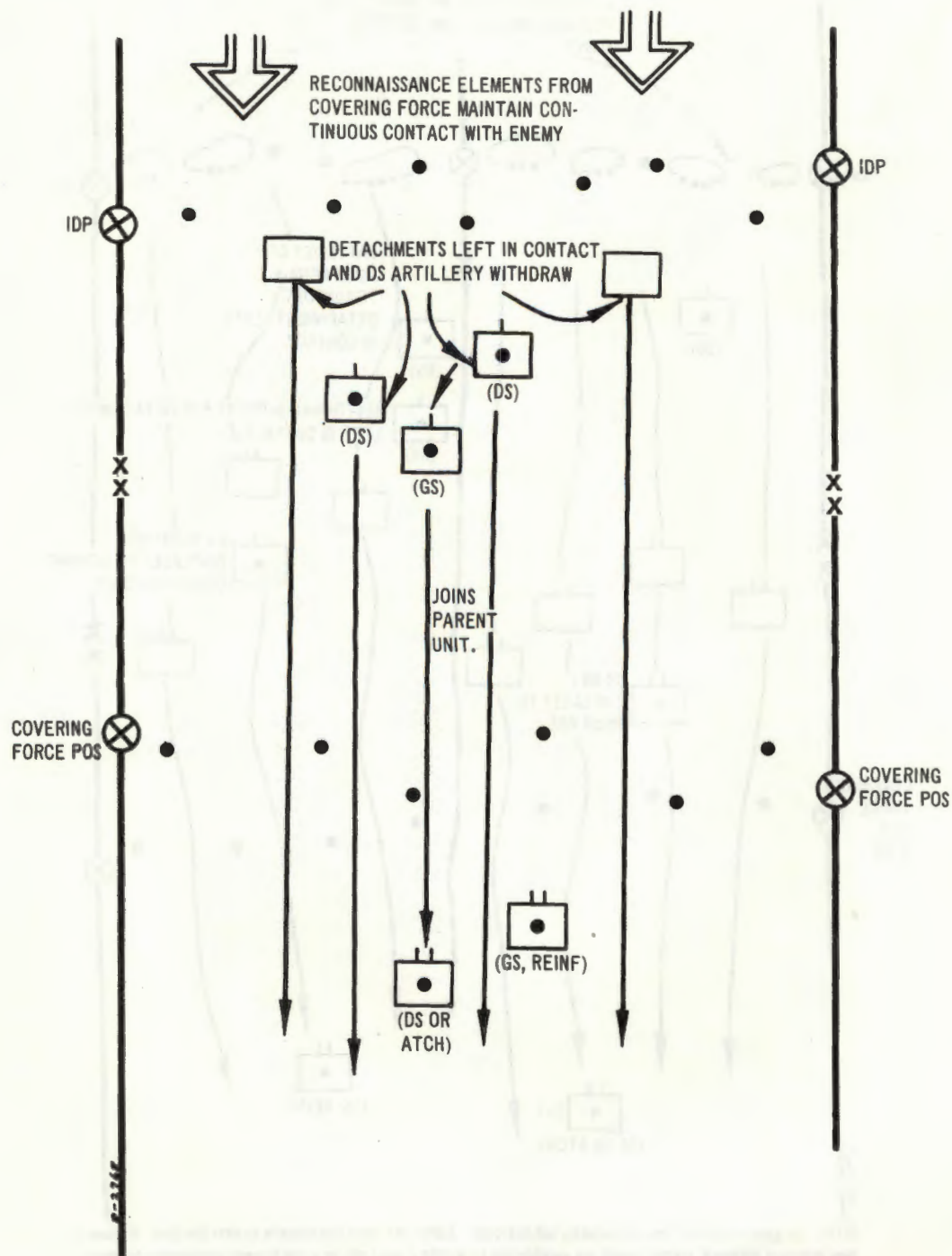


Figure 8-3. Withdrawal Not Under Enemy Pressure—third phase.

f. Units in the forward defense area execute the withdrawal on a broad front. Units move directly to the rear, form march columns, and

proceed to designated locations. To further the reorganization and assembly of units, brigade or division may designate assembly areas for

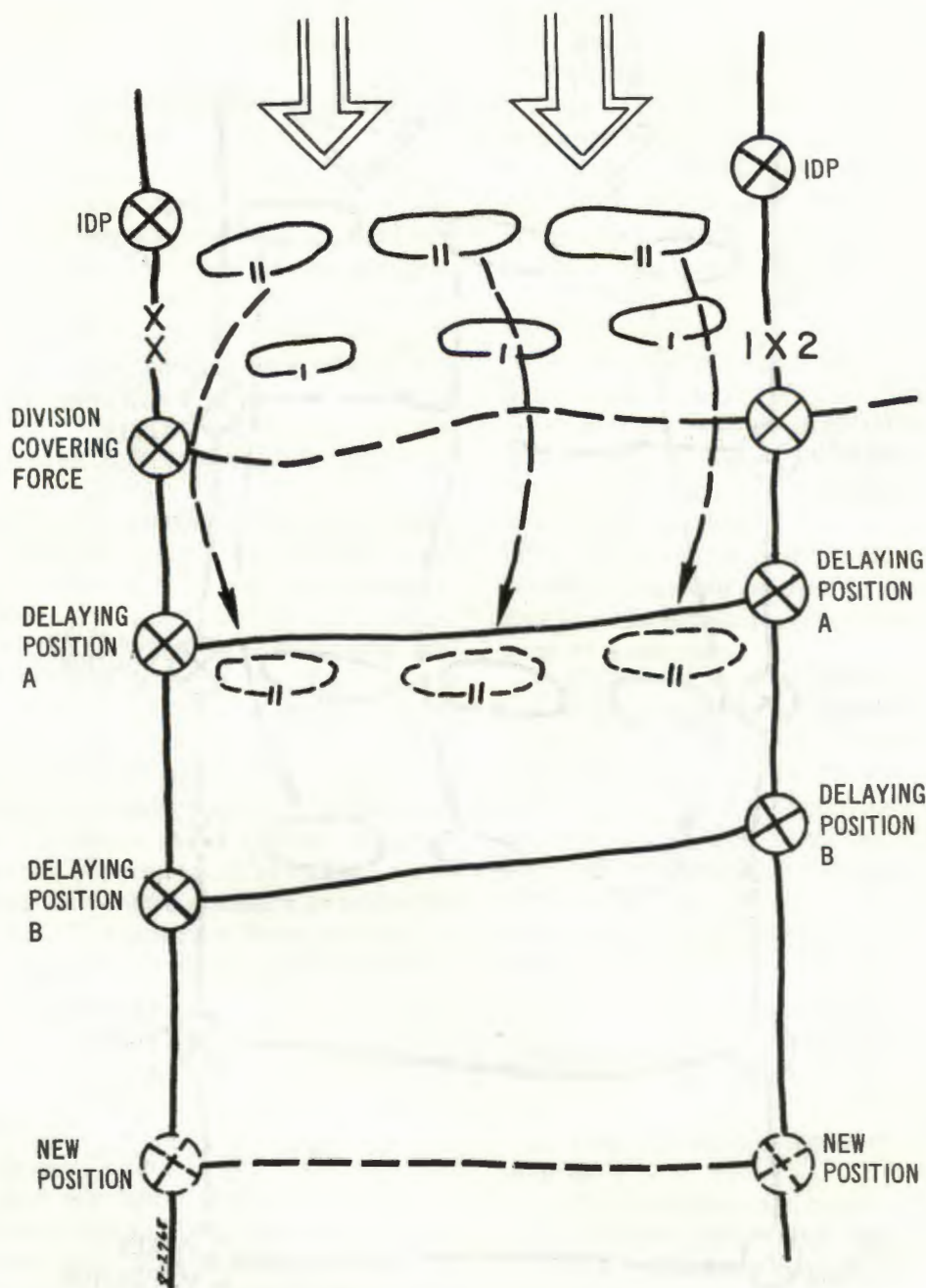


Figure 8-4. Withdrawal Under Enemy Pressure—forward defense area forces disengage.

subordinate units. Such areas are widely dispersed and are occupied for minimum periods.

g. When all elements of the division, except the detachments left in contact, have disengaged from the enemy and formed march columns, the withdrawal is considered completed.

Further movement to the rear or away from the enemy is classified as a retirement and is covered in paragraphs 8-21 and 8-22.

h. The detachments left in contact have a limited capability for resistance and must depend on deception and long-range supporting

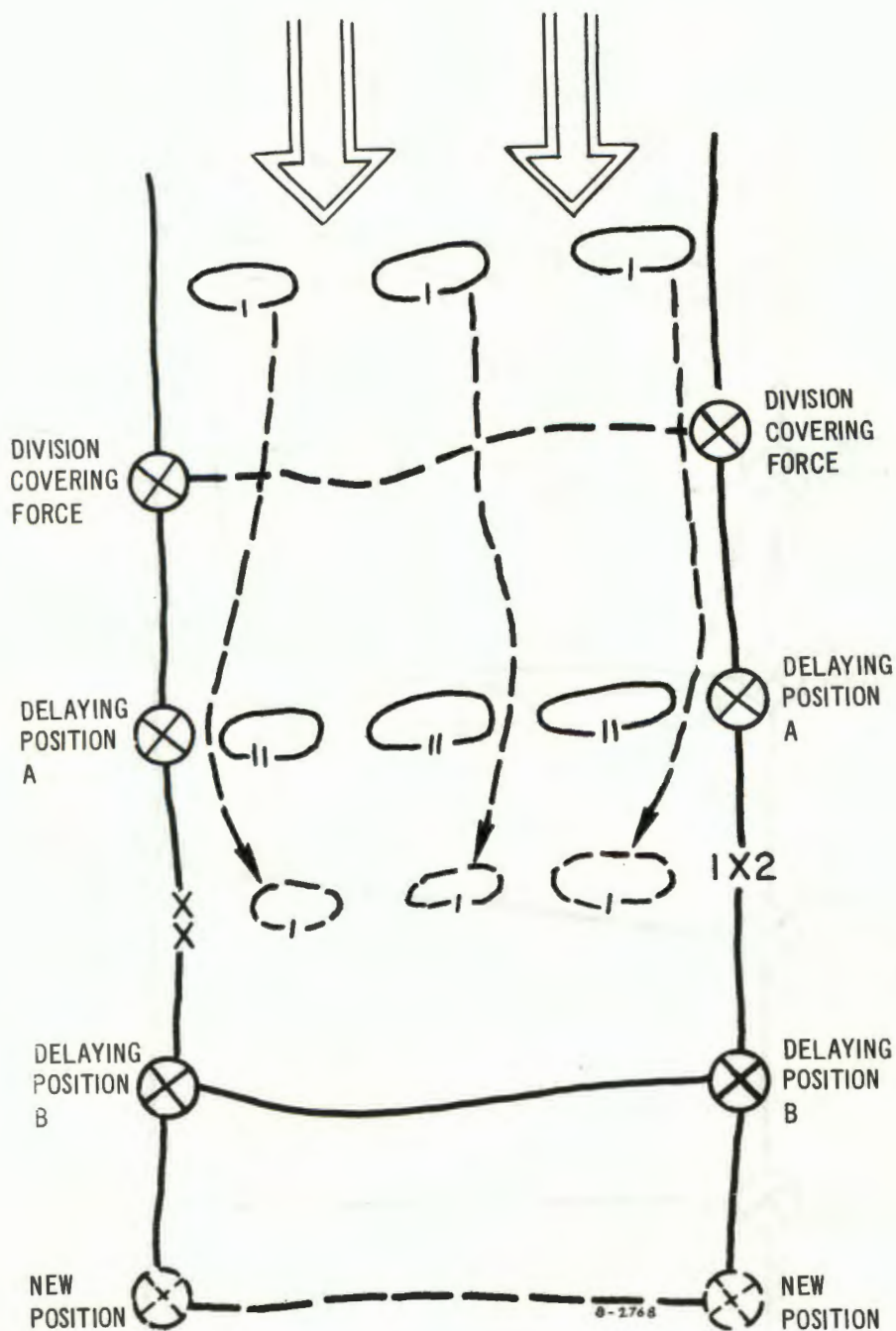


Figure 8-5. Withdrawal Under Enemy Pressure—security forces withdraw through division covering force.

fires to accomplish their mission. Division coordinates their employment; however, brigades specify their time of withdrawal in consonance with the actions of adjacent units. Withdrawal of detachments left in contact is

initiated in time to permit completion of the withdrawal prior to daylight.

i. The success of a withdrawal not under enemy pressure depends on control, security, and deception. Detailed plans, deception, and

simulation of normal radio traffic, fires, and other activities aid control and security.

8-13. Conduct of A Withdrawal Under Enemy Pressure

a. In a withdrawal under enemy pressure, elements use delaying tactics to fight their way to the rear. The greater the mobility and the longer the range of firepower of the division, the better will be its capability to conduct a successful withdrawal under enemy pressure. Since withdrawals under enemy pressure are normally subject to enemy observation, success depends on mobility, control, effective employment of covering forces, and local control of the air.

b. Procedures for a withdrawal under enemy pressure provide for security forces at all echelons to cover forward elements that withdraw intact without leaving detachments in contact. Each unit of the forward defense echelon normally provides and controls its own security force. This force is organized with a relatively high proportion of tanks to cause the greatest delay, to inflict maximum enemy casualties, and to minimize friendly losses. A withdrawal under enemy pressure requires close coordination and control between security forces.

c. The division reserve normally provides the covering force. The covering force should consist of tanks and mechanized or motorized in-

fantry and should be augmented by Army aviation, field artillery, engineers, and air defense artillery. The covering force accomplishes its mission either from the new security area or from prescribed areas forward of the new security area. In addition to covering the withdrawal of the forward defense forces, the covering force assists the forward defense forces to break contact and to delay.

d. The less heavily engaged elements of the forward defense echelon withdraw first. The more heavily engaged units generally withdraw under cover of the division covering force and the massed fires of all available delivery means. Figure 8-4 illustrates the forward defense echelon disengaging. Nuclear and chemical fires assist the forward defense echelon to break contact and support the security forces. Smoke can be used to screen movement and to reduce enemy observation and the accuracy of enemy fire.

e. Movement is expedited. Normally assembly areas are not used. The division's movement and operations are similar to those of a delay on alternate positions as described in section IV. The use of alternate covering positions by the covering force and the disengaged forward defense echelon continues until the entire division breaks contact with the enemy or reaches the planned delaying position as illustrated in figure 8-5.

Section IV. DELAYING ACTION

8-14. General

a. A delaying action is an operation that plans to inflict maximum delay and damage on an advancing enemy without the delaying force becoming decisively engaged in combat. This type of action is normal for 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 loses its freedom of maneuver and can no longer initiate planned action. Although elements or all of a battalion task force or the bulk of a brigade may be decisively engaged, the division can still execute the delay.

c. The division accomplishes a delaying mission by—

- (1) Delaying on successive positions.
- (2) Delaying on alternate positions.
- (3) A 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. Long-range firepower and maneuver cause the enemy to deploy, reconnoiter, maneuver, or 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 division can delay on alternate positions only when it can accomplish its mission and occupy two positions simultaneously. Normally this will occur when the frontage assigned the division is relatively narrow.

(2) Delay on successive positions is used when a relatively wide front is assigned or when the division cannot occupy two positions simultaneously and still accomplish its mission.

f. Units can use a combination of the above techniques. Continuous delay is sought on and between positions. Situations beyond the control of the division may require rapid transition from one technique to another. Division takes aggressive offensive action whenever opportunities arise to inflict serious casualties on the enemy and also to deceive the enemy, to control dominating terrain, or to disengage a decisively engaged force.

g. Planning and control of the overall operation are centralized, but execution is decentralized. Within overall division plans, subordinate commanders are free to exploit any advantages that accrue at their levels.

h. Division may use nuclear and chemical fires to inflict casualties; to create obstacles to enemy movement; to entrap, confine, or canalize the enemy; and to deny him use of major facilities. FM 5-26 contains information on the employment of atomic demolition munitions. FM 101-31-1, FM 101-31-2, FM 101-31-3, and FM 101-40 contain details on the employment of nuclear and chemical munitions.

8-15. Planning the Delaying Action

When the division is given a delay mission, the higher commander normally states the mission in general terms to permit the division commander to use his initiative. The minimum command guidance necessary is as follows:

a. *General Location of the Initial Delay Position.* The higher commander's guidance may designate the initial delay position (IDP) but normally indicates only a general area, allowing the division commander to reconnoiter the area and recommend or select the specific loca-

tion. If the division is in contact when the decision is made to initiate the delay, it is not necessary to designate an initial delay position since the friendly forward dispositions become the initial delay position.

b. *Area for Delay.* Normally the higher commander specifies the area in which the division is responsible for the delay. He prescribes lateral boundaries and indicates coordinating points for the initial delay position and for subsequent corps-designated delaying positions. When the division is deployed to cover the withdrawal of other corps elements, it is free to operate in the entire corps sector; however, it must coordinate with units to its rear.

c. *Period of Delay.* The corps commander notifies the division commander of the length of time the division is to delay the enemy forward of a specified line. Normally, the division commander is given the initial delay position and the new location of the corps security forces. He may add intermediate delaying 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 plan for its occupation or for a rearward passage of lines. Chapter 9 contains details on withdrawal through a rearward position. The location of the new security areas is provided the delaying force commander during initial planning or as soon as available to permit him to make timely plans. If the division covers the withdrawal of other corps elements, the division commander will, when possible, insure that his brigade boundaries coincide with the boundaries of the major forces occupying the corps forward defense echelon.

e. *Limitations Imposed on the Operation.* In his guidance, the corps commander indicates any restrictions on the operation. Examples of these restrictions are limited use of nuclear and chemical munitions or specific control measures necessary during a phase of the delaying action. In turn, the division order normally specifies the initial delay position, the time schedule for the delay, intermediate delaying positions, boundaries, phase lines, and the line along which the delay will terminate.

8-16. Selection of Delaying Positions

a. Delaying positions provide the maximum delay and permit inflicting the greatest damage on the enemy force. Positions are selected where minimum forces cause the maximum delay or cause the enemy to mass and present a profitable nuclear target. Successive delaying positions are far enough apart to cause the enemy to regroup prior to continuing the attack from one position to the next. Delaying positions include as many as possible of the following features:

(1) A series of parallel ridges across the lines of hostile advance.

(2) Streams, swamps, lakes, and other obstacles on the front and flanks that will slow enemy movement.

(3) High ground with good observation and long-range fields of fire.

(4) Concealed routes of withdrawal.

(5) A good road net and good cross-country trafficability.

b. Brigade commanders normally select brigade delaying positions; however, the division commander may designate the delaying position when a suitable natural obstacle extends across the entire division front or when the situation requires centralized control. If suitable natural obstacles do not exist, 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.

c. 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 is to be held forward of each of these lines to gain the minimum overall time prescribed in the mission.

d. Plans are coordinated with adjacent units.

8-17. Organization of Ground

a. In planning for a delaying action, definite sectors of responsibility are assigned to each committed brigade. Boundaries delineate the limits of each sector. These boundaries may ex-

tend through the depth of the division sector, but, as a minimum, extend through the next rearward division delaying position or phase line.

b. When possible, responsibility for enemy avenues of approach is not divided. Boundaries are assigned so that terrain features that control fire and observation into a sector are assigned to the unit having responsibility for that sector.

c. Delaying forces exploit natural obstacles in organizing the delaying positions. The division improves the position by the construction of artificial obstacles. The materials, time, and manpower available influence the number of these obstacles. Obstacles alone, however, will not halt the enemy's progress. An aggressive enemy will attempt to gain surprise by attacking over ground considered impassable. For the maximum delay, all obstacles must be covered by direct or observed indirect fire. In massing to overcome such defended obstacles, the enemy may present a profitable nuclear target.

8-18. Organization for Combat

a. The division commander allocates troops to the delaying force and the division reserve.

b. The size of the delaying force necessary across the division front depends on the relative enemy strength, the width of the sector, the terrain, the depth of the sector, and the period of delay required. Usually, a major portion of the division is required in the force deployed on the initial delay position.

c. The division reserve will be small since most of the force is needed on the delaying positions. As a result the division commander may require brigade commanders to obtain division approved prior to committing the brigade reserve.

d. Delaying positions are not organized in great depth. Fire support means are forward with the bulk of the forces concentrated on likely avenues of approach. The delaying force should be able to deliver long-range fires; the reserve should be highly mobile and responsive to limited objective attacks and counterattacks.

e. Engineer support is provided to each committed brigade, usually by the attachment of

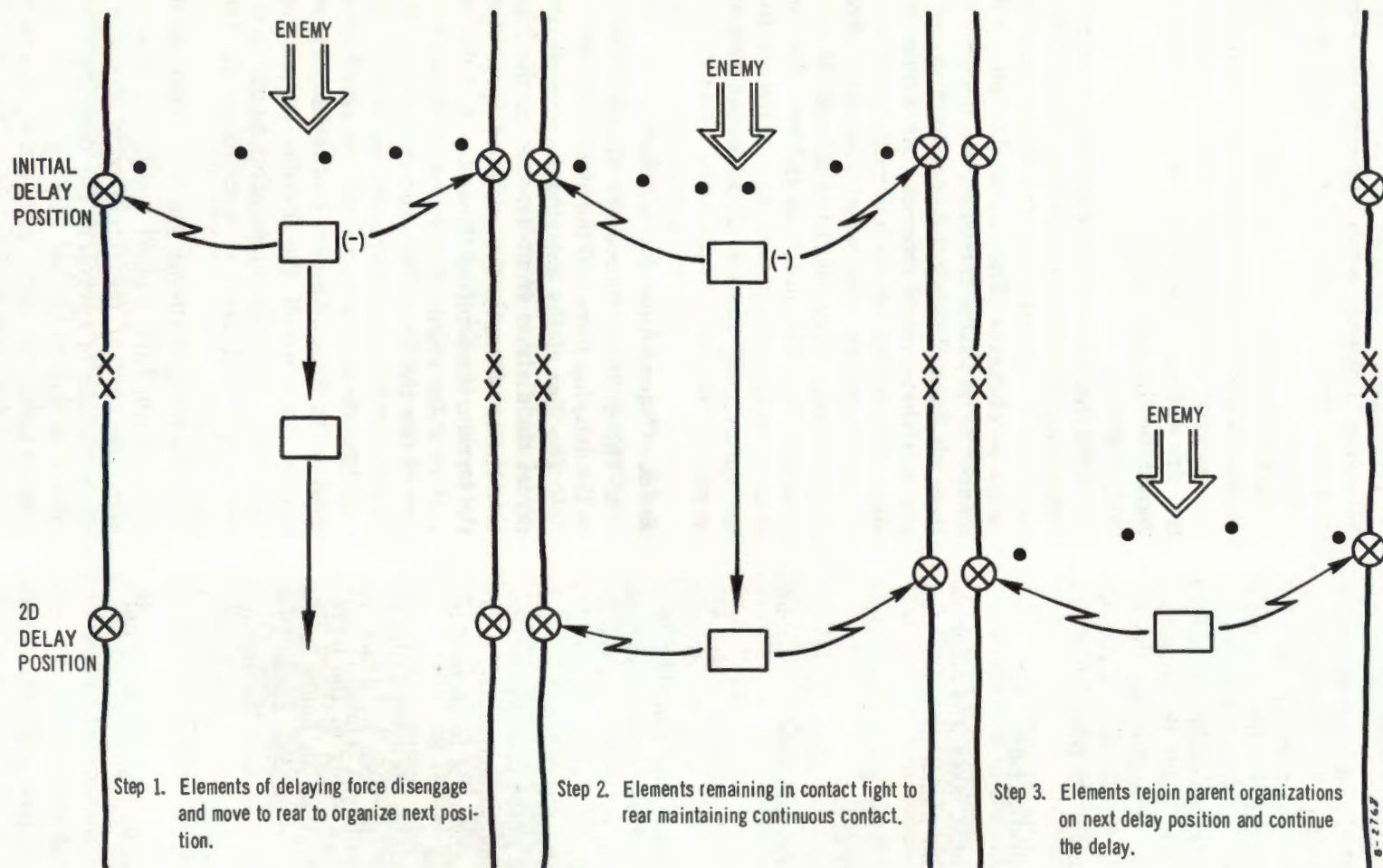


Figure 8-6. Division delaying on successive positions.

elements of the engineer battalion. Remaining engineers, under division control, prepare and maintain routes required for movement between delay positions. They also assist in preparing obstacles on delay positions.

f. Paragraphs 8-4 through 8-9 discuss the organization for combat of the division combat support forces. Paragraphs 8-4 through 8-9 and FM 54-2 discuss combat service support organization for combat.

8-19. 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 division deploys the major portion of its forces forward along likely avenues of approach. Figure 8-6 is a schematic of a division delaying on successive positions.

b. In a delay on successive positions, each natural delaying position is improved and occupied. Units delay continuously on and between these positions. Terrain is given up only when a unit would have to become decisively engaged to hold it.

c. The major elements of each committed brigade organize and occupy the initial delay position. Sometimes they occupy the initial delay position prior to establishing contact with the advancing enemy. In such cases, a division covering force or security elements from each committed unit established contact and delay the enemy advance toward the initial delay position. Long-range artillery and the units in the initial delay position 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 weapons are used to subject him to an increasingly heavy volume of fire.

d. Each position occupied by a forward unit is defended until the enemy threatens decisive engagement or envelopment. When the maximum delay has been achieved and it becomes apparent that further occupation of the position will result in decisive engagement, the withdrawal begins. The withdrawal may begin in accordance with prearranged plans, on order

of the higher commander, or to prevent decisive engagement. Each withdrawal is coordinated with division and 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. Forces remaining in contact retain as much tank strength as possible. When threatened with decisive engagement, these units withdraw slowly toward the next position causing maximum delay. When the enemy is within range, forces on the rear delaying positions subject him to fire and provide overwatching fire for the delaying elements still in contact. When forced back by the enemy, the forces that remained in contact rejoin that portion of the command occupying the next prepared position. The commander then employs all his available firepower to hold the position. When the unit is no longer able to hold the position without becoming decisively engaged, it withdraws again. This process continues until the enemy is halted and friendly forces regain the initiative.

f. The mission assigned to a division or a brigade may require that the enemy be delayed for a prolonged period in an area that has little depth. Under these conditions, the division may be required to risk decisive engagement to accomplish its mission. It makes maximum use of nuclear, chemical, and conventional fires to destroy those enemy forces that threaten the delaying position. Counterattacks disrupt the enemy attack, inflict casualties, and cause additional delay. Airmobile forces enhance the opportunity for success of disruptive, diversionary, and delaying measures.

g. The division normally retains a reserve when delaying on successive positions. This reserve is 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. Frequently the reserve counterattacks to assist a

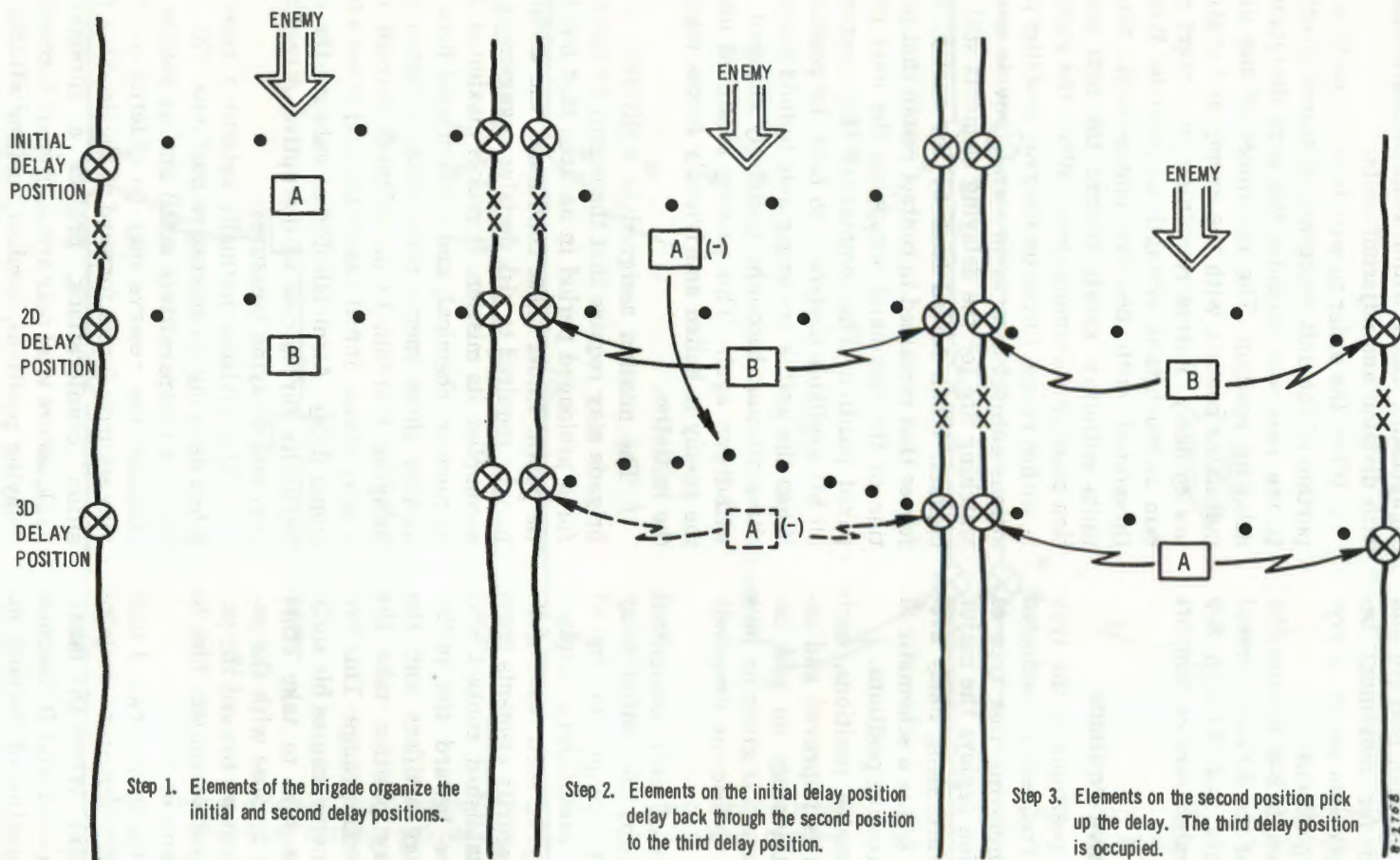


Figure 8-7. Division delaying on alternate positions.

decisively engaged unit to disengage. 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 or enemy units moving forward in the march column. These counterattacks cause damage and delay the enemy force. The counterattack force usually does not attempt to secure and hold terrain; after reaching its objective, it delays to friendly terrain.

h. In the delay, brigades hold the enemy as far forward as possible, for as long as possible, without becoming decisively engaged. Based on the phase lines and time-phasing schedule announced by the division commander, brigades select delaying positions to be occupied by their major subordinate elements. Delaying positions selected by brigades are coordinated with division and adjacent units. These units delay on and between these positions.

i. Committed brigades may also retain small reserves. These reserves can be used on the same types of missions as the division reserve. The division commander may require subordinate commanders to obtain his permission before committing their reserves. By retaining control over the reserves of subordinate units, the division commander can constitute a larger division reserve.

8-20. Delay on Alternate Positions

a. When operating on a narrow front, the division may elect to delay on alternate positions. To employ this technique, the division is organized into two elements. The first element occupies the initial delay position and engages the enemy. The second element occupies and improves a second delaying position.

b. Units occupying the initial delay position employ the continuous delay technique against the enemy. They delay on the initial delay position and between it and the second delaying position. When the units reach 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. Units on the second delaying position assume responsibility for delay of the enemy when the first element has withdrawn through their position. The delay procedure is then repeated, with each element being alternately in contact and responsible for causing the required delay. Figure 8-7 is a schematic of a force delaying on alternate positions. When not in contact, each element improves and occupies positions in the rear and provides overwatching fires for the withdrawal of the element that is in contact.

c. Division reserves are not normally retained for this type of delaying action. The uncommitted elements occupying alternate positions will be committed as reserves if needed. The division commander may require brigade commanders to obtain division approval prior to committing brigade reserves.

d. Delay on alternate positions allows more time for the improvement of delaying positions and for the maintenance of materiel. This technique also provides troops periods of relief from combat. However, it may leave the division vulnerable to nuclear, biological, or chemical munitions during the frequent passage of lines required.

Section V. RETIREMENT

8-21. General

a. A retirement is a retrograde operation in which a force avoids combat under existing conditions by conducting an orderly withdrawal according to its own plan and without pressure by enemy forces.

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 physical contact with the enemy and march columns have been formed.

8-22. 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 during darkness or other conditions of reduced visibility is preferred. 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 similar to the security for a movement to contact. It is provided by advance, flank, and rear guards.

When the retirement is preceded by a withdrawal action, normally the rearguard is stronger. If enemy contact occurs, the rearguard uses delaying actions to hold the advancing enemy and to prevent interference with the movement of the main body. The commander must be especially watchful for enemy attempts to envelop the retiring force. Reconnaissance aircraft can obtain early information of such enemy attempts.

CHAPTER 9

RELIEF OPERATIONS

(NATO STANAG 2082, CENTO STANAG 2082, SEATO SEASTAG 2082,
ABCA SOLOG 49R)

Section I. GENERAL

9-1. Purpose and Types of Relief

a. During prolonged tactical operations, committed units are relieved periodically to conserve fighting power and to maintain effectiveness. Tactical planning provides for this periodic relief either by a relief in place or a passage of lines.

b. The entire division may participate in a relief or it may direct and control reliefs of subordinate units.

9-2. Basic Considerations

In planning and executing relief operations planners insure that—

a. Adequate time is provided for planning and reconnaissance.

b. Warning orders are issued early.

c. Plans are detailed, simple, and well-coor-

dated between all echelons of the relieving and relieved units.

d. When possible, reliefs are executed during periods of reduced visibility.

e. The plans for tactical cover and deception include all practicable measures to insure secrecy and surprise.

f. The relief is executed efficiently and in the shortest possible time.

g. Every precaution is taken to reduce vulnerability to enemy attack during the relief.

h. The relieving and relieved unit maintain liaison.

i. Combat support units are not relieved at the same time as the combat units that they support.

Section II. RELIEF IN PLACE

9-3. General

a. A relief in place is a combat operation in which, by direction of higher authority, all or part of a unit is replaced in a combat area by another unit.

b. The incoming unit assumes the responsibilities of the replaced elements for the combat mission and for the assigned zone of operations or area of defense. The incoming unit continues the operation as ordered. A relief in place is conducted to continue the defense or to prepare for a subsequent attack.

(1) When a relief in place is conducted to continue the defense, the relief is accomplished as nearly as possible on a unit-per-unit, man-per-man, weapon-per-weapon basis. The com-

mander of the relieving unit must make his dispositions conform to the plan of the commander who is being relieved. After the relief is completed, the relieving commander may make changes in the plans for defense.

(2) When a relief in place is conducted to resume the attack, the relieving commander may relieve on an area basis because his primary mission is to prepare for the attack. He assumes responsibility for the defense of the area, but he positions his forces to facilitate resumption of the attack. In most cases, he adopts troop dispositions that position his major subordinate units to execute his plan of attack or to permit a change of direction of the attack.

9-4. Planning Procedures

a. General. When the division relieves another unit in place, the division warning order of 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 directs 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 commander and staff analyze the mission, issue warning orders, establish liaison, and visit the unit to be relieved. The division normally establishes its tactical command post near the main command post of the unit being relieved. The commanders and staffs of the two units confer to work out the details of the relief.

b. Details To Be Coordinated. The incoming unit and the unit being relieved must agree on procedures for the following:

(1) *Exchange of plans and liaison personnel.* The unit being relieved must brief the incoming unit commanders and staff. Incoming commanders and staffs must become thoroughly familiar with the existing defensive plans, to include fire support plans, barrier plans, and counterattack plans. Normally the outgoing unit leaves liaison personnel with the incoming unit to aid in the efficient transfer of information concerning the plans, dispositions, and area of operation. These personnel remain with each combat and combat support headquarters of the incoming unit from company level up. The number of these personnel and the duration of their stay with the incoming unit vary with the situation. They usually remain until the incoming units become familiar with the situation.

(2) *Sequence of relief if not specified by the headquarters ordering the 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 consider—

(a) The subsequent mission of the incoming division.

(b) The strength and combat efficiency of the outgoing division.

(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) The size and type of elements in the relief.

(g) The requirement to maintain secrecy.

(3) *When "command is to pass."*

(a) The time or circumstances under which the incoming commander will assume responsibility for the area must be clearly established. This is determined by mutual agreement or is directed by higher headquarters.

(b) Until command passes, the outgoing division commander retains responsibility for the area and mission and exercises operational control over all subordinate elements of the incoming division that have completed their portion of the relief. During this period, incoming units must fit into and accept the defense plans of outgoing units.

(c) Normally, command passes to the incoming division commander when the incoming forward defense echelon commanders have assumed responsibility for their areas and the incoming division commander has the necessary communications to control the entire sector. When command passes, the incoming division commander assumes operational control of all units of the outgoing unit that have not been relieved.

(4) *Reconnaissance.* Commanders and staff officers of all echelons of the incoming unit must arrange for a thorough daylight reconnaissance. Reconnaissance includes an inspection of terrain to the front, defensive installations, relief routes, assembly areas, weapon positions, and combat service support installations.

(5) *Security.* All echelons of the incoming and the outgoing units use all possible means to prevent the enemy from learning that a relief is taking place. The relief should be conducted during periods of reduced visibility. In addition, all units should take the following security measures:

(a) Normal activity in the area of oper-

ations is maintained during the relief. The incoming unit assumes 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 of incoming units are imposed and enforced. These parties move to the area of operations by infiltration.

(c) The incoming unit conducts air reconnaissance in aircraft of the outgoing unit.

(d) Communications nets of the outgoing unit are used in the new area until after the relief is complete.

(e) The outgoing unit coordinates registration of fires of the incoming unit until command passes.

(f) The incoming and outgoing units must prepare and execute an integrated tactical cover and deception plan.

(g) Air defense is particularly critical during relief. FM 44-1 and FM 44-3 discuss air defense procedures during relief operations.

(6) *Movement control.* The incoming and outgoing divisions establish a single traffic headquarters to coordinate the control of units moving into and out of the area. This includes—

(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 all information and intelligence concerning the enemy and the area of operations to the incoming unit. The outgoing unit also obtains and furnishes any additional information required by the incoming unit.

(8) *Fire support.*

(a) The method of relieving fire support units must be clearly established. Normally, the artillery of the outgoing division remains in position until the units in the forward defense echelon have been relieved. In this procedure, artillery units that 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 they can accomplish the same fire missions. In this case, the incoming artillery moves into position by battery under battalion control. The incoming artillery prepares to take over fire missions before the outgoing batteries are withdrawn.

(c) When the lack of firing positions 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 conducted over more than one night, the incoming artillery will normally move at least one piece 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 fire plans.

(e) Until command passes, the commander of the outgoing artillery controls registration and all other fires of incoming artillery units.

(f) The headquarters ordering the relief may direct that the artillery of the outgoing division remain in position to support subsequent operations of the incoming unit. In this case, position areas must be carefully coordinated to reduce vulnerability.

(9) *Exchange of equipment.* The time available for the relief 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 directed by the headquarters ordering the relief.

(10) *Combat service support.* The incoming and outgoing units coordinate pertinent combat service support matters, such as the transfer of supplies, use of installations, transfer of prisoners of war, operation of civilian collecting points, displacement of combat service support units, use of transportation, and provision of traffic control.

c. Concurrent Planning. The division executing the relief and the division being relieved issue operation orders directing the relief in accordance with procedures agreed on at the planning conference. Prior to the issuance of the operation orders, fragmentary orders are disseminated to subordinate units to allow concurrent planning.

9-5. Conduct of the Relief in Place

a. Two factors influence the procedures employed in conducting the relief:

(1) The sequence of the relief.

(2) Whether the relief is to be conducted in one or more than one night.

b. Within the scheme dictated by these factors, the relief is a series of relief operations conducted by subordinate units and controlled by the division. Planning is centralized; execution is decentralized.

c. 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.

(3) Supervising 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 to any change in the plans.

9-6. Nuclear, Biological, or Chemical Weapons Considerations

During the relief, the presence of two elements in an area where normally only one is positioned increases the vulnerability to nuclear, biological, or chemical attack. Therefore, planners of relief operations must be aware of the risks involved. They must carefully schedule reliefs executed by subordinate units to minimize troop density. Generally, if the relief is conducted over an extended period, vulnerability to nuclear, biological, or chemical munitions can be reduced. However, the possibility of enemy detection and reaction against the relief is increased. The threat of a nuclear, biological, or chemical munitions attack emphasizes the need to avoid detection and to prepare thorough plans to limit the number and duration of profitable targets. It also indicates the need for early and preplanned tactical cover and deception measures.

Section III. PASSAGE OF LINES

9-7. General

a. A passage of lines is an operation in which an incoming unit attacks through a unit that is in contact with the enemy.

b. The unit in contact remains in place and supports the incoming unit until its fires are masked. The unit passed through may then remain in place or may be committed to other action.

c. A passage of lines is executed to relieve an overcommitted or depleted unit and to continue the attack.

d. The unit in contact furnishes all possible aid to the attacking unit.

9-8. Planning Procedures

a. General. The planning procedures for a passage of lines are similar to those for a relief in place. Upon receipt of a warning order that directs an operation requiring passage of lines,

the incoming division commander and his staff establish liaison with the unit in contact. The incoming division normally establishes a tactical command post near the main command post of the unit in contact. Immediately after receipt of the warning order the incoming unit and the unit in contact organize planning conferences to work out the details of the passage. All levels exchange liaison personnel.

b. Details To Be Coordinated. During the planning conferences, commanders and staffs of the units involved coordinate—

(1) Exchange of intelligence.

(2) Exchange of tactical plans, to include communications plans.

(3) Exchange of standing operating instructions.

(4) Arrangements for reconnaissance by elements of the incoming units.

(5) Security measures during the passage.

(6) Selection of areas of passage and provisions for guides.

(7) Priorities for use of routes and facilities and provisions for movement control. The incoming unit must have priority.

(8) Time or circumstances when responsibility for the control of the area of operations will be transferred.

(9) Fire support and other combat support to be provided by the unit in contact.

(10) Combat service support to be provided by the unit in contact.

(11) Exchange of liaison personnel.

(12) Collection and exchange of information on friendly minefields and other obstacles.

(13) Command relationship between incoming combat support and combat service support units and facilities and the unit in contact in whose area they may plan to locate.

(14) Measures to minimize vulnerability to enemy nuclear, biological, or chemical munitions.

(15) Tactical cover and deception plans to retain secrecy and to aid in gaining surprise.

c. Selection of Areas of Passage. When possible, the areas selected for the passage should be the unoccupied areas between elements of the unit in contact or on its flanks. This procedure reduces the vulnerability that results when one unit passes directly through the occupied positions of another unit. The incoming unit also reduces vulnerability by having subordinate units move directly to the areas of passage.

d. Priorities for the Use of Routes. The incoming unit must have priority for use of routes to, and within the area of, the unit in contact. The headquarters directing the passage of lines should establish route priority. Traffic control in the area of the unit in contact is the responsibility of that unit until the responsibility for the area passes to the incoming unit. During the passage, the incoming unit normally augments the traffic control capability of the unit in contact.

e. Passage of Command. The time or circumstances when the responsibility for control of the zone of action or sector of defense is trans-

ferred to the commander of the incoming unit is determined by mutual agreement or is directed by higher headquarters. Normally, the commander of the incoming unit assumes responsibility for the zone of action at, or prior to, the time of attack. This responsibility may shift when the preparatory fires are fired or earlier. Normally the commander of the unit in contact exercises operational control over elements of the incoming unit in his area until responsibility for the area passes to the incoming commander. At this time the incoming unit commander usually assumes control of the tactical operations of both units until the passage is complete.

f. Tactical Support.

(1) The unit in contact provides all possible aid to the incoming unit, e.g., the mapping of minefields, guides, fire support, and other combat support.

(2) Frequently, because of problems of control and the scheme of maneuver, only the indirect fire means of the unit in contact can support the incoming unit. After responsibility for the zone of action or sector of defense is transferred to the incoming unit, the artillery commander of the incoming unit coordinates all fires.

(3) It is desirable to employ the indirect fire means of the incoming unit; however, if the operation has nuclear or chemical munitions support, it may not be necessary to increase troop density by deploying the indirect fire means of the incoming unit. In this case, the indirect fire means of the unit in contact support the passage initially, and the indirect fire means of the attacking unit remain in position ready to move to firing positions to support the continuation of the attack.

g. Combat Service Support. The unit in contact furnishes the following combat service support assistance to the incoming unit:

(1) Evacuation of casualties and prisoners of war.

(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.

9-9. Conduct of the Passage of Lines

a. Elements of the incoming division move from rearward positions to attack at the scheduled time. This movement preferably takes place during periods of reduced visibility. Marches are carefully calculated to insure that units attack at the correct time and do not require forward assembly areas. This minimizes the time that elements of the two units are concentrated in the forward area.

b. If the attack is preceded by a nuclear or chemical preparation, it will be necessary, because of different degrees of protection inherent in the incoming division and the unit in contact, to prescribe troop safety measures.

c. It may be desirable to displace the reserves of the unit in contact to rear assembly areas just prior to the beginning of the passage to reduce troop density during the passage. The headquarters ordering the passage of lines normally prescribes the use of this procedure.

9-10. Passage of Armored and Mechanized Divisions Through Other Divisions

a. In the passage of armored and mechanized divisions through other divisions, coordination is facilitated when the passage of each armored or mechanized element is within the lat-

eral boundaries of one major subordinate element of the division in contact.

b. The following coordination measures receive special emphasis:

(1) Personnel from the incoming unit, assisted by guides furnished by the unit in contact, reconnoiter refueling areas and routes into and out of these areas. It may be necessary for the unit in contact to adjust its positions to permit a satisfactory passage, but such adjustments are held to a minimum.

(2) The unit in contact clears and marks lanes through friendly minefields to permit rapid passage of the incoming unit. Incoming units use their own liaison personnel at difficult gaps or defiles to check each subunit through.

(3) Fire support is furnished by the division in contact.

(4) The incoming unit normally has priority on roads.

(5) Within its capabilities, the unit in contact furnishes combat service support to the incoming unit during and immediately after the passing. This support may include using medical facilities, handling prisoners of war, clearing roads of refugees, providing traffic control, and assisting in handling the dead, but normally does not include supplying petroleum, oil, lubricants (POL), or ammunition.

Section IV. WITHDRAWAL THROUGH A REARWARD POSITION

9-11. General

a. A withdrawal through a rearward position is an operation in which a unit effecting a retrograde movement (withdrawal) passes through the sector of a unit occupying a rearward defensive position.

b. A withdrawal through a rearward position is executed to relieve an overcommitted or depleted unit, as part of a withdrawal operation, or to allow the withdrawn unit to accomplish another mission.

c. The withdrawn unit may move to a rest area to refit and retrain, cover the withdrawal of another unit, or move to another area to be committed to other action.

d. The principles outlined for a withdrawal or a passage of lines in paragraphs 9-7

through 9-10 and chapter 8 are applicable to a withdrawal through a rearward position. This section contains exceptions and principles requiring special emphasis.

9-12. Planning Procedures

a. General. The planning procedures for a division executing a withdrawal through a rearward position are similar to those for a passage of lines. Upon receipt of a warning order that directs an operation that requires a withdrawal through a rearward position, the commander of the withdrawing division and his staff establish liaison with the unit to be passed through. These liaison personnel work out the details of the passage. All levels exchange liaison personnel.

b. Details To Be Coordinated. The commanders and staffs of the units involved in the withdrawal coordinate the same details as outlined for a passage of lines (except for substituting withdrawing unit for incoming unit and unit in position for unit in contact). A detailed plan for mutual recognition must be prepared and carefully coordinated by the withdrawing unit and the unit in position.

c. Selection of Areas of Passage.

(1) When possible, the areas or points selected for the passage should be the unoccupied areas between elements of the unit in position or on its flanks.

(2) Layout of the defensive position, fire plans, security, vulnerability, and the subsequent mission of the units involved must be considered in selecting the areas or points for passage. When possible, routes of withdrawal, particularly for armored or mechanized divisions, should avoid local prepared defensive positions.

(3) Coordination and control are facilitated if sector boundaries for both the unit in position and the withdrawing unit coincide or are made to coincide and the areas or points of passage through the unit in position are kept to a minimum.

(4) Vulnerability to enemy nuclear, biological, or chemical attack is reduced by selecting areas or points of passage that permit the withdrawing unit to pass around the flank or through unoccupied areas between elements of the unit in position and by not allowing the withdrawing unit to halt in the rear area of the unit in position.

d. Priorities for the Use of Routes. The withdrawing unit must have priority on roads and facilities.

e. Passage of Command.

(1) The time or circumstances when responsibility for control of the zone of action or sector of defense is transferred to the commander of the unit in position is determined by mutual agreement or is directed by higher headquarters.

(2) Normally in a withdrawal through a rearward position, the commander of the unit

in position assumes responsibility for the control of the sector at a specific time or during an operational phase, such as the passage by the withdrawing force across a designated phase line. This transfer of responsibility requires that the commander making the withdrawal relinquish control of those elements of the withdrawing unit that remain in contact at the time of transfer.

(3) In a delay, the responsibility of the withdrawing commander for the zone of action or defense area usually terminates on passage.

f. Tactical Support. The unit in position furnishes the withdrawing unit all possible assistance. This includes combat, combat support, and combat service support assistance. Fire support by the unit in position is critical to the withdrawing unit especially in covering the withdrawal of detachments left in contact during a delay.

9-13. Conduct of a Withdrawal Through a Rearward Position

a. At the designated time elements of the withdrawing unit begin a withdrawal straight to the rear within their sectors. When possible, the withdrawing unit initiates and completes this movement during periods of reduced visibility. The withdrawing unit avoids using assembly areas since this results in an unacceptable density of troops in the forward area of the unit in position.

b. The commander of the unit in position designates and controls multiple routes to provide the necessary dispersion and to speed to the withdrawing force's movement through the forward defense area of the unit in position.

c. The commander of the withdrawing unit is responsible for identifying the last element of his command as it passes through the unit in position. He then carries out his new mission. The commander of the unit in position conducts a defense of the area or executes a delay or withdrawal.

d. In order to reduce troop density during the passage, it is desirable to withdraw combat service support units and facilities, reserves,

and nonessential command and control facilities prior to initiating the withdrawal.

e. During a withdrawal through corps defensive positions, the withdrawing division is responsible for traffic control forward of the corps security area; the unit in position is responsi-

ble for the withdrawing force to its rear boundary; and the corps is responsible from the rear boundary of the unit in position to the withdrawing division's assembly area or new position.

Section V. CONSIDERATIONS AFFECTING THE CHOICE OF RELIEFS PRIOR TO ATTACK

9-14. General

The division frequently requires that a unit in contact be relieved prior to the initiation of an attack. This can be accomplished by a relief in place or a passage of lines. The following paragraphs discuss the considerations affecting the choice of methods of relief.

9-15. Relief in Place

If sufficient time is available, the relief in place prior to an attack should be employed when—

- 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 knowledge of the terrain and the enemy situation.

9-16. Passage of Lines

The passage of lines is preferred prior to an attack when—

- a.* There is insufficient time for a relief in place.
- b.* More flexibility is desired in the selection of the formation for the attack.
- c.* It is desired to mass the fire support of both units in a particular area.
- d.* A major change in the direction of attack is planned.
- e.* Continuous offensive pressure against the enemy is desired.
- f.* Speed can be achieved.
- g.* Exploitation of all the capabilities of the attacking unit is desired.

CHAPTER 10

AIRBORNE DIVISION OPERATIONS

Section I. GENERAL

10-1. General

a. This chapter contains doctrinal guidance for the employment of the airborne division and other airborne units. The principles stated elsewhere in this manual are applicable to the airborne units described in this chapter. However, the application of these principles may vary in airborne operations.

b. FM 57-1/AFM 2-51 contains doctrinal guidance for the employment of Army forces in joint airborne operations.

10-2. Basic Considerations

a. The airborne division is organized and equipped to engage in frequent joint airborne assault operations using Air Force airlift aircraft. Organization, training, and equipment give the airborne division the capability of participating in joint airborne operations. These factors also enable the airborne division to participate in airmobile operations. The procedures for planning and conducting airmobile operations are similar to those employed in joint airborne operations. In each case the airborne division prepares for the operation, moves to the objective area by air, and lands in the objective area to accomplish its mission. The major differences between airborne and airmobile operations are—

(1) Command and control of the transport means.

(2) Characteristics of the aircraft.

(3) The airborne operation may be either tactical or strategic. The airmobile operation is usually tactical.

b. Airborne combat operations are classified as short duration and long duration:

(1) *Short duration operations.* Division

or division units conduct short duration operations with limited nondivisional reinforcing units. They engage in combat using accompanying supplies and limited followup supply. There is no routine supply phase. The assault force receives minimum combat service support in the objective area and the operation terminates with the early relief, withdrawal, or relief for subsequent operations.

(2) *Long duration operations.* Nondivisional combat, combat support, and combat service support units reinforce airborne units in long duration operations. These forces are usually committed to sustained ground combat. Long duration operations involve a substantial buildup of troops, supplies, and equipment primarily by air lines of communications.

c. The mission assigned the airborne force determines the type of operation to be conducted. An airborne raid is normally a short duration operation, while a large-scale operation conducted deep in the enemy's rear is usually a long duration operation that requires a buildup by air lines of communications and a link-up between two forces. There is no clear delineation between the two types of operations. They may be either tactical or strategic. The airborne division can conduct independent operations for limited periods without reinforcement. It is well suited for an operation that requires a high ratio of infantry strength. The division can perform in a sustained combat role, but requires augmentation primarily in mobility means, engineer, artillery, armor, and combat service support.

d. An operationally ready strategic army force is required to deploy forces rapidly to meet local aggression in any part of the world

and to reinforce units currently deployed in oversea areas. This force must be ready for prompt deployment by air, or by a combination of air and sea lift, to any part of the world. The airborne division is designed, organized, and equipped for rapid deployment by air. It prepares and maintains plans for deployment to various areas of the world. These plans require deployment with little warning using rapidly established lines of communications that rely primarily on air-transport means. The division gives priority to combat elements and operates with austere combat service support during the early phases of the operation. The division uses supplies in prestocked forward bases and indigenous forces and equipment in the forward staging or objective area to reduce combat service support requirements. The mobility and capabilities of the airborne division are evidence of the readiness of strategic army forces to move without delay to threatened areas. Such evidence is essential to the deterrent value of these forces.

e. Ground tactical operations of airborne units are similar to operations of other ground combat units. They differ primarily in the amount of armor, fire support means, transportation, and heavy equipment available in the objective area. Since reinforcing fires normally are not available within the objective area, airborne forces rely on Air Force and naval fire support from outside the objective area. The general disposition of forces in the objective area permits shifting of reserves and fires. Drop zones and landing zones in or near the objective area are essential. After the airhead line has been established, the airborne force uses drop zones and landing zones located within the airhead. Sufficient airlift and offensive air support must be available to insure successful movement of units and their equipment to the objective area and to supply the force for the required length of time. Air-landed operations with Air Force and naval aircraft require the use of airfields or improved air-landing facilities. Aircraft with short or vertical takeoff and landing characteristics require minimum landing facilities and increase the versatility of airborne forces because of their ability to land in areas otherwise

accessible only to units landed by parachute. All equipment organic to the airborne division can be delivered by parachute; however, the larger items require disassembly, separate packaging, and reassembly in the objective area. Therefore, it is preferable to air-land these large, bulky items and to fly Army aircraft to the objective area when the range and enemy air defense means permit. Air-landed operations permit movement of the heavier and bulkier combat, combat support, and combat service support equipment.

10-3. Concepts of Employment

a. Usually airborne forces are not committed on missions that can be performed as economically or as expeditiously by other combat forces. Airborne forces move directly to the objective area or to forward bases. Airborne forces are airlifted from these forward bases by Air Force aircraft to conduct airborne assault operations. An airborne capability is a strategic threat that may compel the enemy to disperse and dissipate his forces to protect vital installations in his rear areas and on his flanks.

b. Airborne forces can exploit the results of nuclear, biological, or chemical attack when existing radiation or level or persistent chemical or biological agent contamination in areas of employment is within acceptable limits.

c. Normally, with a theater of operations, planning and control of airborne operations are accomplished by a joint airborne task force which responds directly to the theater commander. Commanders of subordinate echelons can request commitment of airborne forces. Airborne commanders keep informed on the theater situation and make recommendations for the employment of airborne forces.

d. Airborne operations can be conducted in areas occupied by well-organized enemy combat forces when preceded by neutralizing preassault air bombardment or intensive field artillery fires.

e. Airborne operations can be conducted in either daylight or darkness or under other conditions of reduced visibility. Because of the in-

herent difficulties in night or reduced visibility operations, commanders prefer to launch major airborne assaults during daylight. Forces conduct loading and a major portion of their air movement during darkness or other conditions of reduced visibility to conceal these operations. Forces avoid establishing a recognizable pattern of timing in the assaults.

f. Parachute elements normally make the initial assault. Air-landed units then move into protected landing areas. When required, airborne operations can be conducted entirely by parachute. Air-landed units can conduct assault operations without having been preceded by a parachute assault if the landing area is undefended, lightly defended, or neutralized. The airborne force is most vulnerable to enemy counterattack, particularly armored and mechanized forces, immediately after landing. Tactical air support, armed helicopters, and artillery restrict the movement of enemy forces into the airhead area during this period.

g. The airborne force can be employed in single or multiple airheads. It can use a single airhead with all its combat elements within supporting distance of each other, or it can deploy its subordinate combat elements in multiple airheads on missions independent of, or only partially dependent on, the action of the remainder of the force. The type assault depends on the mission, terrain and weather in the objective area, enemy capabilities, forces available, and planned time of unit link-up, reinforcement, or withdrawal.

(1) A single airhead facilitates control, coordination, and planning, but may complicate the problem of achieving adequate dispersion. A single airhead may make it easier for the enemy to determine the location and size of the airborne force and to counterattack, particularly with nuclear, biological, and chemical munitions.

(2) Multiple airheads complicate control, coordination, and planning; however, they provide more dispersion and make it more difficult for the enemy to acquire intelligence. The possibility of defeat in detail is greater.

h. Normally airborne operations are initiated by an assault phase followed by a defen-

sive phase and an offensive or withdrawal phase.

i. The assault phase normally is executed, employing parachute and assault aircraft, to secure an initial airhead or multiple airheads in hostile territory. Direct assault landings against occupied objectives are not attempted by aircraft unless enemy resistance has been reduced in the objective area. An airborne assault normally involves a combination of parachute and assault aircraft landings.

j. Concurrently with the defensive phase, the airborne division can conduct limited offensive operations to expand the airhead or to secure additional objectives that will facilitate the defense or future operations.

k. Relief or withdrawal is executed after the accomplishment of a specific mission, after link-up with friendly forces, or when required by the situation.

10-4. Operations Against Irregular Forces

An airborne unit is well suited for operations against guerrilla units because it can deploy by air, it can traverse rugged terrain on foot with minimum weapons and equipment, and it does not rely on ground lines of communications. Airborne units require a minimum amount of specialized training for operations against irregular forces. They are trained to conduct raids and interdictions: operations that are tactically similar to operations against irregular forces. They can conduct independent operations in the enemy's area and can fight in small task forces without extensive combat support and combat service support.

10-5. Command Posts

In airborne operations, the speedy and effective establishment of the division command post in the objective area is imperative. This permits the division commander to regain control of the division as early as possible during the assault phase. The discussion of command posts contained in chapter 2 applies to the airborne division. This paragraph discusses special requirements in airborne operations.

a. The division main command post is established in the departure area to control the dis-

persed division elements. It is organized to permit continuity of command and control while the division moves to the objective area and until the command post opens in the objective area. The tentative location of the division command post in the objective area is selected prior to the assault. During the early stage of the airborne assault, the division command post is manned by a small operating group.

b. In the assault phase of an airborne operation, the division commander is usually in the same aircraft serial as the other members of his tactical command post. Immediately on reaching the objective area, he establishes the division tactical command post. Concurrently, elements from division main begin establishing the division main command post.

c. During combat operations the division usually designates the division artillery command post as the first alternate command post and a brigade command post as the second alternate installation.

d. Normally the division rear command post remains in the departure area. The senior officer in the departure area or an officer design-

nated by the division commander operates the division rear. The division rear command post is organized around the division administration company and is the focal point for all division matters that cannot be handled by the main command post in the objective area.

10-6. Employment of Nuclear and Chemical Munitions

The employment of nuclear and chemical munitions in airborne operations follows normal procedures; however, the following factors deserve additional consideration:

a. The delivery of nuclear or chemical munitions to the objective area and maintenance of delivery facilities in the objective area are more difficult than in other ground operations.

b. Special precaution is taken to avoid creating obstacles in landing areas and to avoid contaminating areas to be entered or occupied by the airborne force.

c. More surface or subsurface burst munitions are employed than in other ground operations to create obstacles along main enemy avenues of approach to the objective area.

Section II. TACTICAL PLANNING

10-7. General

a. The nature of future combat and the flexible organization of the airborne division indicate the likelihood of brigade and battalion size operations. The division frequently plans for several operations simultaneously. Plans prepared by the airborne division, based on directives from higher headquarters, are as detailed as time permits.

b. On receipt of directives or orders to plan for or participate in an airborne operation, commanders of Army and Air Force units exchange liaison officers immediately. These liaison officers act as advisers and coordinators on all matters of command interest. Liaison officers are also exchanged with known link-up forces. Such exchange of liaison officers extends through all echelons.

c. Planning for airborne operations begins with a visualization of operations in the objec-

tive area and proceeds in the following sequence:

(1) *Ground tactics in the objective area.* Plans include missions and objectives; location of the airhead line, combat outpost and other reconnaissance and security forces; task organization and boundaries; and location of reserves. Planners give special consideration to the assembly and reorganization of assault forces and to the decentralized nature of initial operations in the objective area.

(2) *Landing in the objective area.* The landing plan includes sequence and method of delivery into selected drop and landing zones in the objective area. It is not normally a formally published plan. It is primarily a worksheet used by planners to aid them in developing the marshaling and air movement plans.

(3) *Air movement.* The air movement plan includes aircraft loads, assignment of

units to serials and columns, loading and departure sites, flight routes, and other measures for air movement from the departure area. It is essential that this plan support the ground tactical plan.

(4) *Marshaling.* Airborne operations may require movement to temporary camps to complete final preparations for the operation. Troops, equipment, and supplies move from the marshaling area to loading sites and prepare to load in aircraft for the air movement.

d. Because airborne planning is detailed and complex, simplicity, though sought, is difficult to attain. Planners strive for uncomplicated landing and assembly plans and for optimum tactical integrity of units in aircraft loading.

e. Planning staffs of participating Air Force units and the airborne division plan to achieve maximum coordination. The necessity for continuous liaison, mutual interchange of information, and frequent coordinating conferences emphasizes the desirability of locating planning staffs in proximity to one another. When appropriate, planning staffs develop standing operating procedures for normal and recurring actions.

f. Under normal circumstances, and in the absence of a previous alert or prepared plans, the division requires approximately 7 days to plan and prepare for a joint airborne operation. If the airborne division is in a state of operational and logistical readiness and located near departure sites, operations can be planned and launched within 48 hours after receipt of essential planning information. Operations of brigade size can be launched within 24 hours.

g. Staffs start detailed planning on receipt of a directive and after assembly of necessary planning data and intelligence. The planning principles used in planning other ground operations are equally applicable to an airborne operation. The plan for the airborne assault and seizure of objectives is prepared with minimum delay. Much of the detailed planning, particularly supply, communications, and air operations, depends on this plan. The final operation order is based on assault plans, as modified by and integrated with troop carrier, tactical air, and supporting Army missile unit capabilities.

h. The organization of combat elements of the airborne division is based on the mission and operating conditions. Parachute or air-landed units may be included, depending on the need. Troop and materiel-carrying capabilities, availability of aircraft, availability of drop and landing zones in the objective area, and other limitations restrict the organization and size of the assault echelon. Special planning is necessary to reduce aircraft requirements and to insure the necessary firepower and mobility in the assault elements. Division must determine if sufficient aircraft of appropriate types are available to transport the assault elements to the objective area in mass and at the desired time to execute the tactical plan. Based on the number of aircraft available and tactical considerations, the controlling headquarters or the divisions may revise or cancel a specific plan. However, frequently division continues to plan for a specific operation and to phase selected elements of the airborne force to a later lift.

i. Alternate plans are prepared in case preassault weapons malfunction or are misdelivered, units are misdelivered, losses occur en route, or enemy dispositions change. The division prepares alternate plans for each serial scheduled for delivery to a particular drop or landing zone.

10-8. Intelligence

The division initiates intelligence planning when the mission is received and continues planning throughout the operating using the principles outlined in chapter 4. Intelligence is disseminated to all interested agencies as it is received so that all levels can plan concurrently.

a. Weather has a considerable impact on airborne operations both because of flying conditions and because of the effect that wind has on parachute operations. Frequently weather is the decisive factor in determining whether an airborne operation commences on schedule, is postponed, or is canceled. The division establishes procedures for disseminating up-to-date weather information early in the planning phase. The G2 determines the general impact of the forecast weather on enemy capabilities and friendly courses of action. This general

analysis of weather by the G2 enables other staff officers to visualize the effect of weather on aspects of the operation important to them. For example, weather can—

(1) Prevent the Air Force from completing preliminary missions essential to preparing the objective area for the assault.

(2) Curtail training for the operation.

(3) Require special types and unusual quantities of clothing, lubricants, food, and other materiel.

(4) Necessitate postponement or cancellation of the operation.

(5) Delay takeoff of aircraft or prevent serials in flight from reaching the objective area.

(6) Prevent accurate or mass delivery of units into the objective area.

(7) Prevent or delay resupply or reinforcement of units in the objective area.

(8) Interfere with tactical air support.

(9) Cause significant variations in the effects of friendly or enemy nuclear, biological, or chemical munitions.

(10) Prevent or delay the rehabilitation, preparation, or construction of airfields or air-landing facilities.

b. Terrain in the objective area influences the size and extent of the airhead and the missions of subordinate units. A detailed terrain analysis is made to determine likely landing zones and drop zones, to determine the engineer effort required to construct minimum criteria air-landing facilities, and to prepare barrier plans to reduce the threat from armor or mechanized forces. The G2 and the appropriate Air Force intelligence officer determine the areas within, or near, the objective area that are suitable for drop or landing zones. A study is made to obtain information on the number, condition, and capacity of all airfields in the objective area. The engineer officer participates in this study to provide estimates on the amount of engineer effort required in landing zones. To assist engineer planning, this study also contains a detailed description of possible sites for construction of air-landing facilities. This landing area study may be issued separately or may be published as a portion of the intelligence annex.

c. Except for the system operated by Army Security Agency units, objective areas are frequently inaccessible to intelligence collection means; therefore, strategic intelligence resources must be relied on. These resources are supplemented by tactical intelligence means when possible. However frequently the employment of tactical intelligence agencies are sharply restricted since objectives frequently are beyond the range of ground reconnaissance resources. Precautions are required to avoid disclosing the objective area. Since airborne operations normally strike at enemy rear areas, greater clandestine collection efforts are possible than in other ground operations when forward areas are usually carefully screened.

(1) Forces carefully plan reconnaissance and surveillance missions. Brigade forces manning combat outpost positions and the division cavalry squadron coordinate with each other. Essential elements of information are developed for both the planning and the operational phases. Information of the political, sociological, and economic conditions in the proposed area of operations is included in the estimate for an airborne operation.

(2) Special emphasis is placed on the location of enemy armored or mechanized units that might influence the operation and on reinforcing times for all enemy forces that might intervene before the airhead is consolidated. Airborne forces prepare a detailed estimate of enemy's air defenses fires, location of nuclear, biological, and chemical weapons, and enemy dispositions in the objective area. Enemy force dispositions, capabilities, strengths, and weaknesses are usually quite different in rear areas from those near the forward edge of the battle area.

d. Airborne combat troops are committed suddenly and decisively to action; there is little opportunity for progressive orientation of personnel or for modification of intelligence plans during the initial stages of an airborne assault. All details must be firm and personnel must be thoroughly oriented prior to enplaning. Division units require a large quantity of maps, airphotos, and briefing aids to orient all personnel.

e. The need for secrecy when mounting an

airborne operation requires that detailed counterintelligence plans be prepared and rigidly enforced. Counterintelligence and security measures, peculiar to airborne operations, include—

(1) Restricting departures from sealed areas to personnel on official duties.

(2) Requiring special authorization to carry marked maps, operation orders, overlays, or similar items into the objective area.

(3) Using temporary or abbreviated signal operation instructions.

f. Intelligence units, with counterintelligence and security capabilities, are attached to airborne units for early employment in the objective area.

10-9. Operations

a. An airborne division is organized into three echelons for a joint airborne operation: the assault echelon, the followup echelon, and the rear echelon.

(1) The assault echelon contains those units required in the initial stages of the operation to secure the airhead.

(2) The followup echelon contains the remaining units required to sustain the defense of the airhead and to conduct other offensive operations. The followup echelon normally includes followup elements of the assault units; support command headquarters; most of the maintenance battalion; and the supply company.

(3) The rear echelon remains in the departure area during the offensive and defensive phases of the operation. It contains those units, or parts of units, that are not required in the airhead or that can better perform their functions in the rear.

b. There are four basic plans for an airborne operation: the ground tactical plan, the landing plan, the air movement plan, and the marshaling plan.

(1) The ground tactical plan assigns missions and objectives; designates the airhead line, the combat outposts, and other reconnaissance and security forces; prescribes a task organization and boundaries; and provides a reserve. The ground tactical plan is based on normal considerations governing

ground operations. Some modifications are necessary, however, because of the initial decentralization of control. Planners give special consideration to the times and places at which the assault and reserve elements are landed, and to assembly and reorganization of the assault forces. Figure 10-1 illustrates a type ground tactical plan for an airborne division assault.

(a) The mission determines the exact location and extent of the airhead. The area within the airhead is secured, cleared of the enemy, and defended. The military crests of elevations to be controlled are within the airhead line. Factors considered in selecting a division airhead include adequate space to land troops, supplies, and equipment; defense in depth; maneuver of reserves; control of key terrain features; dispersion to reduce vulnerability to enemy nuclear, biological, or chemical attacks; adequate drop zones and landing zones to permit landing of followup forces and supplies; obstacles; and good defensible terrain. It selects assault objectives concurrently with the selecting and locating the airhead line. Division must select features whose immediate control is a priority task to accomplish the mission or to enhance the security of the division during the development of the airhead. Specific considerations are mission; enemy capabilities, particularly his ability to interfere with the establishment of the airhead; own capabilities; and terrain, with emphasis on those features that must be secured to block rapid movement of mobile enemy forces into the airhead. Each assault objective is drawn to indicate the area over which the division commander desires positive control early in the operation. The responsible commander determines the dispositions and size of the force to effect control over the area. The dimensions and configuration of the symbol are fixed by the specific areas to be controlled. Objectives that block high-speed approaches are within and tangent to the airhead line.

(b) Security forces employed in airborne operations include combat outposts, the armored cavalry squadron, and Army and Air Force reconnaissance means. Brigades furnish combat outposts to give timely warning of

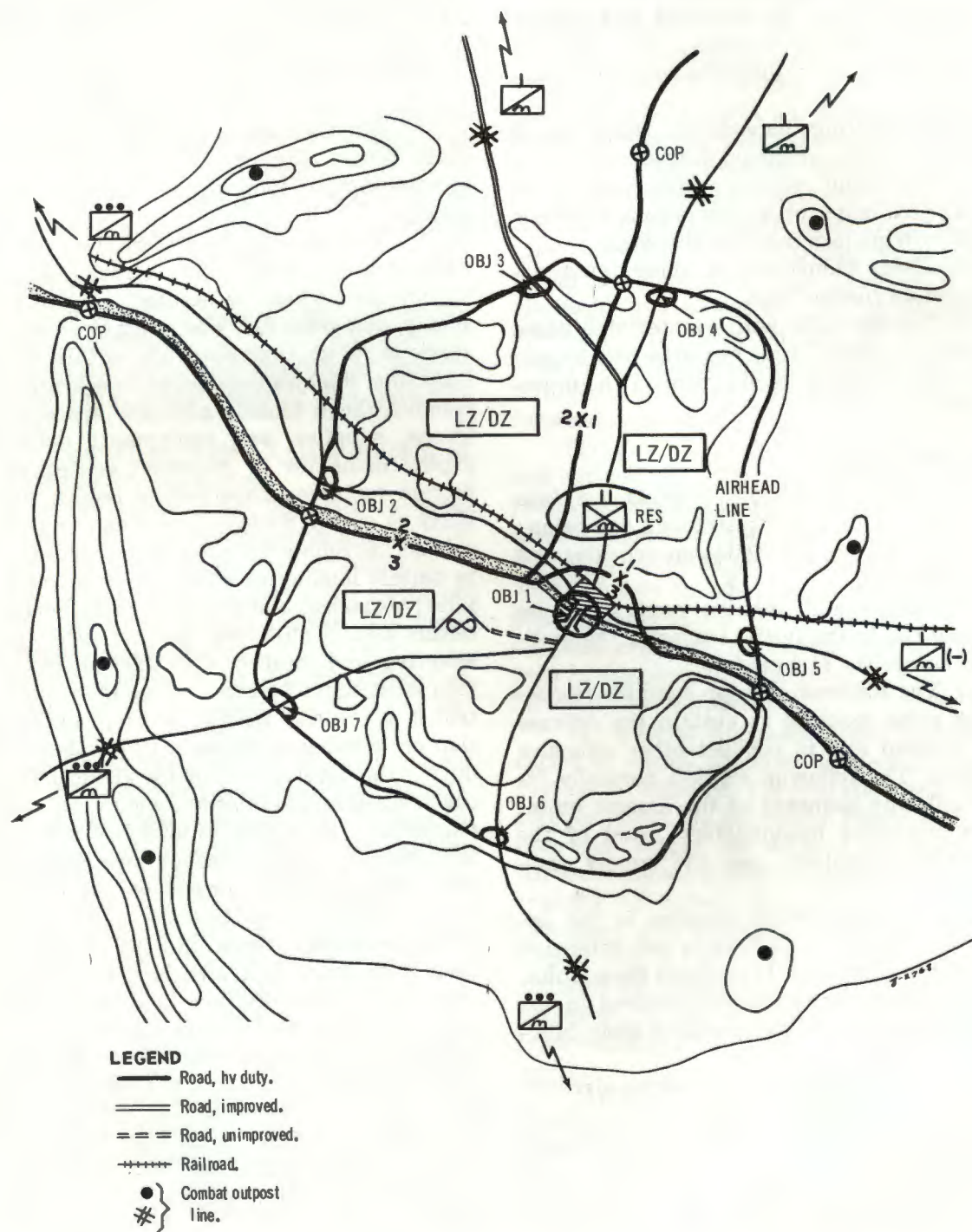


Figure 10-1. Type ground tactical plan for airborne division assault.

enemy approach and to deny the enemy forces ground observation and direct fires into the airhead. Within its capabilities, the combat

outpost (COP) delays, disorganizes, and deceives the enemy. Considerations for its location include blocking enemy high-speed ap-

proaches; terrain that affords long-range observation and fields of fire; obstacles; concealment and cover on position and on withdrawal routes; control of enemy avenues of approach; and location within range of light artillery from the airhead and within communications range of the airhead line. Normally, the combat outpost is located 4 to 8 kilometers beyond the airhead line. In the ground tactical plan, the combat outpost line is indicated graphically by dots and roadblocks on the overlay corresponding to the spot on the ground at which the division commander desires some element to be positioned. The responsible commander determines the size force to be positioned on the combat outpost. A combat outpost symbol on the topographic crest of a hill normally indicates an observation post. The armored cavalry squadron is employed beyond the combat outpost on reconnaissance and security missions, with emphasis on high-speed approaches into the airhead. Normally, the armored cavalry squadron is employed 16 to 24 kilometers beyond the airhead. However, this distance can be increased by judicious use of aerial radio retransmission stations. The reconnaissance platoons of the infantry battalions cover additional approaches, if necessary. Location of enemy units, high-speed approaches, and most probable enemy reaction are basic considerations in determining the employment of the armored cavalry squadron.

(c) The sectors of responsibility and the nature and type of tasks assigned the subordinate units influence the task organization of the airborne division. Normally, the airhead is divided into brigade sectors with no division rear area. Boundaries are precisely drawn and extend beyond the trace of the combat outpost to the distance necessary to coordinate fires. Coordinating points are placed at the intersection of the boundaries with the airhead line and the trace of the combat outpost. Location of boundaries is determined by unit capabilities; number and relative importance of assigned assault objectives; high-speed approaches and key terrain; ease of identification on map and ground; adequate room for defense in depth; adequate room for positioning and maneuvering reserves; adequate drop zones

and landing zones in each brigade sector; minimum adjustment in the transition from the assault to the defense; and minimum requirement for one unit to defend simultaneously in widely divergent directions. The airhead should not be subdivided into equal sectors. Rather, it should be subdivided according to task organization so that each brigade has a proportionate share of tasks. Task organization is considered concurrently with the selection and location of boundaries. For the assault, brigade attachments include not only essential combat units, but also combat support and combat service support units normally assigned a supporting mission without attachment. This initial attachment insures the immediate availability of supporting units. These attached units normally revert to the control of their parent unit when the latter is established within the airhead and able to provide centralized direction and support. In developing the task organization, primary considerations are a balanced force adequate to accomplish the assigned mission; enemy capabilities; initial enemy threat; major or most significant enemy threat; location, number, and relative importance of assigned assault objectives; size of sector and defensibility of terrain within assigned sector; requirement for supporting services immediately on landing; and ability of parent units to provide central direction without delay or interruption of services to supported units. Normally, for the assault, the brigade attachments will include one 105-mm howitzer field artillery battalion, one engineer company, one forward area signal center platoon, one military police platoon, one medical company, a small detachment from the air equipment support company, a graves registration section, and tactical air control parties.

(d) The division reserve normally enters the airhead as part of the division assault echelon. It consists of the elements of one or more battalions, seldom more than a reinforced battalion. The reserve is seldom assigned a mission of securing a portion of the airhead or an assault objective. It is assigned an area in which to assemble following entry into the airhead. On the division plan, this area is shown by a solid line, within which the unit symbol is

placed. The reserve area may lie within the sector of one committed brigade, or it may fall within the sectors of two or more brigades. The size of the area must be large enough to permit dispersion of the force. Planning considerations are size compatible with likely missions; location in proximity to areas of likely employment; enemy capabilities; enemy threat; position to provide depth to the defense in key areas; cover and concealment; road network to facilitate movement; adequate space for dispersion; and location sufficiently removed from assault objectives to avoid interfering with the maneuver of the securing forces.

(e) The scheme of maneuver and tactical plan for forces after landing are based on considerations governing ground operations. Some modification is necessary, however, because of the decentralization of initial command and control. Consideration is given to the time and place of the assault echelon, to include the reserve, lands and to assembly and reorganization of the assault echelon and the reserve.

(f) The nature and location of drop and landing zones are important in formulating the landing plan and scheme of maneuver. In addition to conforming to Air Force technical considerations drop and landing zones should have the following characteristics.

1. Ease of identification from the air.
2. Straight-line approach for aircraft.
3. Close to objectives.
4. Cover and concealment.
5. Avoidance of strong enemy air defenses.
6. Free of anti-airborne obstacles.
7. Near good road net.
8. Sufficient capacity.
9. Minimum construction and maintenance (landing zones).
10. Flat or gently rolling terrain.

(g) The landing area study identifies suitable drop and landing zones in the objective area. The landing area study also prescribes the criteria for drop zones, landing zones, and air-landing facilities. It also contains an estimate of the engineer effort re-

quired to improve landing zones and to construct and maintain air-landing facilities. The landing area study is a joint study developed at joint conferences between the G2, G3, and division engineer and Air Force airlift planners. A joint study is required because the location and characteristics of each drop zone and landing zone are important to both the airborne force and the airlift elements of the joint airborne task force.

(h) The division recommends to higher headquarters the tactical cover and deception measures to be integrated in the overall plan. The division coordinates tactical plans with cover and deception plans. The division is concerned with the following deception measures:

1. The dropping of personnel and equipment at selected locations to deceive the enemy as to the true location of the main effort. The airborne forces can augment the deception effort by dropping dummy and decoy devices at other locations in the same general area. After accomplishing their mission, these airborne forces can be either withdrawn or directed to proceed to the objective area using infiltration tactics.

2. Reinforcement and employment of mobile reconnaissance forces to deceive the enemy as to the true location of the airhead.

3. Manipulation of radio traffic within the objective area to deceive the enemy as to the location and intent of division elements.

4. The employment of nuclear or chemical fires to mislead the enemy concerning the location of the main effort.

(2) The *landing plan* is a tabulation of the sequence, method of delivery, and place of arrival of troops and material in the objective area to support the scheme of maneuver. There is no prescribed format for the landing plan although airborne units may prescribe a standard format in their standing operating procedures. The G3 consolidates the units landing plans into a division landing plan. When there is a conflict between the priorities of the division commander and the subordinate unit commanders, the division commander's guidance will govern. The completed landing plan provides a basis for the air movement plan. The di-

vision landing plan is based on the following:

(a) The priorities established and guidance provided by the division commander for the delivery of all forces, to include brigades, division artillery, division troops, division reserve, and support command.

(b) The scheme of maneuver of the subordinate units.

(c) The landing plans submitted by subordinate unit commanders.

(d) Airlift techniques.

(3) The *air movement plan*, prepared jointly by tactical airlift and airborne force planners, provides information and instructions for the assault from the time the airborne force starts loading on aircraft at the departure airfields until these forces are delivered to the drop or landing zones. The air movement plan consists of the basic plan, published as an annex to the operation order; air movement tables; flight route diagrams; and aircraft loading tables. The plan may also include diagrams; aerial photographs of departure airfields, drop zones, and landing zones, and other information not reflected elsewhere in the operation order. The air movement tables are based on the landing plan to insure that the airborne force is delivered in accordance with the scheme of maneuver contained in the ground tactical plan. Air movement tables list every airlift serial that delivers troops, equipment, or supplies of the airborne force into the objective area. The flight route diagram provides the information concerning the flight routes to be used by the airlift force in delivering the airborne force to each drop or landing zone. It includes information of particular concern to the airlift pilots. The aircraft loading tables include specific information concerning the type of loads for each type aircraft. Departure airfields for each serial and chalk numbers of aircraft are shown in addition to the airborne unit, type of aircraft and employment, load, weight, and any other information of concern to the loading of aircraft. The G3 is responsible for the preparation of the air movement plan for the airborne force. The air movement tables are prepared jointly by the Air Force and the Army; the flight route diagram is prepared by the Air Force;

and the aircraft loading tables are prepared by the Army.

(4) The *marshaling plan* is discussed in paragraph 10-14.

c. During the mounting phase, the division signal officer is primarily concerned with planning for the subsequent phases of the operation and for bringing the signal battalion up to peak operational readiness. The signal officer also supervises the special training of division units and the inspection of all signal equipment to insure that it is adequate for the operation. The theater army support command is responsible for providing the airborne communications means for the airborne force during the marshaling phase.

(1) While the division is airborne and en route to the objective area, only Air Force communications will be used between aircraft and from aircraft back to the departure area.

(2) In addition to planning those phases of the airborne operation that take place prior to the force's arrival in the objective area, the signal officer plans for communications in the objective area. The signal officer is concerned with the following communications plans:

(a) An assault net to operate during the early part of the operation in the objective area.

(b) Transition from the assault net operations to the normal division communications nets.

(c) Communications from the objective area to—

1. Airlift forces.
2. Higher headquarters.
3. Supporting tactical air elements.
4. Departure area.
5. Other supporting elements, such as naval forces.

d. The training required for any specific operation varies with the training of the unit, time and facilities available, and complexity of the operation. The complete training procedure described below will seldom be required.

(1) As soon as the airborne division receives a directive for an operation, all training is directed toward preparing for the assigned mission. Specific training is initiated without

delay. This training covers only essential items, since the time between receipt of a directive and execution of the operation, is normally limited.

(2) An analysis of the unit mission, enemy situation, civil situation, and terrain in the objective area indicates the problems that will confront the unit after landing. A training program is developed emphasizing the specific training each unit will need to accomplish its mission. To add realism, training areas are selected that resemble the objective area. Time permitting, mockups are made of installations, obstacles, landmarks, and enemy defenses in the objective area. All units, particularly platoons and squads, receive the specialized combat training indicated by their mission. This training includes instruction on the use of special equipment and enemy vehicles and equipment.

(3) As the detailed plan develops, specialized or refresher training is given in the methods or techniques to be used in the impending operation. Troops are trained to—

(a) Pack equipment containers.

(b) Load personnel and equipment into aircraft, particularly when the type of aircraft has not been used previously.

(c) Rig and load with field expedients, such as A-frames.

(d) Perform parachute drops and assault aircraft landings under the anticipated combat conditions.

(e) Use assembly aids.

e. Air-transportable units preparing for air-landed operations conduct essentially the same training as airborne units; normally, however, they do not receive training in parachute and aerial delivery techniques. TM 57-210 contains guidance for the preparation of air movement plans and detailed information on the air transportability of various equipment in the field army. FM 101-10-1 contains aircraft requirements for nondivisional units.

f. Rehearsals are desirable prior to an airborne operation. Considerations that preclude or limit rehearsals are—

(1) Lack of time and resources.

(2) Security.

(3) Vulnerability.

g. Rehearsals should be under conditions similar to those in actual operations. Planning is initiated to insure that the following are available for rehearsals:

(1) Necessary aircraft.

(2) Suitable rehearsal areas.

(3) Replacements for damaged or lost equipment.

(4) Replacements for losses sustained during rehearsals.

(5) Sufficient time following rehearsals to permit reconditioning and repair of air-delivered equipment.

h. The following should be included in rehearsals:

(1) Marshaling.

(2) Loading of aircraft.

(3) Unloading of aircraft after landing.

(4) Communications procedures.

(5) Assembly and control procedures after landing.

(6) Execution of the tactical plan.

(7) Supply, evacuation, and transportation procedures.

(8) Link-up procedures.

(9) Conduct of air withdrawal, if planned.

i. In operations involving a link-up, detailed coordination between the airborne force and friendly link-up forces is essential. Direct contact between these forces is authorized beginning with the initial planning phase. This contact is established by command and staff liaison and is continued throughout the execution phase to link-up. The actual link-up should be effected as rapidly as possible and in a manner to minimize the casualties to either the airborne force or the link-up force from friendly fires. The principal measure for fire coordination is the establishment of a mutually agreed upon fire coordination line (FCL). Plans should provide for—

(1) Command and staff liaison.

(2) Mutual recognition systems.

(3) Effective communications.

(4) Link-up points.

(5) Fire coordination.

(6) Unit of command.

(7) Planned action following link-up.

Link-up operations are discussed in chapter 12.

Section III. COMBAT SERVICE SUPPORT PLANNING AND PREPARATIONS

10-10. General

a. The theater army support command normally has the mission of supporting airborne operations. Planning for such operations is on a continuing, long-range basis. Theater army provides the theater army support command with plans for the employment of airborne forces sufficiently early to permit the preparation of supporting combat service support plans. The theater army support command normally delegates the responsibility for mounting and supporting an airborne operation to one of its subordinate agencies.

b. The collection and compilation of combat service support planning data are initiated early. These data are modified and supplemented as planning progresses. The division support command commander, as the combat service support operator of the division, coordinates closely with the G4 in the preparation of the division administrative plan and order. The administrative plan includes instructions for marshaling. FM 101-5 discusses the preparation of the administrative plan.

c. The division must be prepared to mount an airborne operation on short notice and with a minimum of assistance from outside agencies. An airborne unit can be employed in parts of the world where support forces do not exist. The division must then be prepared to mount an airborne operation with locally available material and personnel and minimum outside assistance.

10-11. Personnel Planning

a. Personnel planning for an airborne operation is more detailed than for other ground operations because of the requirement for early reaction to events that take place prior to and during the early phases of the airborne assault. Accurately anticipating these requirements has an effect on all phases of personnel planning and is not limited to replacements.

(1) The division insures that while it is operating in the objective area, administrative procedures are simplified. The administrative

procedures for battlefield promotions and other personnel procedures should conform to the austere administrative facilities in the objective area.

(2) The G1 coordinates plans with higher headquarters, which will frequently be at a distance from the division. This factor emphasizes the need for detailed personnel planning for an airborne operation.

b. Airborne operations should be launched with the division at full strength. Since airborne replacements are not always readily available, division must bring itself up to strength before the operation begins. Replacements are obtained in time to be integrated into their units. Personnel with a record of high radiation exposure are not used in the objective area.

c. Accurate records are kept of personnel participating in the airborne assault and of those remaining in the departure area. Command succession rosters are prepared and kept up to date; and accurate strength reports are kept after both the assault and followup echelons have landed in the objective area.

d. Prior to the airborne operation, the G1 estimates the number of casualties that the division can expect within the first 3 days of the operation. If time permits, overstrength replacements will be requisitioned equal to the estimated losses. After these overstrength replacements are received, division assigns them to units. They participate in training and rehearsals for the operation, but they should not be included in the assault echelon. Before the division marshals, the overstrength replacements are withdrawn and placed under the control of the administration company. Overstrength replacements are then phased into the airhead to replace actual losses. These replacements are air-landed, whenever possible, to preclude jump injuries and to facilitate control on arrival in the objective area. During the planning phase, G1 coordinates with G3 to insure that sufficient airlift is allocated in the air movement table to deliver these replacements into the airhead.

e. Prisoners of war present a considerable logistical burden to the airborne force. Consequently, they are evacuated from the airhead whenever possible. The capturing unit is responsible for guarding and moving the prisoners of war to the brigade prisoner of war collecting points established within each brigade area by attached military police platoons. The prisoners are hastily interrogated and moved directly to a landing zone for air evacuation. Selected prisoners can be taken to the division prisoner of war collecting point for more extensive interrogation prior to evacuation by air. Military police personnel are responsible for the security of prisoners of war from the time they are brought to the collecting points until they are loaded aboard aircraft. The theater army support command provides the necessary guards to secure the prisoners in flight.

f. Evacuation of the dead from the airhead is seldom practicable. Therefore, the division normally establishes a temporary cemetery in the airhead. Graves registration sections establish a graves registration point within each brigade area. Battalions collect and evacuate their dead to these collecting points. The collection and evacuation sections attached to each brigade identify and process the remains for further evacuation to the division collecting point, where the temporary cemetery will be established. After link-up, the field army is responsible for evacuating the dead to the army graves registration collecting point.

g. The Air Force is responsible for the evacuation of casualties from the airhead. This responsibility includes manifesting the patient, loading him aboard an Air Force aircraft, providing in-flight care and treatment, and unloading him at the receiving airfield. The Army is responsible for initial medical treatment and movement of patients within the airhead. The medical company attached to each brigade is responsible for evacuation from the battalion aid station to the clearing station located in each brigade area. At the clearing station it is decided if the patient is to be evacuated by air. Normally, if the patient cannot be returned to duty within 48 hours, he will be

prepared for evacuation at the clearing station and then delivered to a patient staging facility established by the Air Force adjacent to a landing zone. At this point, the Air Force assumes full responsibility for the patient until he is unloaded and turned over to an Army medical unit in the communications zone.

10-12. Civil Affairs

A civil affairs company is normally attached to the division. This command support unit and any required area support units are obtained early enough to permit them to be integrated into the division and briefed on the operation. Elements of the command support unit may enter the objective area during the assault phase. The remainder of this unit and any attached area support units are normally airlanded in the followup echelon.

10-13. Combat Service Support Planning

a. There are three phases of supply: accompanying supply, followup supply, which may be automatic or on-call, and routine supply.

(1) Accompanying supply includes unit-prescribed loads and selected additional supplies. Normally, each unit carries 3 days of supply into the airhead. The division controls the additional supplies. The assault echelon and the followup echelon carry accompanying supply. Units of the airborne division requisition, prepare, and rig all accompanying supply.

(2) Automatic followup supply is based on an estimated daily expenditure of all classes of supply. The G4 prepares the estimate, and the theater army support command element supporting the operation assembles, prepares, and delivers the supplies to the Air Force for loading and delivery to the airhead on a planned schedule. Whenever possible, delivery is made directly to the battalions in the airhead.

(3) The G4 prepares on-call followup supply plans for emergency requirements and then turns them over to the supporting theater army support command for implementation. The G4 estimates the maximum daily requirements for 1 day of the operation, usually D-day, for all classes of supply, to include major

items of equipment. He then doubles this requirement and forwards it to the theater army support command. Theater army support command then prepares and maintains this 2-day requirement of supplies at or near the departure airfield ready for delivery to the Air Force. Theater army support command also replenishes any items delivered to the airborne force from the on-call followup supplies to maintain this 2-day supply level until the requirement is terminated or modified by the airborne force.

(4) Routine supply is begun as soon as feasible to avoid large imbalances of supply in the airhead. These supplies are requisitioned through normal supply procedures, although they may be delivered by either air or ground lines of communications.

b. The desired level of supply in the airhead is 3 days; the minimum safe level is 2 days. The division reaches the desired level initially by carrying 3 days of accompanying supply into the airhead. However, except for any on-call followup supply that may be required the first day, there is no resupply on D-day. Automatic followup supply begins on D+1, at which time 2 days of supply are delivered. Thereafter, 1 day of automatic followup supply is delivered daily until routine supply begins. This procedure insures that the airborne force reaches and maintains the desired 3-day level of supplies in the airhead.

c. Prior to the availability of improved air-landing facilities in the airhead, supplies are delivered direct to using units by parachute, free fall, or assault air-landing on unprepared landing zones. Followup supplies are delivered, so far as possible, by air-landing on prepared minimum criteria air-landing facilities. High usage items are delivered as far forward as possible. Items with slow rates of consumption are delivered to supply points. Organic or attached cargo helicopters compensate for the shortage of ground transportation.

(1) Landing of supplies by aircraft is the preferred delivery method. Aircraft can land larger loads on adequate landing areas than can be delivered by parachute or free fall. In

addition, air-landed aircraft can evacuate personnel and equipment from the objective area.

(2) When aircraft cannot land, delivery of supplies by parachute is more economical than delivery by free fall. Parachute delivery uses air delivery equipment and specially trained personnel. Some loss of equipment by breakage and misdelivery is inherent. Enemy action or weather conditions may dictate the use of parachute delivery even though suitable landing areas exist.

(3) Free fall is more accurate than parachute delivery. Certain items of supply such as blankets and other textile items, barbed wire, and vehicle tires and tubes can be delivered with little or no damage. For other items, the accuracy and the savings of delivery equipment attained by free fall may be offset by greater loss or damage to supplies dropped.

d. Supply and transport units can accompany the assault echelon to recover accompanying supplies transported under control of the airborne force and to establish necessary supply points. Supply point distribution or unit distribution, or a combination of the means, is used to supply the airborne force. Vertical takeoff and landing aircraft deliver priority supplies.

10-14. Marshaling

a. Marshaling is the process by which the division units in the airborne operation move to temporary camps near departure airfields or air-landing facilities, complete the final preparation for the airborne assault, and prepare for loading into the aircraft for movement to the objective area. Marshaling is a phase of the overall mounting procedures and is usually accomplished in 48 hours or less by the airborne division. The temporary camps located near departure airfields or air-landing facilities are referred to as marshaling areas. Once the various elements of the division close in the marshaling areas, they are sealed in the areas and maximum security restrictions are imposed.

b. The G4 develops the marshaling plan based on the information in the air movement

plan. He selects marshaling camps after considering the departure airfields to be used by subordinate units. He coordinates these selections with the theater army support command unit supporting the airborne force. In coordination with the G3 and subordinate unit commanders, the G4 assigns division units to marshaling camps.

c. The marshaling plan includes—

- (1) Assignment of units to marshaling camps.
- (2) Provisions for sealing units in marshaling camps.
- (3) Inspections of personnel, equipment, and supplies.
- (4) Briefings for units and individuals.
- (5) Movement to departure airfields.
- (6) Procedures for loading aircraft.

d. The airborne force normally coordinates all combat service support requirements with theater army support command. This support extends through the mounting, assault, and subsequent buildup within the objective area; the closeout of the marshaling facilities; and the rehabilitation of the force after relief or withdrawal.

e. The theater army support command provides marshaling support to the airborne force to include supply; communications; transportation; maintenance; mess; postal and recreational services; finance, medical, confinement, and religious support; and storage facilities. Airborne forces contribute to the limit of their capability.

f. The G4 is responsible for the preparation of the marshaling plan, which is normally published as an appendix to the administrative annex to the operation order.

g. In an airborne operation mounted from the communications zone, support for the airborne division during the marshaling phase normally is provided by the theater army support command area support group with responsibility for the area in which the marshaling camps are located. Followup supply support for the division in an airhead is provided by a theater army support command field depot with an aerial resupply capability.

h. Airborne units organize departure airfield control groups for each departure airfield. The departure airfield control groups coordinate last-minute changes with the Air Force airlift control element. The airlift control element controls all aircraft at each departure airfield, provides information to the airborne force through departure airfield control groups, and coordinates troop carrier operations at the departure airfields.

10-15. Phase Back Planning

When there are insufficient aircraft sorties available to airlift the airborne force assault echelon at one time, troop carrier units will airlift the assault echelon in multiple lifts. This requires the airborne force to phase back selected units in the assault echelon to subsequent lifts. Units that can be phased back are—

- a. Units assigned low priority tasks.
- b. Parts of units not needed when reduced strength units can accomplish their missions.
- c. Units assigned sectors of the airhead farthest away from the enemy.

10-16. Rear Area Protection

a. *Mounting Area.* In the mounting area, theater army support command subordinate units have overall responsibility for area damage control and rear area security. The division staff coordinates rear area security and area damage control plans with appropriate theater army support command units. Because of the dispersion of the division in multiple marshaling camps, area responsibilities are delegated to the major subordinate commanders. The support command commander is responsible for the security of units in his area of responsibility. The bulk of the support command is dispersed providing support to various elements of the division and is under the control of other commanders for rear area security and area damage control. When the assault elements of the division are marshaled and committed in the airborne assault, the support command commander can be given overall responsibility for the division elements remaining

in the marshaling area. He directs rear area security and area damage control.

b. Short Duration Operations. During short duration operations, division combat service support units in the objective area are in brigade areas of responsibility. These combat service support elements are responsible for the local security of their installations. When it is necessary or desirable to group several elements, an integrated security area may be established under a designated officer. The officer assigned this mission is normally the one commanding or controlling most of the troops in

the area. He operates under the direction of the commander having overall area responsibility. The support command commander seldom has area responsibility in a short duration operation.

c. Long Duration Operations. When the division is in a long duration airborne operation, it may establish a rear area within the objective area. The support command commander is charged with rear area security and area damage control. He uses his unit and logistical staff elements to plan for rear area security and area damage control.

Section IV. CONDUCT OF AIRBORNE OPERATIONS

10-17. Air Movement

a. Aircraft En Route.

(1) The flight to the objective area is closely regulated. Each serial takes off and assembles into formation before departing on a course to the force rendezvous point. At the force rendezvous point, air serials take position in the air columns and then proceed to the departure point on a precise time schedule. This assembly procedure funnels the air serials into the air columns in the desired priority of landing and with the proper space between serials. From the departure point, all serials fly at a specified airspeed over the remainder of the route to the initial point.

(2) Navigation aids such as lights, radios, and radar beacons may be placed at each control point and at intervals along the routes over friendly territory to insure accurate navigation.

(3) A time interval between serials is necessary to provide tolerance for minor variations in timing at the various control points and to compensate for the accordion effect which occurs when parachute serials reduce speed to discharge their loads.

(4) Multiple columns reduce the time length and the time required to land the force in the objective area.

(5) Parachute serials precede assault landing aircraft serials in drop and landing zones. A time interval between the last parachute landing and the first assault aircraft

landing permits parachute troops to clear the landing zone of enemy forces and to remove obstacles. When it is necessary for assault aircraft to land on a drop zone, equipment bundles, parachutes, vehicles, weapons, and casualties are cleared from the area.

(6) The decision to execute alternate plans should be made prior to reaching the initial point at which serials leave the air column for final runs to their drop and landing zones.

(7) Whenever possible, Army aircraft fly to the objective area. The range of the Army aircraft permitting, the aircraft will generally be able to infiltrate to the objective area and to refuel with the fuel that was delivered with the assault or followup echelons.

b. Aircraft Over the Objective Area.

(1) Normally, Air Force units use the computed air release point system in determining the point at which parachuting personnel and equipment are released to land. This system is satisfactory only for visual flight rule conditions since it involves dead reckoning navigation and predetermined parachute characteristics. During instrument flight rule conditions, combat control teams are employed. Combat control aircraft precede or accompany the main airlift columns to drop the joint airborne advance party. Specially trained aircrews operate the combat control aircraft that are equipped with electronic devices for precise navigation. Air Force combat control teams are normally the first elements dropped on

each drop zone. The combat control teams locate, identify, and mark the drop and landing zones; establish and operate terminal navigation aids; and establish communications with the troop carrier aircraft to assist in guiding aircraft serials to the proper drop or landing zone. Army assault teams are delivered with combat control teams. The army assault teams provide security for the combat control teams while the latter perform their missions.

(2) The ground dispersion of parachute serials depends on the type of aircraft used, winds aloft, and skill of the aircraft crews and parachute troops. Good results require precise navigation to the proper drop zone, compact formation, correct speed and altitude for the drop, and rapid and proper exit of personnel, supplies, and equipment. As parachute serials approach the drop zones, pilots alert troops to make last-minute equipment inspections and to prepare for exit. Before reaching its drop zone, the serial reduces speed and the pilot signals the drop. When the aircraft is empty, the pilot increases speed, executes the planned traffic pattern, and returns over the same route or alternate routes, but at a different altitude to avoid inbound traffic.

(3) As air-landed serials approach the landing zones, individual aircraft execute the landing plan. Upon landing, aircraft are parked and unloaded rapidly. They return to departure airfields over predesignated routes. They may return empty or may evacuate wounded, prisoners of war, and equipment.

10-18. The Assault

a. Since the airborne division is most vulnerable to enemy attack during the landing and reorganization of its assault echelon, it must land and reorganize with maximum speed and precision. Combat elements land on their objectives or as close to them as possible. They are organized to execute the ground tactical plan and to avoid presenting profitable targets. Individuals carry only essential combat equipment. Additional equipment and supplies are dropped as separate loads or are landed by assault aircraft.

(1) Brigade elements usually land in their assigned sectors. The airborne force re-

serve and other troops not attached to the brigades land on prescribed drop and landing zones in brigade sectors. Command echelons of the airborne force are assigned to different serials.

(2) Air-landed elements of the assault echelon follow the parachute elements and land on landing zones as near as practicable to parent unit dispositions.

b. Units reorganize as rapidly as possible. They begin to secure assault objectives without waiting for all elements to reorganize.

(1) Units use predesignated areas, visual and sound devices, and identification markings for personnel and equipment to facilitate assembly. Assembly areas are selected in proximity to drop and landing zones. They are identified by prominent landmarks and marked.

(2) Upon landing, the lead elements of a unit are charged with security of the drop and landing zones. Remaining elements move quickly to their assembly areas carrying equipment required for their assigned mission. Upon arrival in assembly areas, unit commanders report the status of their unit, receive new instructions, and continue the operation.

(3) Designated personnel remain at the drop and landing zones to protect the area, to assemble stragglers, to establish prisoner of war collecting points, to care for wounded, and to complete removal of supplies.

(4) Elements of air-landed units move by planeload from the deplaning area to a rendezvous point and then to designated unit assembly areas. They carry all equipment needed for initial tasks. Guides and route markers control this movement. Designated personnel remain at the landing zone to unload aircraft and remove supplies and equipment from the landing zone.

(5) Reorganization of the division is complete when all assault echelons are reorganized and communication is established.

c. The initial assault stresses the coordinated action of small units to secure initial objectives before the advantage of surprise has worn off. The proper use of electronic countermeasures can inhibit the direction and coordination of defending forces. After assault objec-

tives are secured, the airborne force secures the airhead.

(1) Tactical surprise, coupled with detailed planning, enable units to secure their assault objectives and the airhead before the enemy has time to react in force. Missions of units are changed as required by enemy defense of initial objectives. The enemy can be expected to launch uncoordinated attacks quickly along major avenues of approach with forces locally available. Progressively, the degree of coordination and strength of these attacks will increase, and the airborne force must develop greater strength in its defensive positions. Preparation of early defense against armored or mechanized attack and protection from nuclear, biological, or chemical munitions are major considerations.

(2) Units assigned reconnaissance and security missions land in early serials to establish roadblocks, to locate enemy forces, to disrupt enemy communications facilities, and to provide the commander with early warning, security, and information. When initial objectives are lightly defended, the bulk of the force can clear assigned sectors and prepare defensive positions in depth. Extensive patrolling is initiated early between adjacent defensive positions within the airhead line and between the airhead and the combat outposts. Army aircraft are well suited to support this patrolling. Contact with friendly guerrilla forces is established as rapidly as possible.

(3) Personnel are briefed on unit plans, plans of adjacent and higher units, and alternate plans so that if they land in other than their planned area, they can still help accomplish the general mission. Misdelayed units or personnel establish contact with their headquarters as soon as possible.

(4) Reserves, consisting of either withheld forces or restricted forces, prepare and occupy blocking positions pending commitment. Typical missions for reserves committed during the initial assault include performing the mission of misdelayed units, dealing with unexpected opposition in securing assault objectives, and securing the initial airhead.

d. When the division is reinforced with armor units, it is employed in accordance with

the principles contained in FM 17-1, FM 17-15, FM 17-30, and FM 17-36. Tank battalions in the assault phase operate under decentralized control. Tank companies are normally attached to airborne brigades or battalions. The allocation of tank units to the brigades depends on the estimate of combat power necessary to secure initial objectives. During the assault phase, armor elements are employed in the assault gun role. The tank battalion (minus) (with or without tank companies) may enter the objective area as part of the division or brigade reserves. FM 17-1, FM 17-15, FM 17-30, and FM 17-36 contain detailed information.

e. In division operations, one 105-mm field artillery howitzer battalion is normally attached to each brigade. Regardless of the organization for combat in the initial assault, centralized control of all division artillery is regained as soon as practicable. After assault objectives have been secured, artillery units may displace to selected positions well forward within the airhead to support the combat outposts. Artillery may be emplaced outside the airhead to support combat outpost forces. When troops on the combat outposts withdraw, the artillery displaces to selected positions in the airhead. After reorganization, airborne artillery adheres to tactics and techniques applicable to other artillery units. FM 6-20-1 and FM 6-20-2 contain detailed information.

f. Principal missions of engineer units during the assault include providing combat engineering support to the assault units, initiating construction of air-landing facilities, rehabilitation of airfields, and preparation of obstacles for security of the airhead. The engineer annex to the operation order contains detailed instructions concerning tasks to be accomplished or initiated during the assault. Engineers are brought under centralized control as soon as practicable to perform their supporting tasks more efficiently.

g. Whenever possible, organic and attached Army aircraft move to the objective area under their own power, arriving as soon as possible after the initial assault. Flights are closely controlled and regulated to avoid inter-

ference with flights of the airlift elements. Within the field army area, pathfinder units provide terminal guidance for Army aircraft as outlined in FM 57-38. Airlift elements also provide certain navigational aids. Although flights at low altitude are the primary passive means of avoiding enemy counteraction, fighter aircraft provide air escort.

(1) When the distance from the departure area to the objective area is beyond the range of Army aircraft, but the distance from forward battle areas is within their range capabilities, aircraft adopt the procedures outlined below. After being serviced in the departure area, aircraft depart on a planned schedule. They are reserviced in the forward areas and fly planned routes to the objective area. Naval carrier-type vessels can be used as refueling bases or for transport on one leg of the trip to the objective area. When none of the methods cited above can be used because of the extreme range to the objective area, Army aircraft can be disassembled for transport in airlift aircraft. Lighter Army aircraft can be partially disassembled for transport and reassembled for use in the objective area. However, this is a time-consuming operation, and its impact on tactical plans must be considered. For other aircraft, particularly large helicopters, the complexity of the reassembly process in the objective area prohibits their early employment.

(2) FM 1-15 contains details on the organization and employment of the divisional aviation battalion and group.

10-19. Organization of the Objective Area

a. The major consideration after the initial assault landings have been made and the initial ground missions have been accomplished is the organization of the airhead and the surrounding territory. Combat, combat support, and combat service support forces within the airhead are disposed to conduct the initial defense pending initiation of subsequent operations.

b. The degree to which the airhead is occupied and organized for defense is determined by the mission, enemy capabilities, troops available, defensive characteristics of the ter-

rain, and duration of the operation. Commanders adjust planned dispositions of troops and installations to fit the terrain and situation.

(1) Combat outpost forces are reinforced as soon as possible after completion of assault missions. Reconnaissance forward of the combat outpost is intensified by air and surface means. Roadblocks, minefields, and similar artificial obstacles are continuously improved along all likely avenues of approach.

(2) The division conducts the defense of the airhead by aggressive action as far forward of the airhead as possible. It organizes strongpoints in depth on dominant terrain and covers main and secondary avenues of approach into the airhead. It covers intervening gaps by fire, artificial obstacles, and continuous reconnaissance and surveillance. The small reserves of the initial assault are augmented. The commander can influence ground action by—

- (a) Committing the division reserve.
- (b) Modifying missions and changing objectives.
- (c) Shifting units and boundaries.
- (d) Reallocating fire support.
- (e) Being present.

(3) The airborne division commander receives reports concerning the enemy's reaction to the airborne assault from Air Force reconnaissance aircraft, the armored cavalry squadron, Army aviation elements, and subordinate units of the division occupying positions on the airhead line. From these reports the commander determines the most likely areas of enemy counterattacks. As these areas are identified, units occupying the least threatened positions on the airhead line can be moved to reinforce threatened areas. This movement is facilitated by lines of communications within the airhead. Reserves are prepared to counterattack, to occupy defensive positions, and to execute blocking missions. Brigades make the major counterattacks to restore the airhead line. In major penetrations, the brigade reserve can be committed in a blocking role, with the division reserve attached to the brigade for execution of the counterattack. Priorities are established for the designation of new re-

serves. If the division reserve is committed, it can be reconstituted from reserves of subordinate units that are not being employed, from units holding portions of the airhead not heavily engaged, or from division troops or support command units. The division reserve is normally committed by attachment to the brigade in whose sector the reserve is to be employed, since the shape and area of the airhead normally will not permit retention of a brigade headquarters in reserve.

c. During the initial phases of an airborne operation, one of the primary defenses against enemy armor is tactical air support. Enemy armor is attacked as far as possible from the airhead and is maintained under observation and attack as long as it is a threat. Antitank weapons are located in depth along favorable avenues of approach for armor. All major avenues of approach are covered by planned nuclear, chemical, and conventional fires. The antitank weapons organic to units not under armored attack can be concentrated pending anticipated employment or can be moved to threatened sectors.

d. In major operations, organic air defense artillery units, air defense artillery units of higher headquarters, and the Air Force provide protection against enemy air attack.

10-20. Subsequent Operations

a. Following the assault phase and the organization of the objective area, as discussed in the preceding paragraphs, the operations of the airborne force may include continued defense of the airhead until link-up, ground or air withdrawal to another area, or a buildup of forces in the objective area as a base for further combat operations.

b. Withdrawal of the airborne force may be planned as a part of the ground scheme of maneuver, or it may be forced by enemy action. Withdrawal to another area behind enemy lines is feasible for large forces but is seldom conducted by units smaller than a division. The availability of aircraft, especially vertical takeoff landing aircraft, enables elements of the airborne force to execute a delaying action along major avenues of approach. However,

limited of ground vehicular mobility, lack of armor, communications considerations, command and control over relatively great distances, and the sacrifice of mutual support usually make delaying action by the airborne division impracticable. If withdrawal from the initial positions is required, the final area to which the airborne force withdraws must contain adequate space for maneuver, for protection of critical installations, and for air-landing or air withdrawal operations. Techniques for the planning and conduct of retrograde operations contained in chapter 8 are applicable to the conduct of the withdrawal executed by an airborne force.

c. An extensive buildup of troops and supplies in the objective area may be implicit in the mission of the airborne division. Major factors to be considered in planning the buildup are air-landing facility construction, the reception of troops and materiel, the preparation of units for further operations, the requirements for combat service support facilities and troops, and the availability and capability of aircraft. Plans for buildup must be considered simultaneously with plans for air movement. Details are reflected in the air movement table, air loading table, and other documents.

d. Airborne operations can be conducted from the objective area. Forces are given mission-type orders, and the operation is launched with minimum preparation. The airborne operation mounted from a division objective area employs only a portion of the division in airborne assault.

(1) Prior to launching subsequent airborne assaults, units should receive personnel replacements, and individual and unit equipment should be inspected and replaced or repaired as necessary. To avoid congesting the objective area with equipment during preparation for the subsequent assault, equipment to be delivered by heavy drop can be obtained as additional items from theater army support command resources and can be rigged and loaded in the original departure area by rear echelon personnel or by theater army support command units. The heavy drop aircraft are flown to predesignated rendezvous points

where they join air columns departing for the new objective area.

(2) If necessary, platforms, parachutes, and other required rigging and loading equipment, along with technical advisory personnel, can be flown in and the equipment of the airborne force can be rigged and loaded for heavy drop. Aircraft that are to drop personnel should arrive with the required number of packed personnel parachutes.

10-21. Air Traffic Control

a. In joint airborne operations, the joint task force commander has air traffic control. The airspace utilization annex is developed concurrently and coordinated with the air movement and fire support plans. Control is exercised over all aircraft and artillery fire support means operating in a designated area and remains in force until the operation has been completed.

b. The air traffic coordinating center is established by a joint force commander to exercise air traffic regulation over all aircraft operating within a designated regulation area, including the airborne objective area. It contains Army, Air Force, and Navy elements, and its operations are directed by the joint force commander. The joint force commander develops detailed air traffic control procedures early in the planning phase of each operation. These procedures are coordinated with the Army, Air Force, and Navy commanders and permit maximum freedom of operation for all aircraft.

10-22. Airborne Raids

a. Airborne raids are similar to other raids except—

(1) The raiding force is airlifted to the objective area.

(2) The raiding force can be withdrawn by air.

(3) The airborne raid is more apt to go beyond the supporting distance of the parent unit than other raids.

b. The raiding force may be assigned an area of operations rather than a specific objective and may operate separately or with guerrilla forces. Suitable missions for the raid are to

destroy, capture, or harass enemy forces; destroy installations; secure critical equipment or other intelligence objectives; rescue friendly personnel; or disrupt enemy headquarters or communications.

c. Withdrawal plans, considered concurrently with other plans, may be the overriding consideration. Other aspects of planning and preparation for airborne raids closely parallel those required for the airborne assault. Plans for movement are designed to deliver the raiding force to the objective area with the minimum risk of detection. Detailed intelligence is essential to the successful planning and conduct of the airborne raid. Plans are made to isolate the objective area. A coordinated effort, involving fires from aircraft, missiles, and naval forces, is directed toward destroying or disrupting enemy forces moving to the objective area. Guerrilla forces can assist by destroying bridges and communications and by blocking defiles. Withdrawal from a raid under heavy enemy pressure may be difficult and therefore requires detailed, flexible plans.

d. The raiding force must be the minimum size required to accomplish the mission. The raiding force is organized into self-contained elements for specific tasks. Such elements may include assault parties, security parties, and a reserve. Unit structure is retained when practicable. This permits the use of the established chain of command. Special equipment required for the operation may have to be destroyed prior to the withdrawal. The reserve may be kept outside the objective area to be flown in when required, or the raid may be conducted without a reserve.

e. If possible, airborne raids are carried out under conditions of low visibility to achieve surprise. During daylight, raids normally require more supporting fires and increased measures to restrict enemy ground observation and electronic detection. The raid is executed as swiftly as possible, and the force is withdrawn before the enemy can react with significant force.

f. Except when raids must be mounted on very short notice, units receive special training

for each operation. Normally there is at least one rehearsal of the entire operation to include the withdrawal phase. An early rehearsal insures that any lessons learned can be incorporated in the operation plan. When air and naval forces participate in the raid, they also participate in the rehearsal. The ground phase is rehearsed on terrain similar to that in the objective area and under conditions similar to those anticipated for the actual raid. Chapter 12 contains details on conducting a raid.

g. The raiding force withdraws by air, land, sea, or a combination of these means. The withdrawal must be carefully planned since it is frequently the most difficult part of the operation. The raiding force prepares alternate withdrawal plans for unforeseen developments. An air withdrawal can be made by assault or medium transport aircraft or by helicopter, and can be preceded by overland withdrawal to pickup points. Submarines, destroyers, and small boats can be used when evacuation by sea is practicable. Plans provide for alternate beaches and in some instances for naval gunfire to cover the withdrawal. An overland withdrawal of the raiding force is favored when—

(1) The distance to friendly lines is relatively short.

(2) The terrain provides cover and concealment for the movement of small groups on foot and limits the employment of mobile units against the raiding force.

(3) Enemy forces are widely dispersed or are under such pressure that it is difficult for them to concentrate against the raiding force.

(4) The raiding force is lightly equipped and does not have the mission of evacuating captured personnel or materiel.

(5) The raiding force moves through an area occupied by friendly civilians, or friendly partisan or guerrilla forces can assist the withdrawal.

h. Normally, the raiding force carries only the supplies and equipment necessary to accomplish its mission. However, some missions particularly for a overland withdrawal, may require resupply. Resupply is made by airdrop directly to the raiding force. Captured materiel

and weapons are used to the maximum. Equipment and supplies that cannot be evacuated are destroyed.

i. The headquarters controlling the raid must have command or operational control of all units to insure complete coordination and control. A reliable communications system between the raiding force and the next higher headquarters outside the objective area is essential for overall coordination.

10-23. Area Interdiction Operations

a. An airborne force can be assigned an area interdiction mission to prevent or hinder the enemy operations in a specified area. This type of operation is appropriate in conjunction with a major offensive by friendly forces. It may be either a short or a long duration operation. Although the force commander retains overall control of the operation, the operation is characterized by assignment of areas of operation to subordinate units. Elements of the division operate over a large area to destroy enemy communications facilities and supply installations; to destroy or neutralize enemy anti-aircraft, missile, and electronic facilities; and to cut rail lines, crater roads, and destroy bridges to disrupt or prevent movement of enemy supplies and combat forces.

b. Terrain that limits or restricts the off-road mobility of enemy forces assists the airborne force in accomplishing an interdiction mission.

c. The area assigned to the airborne force is divided into sectors. Each of the subordinate elements of the airborne force is responsible for operations in its sector. The force, dispersed over such large area, presents few, if any, profitable targets for enemy weapons.

(1) The interdiction area assigned the airborne force must provide space for the maneuver and permit the use of reconnaissance and security forces.

(2) The elements of the force operating in the various sectors inflict maximum damage on any enemy forces in, or entering, the objective area. No attempt is made to deny the interdiction area to the enemy. Enemy forces in the area are subjected to maximum harass-

ment. However, specific tasks assigned by higher headquarters may require decisive combat.

(3) Equipment, weapons, or supplies that reduce the off-road mobility of the airborne force are not normally brought into the interdiction area.

(4) The airborne force controls certain locations to provide for aid stations, evacuation points, refueling facilities, and the delivery of supplies.

d. Sufficient ground and air transportation is introduced into the objective area to enable the airborne force to accomplish its mission and to avoid being pinned down and defeated in detail.

(1) Elements of the airborne force may be moved within the interdiction area by vertical or short takeoff and landing aircraft. The number of aircraft introduced into the area of operations depends on the distance from friendly areas and the ability of the aircraft to survive and operate within enemy territory.

(2) If a reserve is not taken into the objective area, the commander may provide additional forces to threatened sectors by moving an on-call reserve from the departure area or by shifting unengaged forces from one subordinate unit to another within the interdiction area.

e. Forces do not move outside the designated area without specific authority of the higher headquarters coordinating the entire ground-air-airborne effort. The restriction on movement is necessary to reduce coordination prob-

lems and to allow higher headquarters to deliver all types of fires in the enemy area not included within the interdiction area.

f. Coordination and control of forces in the interdiction area are highlighted in three general areas:

(1) *Control of nuclear and chemical fires.*

Maximum control of fires is required to avoid casualties among the dispersed and moving elements of the airborne force. Certain areas in which targets for nuclear or chemical munitions either exist or will exist are designated as "no entry" areas. These areas are reserved for attack by nuclear or chemical munitions. Their location is disseminated to all appropriate levels of command. Forces are allowed to enter these areas only on specific approval of a designated control headquarters.

(2) *Communications.* The dispersion of the airborne force over a large area complicates communications problems and may require the augmentation of radio facilities.

(3) *Supply.* The airborne force enters the objective area with its accompanying supplies. Additional supplies are delivered on an on-call basis to selected locations. The situation existing within the interdiction area may require that aircraft landing in the objective area or airdropping supplies be directed to usable areas by air controllers operating within the interdiction area. Since a minimum supply level is maintained in the interdiction area, forces must capture enemy stocks and live off the land.

CHAPTER 11

AIRMOBILE DIVISION OPERATIONS

Section I. INTRODUCTION

11-1. General

a. This chapter contains doctrine, tactics, and techniques for the employment of the airmobile division when they differ from those employed in other divisions.

b. Information is provided to guide commanders and their staffs in the employment of the combat, combat support, and combat service support elements of the division. Publications listed in appendix A contain detailed information concerning the employment of subordinate units of the division.

11-2. Organization, Capabilities, and Limitations of the Division

Tables of organization and equipment authorize the airmobile division sufficient organic aviation to provide battlefield airmobility for the combat, and combat support, and combat service support elements. All units of the division can be readily employed at distances be-

hind enemy forward defense areas within range of the assault helicopter by using organic means in a series of lifts. However, the division is most effective when helicopters remain in the objective area available to transport troops within the objective area or to new areas. The most important capability of the division is its ability to rapidly redeploy forces to engage the enemy anywhere within the assigned area of operations. Speed and surprise, together with the ability to concentrate a sizable number of troops at a specific point for a specific purpose, are the key to success. The airmobile force is enemy-oriented, and terrain obstacles have little influence on its movement; but obstacles can be used to limit the enemy's ability to maneuver. Similarly, the ability to disperse these forces once their mission is accomplished is of great importance. Chapter 1 discusses specific capabilities and limitations.

Section II. PLANNING AIRMOBILE DIVISION OPERATIONS

11-3. General

The Army's airmobility concept uses aerial vehicles to maintain the balance among the five functions of combat power: intelligence, command and control, firepower, combat service support, and mobility. The airmobile division is equipped and organized to capitalize on the use of aerial vehicles in the application of this concept.

11-4. Command and Control

a. The tempo of airmobile operations demands command and control procedures which depend, to a large degree, on the issue of mission-type orders and the use of standing oper-

ating procedures. Often, independent decisions will be made down to, and including, the squad (helicopter) level. Every small tactical unit must have the authority and ability to modify plans or to change to alternate plans at a moment's notice within the concept of the operation.

b. Most command and control information is transmitted by radio. The distances involved in airmobile operations create a requirement for more radio retransmission facilities than needed in other division operations.

c. Tactical operations centers must be flexible and highly mobile. Fragmented control facilities are normal in airmobile operations.

d. Time for the exercise of troop-leading procedures is minimal and abbreviated procedures will be used. Limited time creates a requirement for standing operating procedures and mission-type orders as well as for highly trained troops and aggressive leadership. Success is achieved by habitual integration of ground combat troops and their support down to the lowest possible level in both training and actual combat. Therefore, decentralization of control becomes essential. Task forces consisting of infantry, aviation, aerial and airmobile artillery, and other supporting units are commonly used. Subordinate units must react instantaneously and with minimum direction whenever the enemy is vulnerable.

11-5. Intelligence

a. The airmobile division, with its capability for dispersion and airmobility, requires timely and accurate intelligence. Detailed information of enemy antiaircraft capabilities is particularly important in airmobile operations for the planning and execution of countermeasures. Timely and adequate intelligence allows airmobile commanders to use the combat power gained from the aerial mobility.

b. Closely associated with intelligence is the problem of security. The habitual wide dispersion within the airmobile division reduces the probability of creating remunerative nuclear targets; however, it restricts or limits mutual support between units as well as support that can often be gained from adjacent and higher units.

c. The division's dependence on aerial vehicles makes it more susceptible to enemy antiaircraft defenses and enemy air attack. Conversely, the increased mobility of the reserve elements reduces the size and numbers of reserve forces required for this aspect of security.

d. In providing timely intelligence at greater-than-normal ranges and over larger-than-normal areas, the reconnaissance and surveillance means organic to the division give early warning of enemy threats and partially compensate for the loss of security from dispersion. The Army Security Agency division support company and clandestine intelligence

resources available to the division provide valuable supplemental information.

e. The division achieves success in battle by attacking recognized weaknesses with such speed, violence, and aggressiveness that the adversary must continually react defensively rather than being allowed to exercise his initiative. The faster the tempo of operations, the greater the demand for speed and accuracy in the production of intelligence. The airmobile division commander increases the responsiveness of information collection means by directly controlling both aerial and ground surveillance resources.

11-6. Firepower

a. The airmobile division lacks the medium and heavy artillery fire support found in the armored, infantry, and mechanized divisions. The conventional artillery found in the airmobile division employs the same techniques of fire support as used by other divisions; however, the normal primemovers for artillery weapons are helicopters rather than ground vehicles. Displacement by aircraft provides the artillery with expanded flexibility and mobility in its fire support role.

b. Firepower also is generated by the use of rockets mounted on helicopters. Aerial artillery elements normally accompany the air assault force to the objective area and provide preparatory fires and on-call fire support. They may maintain firing sections on aerial standby pending the arrival of cannon artillery to support forces in the objective area. Armed helicopters that escort airmobile formations en route to and from objective areas provide additional support. These helicopters provide both suppressive and destructive fires on enemy elements that threaten the mission of the airmobile force. These aircraft can also provide support in the objective area. This additional type of firepower provides the division with responsive fire support that is as flexible and mobile as the division itself.

11-7. Mobility

a. The airmobile division uses helicopters as the primary means of mobility. It has very limited ground mobility resources.

b. Aerial mobility affords the airmobile unit commander speed and flexibility to accomplish a wide variety of tasks.

c. The speed of reaction, retention of unit integrity, decrease of fatigue in combat personnel, and extension of the areas of influence are advantages of aerial mobility. Disadvantages are dependence on responsive tactical air support and sensitivity to extremes of weather. These disadvantages are more critical for the airmobile division than for other divisions.

d. The use of helicopters as the primary means of mobility in the airmobile division requires that all division tactical operations be considered airmobile operations with the associated peculiarities in planning and execution. The airmobile division relies on air lines of communications almost exclusively. Use of ground lines of communications requires ground vehicle augmentation.

11-8. Combat Support

a. *Combat Support Elements.* The organic combat support elements are the aviation group, division artillery, signal battalion, and engineer battalion. All elements of these units are normally employed in either the initial or the follow-on echelons from the division base of operations into the objective areas.

b. Fire Support.

(1) The principles of employment and coordination of fire support described in chapter 4 apply to the airmobile division. The division artillery is the primary source of organic fire support. It contains airmobile artillery battalions and the aerial artillery battalion.

(a) The airmobile artillery battalion can deliver fire from ground positions only. If available positions within areas under friendly control are in supporting range of the objective, airmobile artillery units can deliver close and continuous fire support. When the objective is beyond supporting range, the airmobile artillery units displace by air to positions within supporting range. Displacement may precede, follow, or be concurrent with the movement of the supported force.

(b) The aerial artillery battalion is highly mobile and can deliver immediately responsive fires from an airborne position to sup-

port the combat element. Aerial artillery with aerially mounted rocket launchers can reinforce a direct support artillery unit and are normally employed in a general support or general support-reinforcing role. The aerial artillery battalion has organic antitank missile systems to provide for armor defense.

(2) The organic fire support of the air cavalry squadron can support squadron operations; however, by appropriate mission assignment, the armed aerial vehicles of the squadron may augment other fire support means. The air cavalry troops have aerial vehicles armed with a rocket, an antitank missile, or a 40-mm grenade launcher armament system. The cavalry troop provides a ground antitank capability.

(3) The aerial weapons company of each of the two assault helicopter battalions, by appropriate mission assignment, can augment other fire support means. However, the primary function of aerial weapons companies is to provide suppressive fires to protect airmobile landings. Fire support provided by the aerial weapons companies is integrated into the fire support plan of the supported unit.

(4) The firepower of the division artillery may be augmented by close air support aircraft and naval gunfire as well as by attaching or assigning tactical missions to artillery units from corps or army when permitted by the mission and location of the division.

(5) FM 1-100 contains doctrine for the employment of armed helicopters organic to the airmobile division and nondivisional army airfire support means.

c. *Engineer Support.* The engineer support required by the airmobile division varies depending on the organization, equipment, and mission.

(1) The airmobile engineer battalion has the same task capabilities for providing general engineer support as other division engineer battalions, except that it lacks organic bridging. Additionally, the productivity of the lightweight airmobile construction equipment is substantially less than similar types of equipment in other engineer units. Bridging and heavier construction equipment support is

obtained from supporting nonorganic engineers.

(2) Elements of the airmobile engineer battalions are normally placed in direct support of, or are attached to, committed brigades and battalion task forces. Principal missions of such elements are preparation and maintenance of landing zones for helicopters and construction of airfields for fixed-wing aircraft. Such elements are also responsible for land clearance and construction of roads, trails, and fire-bases required for deployment and operations of the supported units within or beyond initial landing zones. They may also prepare demolitions, install minefields and other obstacles required for defense, and provide security of the supported command.

(3) Airmobile heavy construction equipment of the headquarters and headquarters company of the airmobile engineer battalion and nonorganic supporting engineers can reinforce line companies and platoons.

(4) Division controls airmobile engineer elements and supporting nonorganic engineer units which are not attached to major subordinate combat units. They are normally employed in general support activities such as construction, improvement, and maintenance of division base airfields, heliports, interior roads, fire support bases, and combat service support facilities.

(5) The battalion depends on support aircraft, particularly medium and heavy helicopters, for deployment of its equipment, supplies, and personnel in airmobile operations.

d. Communications Support.

(1) The airmobile division communications system depends primarily on radio, both FM and AM (SSB). It consists of—

(a) Signal centers operated by the division signal battalion at each echelon of division headquarters and the support command.

(b) A flexible network composed primarily of radio nets interconnecting the signal centers and major subordinate division elements.

(c) A messenger service linking the division headquarters and its echelons with the major subordinate commands of the division.

(d) A limited number of radio wire in-

tegration stations capable of interconnecting mobile FM radio stations with the local telephone system of division main, the support command, and each brigade.

(2) Figure 4-12 illustrates a recommended configuration for the airmobile division radio nets. Final determination of communications employment is made by the division signal officer based on the tactical situation, frequencies and equipment available, and desires of the division commander.

(3) Chapter 4 discusses the employment of the airmobile division communications resources.

e. Aviation Support.

(1) Organic aviation enhances the potential of airmobile combat forces by providing tactical mobility and aerial weapons platforms. Aviation support of the division includes:

(a) Airlift.

(b) Fire support.

(c) Reconnaissance, surveillance, and target acquisition.

(d) Pathfinder support.

(e) Air traffic control.

(f) Command, control, and liaison.

(g) Messenger service.

(2) The primary source of aviation support within the airmobile division is the organic aviation group. The aviation group consists of a headquarters and a headquarters company, two assault helicopter battalions, medium helicopter battalion, and a general support aviation company. The capabilities of the aviation group are as follows:

(a) *Airlift.* At normal aircraft availability the aviation group can airlift simultaneously the assault elements of two airmobile infantry battalions and three howitzer batteries. Normally each assault helicopter battalion lifts the assault elements of an airmobile infantry battalion. The medium helicopter battalion usually transports howitzer batteries into firing positions; however, it can be used to lift reserve units not contained in the initial assault echelon. Each medium helicopter company can lift one howitzer battery or two airmobile infantry companies or any combination thereof. The aviation group provides airlift for

the division reserve or for additional combat, combat support, and combat service support in subsequent lifts. When the division makes a large-scale assault, the two assault helicopter battalions carry infantry troops and their individual equipment and light crew-served weapons into the objective area. The medium helicopter battalion normally brings in infantry reserves or supporting artillery or a combination of the two. A typical load is two companies of the reserve infantry battalion of a brigade and two artillery batteries or the complete artillery battalion. Delivery of these troops and equipment begins as soon as the landing area is cleared of hostile fire. These capabilities of the aviation group must be considered in planning airmobile operations. The maximum force that can be deployed by organic aviation at one time is the assault elements of one brigade of three infantry battalions. Additional aircraft are necessary to deploy more than one brigade simultaneously or to deliver support personnel or supplies.

(b) *Reconnaissance, surveillance, and target acquisition.* The aerial surveillance platoon executes reconnaissance, surveillance, and target acquisition missions. The aerial surveillance platoon provides visual surveillance, radar, infrared, conventional aerial photography, and limited battlefield illumination.

(c) *Pathfinder support.* The pathfinder platoon of the aviation group headquarters and headquarters company provides pathfinder support. In airmobile operations, pathfinder detachments can be attached to committed brigades. FM 57-35 and FM 57-38 discuss the mission and employment of pathfinder detachments, transportation modes and visual signal procedures, conduct of operations, and terminal guidance support.

(d) *Air traffic control.* The aviation group commander normally is responsible for air traffic control in the division area. Minimum flight restrictions apply to aerial vehicles during operations. The aviation group commander has under his control elements of the Army air traffic company operating in the division area.

(e) *Command, control, and liaison.* The

aviation general support company provides aerial vehicles for division headquarters and other units not possessing organic aerial vehicles for command, control, and liaison.

(f) *Messenger service.* The aviation general support company provides aerial vehicles, as requested by division signal officer, for a high-priority and responsive aerial messenger service.

(3) Nondivisional Army aviation units assigned to the field army are normally assigned or 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 airmobile operations under brigade control.

(4) Plans for employing units using Army airlift can encompass operations up to and including the tactical airlift of battalions. Chapter 4 outlines procedures for requesting nondivisional Army aviation support for tactical operations. The airmobile division normally receives nonorganic airlift support when deployed in its entirety. The nonorganic support available varies greatly from the organic aviation group and is normally heavy in cargo aircraft (C-7A, C-123, and C-130) and helicopters (CH-47 and CH-54). These units move supplies and heavy equipment after the assault units have established a base in the objective area. These units can carry troops to reinforce the objective area.

11-9. Combat Service Support

a. The airmobile division requires a combat service support system able to support all division operations. Because the division is moved by aerial vehicles, supplies and equipment usually must be moved in the same manner. This may require a complete air line of communications for combat service support forward from a logistic base. This air movement requires an expanded aircraft maintenance capability and an increased use of aircraft to transport supplies as far forward as possible. To take maximum advantage of transport aircraft and to minimize the echeloning of supplies between the base camp and the supported combat units,

throughput of supplies from base to forward units with minimum handling and transshipment is required.

b. Combat service support in the airmobile division relies primarily on ground lines of communication supplemented by air lines of communications from the field army logistical installations to the division. The airmobile division has more personnel available in the support command than other divisions to operate at the brigade bases. A forward service sup-

port control section of the support command is employed in each brigade base. The forward service support control officer of the support command commands this unit and has operational control over all support command units in the brigade base. FM 54-2 contains details of combat service support for the airmobile division.

11-10. Planning

FM 57-35 contains detailed doctrine for airmobile operations.

Section III. OFFENSIVE OPERATIONS

11-11. General

The airmobile division is employed in offensive operations for the same purposes as other divisions. Because of the means available to the airmobile division commander, the tactics and techniques for offensive operations vary from those of other divisions. Maximum use is made of the mobility of the division to introduce it to the battle area at the critical time and place. However, the responsiveness of the division and its subordinate units within the battle area is of even greater importance to the commander. This responsiveness is made possible by the use of organic helicopters that remain with the division and its subordinate units in the battle area to redeploy forces rapidly for operations anywhere in the battle area.

11-12. Concept of Offense

a. In the offense, the attacker seeks to force the enemy to react in conformance with the offensive plan. The attacker seizes and retains the initiative, thus permitting the commander to direct his movements and to employ his forces in a decisive manner. An offensive that gains tactical surprise and is prosecuted with vigor can accomplish the mission before the enemy can take effective counteraction.

b. The airmobile division is organized for combat to make the best use of all its elements. It employs a combination of fire and maneuver to accomplish offensive missions under conditions of either nuclear or nonnuclear warfare.

(1) Offensive airmobile operations exploit terrain obstacles and the close tactical integra-

tion of troop lift and supporting fires applied with precision and speed over extended distances to achieve tactical surprise. The integration of maneuver, firepower, control, intelligence, and combat service support is maximized to introduce airmobile forces into objective areas from any direction or into landing areas in proximity to objectives for followup assault on foot. Rapid assembly of widely dispersed elements and commitment in mass are characteristics of airmobile operations.

(2) The greater maneuver capability of the airmobile force increases its ability to achieve surprise; therefore, it is less dependent on heavy, sustained ground fires. Airmobile forces are protected during offensive tactical operations by the close integration of organic fires of ground and aerial fire support elements with close air support. Armed helicopter escorts accompany aerial columns, and aerial artillery provides suppressive fires in objective areas.

(3) Airmobile forces are relatively unrestricted by terrain. Operations are carried out to locate and destroy enemy forces and installations and to prevent enemy withdrawal, reinforcement, resupply, or shifting of reserves. As missions are accomplished, airmobile forces can move by air to attack successive objectives or can disperse for reorganization and resupply.

(4) Organic aviation enhances the versatility and flexibility of combat units in offensive operations. The threat of airmobile operations can cause the enemy to relocate combat

forces to protect supporting units, installations, and rear areas.

11-13. Forms of Maneuver

a. The airmobile division is less likely to employ all the forms of maneuver in offensive operations than other divisions. Since the division lacks armor and much of the organic fire support of the other divisions, its employment in the penetration or ground envelopment is infrequent. Organic aviation makes the unit ideal for a vertical envelopment or a turning movement.

b. The division can be a part of a larger force that conducts any of the forms of maneuver. Maximum use is made of the division's ability to strike deep in the enemy rear. When the division is out of supporting range of ground artillery, it depends on organic aerial firepower, aerial and airmobile artillery, and tactical air for fire support. Chapter 6 discusses the forms of maneuver in detail.

11-14. Basic Considerations in Offense

a. General. The same basic considerations of offense apply to the airmobile division as to other divisions. However, because of the primary means of maneuver employed by the airmobile division, there are some changes in the application of these considerations.

b. Terrain. The abundance of means of acquiring aerial observation within the division reduces the importance of high ground for observation.

c. Obstacles.

(1) Most obstacles do not deter the movement of an airmobile division; however, obstacles can have a decided effect on the courses of action available to the opposing forces. Therefore, when planning tactical operations, the division should insure that it obtains maximum advantage of the effects of the obstacles on enemy capabilities.

(2) The mobility of the division can minimize the effects of obstacles created by nuclear, biological, or chemical fires.

d. Cover and Concealment. Maximum cover and concealment are sought, particularly in planning flight routes. Cover can be gained by using defiladed flight routes (nap-of-the-earth

techniques) that limit the effectiveness of enemy antiaircraft weapons and small-arms fire. Concealment can be gained by flying over heavily wooded areas to reduce the exposure of aircraft to enemy fires.

e. Fields of Fire. In the attack the division uses cover for protection or concealment to reduce the enemy's ability to gain observed fires on our aircraft. When operating against an enemy who lacks air defense weapons, the aircraft can fly at high altitudes to limit the accuracy and effectiveness of enemy small-arms fires.

f. Key Terrain. Since the airmobile division overflies terrain to reach the objective, the importance of intermediate terrain is minimized. Terrain analysis must include selection of primary and alternate landing zones in the objective area and emergency landing sites en route to the objective. Terrain in or near the objective area that is important to the mission is key terrain to the commander.

g. Avenues of Approach.

(1) In airmobile operations an avenue of approach is selected based on criteria different from those used in other ground operations. An avenue of approach is a route for deployed forces that provides observation and relatively limited exposure to enemy fire.

(2) Possible avenues of approach are analyzed, avoiding air defense weapons and hazards to low-level flight (e.g., power lines), flying over wooded areas while remaining close to emergency landing areas, and placing land-masses between the flight route and known radar or other detection devices.

(3) Avenues of approach are used that allow movement to the objective area without compromising the specific objective, thus maximizing the possibility of surprise.

h. Weather.

(1) Weather is an important consideration in planning airmobile division operations. The ability of the division to maintain a favorable tactical mobility differential over enemy ground forces and to provide continuing logistical support depends on the ability of aircraft to fly. Adverse weather, particularly low ceilings, poor visibility, and high winds, can restrict flying.

(2) Weather minimums must prescribe the least acceptable weather in which operations can be conducted. Weather minimums are based on the type of aircraft employed, navigational aids available, terrain along flight routes, and time of the operation. Rotary-wing aircraft are more adaptable than fixed-wing aircraft to marginal weather conditions. Present navigational systems permit aircraft operation in wide variations of weather.

11-15. Fire Support

The airmobile division plans for fire support in the same manner as other divisions. However, the division, or subordinate units of the division, can be employed beyond the range of normal ground artillery support. Combat units depend on organic aerial artillery fire support, other organic aerial fire support, and tactical air support. These fires are delivered during the approach, landing, assault, reinforcement, and withdrawal of airmobile forces.

11-16. Mobility

The organic aircraft of the airmobile division give it a mobility advantage that is considered when planning offensive operations. The division can attack anywhere within the battle area so rapidly that the enemy has little time to react. Airmobile forces can fly over or around terrain obstacles and enemy forces. This mobility permits the airmobile commander to mass his combat power rapidly at one place oriented on the enemy force. Similarly, as soon as an operation is completed, the commander can rapidly redeploy his forces.

11-17. Frontages and Formations

The airmobile division is not normally employed as other divisions with an assigned frontage or in standard ground formations. The sequence of commitment of subordinate units replaces these standard formations.

11-18. Division Organization for Combat

a. The same basic principles apply to organizing an airmobile division for combat as apply to other divisions. Because of distances involved and the decentralization of control inherent in many missions assigned to subordinate units, except in the case of maneuver bat-

talions, attachment of units to brigades occurs more frequently in the airmobile division than in other divisions.

b. Subordinate units of the aviation group are attached to, or placed in support of, committed brigades. The assault helicopter units normally remain with the brigade units to provide an immediately available airlift capability to the brigade commander and give him mobility within the battle area. Medium helicopter units support the committed brigades to provide primemovers for the artillery and to deliver essential bulky supplies to subordinate units.

11-19. Planning the Attack

The airmobile division applies in the same principles as other divisions in planning the attack. Since the initial movement to the objective area is normally by air, the control measures contained in FM 57-35 usually apply. However, in subsequent redeployment of forces within the objective areas, fragmentary orders and reliance on standing operating procedures will be normal. Time is an important factor, and the time lost during the issue of complete orders may negate the advantages gained by superior mobility.

11-20. Types of Offensive Operations

a. *Movement to Contact.* An airmobile division is well suited for employment as the covering force for a larger unit during a movement to contact. Some considerations in movement to contact are:

(1) Integration of air cavalry reconnaissance aircraft and aviation group surveillance aircraft to insure forward area aerial coverage.

(2) Use of airmobile flank guards that move by bounds along exposed flanks to provide security.

(3) Use of airmobile units or patrols for necessary ground reconnaissance or combat in suspected areas to destroy targets of opportunity and to secure or deny key terrain.

(4) Use of the Army Security Agency division support company and other intelligence and security units to support both the division's movement and its preparation for reinforcement.

(5) Maintenance of airmobile reserves that can insure a rapid and uninterrupted advance.

(6) Retention of most of the combat power uncommitted during movement so that it is available for rapid deployment after contact has been established with the enemy main forces.

(7) Imminence of contact and the terrain determine the control required. Control must permit subordinate units to respond quickly to changes in mission, organization, and control measures.

(8) Tactical air reconnaissance aircraft perform day and night; visual, photo, and electronic reconnaissance missions are made to augment the efforts of Army aircraft, to detect enemy units or movement and to provide information on the terrain. Close air support aircraft reinforce frontal and flank security efforts. Column cover or air-alert aircraft are used habitually when contact is imminent.

(9) When contact with the enemy appears imminent, the airmobile security forces secure key terrain to cover the deployment of the other forces, establish flank security, attack by aerial envelopment to cause the enemy to deploy prematurely, or attack the flanks and rear of the main body.

(10) Nuclear weapons permit more rapid movement, since, with relatively small forces, they can eliminate enemy resistance that might otherwise require the deployment of sizable elements. Nuclear fires 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. A vague enemy situation requires that most nuclear and chemical fires be held on-call.

(11) The airmobile division has less strength and fewer fire support means than other divisions; therefore, it requires additional units and fire support once the main enemy force is engaged.

b. Reconnaissance in Force.

(1) Because of its mobility and organic capability to extricate itself from engagement with the enemy, the airmobile division is ideally suited to conduct reconnaissance in

force operations for a larger unit. The airmobile division seldom conducts an independent reconnaissance in force operation.

(2) However, when the division is involved in special operations, such as stability operations, its subordinate units will frequently conduct a reconnaissance in force. The division can exploit the success of the force involved or it can extricate the force.

c. Coordinated Attack. The airmobile division is not normally employed in the ground role in coordinated attacks because it lacks armor, nuclear resources, and medium and heavy nonnuclear fire support means. If it is employed in a ground role, it requires armor and artillery augmentation.

d. Exploitation. Corps can employ the airmobile division during the exploitation to secure objectives deep in the enemy rear, to cut lines of communications, to surround and destroy enemy forces, to deny escape routes to an enemy force, and to destroy enemy reserves. However, large enemy forces may be bypassed and not contained by airmobile operations. Therefore, when an airmobile division is deployed deep in the enemy rear, the commander insures that it does not encounter major armored units and risk destruction by becoming decisively engaged.

e. Pursuit. The airmobile division can conduct pursuit operations and can act as the enveloping force of a higher echelon in pursuit. The mobility of the division permits it to maintain continuous pressure on the enemy to prevent him from breaking contact. This mobility also allows elements of the division to encircle enemy forces. Aircraft supporting the division can be used to insure that sufficient supplies, especially aviation fuel, are available.

11-21. Control Measures

a. General. To control combat operations, the airmobile division uses only those control measures that insure a unity of effort. The rapid tempo of operations and the flexibility needed to react to changing situations under fluid conditions dictate that control be decentralized to the lowest echelon feasible. Control measures used by the division differ somewhat from those used by other divisions.

b. Time of Attack. The time of attack is the time that the airmobile force is to conduct the landing. When attacking a target of opportunity, the subordinate commander should, if possible, be allowed to select the time to attack in order to engage the enemy when he is in the most vulnerable position.

c. Formations. Division seldom dictates formations. Mission-type orders are issued to subordinate units, and formations become the sequence of commitment of these units.

d. Objectives. The airmobile division normally selects enemy forces as objectives but may select terrain objectives when they contribute to destruction of enemy forces.

e. Start Point. The start point is a designated point, recognizable from the air, used to assemble aircraft carrying assault troops to start their integrated movement to launch a massed attack against an enemy force. It aids in assembly and in setting an initial course along a flight corridor toward an area in which engagement with enemy forces is anticipated.

f. Air Control Point. An air control point is used as a navigational aid to check the progress of an airborne force along a flight corridor or to mark the point of a change of course. It is a recognizable terrain feature or may be marked by electronic navigational aids. During periods of reduced visibility, the air control point is marked by electronic aids.

g. Release Point. A release point is a readily identifiable point on the ground at the termination of an air corridor at which formations of assault aircraft break up and individual flight elements are released to proceed to individual

landing sites within the landing zone. The release point is the point at which the coordinated defense of the airmobile force ends. This coordinated defense is primarily route security and flak suppression. At the release point, air defense resources usually revert to area defense to protect the landing area, and flak suppression becomes the responsibility of the accompanying armed aircraft.

h. Air Corridor. An air corridor is used to control and coordinate the air movement of the division and subordinate elements. An air corridor is established by designating a specified distance right and left of a center line which is the route to be flown and by designating maximum and minimum altitudes. The air corridor is used to coordinate fires in support of the air movement and to coordinate a passage of lines when the division conducts overflights.

i. Boundaries. When two or more major subordinate headquarters operate in the enemy rear area, boundaries are used to establish operational areas. These boundaries are extended out to the limits of the area of influence of the major subordinate units. Coordinating points are seldom designated on these boundaries. An airhead line as used in joint airborne operations is seldom designated because of the nature of airmobile division operations.

j. Communications Check Point. A readily identifiable point on the ground along the flight route at which flight leaders initiate radio contact with landing zone control elements. The communications check point is normally also an air control point.

Section IV. DEFENSIVE OPERATIONS

11-22. General

The airmobile division is organized primarily for offensive operations and does not have the organic equipment necessary for sustained ground operations against a strong, well-equipped enemy force.

11-23. Limitations

The division has limited protection against tanks and lacks organic medium and heavy artillery fire support; therefore, the division re-

quires considerable augmentation for defensive operations in the forward defense area.

11-24. Participation in Defensive Operations

Although the airmobile division is not organized or equipped to retain specific terrain, it is suitable for some missions in the corps defense. The ability of the division to cover a wide area with mobile, widely ranging reconnaissance and security operations makes it suitable for

use as a corps covering force. It requires augmentation for this mission. As the division conducts a general delay throughout the corps security area, it can disorganize the enemy forces during their advance by attacking isolated units, columns, or logistical installations with-

out becoming decisively engaged with the enemy main force. Similarly, the surveillance capability of the division and its ability to re-deploy its forces rapidly make this unit ideal for defense of the corps rear area against airborne, airmobile, or guerrilla forces.

Section V. RETROGRADE OPERATIONS

11-25. General

a. Retrograde operations conducted by the airmobile division are characterized by aggressive spoiling attacks by highly mobile forces and early disengagement from numerically superior enemy forces. Decisive engagement for an airmobile force is that period when enemy ground action can prevent or materially hamper the extraction of the ground forces by air.

b. Retrograde operations are planned and coordinated at the highest level possible and decentralized for execution. Aviation support is allocated to the lowest echelon to insure timely response to the ground force commander. An adequate troop reserve is retained to assist in disengaging a committed force or to attack a vulnerable enemy force that has been canalized or massed.

c. Standing operating procedures, common to all units, should be developed to facilitate extraction of ground forces by air. These standing operating procedures should include, but not be limited to, fire support, priorities of extraction of combat, combat support, and combat service support units, responsibilities of ground and aviation commanders, standard flight formations, handling of wounded and prisoners, and provisions for destruction of supplies and equipment.

d. In all retrograde operations, consideration should be given to employing elements of the ground forces in a stay-behind role. These stay-behind forces can provide information, adjust fires, and assist in future airmobile spoiling attacks into the enemy's rear area.

11-26. Withdrawal

a. The withdrawal is used more frequently by the airmobile division than by other divisions. The fact that the division engages enemy forces deep in their rear areas, makes the

withdrawal an inherent part of many operations. A withdrawal plan is developed for all operations in enemy controlled areas.

b. The withdrawal must be supported by all fires available to the division with priorities of fires shifting, when feasible, from unit to unit as they commence their withdrawal. The air cavalry squadron can disrupt enemy attacks by attacking the enemy from the rear or flanks and interdicting his movement of troops to cover the withdrawal. The control and coordination of fires and tactical air support become paramount in a withdrawal.

c. An airmobile division conducts a withdrawal from contact along the forward edge of the battle area similarly to a withdrawal of other divisions except that the means of transportation is air vehicles.

11-27. Delaying Action

a. The airmobile division conducts the delay by employing minimum security forces forward and by using most of the division in offensive operations to disrupt and disorganize the enemy attack by striking him on the flanks or in his rear area.

b. Whether delay on successive or alternate positions is used has a definite effect on how the aircraft will be used to transport the security forces. When delaying on successive positions, sufficient aircraft should be responsive to the delaying force to give it the capability of withdrawing forces prior to decisive engagement. When the division conducts a delay on alternate positions, the aircraft will be retained under centralized control and will be made available to the appropriate force to move in the leapfrog fashion associated with delay on alternate positions.

c. The authority to destroy bridges and create obstacles can be delegated as in other di-

visions; however, since the division normally moves to successive or alternate positions by air, obstacles have less effect on its maneuverability.

d. The air cavalry squadron is normally retained under division control and screens forward of the brigades and provides flank secur-

ity for the division. Because of the mobility of the cavalry squadron, these missions are well within its capabilities.

11-28. Retirement

The airmobile division conducts retirements in the same manner as other divisions except for the means of movement.

CHAPTER 12

OTHER TACTICAL OPERATIONS

(NATO STANAG 2027, CENTO STANAG 2027, SEATO SEASTAG 2027,
ABCA SOLOG 62; NATO STANAG 2099, CENTO STANAG 2099,
SEATO SEASTAG 2099)

Section I. GENERAL

12-1. General

a. The division operates under all conditions of climate in all types of terrain. However, it may require augmentation with specialized equipment and personnel with special skills. The type of augmentation depends on the characteristics of the area of operation, the nature of the operations, conditions under which the operations are conducted, or a combination of these factors.

b. Regardless of the mission and operational

environment, the principles are the same for all tactical operations; however, the techniques of application of these principles may vary. This chapter discusses some of these variations and different operational environments.

12-2. References

Appendix A lists references that contain detailed guidance applicable to the tactical operations discussed in this chapter.

Section II. JOINT AMPHIBIOUS OPERATIONS

12-3. General

a. Army divisions participate in joint amphibious operations as part of the Army component of a joint amphibious task force. FM 31-11 sets forth joint doctrine for planning and conducting amphibious operations. FM 31-12 sets forth the fundamental principles, doctrine, and procedures for the Army component of a joint amphibious task force, to include preparatory training.

b. The Army landing force is the Army component of the joint task force. The composition and size of the Army component of a joint amphibious task force vary with the type of amphibious operation, the landing force mission, and the operational environment. The Army landing force is formed around a basic tactical organization, varying in size from the lowest echelon capable of semi-independent operations through a field army. It may include elements of a division, a complete division, or several divisions of the same or different types.

c. Divisions of the landing force that execute assault landings are called assault divisions. They are, in effect, division task forces, because the divisions are reinforced to provide sufficient combat support and combat service support to sustain combat operations until normal support systems are established in the objective area.

d. Normally armored, infantry, or mechanized divisions are employed as surface assault divisions. However, infantry divisions are best adapted for use as surface assault divisions because of their suitability for lift in transport-type ships and ship-to-shore movement in assault craft and assault aircraft and their requirement for less logistical support initially. The large numbers of heavy vehicles in the mechanized and armored divisions necessitate a high proportion of landing ships, tank (LST), for their movement and landing. These divisions have a continuing requirement for large amounts of logistical support. Mecha-

nized and armored divisions are well suited for landing over beaches already secured and for rapid advance inland in an exploitation or pursuit role.

e. Airborne and airmobile divisions are not normally employed as surface assault divisions in joint amphibious operations. These divisions are employed on missions and in the same manner as in other offensive operations.

f. In amphibious operations, communications and control are vital. All components of the joint amphibious force prepare and coordinate detailed plans for these activities.

g. In training for amphibious operations, primary emphasis is placed on the amphibious assault role of the division. Such supporting operations as the amphibious raid, demonstration, reconnaissance, and withdrawal normally involve a force of less than a division.

12-4. Organization for a Joint Amphibious Operation

For a joint amphibious operation, divisions form temporary combat and combat service support organizations. These temporary organizations are designated according to a standard pattern for the landing force. Combat support units are integrated in the combat and combat service support organizations.

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. Divisions in landing force reserve must also be prepared to execute assault landings; therefore, they organize assault landing teams. Assault landing teams are designated to reflect the combat echelon at which the task force is formed. For reference purposes, an assault landing team may be further identified according to the ship-to-shore movement means to be used. Type designations are—

Designations	Surface movement	Air movement
Battalion landing team (BLT)	BLT (S)	BLT (A)
Brigade landing team (BDELT)	BDELT (S)	BDELT (A)

A brigade landing team consists of two or more battalion landing teams.

b. *Organization for Embarkation.* This is an administrative grouping of forces for embarkation in ships and the oversea movement. Divisions form embarkation teams that 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 containing specialized equipment and specially trained personnel of the Army and Navy components. It is formed to facilitate the landing and movement of troops, equipment, and supplies over the beaches; to evacuate casualties and prisoners of war from the beaches; and to facilitate the beaching, retracting, and salvaging of landing ships and craft. Specialized engineer amphibious 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. FM 5-144 contains a detailed discussion of engineer amphibious unit operations. 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 are responsible 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 to facilitate landing and interim logistical support of elements in a landing zone. The airmobile support party's mission and function are similar to those of a shore party, except that they deal with aircraft and airmobile forces. Normally they will contain personnel from both the Army and the Navy components. Commanders of air assault divisions provide airmobile support parties to those landing teams executing initial assault landings in assault aircraft. These parties are

formed from units or personnel within the division.

12-5. Shore-to-Shore Operations

a. The division may participate in operations involving overwater movement primarily using Army watercraft or aircraft and a uni-Service command structure. Other Services

may support the operation. Such operations are not classified as amphibious operations since they do not involve embarkation in naval ships. The procedures employed in planning and conducting amphibious operations are applicable, with minor modification, to Army shore-to-shore operations.

b. FM 31-12 contains doctrine and procedures for conducting shore-to-shore operations.

Section III. LINK-UP OPERATIONS

12-6. General

a. A link-up operation entails the meeting of two ground units. This meeting may occur in airborne, amphibious, shore-to-shore, or airmobile operations, during the relief of an isolated unit, during the breakout of an encircled force, during the convergence of separate forces, or on meeting friendly guerrilla or other Allied forces.

b. The initial phase of a link-up operation is conducted as in normal offensive operations. As link-up becomes imminent, coordination and control are intensified. Positive restrictions are placed on the forces involved.

c. Because forces within an airhead or those cut off by enemy action frequently lack staying power, time is often a critical factor.

12-7. Planning

a. *General.* When possible, the link-up forces coordinate all plans in advance and arrange for the prompt exchange of information. They consider the following factors when planning link-up 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 link-up.

b. *Command Relationships and Responsibilities.* The headquarters directing the link-up establishes the command relationships and responsibilities of the two forces. After link-up, the two forces can be combined to form a single force under the control of either com-

mander, or both forces can continue to operate as separate forces under the control of a higher commander.

c. *Command and Staff Liaison.* The two forces maintain command and staff liaison. This liaison is established during the planning phase and is continued throughout the operation. As link-up becomes imminent, additional liaison personnel are exchanged between leading units and between fire support means. If the operation entails link-up with friendly guerrilla or other Allied forces, interpreters or liaison officers with linguistic ability are provided.

d. *Coordination of Schemes of Maneuver.* The two forces carefully define control measures. They select link-up points at which physical contact between the two forces will occur. These points are mutually agreed on by the commanders of the link-up forces. They should be readily recognizable to both forces. They are normally located where the routes of advance of the link-up force intersect the line along which the security elements of the stationary force are located. The forces also establish alternate link-up points since enemy action may force link-up at places other than those planned. The number of link-up points established depends on the capability of the stationary force, the number of routes being used by the link-up force, the terrain, and the enemy threats. 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. Stationary forces assist in a link-up operation by removing obstacles established to hinder enemy movement, providing

guides, and reserving assembly areas for the reorganization of link-up forces.

e. *Fire Coordination Measures.* The headquarters directing the operation establishes fire coordination lines. Neither force delivers fires across these lines without clearance from the other force. If one of the forces is stationary, the fire coordination line (FCL) is moved as close to the stationary force as possible when link-up becomes imminent. This allows

the maneuvering force maximum freedom of action. The headquarters directing the operation establishes fire support coordination lines (FSCL) for both forces. Fire support coordination lines are separate in the early stages; however, as link-up becomes imminent, the fire support coordination lines merge and become a single fire support coordination line applicable to both forces. Airstrikes in the area between the two forces are coordinated with both

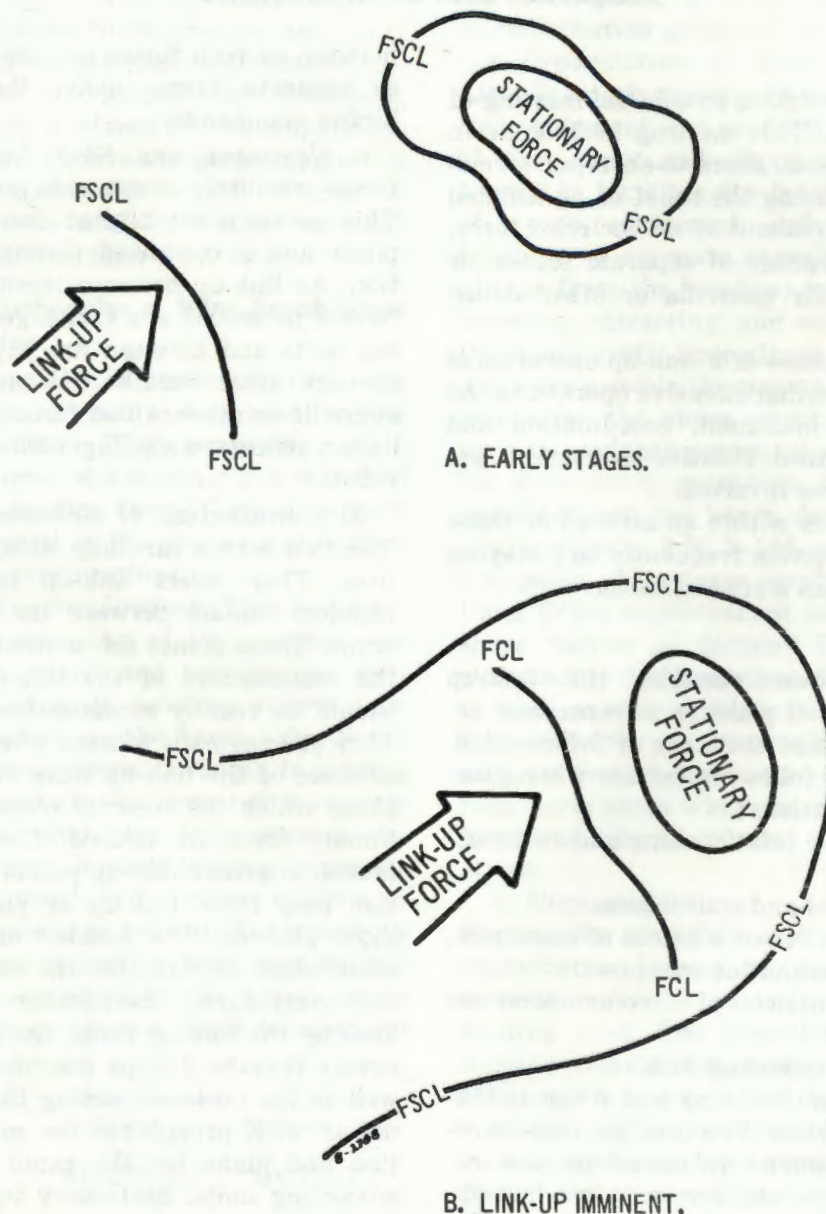


Figure 12-1. Fire coordination measures in link-up operations.

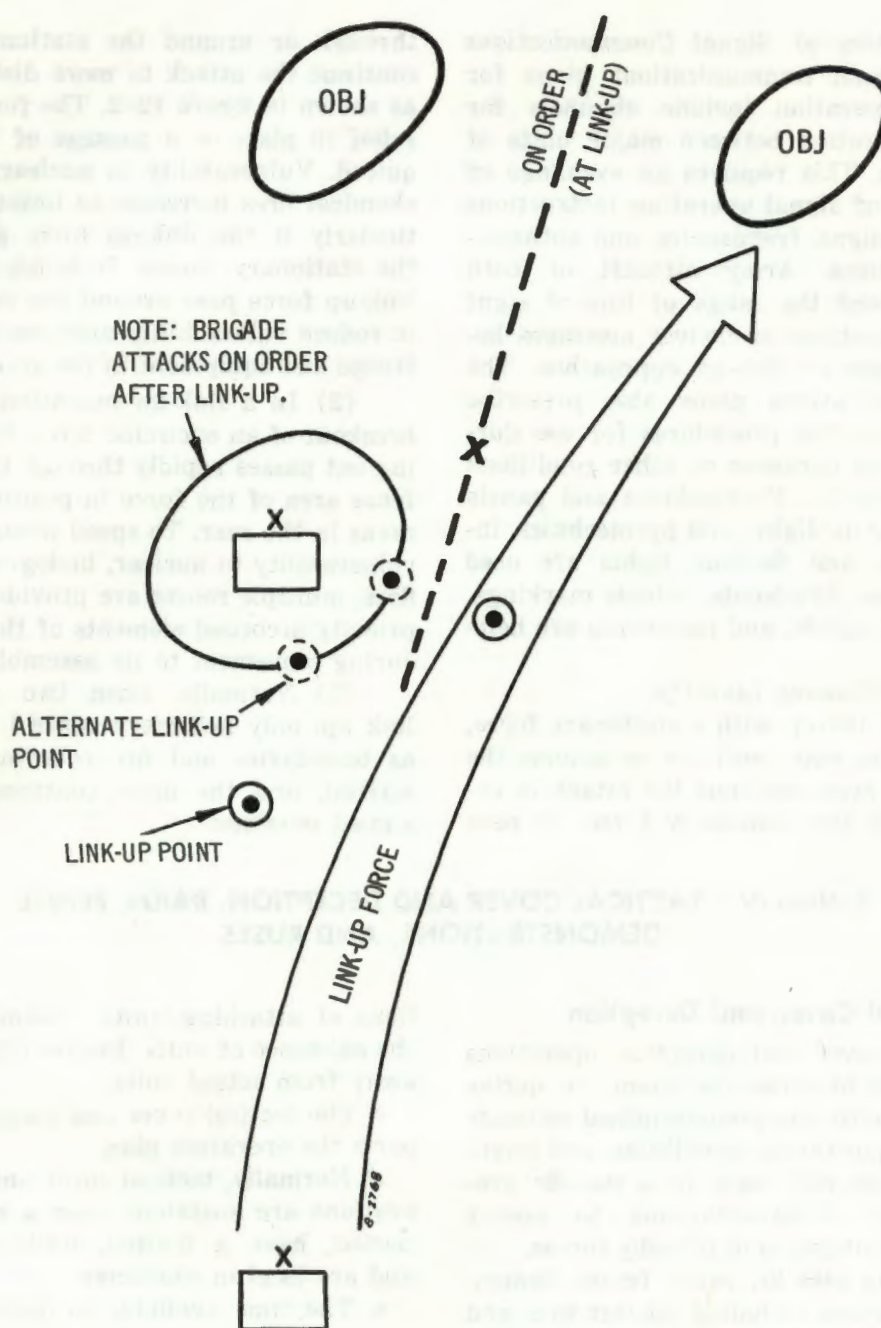


Figure 12-2. Action following link-up.

forces. Normally, the initial fire coordination line becomes effective at the time a common fire support coordination line is established as illustrated in figure 12-1. After link-up, responsibility for fire support coordination for the force as a whole must be clearly established; responsibility for such coordination is nor-

mally that of the senior headquarters in the area or of the force having primary interest in the operations following link-up. The headquarters directing the link-up will designate the headquarters that is to assume this responsibility. Section II, chapter 4, discusses fire coordination measures.

f. Coordination of Signal Communications Plans. The signal communications plans for the link-up operation include channels for radio communication between major units of the two forces. This requires an exchange of selected items of signal operating instructions to include call signs, frequencies, and authentication procedures. Army aircraft of both forces can extend the range of line of sight radio communications or deliver messages between the forces as link-up approaches. The signal communications plans also prescribe positive identification procedures for use during daylight and darkness or other conditions of reduced visibility. Pyrotechnics 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 Link-Up.

(1) Upon link-up with a stationary force, the link-up 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 as shown in figure 12-2. The forces plan for a relief in place or a passage of lines when required. Vulnerability to nuclear, biological, or chemical fires increases as link-up occurs, particularly if the link-up force passes through the stationary forces. It is desirable that the link-up force pass around the stationary force to reduce vulnerability and prevent massing of troops and equipment in the area.

(2) In a link-up operation involving the breakout of an encircled force, the force breaking out passes rapidly through the forward defense area of the force in position to assembly areas in the rear. To speed passage and reduce vulnerability to nuclear, biological, or chemical fires, multiple routes are provided and suitable priority accorded elements of the link-up force during movement to its assembly areas.

(3) Normally when two moving forces link up, only necessary control measures such as boundaries and fire coordination are prescribed, and the units continue on their assigned missions.

Section IV. TACTICAL COVER AND DECEPTION, RAIDS, FEINTS, DEMONSTRATIONS, AND RUSES

12-8. Tactical Cover and Deception

a. Tactical cover and deception operations are undertaken to cause the enemy to derive and accept a particular predetermined estimate of friendly dispositions, capabilities, and intentions so that he will react in a specific predicted manner disadvantageous to enemy forces and advantageous to friendly forces.

b. Supporting attacks, raids, feints, demonstrations, and ruses including nuclear fires and electronic deception, are examples of cover and deception operations since they mislead the enemy. Restricted radio communications may aid in concealing the time of attack; however, reduced traffic or radio silence may alert the enemy to an impending operation and cause him to intensify his intelligence efforts. Use of dummy equipment and simulation devices mislead the enemy as to the size, type, and inten-

tions of attacking units. Camouflage conceals the existence of units. Decoys draw enemy fires away from actual units.

c. The tactical cover and deception plan supports the operation plan.

d. Normally, tactical cover and deception operations are sustained over a relatively short period, have a limited, well-defined mission, and are local in character.

e. 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 may limit active and passive deception measures. Active measures must be authorized by the next higher headquarters.

f. FM 31-40 contains detailed information on tactical cover and deception measures and planning.

12-9. Raids

a. General. A raid is an operation, usually small in scale, involving a swift penetration of hostile territory to secure information, to confuse the enemy, or to destroy his installations. The raid ends with a planned withdrawal on completion of the assigned mission. Raids can be conducted within or beyond supporting distance of the parent unit; either in daylight or darkness or other conditions of reduced visibility. The raiding force can move on foot or in trucks, tanks, armored personnel carriers, aircraft, watercraft, or any combination of means. Raiding forces are particularly vulnerable if they are discovered prematurely, encounter superior forces, or are cut off.

b. Purpose. A raid can accomplish the following:

- (1) Capture prisoners or enemy materiel.
- (2) Obtain or free key civilians such as scientists or political leaders.
- (3) Destroy 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 enemy forces.
- (6) Complete the destruction caused by nuclear fires.
- (7) Support unconventional warfare activities.

c. Planning and Conduct.

(1) Plans and preparations for raids are carefully made, and all practicable measures of assistance are worked out 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.

(2) Withdrawal of the force is planned and executed with the same care and thoroughness as the attack itself.

(3) Security measures are emphasized because the raiding force enters the enemy position and is vulnerable to attack from all directions.

(4) Preparatory and supporting fires, including nuclear and chemical fires, are used as in any offensive action. Protective fires isolate the objective, prevent or limit counterattacks,

and keep the route of withdrawal open. When surprise is sought either by stealth or rapidity of attack and withdrawal, fires are planned but are held on call for the raiding force.

(5) Night raids can be illuminated or nonilluminated. The considerations of night attacks apply to the planning and conduct of night raids.

(6) Infiltration or the use of aircraft enables the raiding force to attack deep objectives. Aircraft can expedite withdrawal of such a force.

(7) Raiding forces are frequently organized into task forces, particularly when the depth of the operation places them beyond supporting distance of their parent units.

(8) Frequently deep raids can be assisted by friendly guerrillas or other irregular forces. 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) When authorized, nuclear or chemical munitions can be used to destroy enemy materials or installations; to produce obstacles; to contaminate or deny the enemy use of equipment, supplies, or facilities; to create diversion; or cover the withdrawal of the raiding force.

12-10. Feints

a. General. A feint is a show of force intended to mislead the enemy and draw him away from the main attack. It normally consists of a shallow limited objective attack executed by a small portion of the total force. 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. The planning for, and conducting of, feints are similar to these actions in other offensive operations.

b. Purpose. A feint is designed to cause the enemy to react in a predetermined manner.

The attacker may desire to cause the enemy to react physically, to divert his attention, to confuse him, or to cause him to reevaluate the attacker's capabilities and intentions. The following are examples of desired enemy reactions:

- (1) Employ reserve improperly.
- (2) Direct supporting fire away from the main attack.
- (3) Reveal defensive fires.
- (4) Become so accustomed to frequent raids and feints that little or no action is taken when the main attack is actually launched.

c. Time.

(1) *Time in relation to the main attack.* Feints can be conducted before, during, or after the main attack.

(a) A feint before the main attack can cause the enemy to move his reserve away from the area of the main attack, attract the enemy's supporting fires so that they can 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. If the enemy commander is uncertain as to which attack is the main attack, he may hold his reserve in position pending the outcome of the attacks until it is too late to influence the friendly main attack.

(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 time of day for the feint is based on the time that most favors success of the main attack. In addition, the pattern of previous operations is considered.

d. Place. The force selecting an area for a feint considers:

- (1) Areas considered for the main attack during initial planning but later rejected. These are logical areas for feints.
- (2) The area must be of interest to the enemy.

(3) The area should be far enough from the main attack to preclude interference.

(4) If the feint is to cause displacement of enemy supporting weapons and troops, the feint must be conducted far enough from the enemy units to force their displacement.

12-11. Demonstrations

a. General. A demonstration is a show of force on a front where a decision is not sought. It is made to deceive the enemy. 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. The demonstration must be conducted with sufficient realism to deceive the enemy.

b. Characteristics. Fewer troops are required for a demonstration than for a feint, and the force involved need not be balanced. Demonstrating forces can be withdrawn and employed elsewhere. Demonstrating forces can make extensive use of fires, smoke, sonic devices, and decoy equipment. A demonstration lacks the realism of a feint; therefore, the enemy is less easily deceived. 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 depict the buildup for operations such as a river crossing or an attack of fortified areas.

12-12. Ruses

Ruses are tricks to achieve deception. They are used at all levels in the division. Large movements can be represented by few vehicles towing chains to produce dust clouds or by a few tanks moving throughout the area at night. Ruses, such as the use of loudspeakers in the forward area, can divert the enemy's attention from other activities. The judicious use of electronic deception can achieve short-term enemy reactions favorable to the division both in the offense and in the defense.

Section V. COMBAT AT RIVER LINES

12-13. General

FM 100-5 discusses the general considerations of combat at river lines. FM 31-60 contains detailed information on combat at river lines.

12-14. Offense

a. When the division attacks through an area containing an unfordable river, it plans to cross without losing momentum or concentrating on either bank. The division approaches the river at maximum speed on a broad front. All bridges in the zone of advance are objectives. Captured bridges or other crossing means are exploited to the maximum. Whether or not bridges are seized intact, hasty crossings are attempted on a wide front capitalizing on airmobile operations, nuclear and chemical fires, the amphibian characteristics of armored personnel carriers, and improvised means. Advance planning for hasty crossings is essential.

b. The division conducts a deliberate crossing 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 deliberate crossing requires corps or army level coordination, and concurrent, detailed planning at all levels.

12-15. 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 who masses troops and materiel in preparation for his crossing is a remunerative target for nuclear or chemical weapons. An attacking force astride a river is especially vulnerable to offensive maneuver.

c. The defense of a river line is organized to exploit natural terrain features and available resources. When the defense is conducted primarily with nuclear and chemical fires and offensive maneuver, only screening forces need be at the river line.

d. The division, when defending a river line, should expect the attacker to move rapidly on a broad front and to attempt to cross without pause at multiple sites using amphibious vehicles, expedient crossing means, and helicopters. Because of the airborne or airmobile threat, the division prepares plans for the protection of, and counterattacks to regain, key terrain well in rear of the river.

Section VI. COMBAT IN FORTIFIED AREAS

12-16. General

FM 100-5 contains the general considerations of combat in fortified areas. FM 31-50 contains detailed information on fortified areas and combat techniques employed in fortified areas.

12-17. Offense

a. When possible, the division avoids combat in fortified areas. Minimum forces contain the fortified positions while the main force continues the advance to secure more decisive objectives. Reduction of a fortified area may include a siege or an attack from the rear.

b. Special considerations in the attack of a fortified area are—

(1) A fortified area causes offensive forces to mass and present a profitable target

for nuclear, biological, or chemical munitions. Attack formations and operations must recognize this danger.

(2) Nuclear or chemical munitions can destroy or neutralize fortified areas. Surface and subsurface nuclear bursts can create gaps in the fortified area or can isolate sections of it.

(3) Detailed intelligence is required for training, rehearsals, and plans.

(4) Planning and preparation are more detailed and more centralized than in other offensive operations; however, execution of plans is decentralized.

(5) An isolated area is selected for the penetration. Nuclear or chemical fires are particularly well suited for breaching fortified

areas. Smoke isolates individual strongpoints from the observed fires of other fortifications. Indirect fire weapons destroy camouflage, neutralize, or destroy enemy field fortifications and weapons, fire on enemy counterattacks, and screen the movement of assault troops.

(6) Assault elements are organized for specific missions and are specially 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 mopped up by followup troops.

(7) Reserves follow closely behind the assault echelon to exploit the penetration, maintain the continuity of the attack, or defend key areas against counterattack.

(8) Airborne or airmobile forces are used in attacks of fortified areas to block the movement of large enemy reserves and to attack the fortifications from the rear.

(9) Unless the attacker requires captured enemy armament and fortifications, he moves or destroys them to prevent their use if recaptured.

Section VII. COMBAT IN BUILT-UP AREAS

12-19. General

FM 100-5 contains the general considerations of combat in built-up areas. FM 31-50 contains detailed information on built-up areas and techniques of combat therein.

12-20. Offense

a. When possible, a force bypasses or isolates built-up areas. When this is impossible, the force attempts to reduce or neutralize resistance in the built-up area.

b. Terrain dominating the approaches is secured to isolate the built-up area. Mobile forces, including airborne or airmobile forces, can secure such terrain. Forces select objectives within the built-up area to divide the enemy defense.

c. The advantages gained by the use of nuclear or chemical munitions and by intense conventional bombardments must be weighed against the adverse effects on the population and its institutions and the effect of the obstacles on the assault elements.

12-18. Defense

a. The primary purpose of the defense of a fortified area is to cause the enemy to mass and present a target for nuclear or chemical fires 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 or neutralize fortified areas with nuclear, biological, or chemical fires or can bypass and neutralize them later.

b. The specific considerations in the defense of a fortified area are that—

(1) Fortified positions, by permitting an economy of force in the forward defense area, release larger forces for the reserve.

(2) The reserve must have suitable mobility and must use it aggressively.

(3) Fortifications are organized in depth and provide an all-round defense. Field fortifications supplement the fortified area.

(4) The defense is conducted in the same manner as set forth in chapter 7. Defense of a fortified area is normally associated with area defense rather than with mobile defense.

d. Division establishes measures to control and provide as much protection as possible to the civilian population and its institutions.

12-21. Defense

a. Since built-up areas are obstacles to the movement of friendly counterattack forces as well as to the attacking enemy, division should consider 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 whose retention preserves the integrity of the defense and permits the defender freedom of action. Forces can move through subterranean systems that provide protection against nuclear, biological, or chemical munitions. These systems 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. Division plans for the control of the civil-

ian population and for the use of friendly elements in the preparation of defensive positions. Division considers evacuating civilians from the area.

Section VIII. COMBAT IN EXTREME TERRAIN AND WEATHER CONDITIONS

12-22. General

a. The division generally is organized and equipped for combat in extreme terrain and weather conditions. Under certain circumstances, the division may require additional or substitute equipment and specialized training. Usually it requires increased engineer means and logistical support.

b. Difficult terrain may slow the momentum of the division's operation or canalize its movement. This increases the division's vulnerability to location and identification by the enemy and attack by nuclear, biological, or chemical munitions or tactical air. In some instances, however, this terrain may provide natural concealment and protection from the effects of these weapons.

c. The division can use difficult terrain to increase the opportunities for surprise. Areas of difficult terrain favor infiltration, raids, and guerrilla operations.

12-23. Operations in Woods, Swamps, and Lake Areas

a. Operations in woods, swamps, and lake areas 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 munitions used in wooded areas can create extensive blowdown or, when conditions are favorable, cause forest fires; in winter they can be used to break the ice on water bodies used as lines of communications.

b. Woods and swamps favor raids, infiltra-

tion, 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 on maneuver. Further, the fire hazard of enemy nuclear munitions must be carefully considered.

12-24. Operations in Riverine Areas

a. Military operations in inundated areas in which water lines of communications are vital elements of the transportation and communications system require modification of the techniques employed in other ground operations. The waterways and water must be considered assets rather than obstacles.

b. Such inundated areas are classified as riverine environments. Paragraphs 12-40 through 12-43 and FM 31-75 (Test) discuss operations in riverine environments.

12-25. Operations in Steppes

a. The steppes of southeastern Europe and west-central Asia are vast flat areas broken by ravines and many high, steep slopes overgrown with brush and thickets and some isolated clumps of trees. The steppe grass provides concealment for individuals, but only limited concealment for vehicles, tanks, artillery pieces, and similar materiel. Except for ravines, there is no natural cover. The arid steppe has a limited water supply.

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 when the steppes are dry, either nuclear munitions or incendiaries can cause large destructive fires. In summer, dust affects vehicles and makes concealment of movement difficult. 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 thaws, ravines become streams, small depressions become ponds, and large areas of flatland are covered with water. The thawed ground is soggy and 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 on speed of movement and the accompanying requirement for additional means of mobility.

(5) Increased reliance on mines or surface burst nuclear munitions 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.

12-26. Mountain Operations

a. FM 100-5 contains the general considerations of mountain operations. FM 31-71 and FM 31-72 contain detailed information on mountain operations, the employment of the arms and services, and training.

b. Infantry, airborne, and airmobile divisions require only minor modifications in organization for combat in mountains. Full advantage cannot be taken of the capabilities of armored and mechanized divisions in mountainous areas. In mountain operations, increased emphasis is placed on 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. In alpine terrain, specialized 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, availability of roads, and season. Movement is measured in time rather than distance. Early issuance of orders is critical in mountain operations because of the longer time required and the increased difficulty in moving units and supplies.

e. Terrain restricts the deployment of forces. 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. Armor units in substantial number are usually of limited value in mountainous terrain, but their use must be exploited when possible. The use of heavy infantry weapons and artillery is hampered by their bulk and weight, the considerable dead space in their fields of fire, and their restricted observation. However, high-angle fire weapons assume increased 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 and decentralized execution by semi-independent tactical groupings. Objectives are frequently the heights that dominate the passes and permit movement through the mountains. Each dominant height is secured before movement to the next. Whenever possible, attacks 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 infiltration and guerrilla warfare.

i. Mountainous terrain reduces the effectiveness of radio, radio relay, and radio-transmission equipment. The siting of radio equipment is critical, and use of auxiliary antennas is desirable. Installation of an extensive wire sys-

tem is difficult. Airborne radio-retransmission stations are used extensively. Messenger and liaison personnel are slowed by limited road nets. Although dead space in radio reception exists in both AM and FM radios, AM radio is the least affected and normally should be used for command and control.

12-27. Desert Operations

a. FM 100-5 contains the general considerations of desert combat. FM 31-25 contains detailed information on desert operations, the employment of the arms and services, and training.

b. The doctrine expressed in chapters 6 and 7 for offensive and defensive operations applies to 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. In defensive operations, measures against air and armor attack are emphasized.

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 greater maintenance requirements. Troops must become acclimated to the desert before they can operate effectively.

d. The division communications system is easier to operate effectively in desert terrain; however, camouflage and maintenance of equipment are more difficult. Radio is used extensively because it is particularly suitable for fast-moving situations. Special antennas can extend the planning range for line of sight radios.

12-28. Jungle Operations

a. FM 100-5 contains the general considerations of combat in the jungle. FM 31-30 contains detailed information on the characteristics of jungles, the employment of the arms and services, and training.

b. Combat in jungles is conducted at extremely close quarters by 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 permit rapid and timely resupply and require less equipment to be carried by the individual soldier. This speeds movement and reduces fatigue. However, air supply and evacuation are difficult, especially in restricted areas. Maintenance of equipment is difficult. Sanitation and health measures are important and must be rigidly enforced. Engineer requirements are increased.

d. Because of the greatly increased importance of routes through otherwise 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 outflank enemy defensive positions and conduct assaults on these positions. Because of the vulnerability of airborne and airmobile forces during the initial assault, airborne and airmobile operations require extensive fire support.

g. Jungle areas are conducive to raids, infiltrations, and guerrilla warfare.

h. In jungles the effects of terrain on communications are similar to the effects in mountain operations. Establishment and operation of the area-type communications system will often not be possible. A modified communications system organized for the tactical situation along the axis of tactical operations may be required. Between major command echelons, AM radio may be the only usable communications. Field expedients may be needed to elevate radio antennas above vegetation. Airborne radio-retransmission stations are used to extend the range of ground radio stations. Commanders must emphasize maintenance of electronic equipment.

12-29. Operations in Defiles

a. Defiles are natural or artificial terrain features that 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, biological, or chemical munitions.

b. A thorough reconnaissance is made and consideration given to all possible routes. Units must 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 flanks, entrances, and exits. Units must plan to move directly into a dispersed position upon clearance of the defile. Since a defile is a prime enemy target, deception measures attempt to conceal friendly intentions to facilitate successful passage.

c. Close command supervision and absolute control of traffic prevent inadvertent concentration of the division in the defile area. The major unit commander designates a defile commander for each defile. The defile commander can exercise absolute control over traffic entering and within the defile area to insure that the passage is properly executed. FM 5-29 and FM 5-135 provide a further discussion of the passage of defiles.

12-30. Northern Operations

a. FM 100-5 contains general considerations for northern operations. FM 31-70 and FM 31-71 contain detailed information on the arctic and subarctic areas, the employment of the arms and services, and training.

b. The division, when conducting operations in northern latitudes, requires specialized training and special equipment. The fall and spring seasonal exchange of large amounts of organizational and individual equipment present 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 the long hours of daylight and the heat and dust of summer, the long nights and bitter cold and storms of winter, the mud

and morass during spring and autumn, the disrupting effects of natural phenomena, the scarcity of roads, and the 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 shelters, cause difficulty in constructing fortifications, increase dependence on combat service support, and require winter clothing and special equipment. The division must train troops to use oversnow equipment including skis, sleds, and snowshoes. Aircraft can use frozen lakes and rivers for landing areas. Wheeled vehicles can move on frozen ground and over frozen lakes when the snow cover is light. The thickness and type of ice determine the size and weight of vehicles that can use a lake surface as a roadway. Lakes and streams should be checked to see if they are fed by warm springs. Tracked vehicles should be substituted for wheeled vehicles whenever practicable.

(2) *During the summer.* Because of the extensive swamps, muskeg areas, lakes, and rivers, special equipment, such as boats and low ground pressure vehicles, is required. Special care is needed in movement because of the almost continuous daylight. 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 thaws. The resulting poor trafficability seriously reduces 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 largescale operations and increases the difficulty of combat service support. Because of the limited map coverage, special training and procedures are required in navi-

gation and for accurate reporting of unit locations.

e. Installation time is greater for all types of communications. Personnel need special training to operate and maintain signal equipment in extreme cold. Since they are less affected by ionospheric disturbances, very high frequency (VHF) or ultra high frequency (UHF), equipment is often preferred to high frequency

(HF) radio and radio-relay equipment. Special considerations include:

- (1) Use of arctic batteries.
- (2) Greater attention to communications vehicles and power units.
- (3) Use of microphone covers.
- (4) Maintenance of equipment at operating temperatures.
- (5) Selection of radio frequencies.

Section IX. CIVIL DISTURBANCES

12-31. General

a. Past experience has proved that members of the U.S. Armed Forces often have to deal with crowds and gatherings. Some of these crowds are peaceful gatherings; others are disorderly and become difficult to guide and handle. In times of civil disturbance it is often possible for an apparently peaceful crowd suddenly to become a violent, dangerous, active mob. The relationships between different minority groups, national, religious, and social, are continually changing. The migration of workers from one area or town to another and the competition among civilians for consumer goods, housing, transportation, and other economic and social factors may lead to these rapid changes, especially in large cities. Changes are accompanied by tensions among different groups that must be carefully and wisely dealt with if democratic principles are to be maintained.

b. It must be clearly understood and constantly remembered that the preservation of law and order is the responsibility of the State

and local governments, not of the U.S. Armed Forces.

c. Nevertheless, U.S. Armed Forces can be called on to assist civil authorities to control mob action in civil communities. Therefore, the division trains its units to handle riots. A knowledge of the various psychological factors that affect crowd and mob behavior, along with some of the methods used by agitators to incite mob violence, enable military forces to predict the probable reactions of individuals, crowds, or mobs and to select the tactics that will disperse or control the mob.

d. The division also trains to handle the individual or small group riot activities which have become more common in recent civil disturbances. The sniper, the arsonist, the looter, and those who, individually or in small groups, interfere with the work of firefighters, must be dealt with promptly and thoroughly.

12-32. References

FM 19-15, and Army Subject Schedule 19-6 contain doctrine, procedures, techniques, and training required for civil disturbances.

Section X. COLD WAR SITUATIONS

12-33. General

a. A direct threat to U.S. interests by acts of a hostile power may necessitate cold war operations. These acts include illegal occupation, subversion, or coercion of friendly countries; a show of force; or the establishment of hostile military forces within range of U.S. territory.

b. Military operations in cold war can include incidents between regular forces and action against irregular forces during stability

operations as well as operations short of overt armed conflict.

c. The organization and wide range of available combat power of the division enable it to adapt itself to a variety of conditions. The division can be employed independently or as part of a larger force. When employed independently, the division should be reinforced for sustained logistical support.

d. In preparation for, and execution of, a

cold war mission, the division commander provides for the indoctrination of all personnel in civil-military relations; the limitations on application of force; and the social customs, economic conditions, religious practices, and 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 emphasize proper conduct of their troops since misconduct can seriously affect relationships with the host country.

12-34. Special Considerations

a. Limitations on Authority. International agreements, such as the status of forces agreements, set specific limits on the authority of commanders of divisions and divisional elements employed on foreign soil in a cold war. These limitations 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 amount of force that can be employed and the manner of its employment. Examples are restrictions on the use of firepower, roads, buildings, installations, railroads, and terrain. Since civil officials of the host nation usually retain their authority, coordination with local officials is necessary to insure accomplishment of the division mission and achievement of overall U.S. objectives.

b. Civil Affairs. The division and subordinate commanders must emphasize the civil affairs (CA) aspects of their missions. Civil affairs personnel and teams, specially trained in cold war operations, are placed with key host country civilian control agencies for continuous liaison and good relations. The division is reinforced with civil affairs units in preparation for such missions. The impact of the limitations on authority and tactical operations discussed above is reduced by efficient civil affairs operations. At division level, the civil affairs annex to the operation order contains instructions that implement existing status of forces agreements and other international or local agreements.

12-35. Cold War 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 prepares plans for three conditions—current operations and training, future cold war missions, and probable combat operations.

(2) The division initiates planning for future cold war missions and combat operations at the earliest opportunity. This planning is continuous and is conducted concurrently with security missions and training. When time and the situation permit, operation plans are rehearsed and revised in accordance with current intelligence reports.

c. Training. A division committed to a cold war mission for an extended period must retain its capability for coordinated combat action by replacing personnel losses and by training troops in combat skills. Therefore, individual and unit training exercises are planned and conducted concurrently with the execution of the mission. Reserves at all echelons are kept active and proficient through participation in training exercises. Rotation of reserve elements with those required to be committed insures effective periodic combat training 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. 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 must be augmented with signal units. Commercial communications may be limited or nonexistent. Because of 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 cold war operations receive special consideration. If the division is 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 distribution points and maintenance units to make support readily available to the user and to reduce transportation and distribution requirements. Decisions are based on the number of troops available for security missions, the distances to supplies, and the amount of transportation. Isolated units can be supplied by air.

(2) Logistical support plans for future combat operations must provide for area damage control. Intelligence efforts attempt to determine the enemy's potential for infiltration and for the employment of nuclear, biological, and chemical munitions.

(3) Combat service support units and supplies are deployed to support the division's mission and to minimize the need for major relocation to support the various operation plans.

12-36. Unit Capabilities

a. The subordinate units of the division have characteristics and capabilities that make them particularly adaptable to the varied operational requirements in cold war situations.

(1) The airborne, airmobile, infantry, and mechanized infantry battalions provide the bulk of the troops necessary for mounted or dismounted patrol operations, area search and security, outposts, strongpoints, and control posts, and for action in mountainous terrain, jungles, or swamps. All battalions can control mobs and suppress riots and civil disorders. 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 that can be 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 are powerful mobile task forces with extensive communications. When employed with dismounted infantry, tanks can quell riots and civil disturbances without using their full firepower.

(4) Army aviation conducts day and night reconnaissance and surveillance operations over wide areas and provides liaison and courier service. It operates from hastily prepared airstrips within protected areas. Army aircraft can supply isolated outposts and detachments located away from the major division elements. Army aircraft can 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 the engineer battalion can perform security and riot control missions.

(6) The signal battalion normally provides a signal communication network. Radio is used extensively because of the maintenance problems of wire communication systems, particularly in guerrilla-infested areas. Signal communications with subordinate elements are maintained over extremely wide areas by radio retransmission.

(7) When the disposition of forces and terrain permit, artillery support is provided to outposts and detachments. When not required in its primary role, division artillery can execute 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 civil af-

fairs operations. Such assistance entails a command decision and normally is limited. When adequate units and supplies are available, the provision of human relief services may assist accomplishment of the division mission.

(9) The military police company, cooperating with civil police, can further the division mission by controlling division personnel and vehicles and by assisting civil authorities.

(10) The attached civil affairs unit provides the division commander with an agency to

conduct civil affairs 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 overwide areas.

Section XI. STABILITY OPERATIONS

12-37. General

Stability operations are those types of internal defense and internal development operations and assistance furnished by the Army component of the Armed Forces to maintain, restore, or establish a climate of order within which responsible government can function effectively and without which progress cannot be achieved. These operations include situations that range from support of the friendly country against incipient subversive insurgent activities and guerrilla warfare operations to active participation in a war of movement between organized forces of the insurgent movement and those of the legally constituted government. The insurgent force frequently receives support from an outside power either openly or covertly.

12-38. Phases of Insurgency

a. The three phases in the development or escalation of insurgency are—

(1) Phase I—the potential subversive situation and the initiation of corrective or suppressive measures by legally established authority.

(2) Phase II—the outbreak of organized guerrilla warfare or related violence against legally established authority requiring military action by government forces.

(3) Phase III—the war of movement between organized forces of the insurgents and those of legally established authority.

b. FM 100-5 contains a discussion of the developmental phases of insurgency and the doctrinal principles for stability operations.

12-39. Division Stability Operations

a. The division with its normal attachments is particularly well suited for stability operations. To attain maximum effectiveness, intensive training must be completed in counter-guerrilla operations to include airmobile operations, civil affairs operations, intelligence operations, psychological operations, area orientation, and language training. This training should include a thorough orientation on the roles and missions of the nonmilitary agencies and other military Services engaged in internal defense and internal development operations.

b. The division may provide advisory assistance ranging from furnishing mobile training teams to training selected host country personnel and units. The division also may be tasked to provide brigade-size backup forces as outlined in FM 31-23.

c. The division must exploit all possible intelligence means to avoid surprise and to provide early warning to permit rapid response to a fast-moving and ever-changing situation.

d. FM 31-16, FM 31-22, FM 31-23, FM 33-1, FM 41-10, and FM 100-20 discuss organization, operation, and employment of the division and its subordinate units in stability operations. FM 30-31 and FM 30-31A contain detailed information on intelligence activities in stability operations.

Section XII. RIVERINE OPERATIONS

12-40. General

a. A riverine area is a land environment dominated by water lines of communications with an extensive network of rivers, streams, canals, swamps, paddies, or muskeg extending over broad, level terrain, parts of which may be inundated periodically or permanently. It may include sparsely populated swamps or forests, rivers and streams that have steep banks densely covered with tropical trees or bamboo, and relatively flat and open terrain. A large agrarian population may concentrate along the waterways. Ocean tides may affect riverine areas both near the ocean and far inland.

b. In developing areas with limited overland transportation capabilities and abundant surface water, inland waterways provide natural routes for transportation and communications and logical centers of population. Water routes have both strategic and tactical importance to an insurgent or enemy force. Water routes are particularly important in situations where an external force supports and directs the insurgency. Such a situation dictates a doctrine and strategy of interdiction and control of waterways and adjacent land bases.

c. FM 31-75 (Test) covers detailed concepts and operating techniques for riverine operations.

12-41. Riverine Operations

a. Riverine operations include all military activities designed to achieve and maintain territorial control of a riverine area by destroying enemy forces and restricting or eliminating enemy activities. The basic nature of riverine operations is ground combat in a land environment dominated by water lines of communications. Therefore, a characteristic of riverine operations is the extensive use of joint watermobile forces in conjunction with groundmobile and airmobile forces in a predominantly land battle.

b. Riverine operations are not amphibious operations although some of the principles and techniques of amphibious operations can be readily adapted to riverine operations. Riverine warfare is distinct in that it continually

uses specialized watercraft, equipment, or techniques and usually takes place where amphibious operations are not practicable.

c. The significant difference between riverine and conventional operations is that one or more elements of the force utilize existing waterways as the primary line of communications. Military forces equipped and trained to operate on rivers and canals, together with airmobile and overland forces, provide an added dimension to mobility and firepower.

d. The nature of riverine operations necessitates integrating the operations of ground forces, naval units, and supporting air elements. Maximum coordination and cooperation between participants are mandatory. Their operations are interdependent; however, since the basic nature of riverine warfare is ground conduct, all forces must be considered as a single tactical entity responsive to the needs and requirements of the ground force.

e. The basis for task organization for riverine operations is the mission, terrain and weather, enemy, and troops available. In general, the mission is the deciding factor in determining the strength and organization of Navy and other supporting forces. Maneuver battalions, permanently based aboard naval barracks ships (afloat based), are used primarily as waterborne forces moving on watercraft of naval river assault squadrons. However, ground-based battalions can have the same capability by using river assault squadron watercraft for transport and fire support. Maneuver units may have a waterborne element that uses assault boats with outboard motors.

f. Offensive operations in a riverine environment are conducted under many different terrain conditions and against enemy forces with widely differing capabilities. Successful operations normally depend on the ability of friendly forces to control and coordinate their movements and firepower quickly and with decisive results. Highly mobile combat elements and continuous flexible fire support are indispensable in riverine areas.

g. All means of mobility are somewhat restricted during riverine operations. Foot move-

ment is least desirable for maneuvering forces; it exhausts troops and severely reduces their rate of movement. Movement and maneuver normally require a combination of available means of mobility. Movements on foot, boats, helicopters, and fixed-wing aircraft are common. The movement of wheeled and tracked vehicles may be inhibited; however, they can be used effectively with the proper planning. The mobility, fire support, and logistical assets of supporting Navy elements significantly enhance Army firepower and maneuver capabilities. Waterborne artillery units may have to use floating firing platforms because of a lack of dry ground for positioning artillery.

h. Because most riverine operations involve at least two military Services plus host country forces and possible third country forces, all elements must plan jointly and concurrently. Operations are normally phased to distinguish between loading, movement to the area of operations, tactical operations in the area of operations, withdrawal, and return. The ground tactical plan for the area of operations also may be phased by time, geographic limits, or type of operation. Timely and detailed planning and coordination between Army and Navy commanders and staffs at the brigade-flotilla and battalion-river assault squadron levels are particularly important in riverine operations.

i. Riverine operations use water transport extensively to move troops, supplies, and equipment. Waterborne operations are normally mounted from areas where ground forces and naval watercraft can be marshaled and loaded, and operations can be coordinated. This may be at a land base adjacent to a navigable waterway, at an afloat base on a navigable waterway, or in an existing area of operations. Once they are loaded, the watercraft proceed to designated landing areas within an assigned area of operations for offensive operations.

(1) Navy watercraft operating in support of the ground force may—

(a) Transport and support ground troops in the assault.

(b) Act as, or in support of, a blocking force.

(c) Conduct reconnaissance, security, and combat patrols.

(d) Transport a raiding force.

(e) Displace crew-served weapons.

(f) Transport reserves.

(g) Perform resupply and evacuation tasks.

(h) Serve as command or utility vehicles.

(i) Serve as a mobile aid station.

(j) Provide fire support.

(k) Withdraw or redeploy troops.

(l) Serve as a firing platform for artillery or mortars.

(m) Evacuate prisoners of war, defectors, and detainees.

(n) Perform damage control and salvage.

(o) Provide maintenance and repair of watercraft.

(2) Water movements normally divide into four elements: an advance guard, flank guards, rear guards, and a main body. Formations are similar to those used in ground movements to contact. They facilitate Navy control of watercraft movements while maintaining ground force tactical integrity. The objective in movement organization is to provide security for the entire force and to have the force in the objective area in the best formation to accomplish its mission.

(3) Security measures during the water movement phase include selected watercraft formations, constant water patrolling, ground patrols as necessary along the route, air observation, and column cover with armed aircraft. Close air support aircraft on air or ground alert, artillery, and naval gunfire support must be preplanned. River assault squadron fires are primarily provided by the monitors and assault support patrol boats (ASPB).

(4) All water movements are conducted as tactical moves. Enemy forces should be considered to have well-developed infiltration and ambush capabilities, as well as techniques for exploiting water mobility. However, their capability to fight on the water may be limited. Enemy ambush forces on the flanks rather than to the front are the primary threat to the waterborne force. They may strike at any point in the column. The force prepares coun-

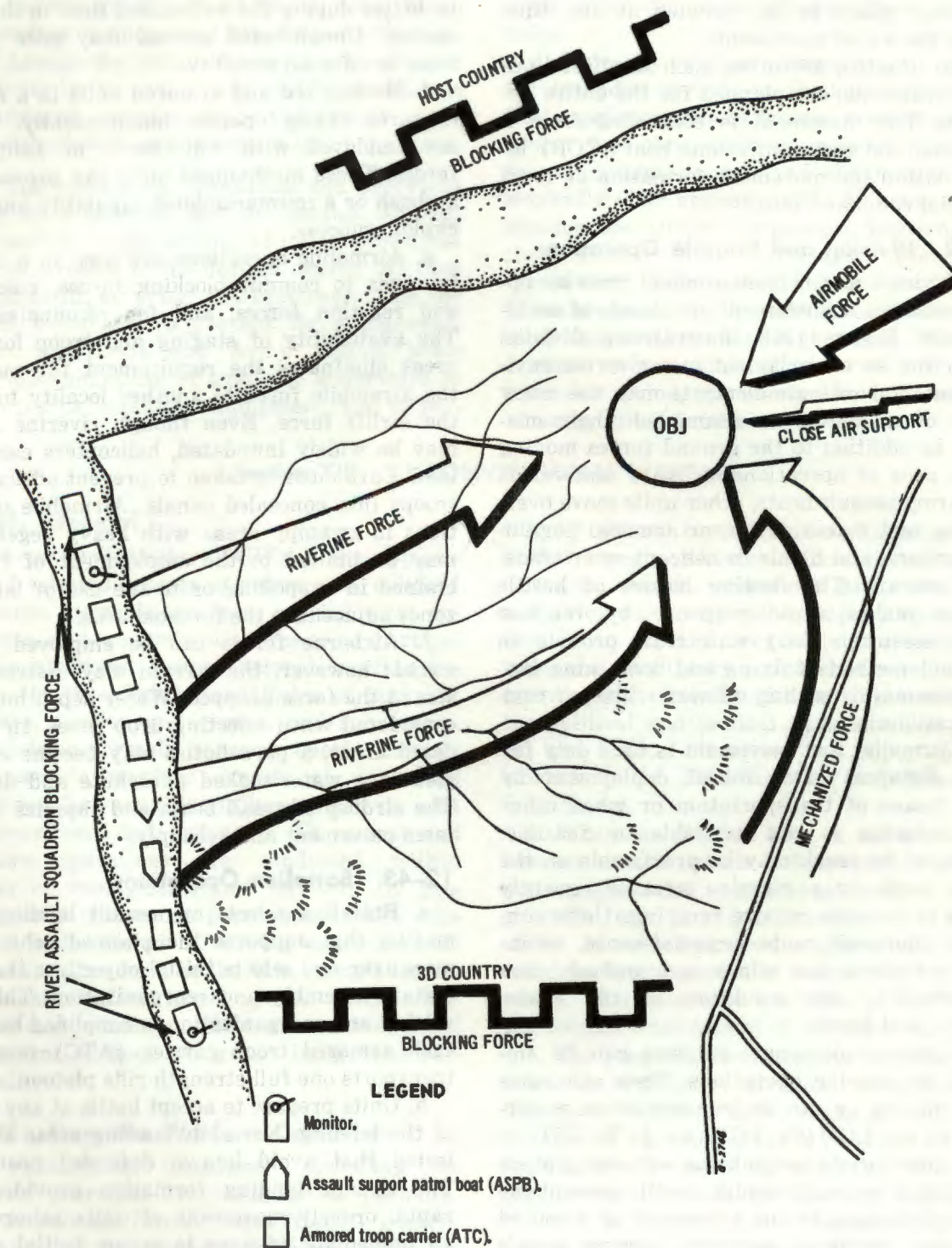


Figure 12-3. Concept of riverine operations.

terambush plans to be executed at any time during the water movement.

(5) Control measures, such as phase lines and checkpoints, are planned for the entire operation. The movement is controlled from a command and communications boat (CCB) located within the movement formation or from an aerial command post.

12-42. Division and Brigade Operations

a. Division and brigade conduct riverine operations as an encirclement or a series of encirclements. Figure 12-3 illustrates a division conducting an encirclement in a riverine environment. Subordinate elements may use many forms of maneuver to accomplish their missions. In addition to the ground forces moving to the area of operations by Navy watercraft and Army assault boats, other units move overland by foot march, truck, or armored personnel carriers, and by air in helicopters or transport aircraft. The fleeting nature of hostile targets makes rapid response by reaction forces essential. Navy watercraft provide an excellent method of fixing and containing hostile elements by sealing off water lines of communications.

b. Normally, foot movement is used only for short distances after initial deployment by other means of transportation or when other transportation is not available or feasible. Movement by truck may be practicable on the major roads in a riverine area. Frequently trucks and troops require ferrying. Units conduct a thorough route reconnaissance, to include searching for mines and ambush sites and checking the condition of the roads, bridges, and ferries.

c. Armored personnel carriers can be employed in riverine operations. They can move cross country or can be transported on waterways by the LCM(6), LCM(8), LCU, LST, or other appropriate amphibious vehicles. Canals from 3 to 5 meters in width usually present the primary obstacle to the movement of armored personnel carriers; however, narrow canals may present an equally difficult obstacle because of the steep mud banks that frequently bound them. Trafficability and cross-country movement for armored personnel carriers may

be better during the wet season than in the dry season. Uncultivated ground may pose problems in off-road mobility.

d. Mechanized and armored units in a riverine area rarely operate independently. They are employed with waterborne or heliborne forces. These mechanized units can provide an ambush or a counterambush capability and can exploit success.

e. Airmobile operations are used in a riverine area to commit blocking forces, reserves, and reaction forces, and for reconnaissance. The availability of staging and troop loading areas eliminates the requirement for moving the airmobile force to another locality to join the airlift force. Even though riverine areas may be widely inundated, helicopters can still land. Care must be taken to prevent off-loading troops into concealed canals. Airmobile operations in swampy areas with heavy vegetation may be limited to the employment of troops trained in rappelling or to the use of landing zones adjacent to the forested area.

f. Airborne forces can be employed year-round; however, the terrain may restrict the size of the force dropped. Water depth must be considered when selecting drop zones. In inundated areas, a parachutist may become entangled in a water-soaked parachute and drown. The airdrop of small boats and supplies facilitates movement and resupply.

12-43. Battalion Operations

a. Battalion selects an assault landing formation that supports the planned scheme of maneuver and selects initial objectives that facilitate assembly and reorganization. This assembly and reorganization is simplified because each armored troop carrier (ATC) normally transports one full-strength rifle platoon.

b. Units prepare to accept battle at any stage of the landing. Normally landing areas are selected that avoid known defended positions. The assault landing formation provides for rapid, orderly movement of units ashore and an immediate advance to secure initial objectives near the landing area. River assault squadron boats are stationed to provide supporting fires to the flanks and rear, as well as to the front of the landing force. Supporting

fires include scheduled and on-call fires. When the landing is unopposed, the force moves rapidly through the initial objectives and on order continues to the next objective. If opposition is encountered, securing the initial objectives assists debarkation of the remainder of the force.

c. The commander continues the operation when he is satisfied that the assault landing, reorganization, and seizure of initial objectives have progressed to the desired degree. He uses encirclement, surprise, and firepower to fix the hostile force and to prevent its withdrawal. Naval watercraft and Army assault boats make maximum use of available waterways to move troops, reposition equipment, and to per-

form resupply missions and other assigned tasks.

d. Normally, ground troops cannot operate for extended periods in shallow water areas. Prolonged exposure of troops in water and improper foot care result in cases of immersion foot. Individual morale and alertness decrease markedly after approximately 48 hours of continuous operations in swamps. The length of time varies with individuals. Dismounted troops carry only essential equipment to make it easier for them to wade through knee-deep mud and waist-to-chest high water. When operations in an inundated area continue for an extended period, the commander must consider rotating ground units.

Section XIII. UNCONVENTIONAL WARFARE

12-44. General

Unconventional warfare (UW) is the application of selected aspects of subversion, political measures, guerrilla warfare, psychological operations, and economic measures to support national objectives. Unconventional warfare includes the three interrelated fields of guerrilla warfare, evasion and escape, and subversion. The division normally concerns itself with only the guerrilla warfare aspects of unconventional warfare activities falling within its area of operations and influence. Unconventional warfare operations are conducted within enemy or enemy-controlled territory by predominantly indigenous personnel, usually supported and directed in varying degrees by an external source such as the U.S. Army's unconventional warfare force, special forces. U.S. forces may conduct unilateral unconventional operations without using any indigenous personnel.

12-45. Guerrilla Warfare Operations

a. Indigenous personnel operating as friendly guerrillas are organized as paramilitary or military forces. These friendly guerrillas carry out operations designed to reduce the combat effectiveness, war potential, and morale of their enemy. Guerrilla combat operations include interdiction, attack of critical enemy installations, and other assigned missions that

support ground combat forces. Raids and ambushes are the principal offensive techniques. Guerrilla combat operations are coordinated and integrated with psychological operations, evasion and escape, reprisal, subversion, sabotage, and intelligence activities. Guerrillas may operate with friendly forces if permitted by the political and tactical situation. The political and tactical situations are important considerations in planning the commitment of U.S. forces.

b. When the division area of influence overlaps an area in which U.S.-sponsored guerrillas are operating, operational control of the guerrilla force usually is transferred to the division. In such instances, a special forces liaison detachment normally is attached to the division. This detachment advises and assists in the combat employment of the guerrilla forces.

c. The guerrilla forces conduct combat operations in support of division operations until link-up or until hostilities cease. A mutual exchange of liaison parties and adequate communications between the guerrilla forces and the division, provide the division commander with his primary means of coordinating guerrilla operations with those of the division.

d. On link-up, friendly guerrilla units can be attached to the division for further employment within the limits of their capabilities or they can be demobilized. Final disposition of

friendly guerrilla forces depends on directions issued from higher headquarters.

e. When the guerrilla force does not operate with the special forces, the division commander coordinates directly with the friendly guerrilla force commander.

f. FM 31-21 discusses the operations and employment of friendly guerrilla forces to assist the division before, during, and after link-up.

Section XIV. AIRBORNE OPERATIONS

12-46. General

a. An airborne operation delivers combat and combat support forces and their logistical support into an objective area by air for the execution of a tactical or strategic mission. The term "airborne operation" as used in this section describes a joint operation involving primarily Army and Air Force units. Any combination of airborne units, air-transportable units, and types of transport aircraft can be used. Ground forces participating in an airborne operation may be parachuted or air-landed in the objective area or a combination of these means can be used.

b. FM 100-5 contains general considerations of airborne operations. FM 57-1 contains detailed information on planning and conducting joint airborne operations. TM 57-210 includes technical information required for planning the air movement of troops and equipment.

c. Chapter 13 discusses movements by air.

d. Chapter 10 discusses airborne division operations.

12-47. Air Transportability of the Division

a. *Airborne Division.* The airborne division is designed to perform airborne assault landings by parachute. Therefore, all of its equipment is air transportable in Air Force medium and heavy transport aircraft. This equipment can also be delivered by parachute; however, some of the bulky items require disassembly into major components, delivery as components, and reassembly after delivery. Therefore, it is preferred to air land this equipment. If the airhead is within range, organic aircraft are flown in. This method is preferred since ex-

tensive disassembly of the aircraft is required for aerial delivery.

b. *Airmobile Division.* The airmobile division can participate in the air-landed phase of an airborne operation. The division's equipment is all air transportable in Air Force medium or heavy transport aircraft or organic rotary-wing aircraft. When the distance to the objective and enemy air defense means permit, it is preferable to fly organic aircraft into the objective area to avoid extensive disassembly.

c. *Infantry Division.* Most of the infantry division's equipment is air transportable in Air Force medium and heavy transport aircraft. Exceptions are tanks, tank recovery vehicles, combat engineer vehicles, the armored vehicle launched bridge (AVLB), and other engineer heavy equipment. If within range, organic aircraft are flown into the airhead. This procedure is favored since organic aircraft must be extensively disassembled when transported by Air Force aircraft. The infantry division, when appropriately organized, is well suited to participate in airborne operations in the air-landed role.

d. *Armored and Mechanized Divisions.* The armored and mechanized divisions do not normally participate in airborne operations initially because much of their equipment—particularly main battle tanks and self-propelled artillery—is not air transportable. These divisions, minus heavy equipment, can deploy by strategic airlift to an area where substitute equipment has been stockpiled. The armored and mechanized divisions are ideal for the ground link-up force for airborne operations.

Section XV. AIRMOBILE OPERATIONS

12-48. General

a. In an airmobile operation, 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 on availability of aircraft. The forces in an airmobile operation can vary from one squad to one or more battalions. Chapter 11 contains a discussion of airmobile division operations.

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 that causes 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) All types of offensive operations.
- (2) Operations against irregular forces.
- (3) Over-obstacle assault operations.
- (4) Exploitation of nuclear, chemical, and conventional fires.
- (5) Control of key terrain.
- (6) Blocking or screening enemy avenues of approach.
- (7) Reconnaissance and security missions.
- (8) Counterattack of enemy penetrations.
- (9) Reinforcement of threatened areas.
- (10) Economy of force missions.
- (11) Antiairborne operations.
- (12) Raids.
- (13) Feints and demonstrations.
- (14) Infiltration.

12-49. Basic Considerations

a. Using their organic airlift capability, the infantry and airborne divisions can conduct company-size airmobile operations. Larger operations require corps or field army support.

b. The armored and mechanized divisions do not have an organic capability to conduct airmobile operations except for the reconnaissance and security missions of the armored cavalry squadron.

c. Aviation support for airmobile operations

is provided by attachment, operational control for a specified period, direct support, or combinations of these methods. The lowest echelon able to control and coordinate 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.

d. Limited airmobile operations can be conducted without full air superiority during periods of limited visibility or by using low-level flight techniques.

e. Specially trained personnel are included in the unit being lifted (unit pathfinders). They may be either pathfinders assigned to the supporting aviation unit, or TOE pathfinder detachments assigned to field army provide terminal guidance. Consistent with security, pathfinders can be used in all airmobile operations, especially during periods of reduced visibility. Pathfinder detachments provide terminal guidance to aircraft, assist in the assembly of troops, reconnoiter and recommend drop or landing zones, and reconnoiter and make surveys of areas subjected to attack with nuclear or chemical munitions. Detachments can be delivered to the landing zone by parachute, aircraft, and surface vehicles and craft, or they can infiltrate on foot.

f. When possible, aircraft fly routes that avoid areas occupied by enemy forces. Ground or small airmobile patrols can determine the safety of the routes and can secure them.

g. Airmobile operations do not envision direct assault of heavily defended objectives. Forces land at nearby landing zones, assault, and secure assigned objectives in dismounted attacks. Nuclear or chemical fires can eliminate or neutralize enemy defenses. Armed helicopters provide escort and limited suppressive fires during debarkation and assembly of landing troops.

h. A daylight airmobile operation, which facilitates assembly of troops and equipment, permits more effective air and artillery support than one conducted at night. However, darkness aids in achieving surprise and reduces the effectiveness of enemy fire.

i. Additional intelligence and extensive reconnaissance are necessary in airmobile operations. Reconnaissance should be planned and executed so that it does not disclose future landing zones. The intelligence sections at all levels should strive to document possible landing zones on both sides of the line of contact for both offensive and defensive planning.

j. Intelligence and reconnaissance are extremely important in airmobile operations against insurgency forces. Reconnaissance must not disclose impending operations. Intelligence must be continuous and accurate, and must be available for ready reference to facilitate rapid reaction to insurgency actions.

k. Normally in stability operations, pathfinders do not precede assault forces since their arrival warns the insurgents of an impending operation. Pathfinders normally accompany the assault echelon on the initial lift into the landing zone and control all subsequent lifts. When pathfinders precede the assault forces, they infiltrate to avoid forewarning the enemy forces.

l. While airborne, commanders must be prepared to shift landing zones rapidly to take advantage of enemy weaknesses discovered or to react to enemy countermeasures. The development and use of unit standing operating procedures for changing situations are indispensable in reacting rapidly to changing situations.

12-50. Planning

a. The commander plans rapidly and issues brief, simple orders. He prepares formal operation plans complete with annexes 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) Ground tactical plan, including withdrawal or extraction, reorganization, link-up, and redeployment.

(2) Flight route diagram which includes, as appropriate, loading areas, air control points, start points, departure points, landing (drop) zones, times between control points, and release points for primary and alternate routes. When an air movement plan annex is not prepared, the flight route diagram may also show altitude, formation, and speed. When

applicable, a night flight route diagram is prepared that includes loading areas, departure points, air control points, start points, breakup points, landing zones, times between control points, and release points for primary and alternate routes.

(3) Air movement table (including, as appropriate, time and place of loading, aircraft allocated to units and aircraft loads, and times aircraft and serials clear various control points).

(4) Loading plan which includes sequence of arrival of ground elements in the loading areas.

b. Unit standing operating procedures save time in launching airmobile operations. Standing operating procedures for aircraft loads are developed in detail at squad, platoon, and company levels. General loading plans are developed for company and battalion to indicate how many spaces are required to lift each unit. Loading plans are developed for each type of aircraft and for several environmental conditions that would vary the lift capacity of the aircraft.

c. Plans include electronic countermeasures to reduce the effectiveness of enemy surveillance and fire control equipment. Detailed air reconnaissance and surveillance requirements for airmobile operations must be prepared and included in the division air surveillance plans.

d. Fire support planning includes the use of artillery, nuclear and chemical 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. Time phasing of various fire support means is established and disseminated to the aviation mission commander of the airmobile forces. This is essential to insure reasonable route selection and safety for the airmobile forces en route to the landing zones.

e. Alternate plans are prepared in the event that—

(1) Part of the force is prevented from accomplishing its assigned 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.

f. When airmobile operations involve retention of terrain and link-up on extended time in the objective area, the plan includes defensive measures. If necessary, a separate plan for defense of the area is prepared.

g. 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 and chemical fires.

(5) Availability of ground and aerial vehicles.

h. 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 link-up.

(4) Availability of logistical support.

i. FM 57-35 contains doctrine and planning procedures for airmobile operations.

12-1. General. The primary consideration in troop movement is to be assured that troops arrive at the proper place, at the proper time, in sufficient numbers, and in the best formation to accomplish their assigned mission. This requires that the commander, subordinate units, and the troops be kept informed of the status of the movement and the location of the troops. The commander must also be aware of the status of the enemy's tactical situation.

12-2. The division air defense officer advises the division commander, his staff, and the support command regarding the employment, capabilities, and limitations of organic and attached ground and air support transportation. He is responsible for traffic regulation in the division area.

12-3. The division commander advises the division commander and his staff on the position, capabilities, and limitations of the troops. He also advises on the feasibility of a mobile organic and nonorganic engineer support to support the planned movement.

12-4. The division project manager advises the division commander and his staff on the status of movement within the division area.

12-5. FM 101-3 describes staff officer's responsibilities for troop movement.

12-6. The division air defense officer advises the division commander and his staff on the status and employment of air defense resources during tactical movements. Organic, attached, and supporting air defense assets furnish protection from air attack during tactical movements.

13-2. Classification of Movements

13-2.1. Troop movements are either tactical or administrative. They can be further classified according to the type transportation means employed: land, water, air, or water.

13-2.2. A tactical movement is one in which the movement is conducted in accordance with the tactical situation. The movement is planned and executed in accordance with the tactical situation. The movement is planned and executed in accordance with the tactical situation.

13-2.3. An administrative movement is one in which the movement is conducted in accordance with the administrative situation. The movement is planned and executed in accordance with the administrative situation.

13-2.4. The movement of troops is classified by type of transport.

CHAPTER 13 TROOP MOVEMENTS

(NATO STANAG 2025, SEATO SEASTAG 2025; NATO STANAG 2041,
CENTO STANAG 2041, SEATO SEASTAG 2041, ABCA SOLOG 51;
NATO STANAG 2154, CENTO STANAG 2154, SEATO SEASTAG 2154)

Section I. BASIC CONSIDERATIONS

13-1. 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 a nuclear environment, commanders move their troops from dispersed positions to the point of decision and deploy them discriminately to avoid forming a remunerative target for the enemy's nuclear delivery means.

b. The division transportation officer advises the division commander, his staff, and the support command commander on the employment, capabilities, and limitations of organic and attached combat service support transportation. He is responsible for traffic regulation in the division area.

c. The division engineer advises the division commander and his staff on the condition, capabilities, and limitations of the road net. He also advises on the capability of available organic and nonorganic engineer troops to support the planned movement.

d. The division provost marshal advises the division commander and his staff on traffic control of movement within the division area.

e. FM 101-5 describes staff officer's responsibilities for troop movements.

f. The division air defense officer advises the division commander and his staff on operations and employment of air defense resources during tactical movements. Organic, attached, and supporting air defense means furnish protection from air attack during tactical moves. FM

44-1 and FM 44-3 contain detailed procedures on air defense operations during movement.

g. To expedite movement, individuals and units train for all types of movement. Unit standing operating procedures include methods and techniques for using each mode of transportation that the unit may be required to employ in combat.

h. In movement planning, commanders and staff officers strive for maximum use of the allowable cargo or troop-carrying capacity of available transportation.

13-2. Classification of Movements

a. Troop movements are either tactical or administrative. They can be further classified according to the type transportation means employed: rail, motor, air, or water.

b. A tactical movement emphasizes movement in combat-ready formations. Tactical movements assume that contact with the enemy will occur either en route or shortly after arrival at the destination. Under these conditions, efficient use of transportation is frequently sacrificed because of tactical considerations. The G3 is responsible for staff supervision of tactical troop movements.

c. An administrative movement emphasizes efficient use of transportation. Such moves assume that contact with the enemy is remote or improbable both en route and shortly after arrival at destination. The G4 is responsible for staff supervision of administrative troop movements.

d. Subsequent sections of this chapter discuss the classification of troop movements by type of means.

13-3. Plans

Detailed plans are essential to successful troop movements. Timely notification of impending moves permits units to make necessary preparations. In planning troop movements, division considers—

- a. Organization of troops and equipment to meet the requirements of the tactical situation while making the best use of transportation.
- b. Assembly of troops and transportation.
- c. Packing and marking of equipment.
- d. Loading of personnel and equipment.
- e. Control, combat support, and combat service support en route and at the destination.
- f. Arrival of personnel and equipment in the formation desired at the destination.
- g. Adequate security against air and ground attack en route and at the destination.
- h. Influence of the mission, terrain, weather, enemy, and adequacy of the road net.
- i. Nature and extent of possible interference due to enemy action or refugee movement.

13-4. Control and Coordination

a. Division establishes priorities for control of tactical and administrative troop movements of its subordinate units. The division traffic headquarters plans, routes, schedules, and clears such movements according to their priority.

b. Members of the division traffic headquarters maintain close liaison with the division support command and the traffic headquarters of higher headquarters to insure incorporation of all essential highway movements in the division traffic regulation plan. The division traffic headquarters is operated by the division transportation section. It is normally located in or near the division main command post echelon.

c. The G3, in coordination with the G4, plans and supervises the execution of tactical troop movement plans.

13-5. Security

Security and security planning are essential to troop movement to avoid surprise attack and compromise of plans.

Section II. TACTICAL MOTOR MARCHES**13-6. General**

A division move requires detailed planning. Frequently the time available for issuing orders is short; yet they must be disseminated throughout the division. Time is saved by practicing moves, by experience, and by including pertinent detail in standing operating procedures. FM 55-35 and FM 101-10-1 contain guidance for planning and executing marches.

13-7. Preparation for the March

In preparation for tactical movement, the force is organized into manageable movement echelons. Unit integrity is preserved as much as possible. Movement groups, composed of troops from more than one unit, have a single commander. Subgroupings consist of units under their own commanders. Preparation for the march normally requires the following steps, many of which can be included in the division standing operating procedures:

- a. Issue a warning order.
- b. Make a map reconnaissance. Make ground

and air reconnaissance of the routes and the new area 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 start point.

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.

13-8. Warning Order for the March

The warning order alerts units of an impending move. As soon as the commander receives the first notification concerning the move, he issues a warning order to subordinate commands so they can plan, prepare, and perform reconnaissance. The warning order contains all available information or as much as can be released. The commander disseminates additional information as it is received or released. The warning order, normally a fragmentary order, may be either written or oral.

13-9. Reconnaissance of Routes

a. The assignment of routes to subordinate units depends on the mission and mobility of the unit, enemy capabilities, and the nature of the route. Subordinate units reconnoiter all routes being considered for their use by division. Often speed of movement is closely related to accuracy of reconnaissance.

b. The cavalry squadron, engineer battalion, military police company, battalion reconnaissance platoons, and Army aviation conduct route reconnaissance in conjunction with other functions. They also perform detailed reconnaissance prior to a move. The route reconnaissance party may also include an air defense element to locate areas for siting air defense means to cover the movement of the division through defiles, around obstacles, or at other critical points. If the route reconnaissance party does not include air defense representation, an element of the route reconnaissance party evaluates requirements and makes recommendations on air defense. Reconnaissance determines the capacities of underpasses, bridges and culverts, ferries, fords, and locates critical points and obstacles. Prior location of critical points can prevent congestion and assist security measures.

13-10. Selection of Routes

a. The selection of routes is essential to suc-

cessful marches, especially when the march is long or takes place during adverse weather, darkness, or other conditions of reduced visibility.

b. To reduce vulnerability to nuclear, biological, or chemical fires, the division prefers to move cross-country on multiple routes. The use of multiple routes allows more rapid completion of moves, provides dispersion, and aids security.

c. When moving on multiple routes, elements of the division often use secondary roads. Engineer support is provided, if required. Routes are carefully assigned to insure that they will support the various division loads.

d. The mission is the overriding consideration in selecting routes for a tactical march. Military police provide control during the move. Engineers clear obstacles if requirements exceed the capabilities of the tactical unit.

e. While planning, the commander may find that all vehicles of his command cannot negotiate the route over which his column is to move. He schedules these vehicles over a separate route, making sure that adequate security, maintenance, and supply support are provided.

13-11. Division Planning Considerations

a. The time required to complete the move of the division is calculated as follows:

(1) *Preparation time*—the time from receipt of the order to move until the first vehicle crosses the start point (SP). FM 101-10-1 contains experience factors.

(2) *Time distance*—the time required to travel between two given points at a given rate of march, usually from the start point to the release point.

(3) *Time length*—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. Based on data provided by the transportation officer and the route reconnaissance party, the G3 plans backward from the scheduled mission beginning time to determine when the division is to begin the move.

c. Tables, graphs, and other aids in the standing operating procedures based on the division's experience simplify movement calculations. The most important of these aids are—

- (1) Table of time lengths of columns for division units.
- (2) Table of simplified formulas for road spaces and time length computations.
- (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 maintain a record of the current status of vehicles. Each headquarters ascertains the status of vehicles of the next lower command echelon and determines the time length and road space for each unit.

13-12. Designation of the Start Point

a. A start point provides all units of a march column a common point for starting their integrated movement. When units use more than one route, each route has a start point. The start point is a place along the route of march that is easily recognizable on the ground and is readily accessible, e.g., a road intersection. The start point should—

- (1) Not be in a defile, on a hill, or at a sharp curve in the road.
 - (2) Be far enough from assembly areas to allow the march units to be organized and moving at the prescribed rate when they reach it.
 - (3) 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 to the start point and determines the exact time re-

quired to move this distance. The movement order states the time that each serial will arrive and clear its start point. However, the serial commander calculates and announces the times for major units of his serial to arrive at and clear the serial start point. The start point for march units of the serial may be the same as the serial start point.

13-13. Designation of the Release Point

A release point provides all units of the march column a common point for reverting to the control of their respective commanders. The release point should be on the route of march and easily recognizable on the map and on the ground. Unit guides meet their units as they arrive at the release point and lead them to the new areas. Multiple routes and cross-country movement from the release point to assembly areas enable units to disperse rapidly. A route release point should—

- a. Not be in a defile, on a hill, or on a sharp curve in the road.
- b. Not require a unit to countermarch or march through other units to reach its new area.

13-14. 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. FM 101-10-1 contains details on preparation and illustrates a road movement graph.

13-15. Road Movement Table

a. A road movement table normally is an annex to the movement order. The road movement table contains information and instructions concerning the march serials involved in the location of movement, including their identification serial numbers, rates of march, routes, start points, time of crossing the start points, critical points, and other pertinent details. This information usually results from an accurate knowledge of the status of routes and units from a road movement graph and from time and space calculations.

b. A marching column has difficulty maintaining a constant density and a uniform distance between march units and march serials, while at the same time maintaining a set rate of march. Length of column, rate of march, time interval, time length, and road space vary from the calculated data even in well-disciplined and well-controlled marches. In preparing the road movement table, important considerations are the state of training of units, weather, light, road conditions, and tactical situation. The addition of a safety time factor to calculations may be necessary.

c. Units can expect loss of time and the creation of obstacles and contamination to result from nuclear or chemical fires. They prepare alternate plans for immediate execution. The weather, terrain, experience factors, road conditions, and the enemy's nuclear, biological, or chemical capability influence the time required for movement.

d. FM 101-10-1 contains an example of a road movement table.

13-16. Organization of the Column

a. Whenever possible, elements move in multiple columns, each organized to permit continuous movement. In selecting the formation to be used and determining the order of march, the following are considered:

(1) Missions of the units on arrival and the disposition that 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) Time interval 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 usually marches in six or more major march serials: three brigades, division troops, division artillery, and support command. However, there is not standard for-

mation. The tactical situation determines the organization of march serials. Elements of division artillery, other division troops, and the support command can move with the supported brigades.

c. The division organizes into march units and march serials or march columns prior to executing a march.

d. FM 101-10-1 contains information concerning vehicle densities of motor columns.

13-17. Rate of March

a. The threat of nuclear, biological, or chemical fires increases the requirements for speed, dispersion, and precision of movement. Rates of march vary with the local conditions. Wheeled and tracked vehicles in column 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.

13-18. Halts on the March

a. FM 55-35 contains details of time, duration, and frequency of halts.

b. A unit commander selects a series of assembly areas along all routes for dispersal of units during planned halts. Units move into these areas for refueling and relief halts and, when ordered, to clear blocked or contaminated roads. Unit commanders control movement into and out of assembly areas. 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 halt areas is important.

13-19. Refueling on the March

Commanders make plans for refueling en route. Refueling takes place in assembly areas, if possible. Sufficient fuel and lubricants are carried in unit trains, obtained from POL sup-

ply points en route, or dispatched ahead of the movement to be on hand as required.

13-20. March Liaison

a. Each march unit and serial establish liaison with the preceding element in the column before crossing the start point. 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 there is radio or listening silence, units normally use radio to maintain contact. When there is radio silence, units employ motor or air messengers. Liaison reduces 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 traffic headquarters establishes liaison with higher headquarters to keep abreast of priorities on roads and critical points on the route of march. Other units may use or cross the routes being used by the division. Division establishes liaison with these units as early as possible.

13-21. 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. FM 55-35 contains details of maintenance and procedures in the event of accident.

13-22. Night Marches

Enemy air, nuclear, biological, or chemical munitions capabilities, and the requirements for secrecy frequently dictate movement at night or under conditions of reduced visibility. Reduced visibility places greater emphasis on control, security, liaison, and maintenance of direction. These aspects require careful prior reconnaissance, thorough preparation, and suitable control measures.

13-23. Security

a. The division commander prescribes the security measures for the division.

b. The cavalry squadron and Army aviation assist in providing security for the division. During a move involving all or most of the division, these units normally operate under division control. Chapter 6 contains details of security during movement.

c. When a column halts for a short period, its advance, flank, and rear guards establish march outposts. If the command halts for a long period, it secures itself by means of an interior guard for internal security and an outpost system disposed to provide all-round security. Each column organizes its own outpost system. When the column must secure important points outside the outpost system, it establishes detached posts. The main body is disposed to counter enemy threats and facilitate the adoption of a predetermined defense.

d. Organic and supporting air defense means furnish protection from air attack. FM 44-4 and FM 44-3 contain detailed procedures on air defense operations.

13-24. Orders

a. The operation order contains the instructions for the movement of units from one location to another within a stated time. Preparation of this order normally follows the completion of the necessary reconnaissance and an estimate of the situation. When the time available and the existing tactical conditions prevent detailed planning or reconnaissance, division prepares several march plans in the form of standing operating procedures. Fragmentary orders can modify these plans to fit the given situation.

b. If conditions and time permit, information in the operation order includes destination, routes, rate of march, maximum speeds, order of march, start points, start point times, details of air and ground alert guards, scheduled halts, vehicle distances, release points, communications, location of the commander during the march, and strip maps. Other details included, as necessary, are route or unit markers to be used, control or checkpoints, and location of road guides. Certain items listed

above often become standard, and units include them in standing operating procedures. Repetition of these items is not necessary in the operation order.

13-25. Strip Maps

A strip map is a sketch of the route that provides useful information about the route of march. A strip map should be included as an annex to the operation order. Small-unit commanders find the strip map particularly useful for organizational control. Using units can reproduce strip maps in quantity and supply them to key personnel.

13-26. Control

a. To establish initial control of the march, the division commander designates—

- (1) Start point, release point, and other critical points.
- (2) Time at which the heads or the tails of the columns pass these points.
- (3) Rate of march.
- (4) Time intervals between units.
- (5) Order of march.
- (6) Routes of march.
- (7) Assembly areas.
- (8) Phase lines.
- (9) Location of his command post.
- (10) Communications for control of the march.
- (11) Military police traffic control posts.

b. The rapid movement of forces requires effective control. Control of the movement of corps and army units operating in the division

zone is emphasized. A movement plan or standing operating procedures provides for—

(1) Establishment of unit priorities and control of the movement to and on routes. Clearly marked routes and thoroughly briefed vehicle operators are essential.

(2) Granting of clearances 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 uninterrupted movement and reduced vulnerability. Army aircraft provide an efficient means of detecting and correcting violations and, consistent with tactical security, are used to the maximum. Units identify themselves to air observers by displaying panels. Ground surveillance is used for all marches. Staff officers at all echelons check and control columns.

d. Units plan efficient use of military police. Movement on multiple routes during periods of poor visibility and the existence of major intersections, defiles, and detours along routes increase traffic control problems. A minimum number of traffic control posts are used. In conjunction with control posts and consistent with tactical security, each column uses air and mobile ground control teams. The air control team can land and control situations until relieved by a ground control team. Columns should request additional military police support from higher headquarters when organic military police cannot handle the operation alone.

Section III. MOVEMENTS BY RAIL

13-27. General

Since rail is economical transportation for moving large bodies of troops long distances, it should be used to the maximum. When rail facilities are limited, tracked, heavy, and oversized vehicles should receive priority for rail movement.

13-28. 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, including shipping containers, loading and unloading facilities, and 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.

13-29. Plans and Orders

a. An order directing the movement of a unit by rail designates the points at which the unit will entrain and indicates the desired closing time at the unit's destination.

b. The commander of 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.

13-30. Organization for Movement

a. The availability of transportation, the

mission, and the situation confronting the moving unit at its destination determine the sequence in which elements move. Availability of suitable loading facilities, material to be loaded, and proximity of elements to entraining points determine the assignment of units to entraining points.

b. A transportation grouping consists of the troops, equipment, and supplies transported on one train. Transportation groupings obtain the most economical loading unless tactical considerations dictate the maintenance of tactical unity. When tactical considerations govern, each combat element should carry its own equipment and supplies.

Section IV. MOVEMENTS BY WATER**13-31. General**

a. Water transportation is the primary means of establishing and maintaining operations in oversea areas. A large capacity for personnel and tonnage, great range, and comparatively slow speed characterize water transportation.

b. Waterborne movements are especially vulnerable to hostile air, surface, and undersea attack. When an enemy attack is possible, vessels usually will assemble in a convoy under naval command and will have a naval escort to include air cover.

c. Chapter 12 discusses waterborne movements of divisions in a riverine environment.

13-32. Responsibilities

a. JCS Pub. 3 sets forth the responsibilities of the moving agency—the Military Sea Transport Service (MSTS) or the U.S. Navy. FM 101-10-1 contains details relative to water transportation.

b. The responsibilities of the unit being moved are the same as set forth in paragraph 13-28.

Section V. MOVEMENTS BY AIR**13-33. General**

Units can be transported rapidly into battle by aerial means. These means can also deliver troops, supplies, and equipment to a secure objective area or to an area inaccessible by other means. Movements by air may be either tactical or administrative, or a combination thereof, depending on the contemplated employment of the force being moved or the tactical situation at the destination. Movement by air capitalizes on the capability of the aircraft to overcome distances and overfly geographical barriers. Movement by air has the advantage of speed;

however, it is limited by a low-tonnage and low-cubage capacity, adverse weather, inadequate air-landing facilities, and enemy counter-air activities.

a. *Strategic.* Air movement increases speed. The division, less tanks, tank recovery vehicles, armored vehicle launched bridges, and self-propelled artillery, can move to locations throughout the world in a short time, thereby capitalizing on strategic surprise. The division can move by air independently or as part of an airborne force. TM 57-210 and FM 57-1 contain information regarding air movement.

b. Tactical. FM 57-1, FM 57-35, and FM 100-27 contain joint doctrine for movement by air.

13-34. Army Aviation

The aviation battalion in the infantry and airborne divisions and the aviation group in the airmobile division contain Army aircraft suitable for cargo or troop lift. Corps and army resources provide the armored and mechanized divisions army airlift means. The division's mobility is improved by Army aviation to support reconnaissance, to move troops and supplies, and to evacuate casualties. When the division has a limited airlift capability, it carefully coordinates and plans the efficient use of this capability. Additional Army aviation support available within the field army is considered.

13-35. Control of Army Aviation

Army aviation units from higher headquarters can support, be attached, or be placed under the operational control of the division. Normally, the division retains operational control of any attached aviation units; however, in some circumstances, control may be delegated to a lower level. The division may favor delegation of operational control 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 designates the mission that the airmobile force is to accomplish.
- d.* The unit conducting the operation has adequate communication facilities for control of Army aviation.

13-36. Air Force Airlift Support

The division plans for operations employing airlift aircraft to include maintaining up-to-date requirements to move the division or its subordinate elements by various types of Air Force airlift aircraft. When aircraft are not available in the quantities required, elements that are not needed immediately in the objective area are phased back to subsequent echelons. TM 57-210 and FM 100-27 contain tech-

nical information and doctrine for air movement in Air Force airlift aircraft.

13-37. Airlift Requests

a. Airlift of troops, cargo, and supplies is accomplished through the use of cargo helicopters of Army aviation units or cargo aircraft of the tactical air force supporting the field army.

b. Requests for airlift can be initiated at any level of command. Requests are satisfied at the lowest echelon capable of fulfilling the requester's needs. Chapter 5 discusses request procedures for airlift of cargo and supplies. This paragraph discusses request procedures for airlift of troops.

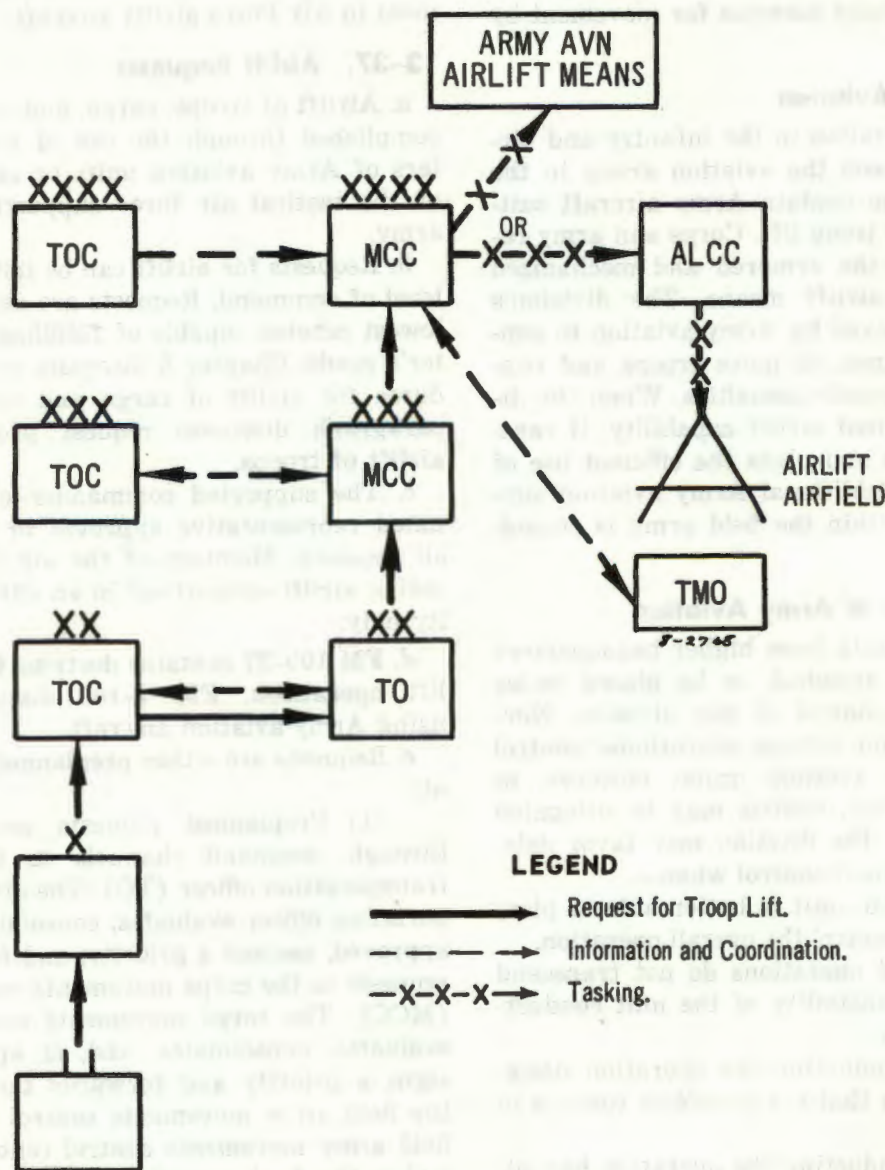
c. The supported commander or his designated representative approves or disapproves all requests. Members of the air element providing airlift support act in an advisory capacity only.

d. FM 100-27 contains doctrine for joint airlift operations. FM 1-100 discusses airlift using Army aviation aircraft.

e. Requests are either preplanned or immediate.

(1) Preplanned requests are submitted through command channels to the division transportation officer (TO). The division transportation officer evaluates, consolidates, and, if approved, assigns a priority, and forwards the requests to the corps movements control center (MCC). The corps movements control center evaluates, consolidates, and, if approved, assigns a priority and forwards the request to the field army movements control center. The field army movements control center normally makes the final consolidation and obtains approval of the requests. After receiving approval of the requests, the field army movements control center tasks the appropriate Army aviation unit or the Air Force airlift control center to perform the mission and notifies the originator of the approval through channels. If the request is disapproved at any echelon, the requester is notified through channels. Figure 13-1 illustrates preplanned request channels for airlift of troops.

(2) Immediate requests below battalion level are forwarded to the battalion command



NOTE: Requests are satisfied at the lowest echelon capable of fulfilling the requester's needs.

Figure 13-1. Preplanned request channels for airlift of troops.

post by the most rapid means available. At battalion level, requests are validated by the commander or his representative and passed to the tactical air control party. The tactical air control party transmits the requests directly to the direct air support center (DASC) collocated with the corps tactical operations center (CTOC). Tactical air control parties at inter-

mediate headquarters monitor the request and acknowledge receipt. Normally, acknowledgment of the request by intermediate tactical air control parties indicates approval by the associated headquarters unless, within a specified period of time, a disapproval is transmitted. The commander may desire that approval as well as disapproval of requests originating

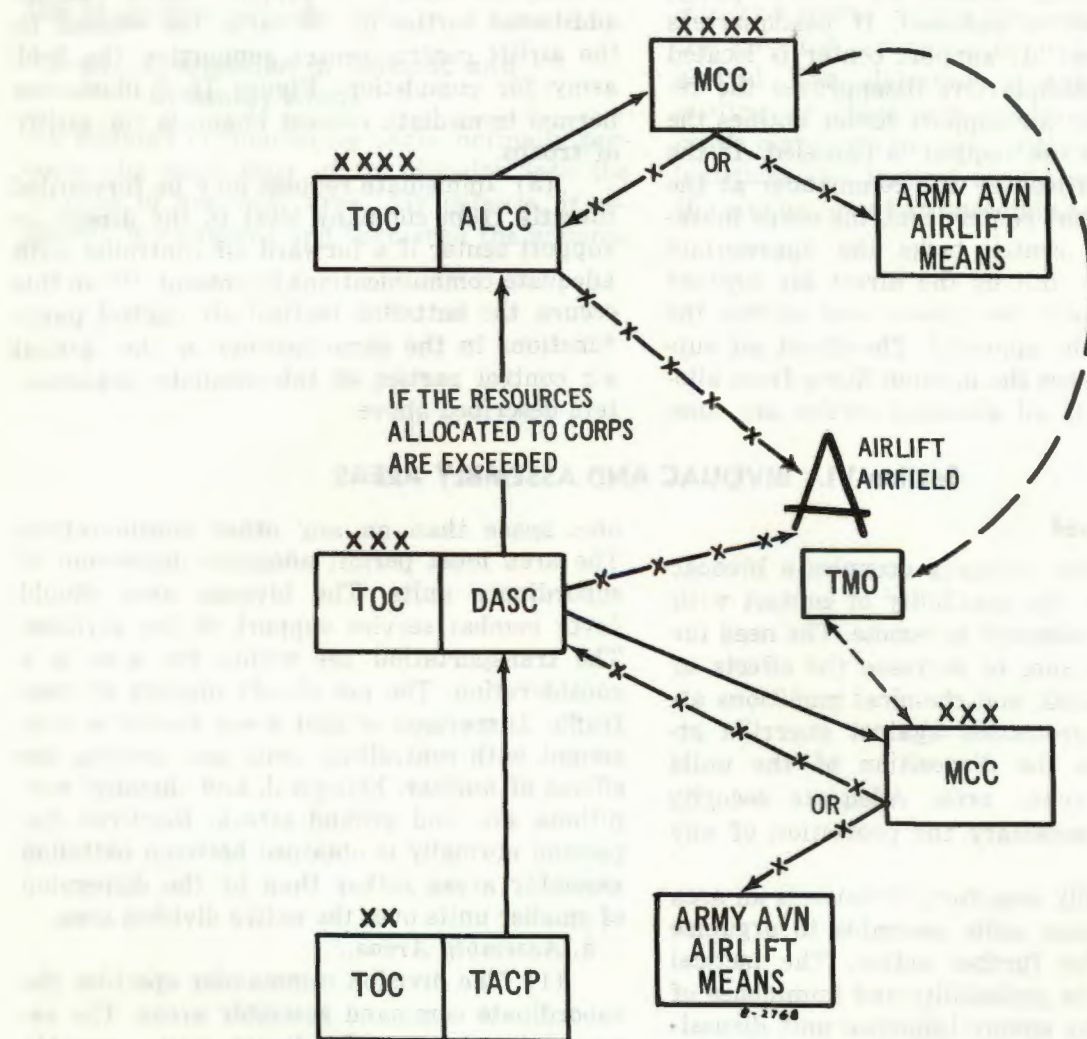


Figure 13-2. Immediate request channels for airlift of troops.

within his command be stated by specific transmission. Standing operating procedures establish procedures for approving and disapproving requests at intermediate echelons. The direct air support center passes the requests to the corps movements control center for action and coordination. Meanwhile, the in-

termediate tactical air control parties pass the requests to the associated headquarters for action and coordination. All echelons coordinate simultaneously. If any echelon above the initiating level disapproves a request, the tactical air control party at the disapproving headquarters notifies the direct air support center

and the initiating tactical air control party, and the request is canceled. If headquarters where the direct air support center is located or a higher headquarters disapproves the request, the direct air support center notifies the originator and the request is canceled. If the request is approved by the commander at the direct air support center level, the corps movements control center tasks the appropriate Army aviation unit or the direct air support center to perform the mission and notifies the originator of the approval. The direct air support center orders the mission flown from allocated sorties. If all allocated sorties are com-

mitted, the direct air support center obtains additional sorties or forwards the request to the airlift control center supporting the field army for completion. Figure 13-2 illustrates normal immediate request channels for airlift of troops.

(3) Immediate request may be forwarded directly from company level to the direct air support center if a forward air controller with adequate communications is present. When this occurs, the battalion tactical air control party functions in the same manner as the tactical air control parties of intermediate headquarters described above.

Section VI. BIVOUAC AND ASSEMBLY AREAS

13-38. General

a. The division normally occupies a bivouac area only when the possibility of contact with enemy ground elements is remote. The need for adequate dispersion to decrease the effects of nuclear, biological, and chemical munitions attack and for protection against guerrilla attack influences the disposition of the units within the bivouac area. Adequate security measures are necessary for protection of any bivouac area.

b. An assembly area for a division is an area where its organic units assemble to organize and prepare for further action. The tactical situation and the probability and imminence of contact with the enemy influence unit dispositions. Security measures taken in assembly areas are those required by the tactical situation.

c. While in an assembly area, units may—

- (1) Issue orders.
- (2) Reorganize for combat.
- (3) Train and release for future operations.
- (4) Refuel and resupply.
- (5) Perform maintenance and decontamination.
- (6) Rest and relax.

13-39. Selection of Bivouac and Assembly Areas

a. *Bivouac Areas.* The selection of bivouac areas depends more on the availability of suit-

able space than on any other consideration. The area must permit adequate dispersion of subordinate units. The bivouac area should favor combat service support of the division. The transportation net within the area is a consideration. The net should support division traffic. Dispersion of unit areas should be consistent with controlling units and limiting the effects of nuclear, biological, and chemical munitions, 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 division commander specifies the subordinate command assembly areas. The assignment of the subordinate unit assembly areas maintains unit integrity.

(2) In selecting an assembly area, the commander considers:

(a) A location to permit the contemplated employment of the unit to occupy it.

(b) A location that can be defended against known enemy capabilities.

(c) A location with the size, shape, and ground conformation to allow the occupying unit sufficient protection and dispersion to prevent losing more than one battalion to a single nuclear, biological, or chemical munition.

(d) The occupying unit's ability to establish the necessary communications.

(e) Terrain that provides adequate

trafficability, concealment, and physical facilities to accommodate the unit.

13-40. 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 division's arrival. The allocation of subareas and the posting of signs and guides aid the march unit's move into the area without halting. Both logistical and tactical considerations apply in the occupation of an assembly area.

APPENDIX A

REFERENCES

A-1. Field Manuals

FM 1-5	Aviation Company.
FM 1-15	Divisional Aviation Battalion and Group.
FM 1-20 (Test)	Nondivisional Combat Aviation Battalion, Group, and Brigade.
FM 1-60	Army Aviation Air Traffic Operations—Tactical.
FM 1-100	Army Aviation Utilization.
FM 1-105	Army Aviation Techniques and Procedures.
FM 1-110	Armed Helicopter Employment.
FM 3-8	Chemical Reference Handbook.
FM 3-10	Employment of Chemical and Biological Agents.
(S) FM 3-10A	Employment of Biological Agents (U).
(C) FM 3-10B	Employment of Chemical Agents (U).
FM 3-12	Operational Aspects of Radiological Defense.
FM 3-50	Chemical Smoke Generator Units and Smoke Operations.
FM 5-1	Engineer Troop Organizations and Operations.
FM 5-26	Employment of Atomic Demolition Munitions (ADM).
FM 5-35	Engineers' Reference and Logistical Data.
FM 5-135	Engineer Battalion, Armored, Infantry, and Infantry (Mechanized) Divisions.
FM 5-136	Engineer Battalion, Airborne and Airmobile Divisions.
FM 5-142	Nondivisional Engineer Combat Units.
FM 5-144	Engineer Amphibious Units.
FM 6-20-1	Field Artillery Tactics.
FM 6-20-2	Field Artillery Techniques.
FM 6-140	Field Artillery Cannon Battalions and Batteries.
(C) FM 6-141-1	Nonnuclear Employment of Field Artillery Weapon Systems (U).
(S) FM 6-141-1A	Nonnuclear Employment of Field Artillery Weapon Systems (Biological) (U).
FM 7-11	Rifle Company, Infantry, Airborne, and Mechanized.
FM 7-15	Rifle Platoon and Squads, Infantry, Airborne and Mechanized.

FM 7-20	Infantry, Airborne Infantry, and Mechanized Infantry Battalions.
FM 7-30	Infantry, Airborne, and Mechanized Division Brigades.
FM 8-10	Medical Service, Theater of Operations.
FM 8-15	Medical Service in Divisions, Separate Brigades, and Armored Cavalry Regiments.
FM 8-16	Medical Service Field Army.
FM 8-35	Transportation of the Sick and Wounded.
FM 9-6	Ammunition Service in the Theater of Operations.
FM 10-8	Air Delivery of Supplies and Equipment in the Field Army.
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, Infantry, and Infantry (Mechanized) Divisions.
FM 11-57	Signal Battalion, Airborne Division.
FM 12-2	Adjutant General Support in Theaters of Operations.
FM 14-3	Comptroller Support in Theaters of Operations.
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 19-1	Military Police Support, Army, Divisions, and Separate Brigades.
FM 19-15	Civil Disturbances and Disasters.
FM 19-45-1 (Test)	Rear Area Protection.
FM 20-10	Military Support in Civil Defense.
FM 20-32	Landmine Warfare.
FM 20-33	Combat Flame Operations.
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	Chemical, Biological, and Nuclear Defense.
FM 21-48	Chemical, Biological, and Radiological (CBR) and Nuclear Defense Training Exercises.
FM 22-100	Military Leadership.
FM 23-17	Redeye Guided Missile System.
(C) FM 23-17A	Redeye Guided Missile System (U).

FM 24-1	Tactical Communications Doctrine.
FM 24-16	Signal Orders, Records, and Reports.
FM 24-17	Tactical Communications Center Operations.
FM 24-18	Field Radio Techniques.
FM 27-10	The Law of Land Warfare.
FM 29-10	Supply Management in the Field Army.
FM 29-22	Maintenance Operations in the Field Army.
FM 29-45	General Support Supply and Service in the Field Army.
FM 29-50	Supply and Services in Divisions and Separate Brigades.
FM 30-5	Combat Intelligence.
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 30-17	Counterintelligence Operations.
FM 30-20	Aerial Surveillance—Reconnaissance, Field Army.
FM 30-20-1 (Test)	Aerial Surveillance—Reconnaissance, Field Army (Aerial Surveillance Company).
(C) FM 30-31	Stability Operations—Intelligence (U).
(S) FM 30-31A	Stability Operations—Intelligence Collection (U).
FM 31-10	Barriers and Denial Operations.
FM 31-12	Counter guerrilla Operations.
FM 31-16	Army Forces in Amphibious Operations (The Army Landing Force).
FM 31-21	Special Forces Operations.
(S) FM 31-21A	Special Forces Operations (U) (when published).
FM 31-22	U.S. Army Counterinsurgency Forces.
(S) FM 31-22A	U.S. Army Counterinsurgency Forces (U).
FM 31-23	Stability Operations—U.S. Army Doctrine.
FM 31-25	Desert Operations.
FM 31-30	Jungle Training and Operations.
FM 31-36 (Test)	Night Operations
(C) FM 31-40	Tactical Cover and Deception (U).
FM 31-50	Combat in Fortified and Built-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.
FM 31-75 (Test)	Riverine Operations.
FM 31-81 (Test)	Base Defense (To be published).
(C) FM 32-5	Signal Security (SIGSEC) (U).
(S) FM 32-10	United States Army Security Agency in Support of a Field Army (U).
(C) FM 32-20	Electronic Warfare (Ground Based) (U).
(S) FM 32-20A	Electronic Warfare (Ground Based) (U).

FM 33-1	Psychological Operations—U.S. Army Doctrine.
FM 33-5	Psychological Operations—Techniques and Procedures.
FM 41-5	Joint Manual for Civil Affairs.
FM 41-10	Civil Affairs Operations.
FM 41-15 (Test)	Civil Affairs Support TASTA-70.
FM 44-1	U.S. Army Air Defense Artillery Employment.
(S) FM 44-1A	U.S. Army Air Defense Artillery Employment (U).
FM 44-2	Air Defense Artillery Employment (Automatic Weapons) M42/M55.
FM 44-3	Air Defense Artillery Employment, Chaparral/Vulcan.
FM 44-96	Air Defense Artillery Employment, Hawk.
FM 54-2	The Division Support Command.
FM 55-6	Transportation Services in Theaters of Operations.
FM 55-35	Motor Transportation Operations and Motor Transport Units.
FM 55-46	Army Air Transport Operations.
FM 57-1/AFM 2-51	U.S. Army/U.S. Air Force Doctrine for Airborne Operations.
FM 57-35	Airmobile Operations.
FM 57-38	Pathfinder Operations.
FM 61-24	Division Communications.
FM 100-5	Field Service Regulations—Operations.
FM 100-10	Field Service Regulations, Administration.
FM 100-15	Field Service Regulations, Larger Units.
(C) FM 100-20	Field Service Regulations—Internal Defense and Development (IDAD) (U).
FM 100-27	U.S. Army/U.S. Air Force Doctrine for Tactical Airlift Operations.
FM 101-5	Staff Officer's Field Manual—Staff Organization and Procedures.
FM 101-10-1	Staff Officer's Field Manual—Organization, Technical, and Logistic Data; Unclassified Data.
FM 101-10-2	Staff Officer's Field Manual—Organization, Technical, and Logistic Data—Extracts of Tables of Organization and Equipment.
FM 101-31-1	Staff Officer's Field Manual—Nuclear Weapons Employment, Doctrine, and Procedures.
(S) FM 101-31-2	Staff Officer's Field Manual—Nuclear Weapons Employment, Doctrine, and Procedures (U).
FM 101-31-3	Staff Officer's Field Manual—Nuclear Weapons Employment Effects Data (Classified).

FM 101-40

Armed Forces Doctrine for Chemical and Biological Weapons Employment and Defense.

A-2. Technical Manuals

TM 3-210

Fallout Prediction.

TM 3-220

Chemical, Biological, and Radiological (CBR) Decontamination.

TM 5-227

Simplified Designs and Techniques for Military Civic Action.

TM 57-210

Air Movement of Troops and Equipment.

TM 57-220

Technical Training of Parachutists.

A-3. Training Circulars

TC 101-2

Tactical Operations Centers.

A-4. Army Regulations

(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.

A-5. Tables of Organization and Equipment

TOE 7G

Infantry Division.

TOE 17G

Armored Division.

TOE 37G

Infantry Division (Mechanized).

TOE 57G

Airborne Division.

TOE 67T

Airmobile Division.

A-6. Miscellaneous

ATT 32-400

Signal Security (SIGSEC), Army Type Brigade, Battalions, and Other Units and Teams.

DA Pam 310-series

Military Publications Indexes.

JCS Pub 1

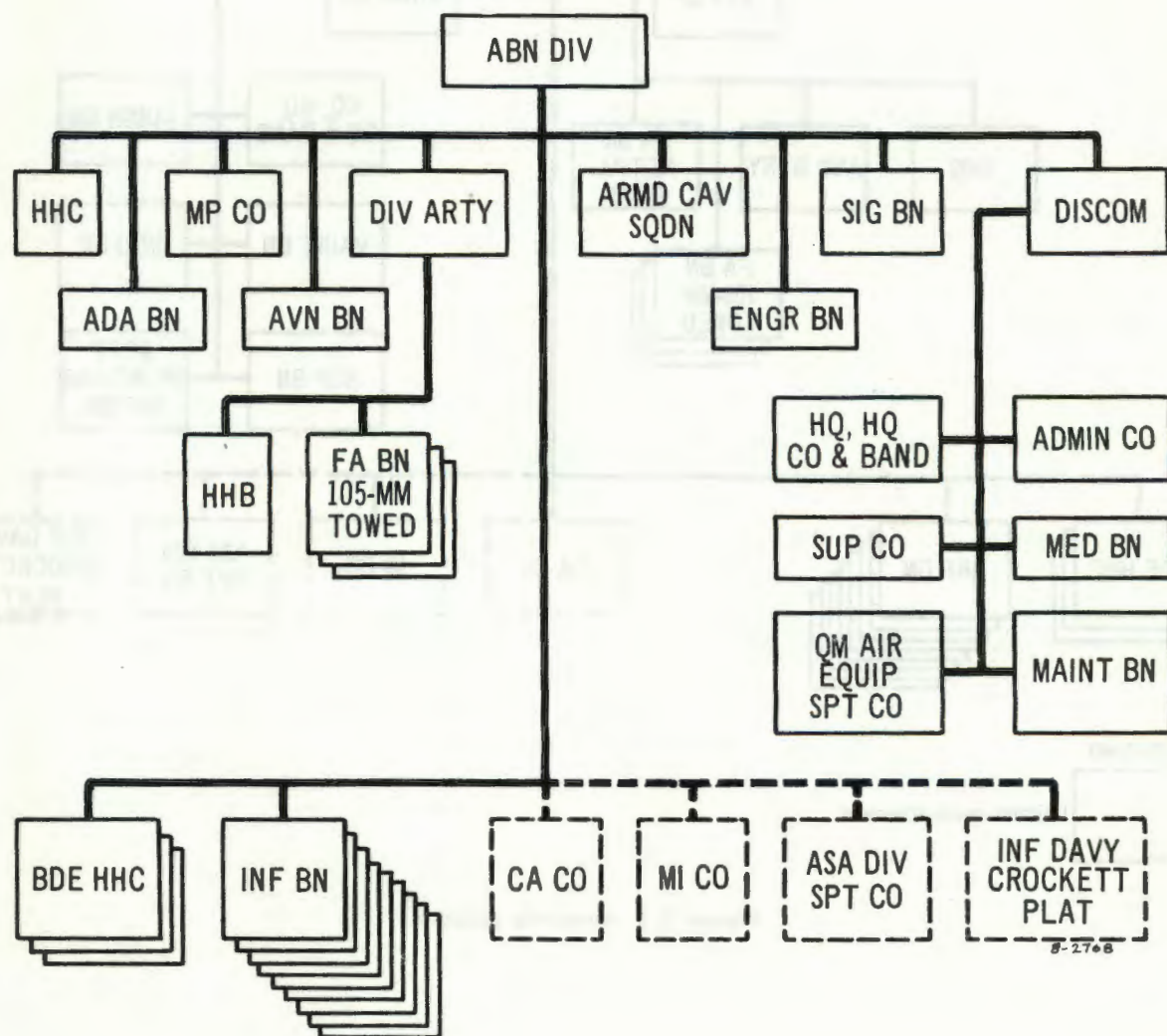
Dictionary of United States Military Terms for Joint Usage.

JCS Pub 2

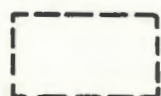
Unified Action Armed Forces (UNAAF).

APPENDIX B ORGANIZATION CHARTS

APPENDIX B ORGANIZATION CHARTS



LEGEND



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Figure B-1. Airborne division.

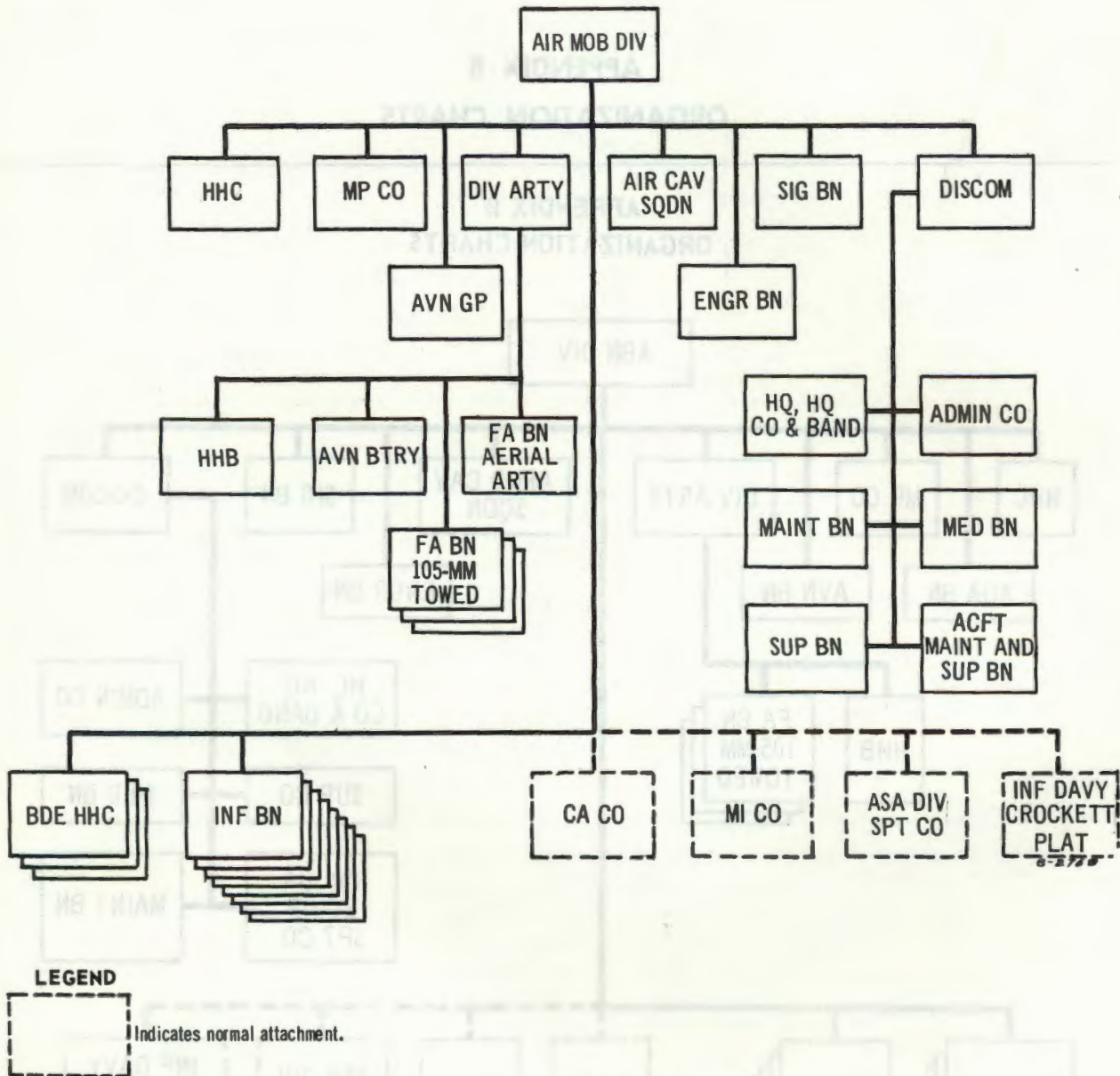
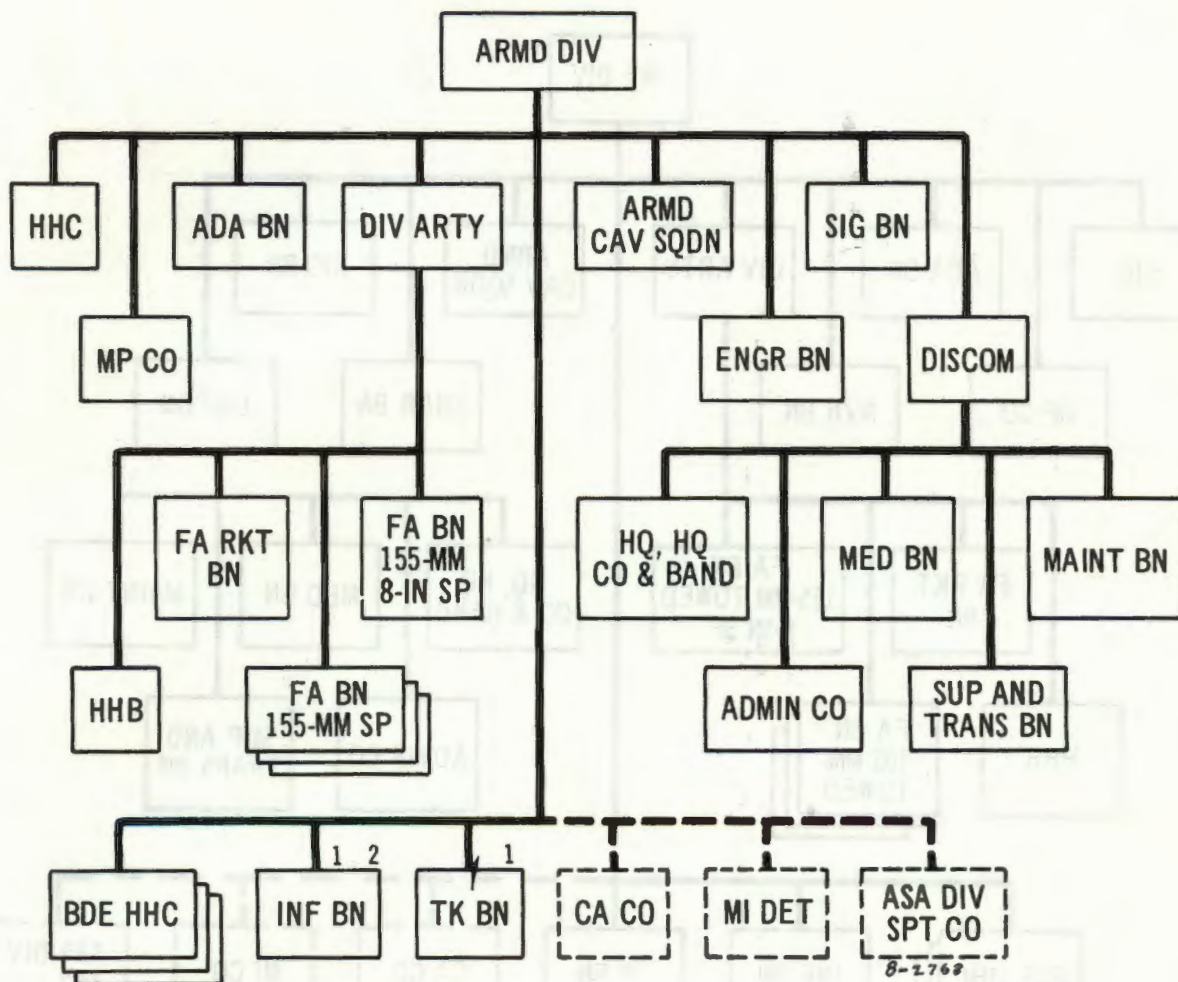


Figure B-2. Airmobile division.



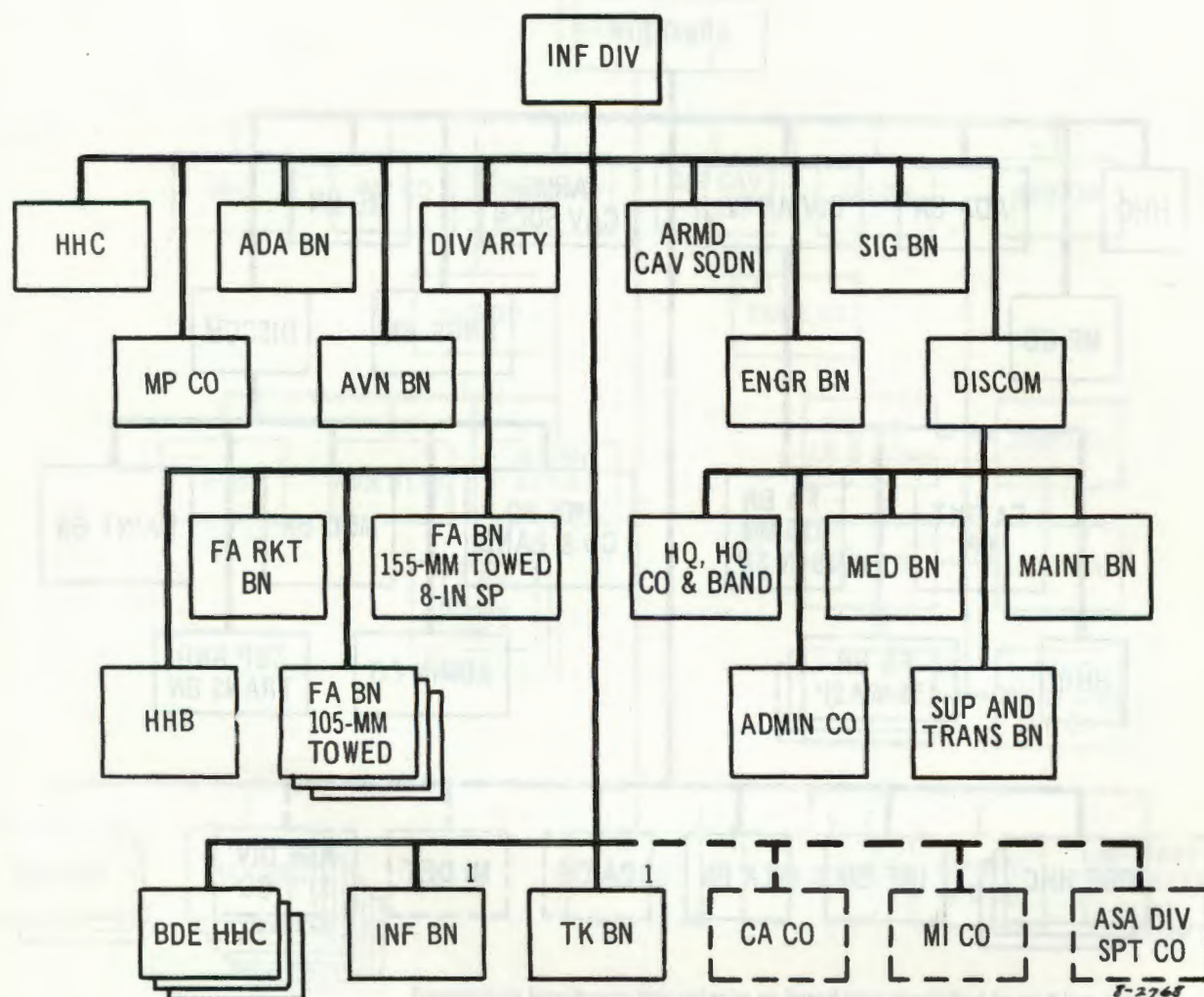
¹Number and type of battalions vary based on mission and operational environment.

²Mechanized infantry.

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Figure B-3. Armored division.



¹Number and type of battalions vary based on mission and operational environment.

Figure B-4. Infantry division.

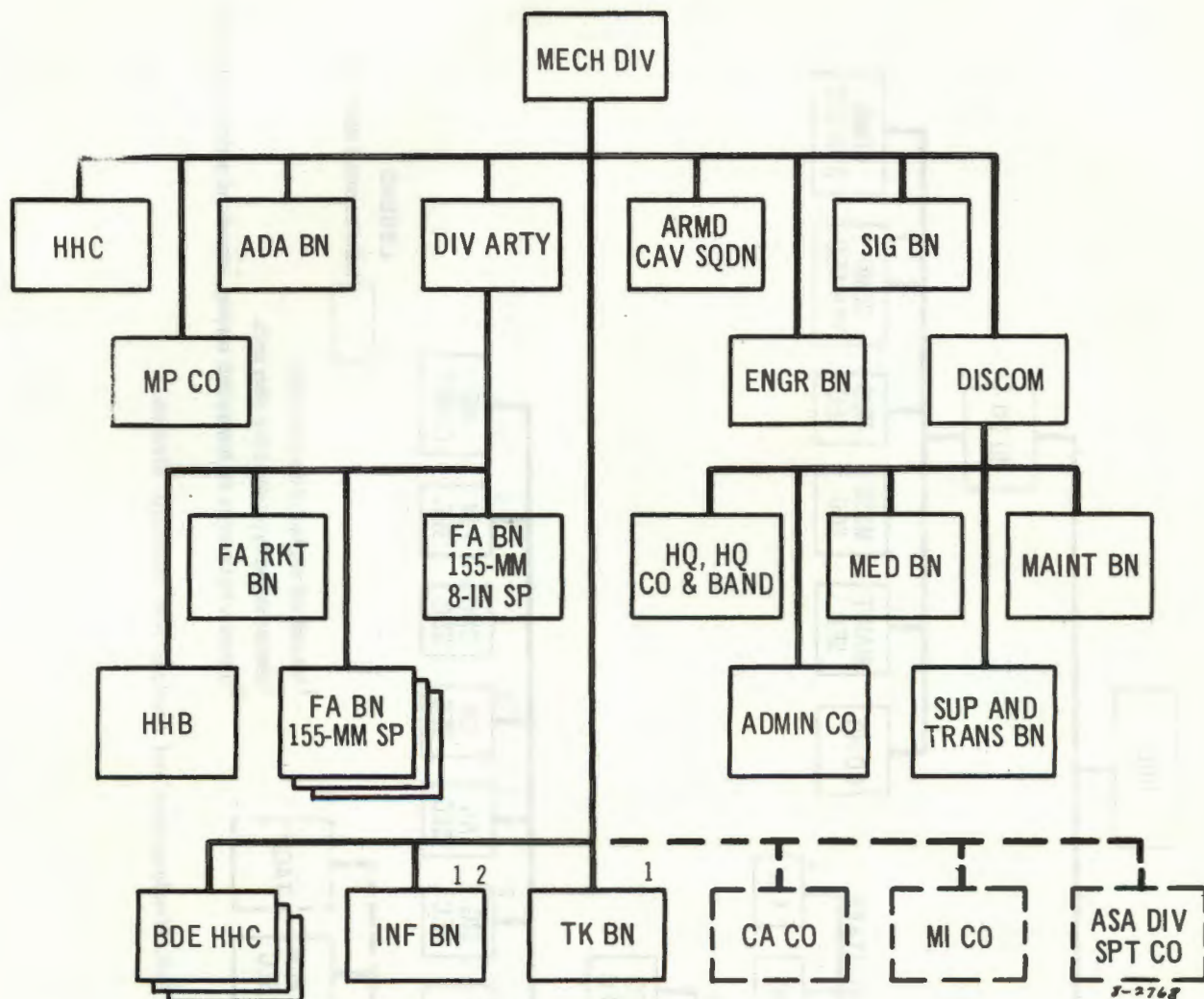


Figure B-5. Mechanized division.

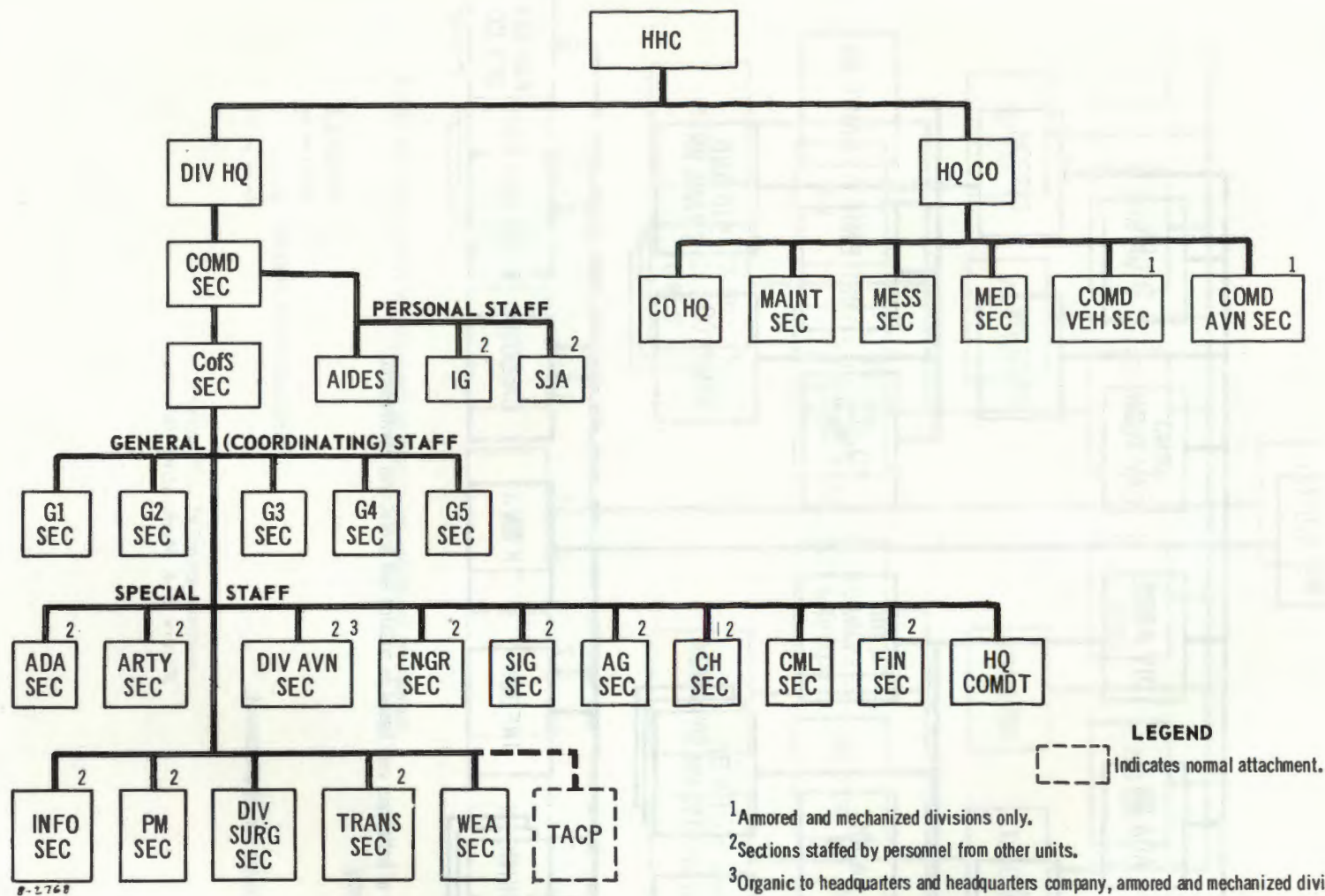
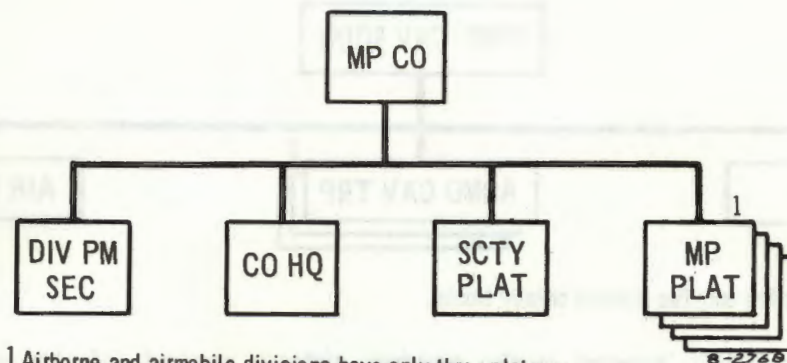


Figure B-6. Headquarters and headquarters company, division.



¹ Airborne and airmobile divisions have only three platoons.

Figure B-7. Military police company, division.

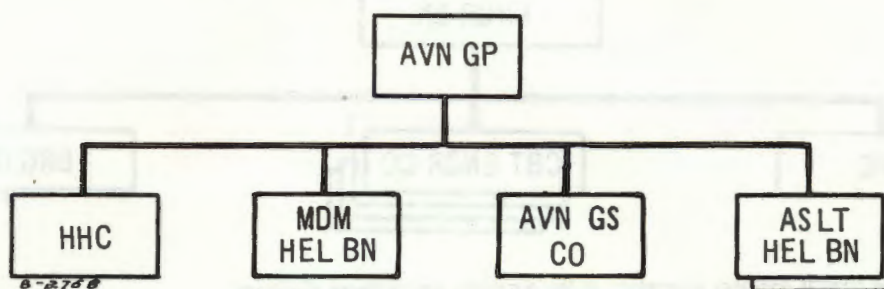


Figure B-8. Aviation group, airmobile division.

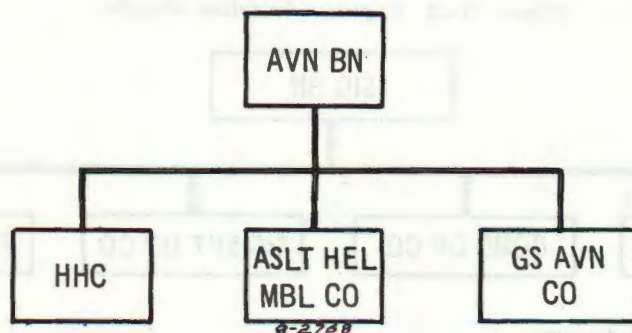


Figure B-9. Aviation battalion, airborne and infantry divisions.

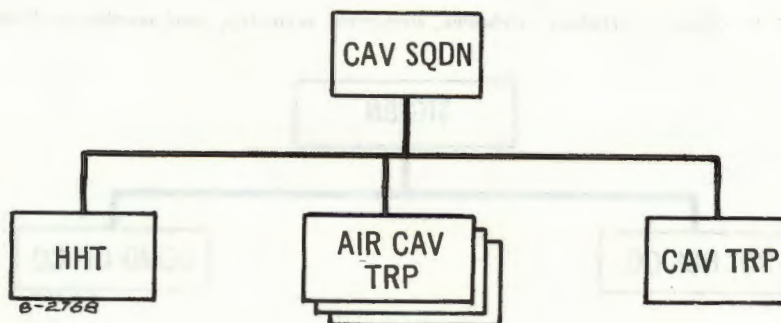
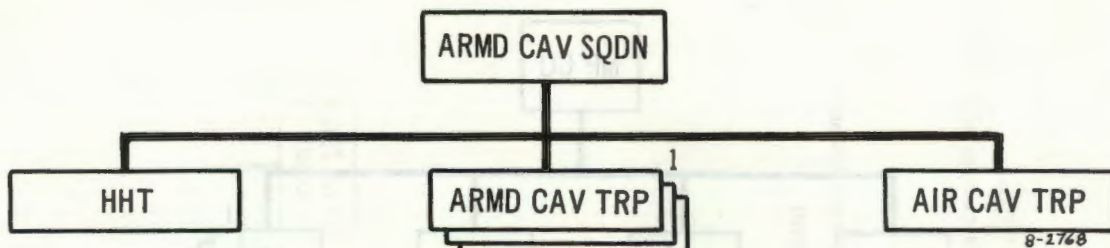
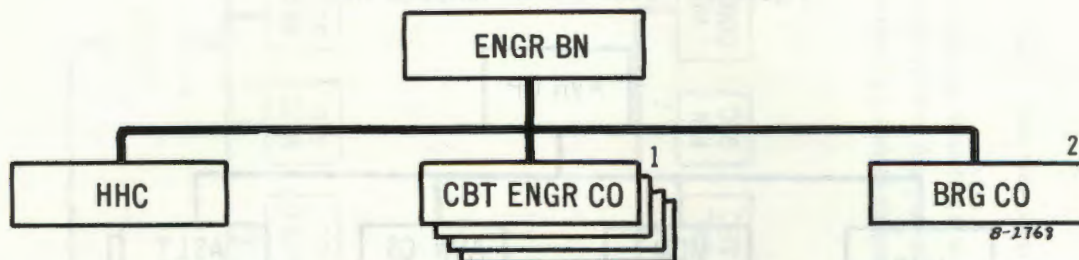


Figure B-10. Air cavalry squadron, airmobile division.



¹Airborne division has only two armored cavalry troops.

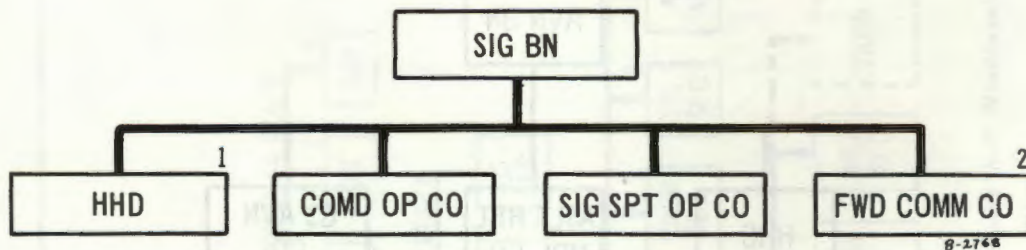
Figure B-11. Armored cavalry squadron, airborne, armored, infantry, and mechanized divisions.



¹Only three combat engineer companies in the airmobile and airborne divisions.

²Armored, infantry, and mechanized divisions only.

Figure B-12. Engineer battalion, division.



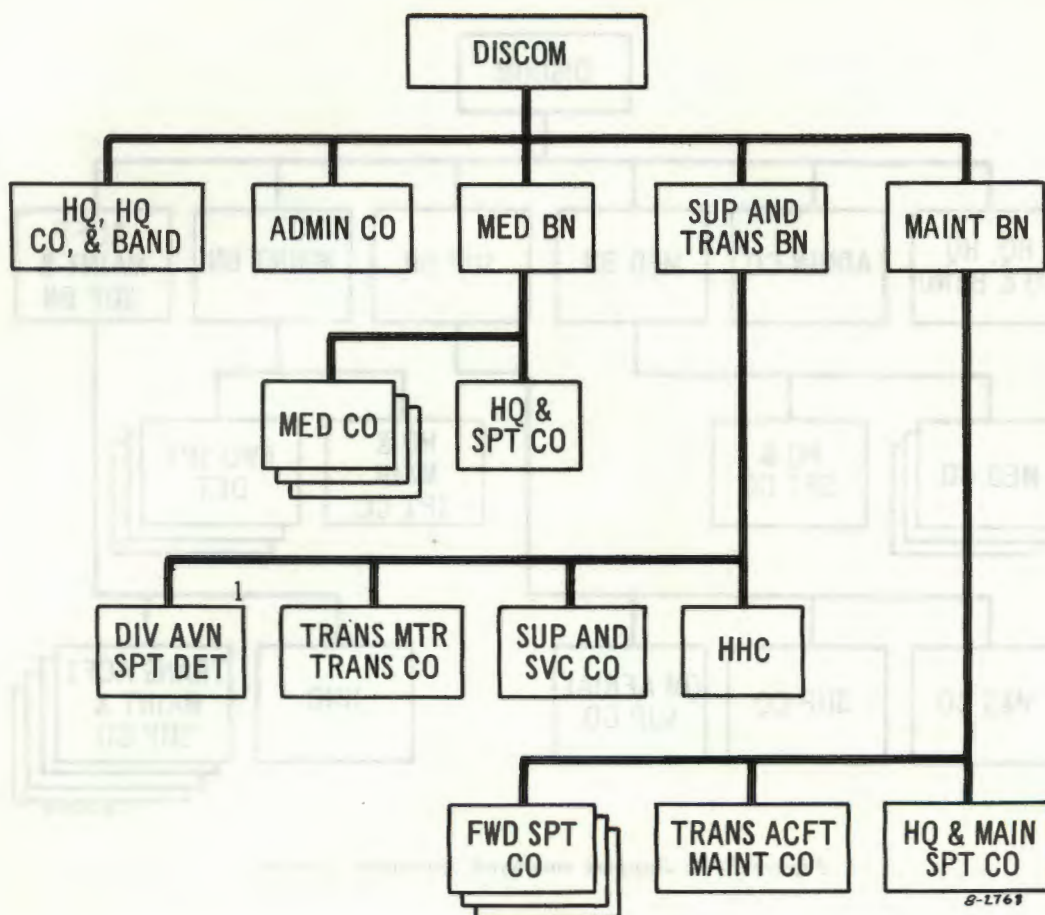
¹Company in airborne division.

²Armored, infantry, and mechanized divisions only.

Figure B-13. Signal battalion, airborne, armored, infantry, and mechanized divisions.



Figure B-14. Signal battalion, airmobile division.



¹Armored and mechanized division only.

Figure B-15. Support command, armored, infantry, and mechanized divisions.

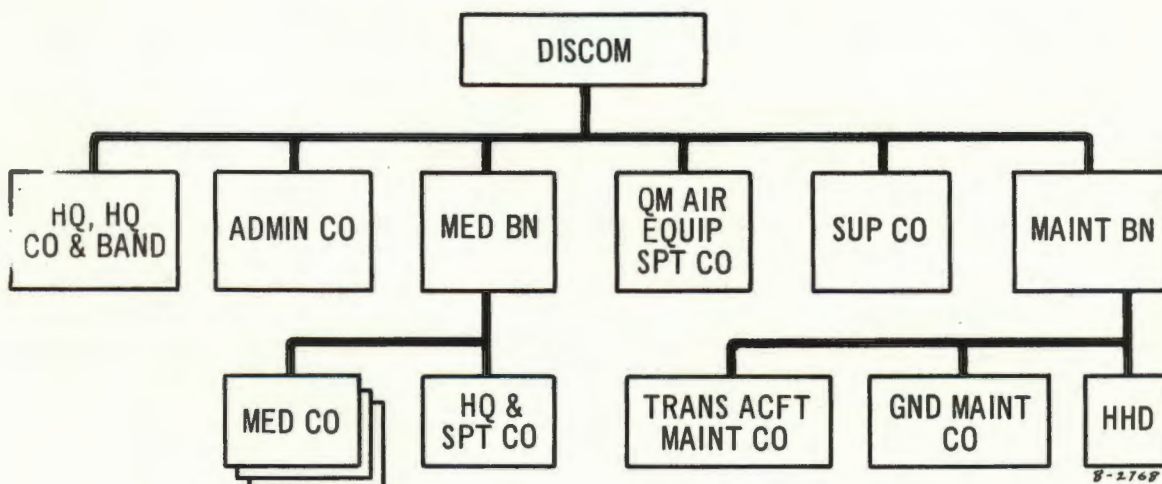


Figure B-16. Support command, airborne division.

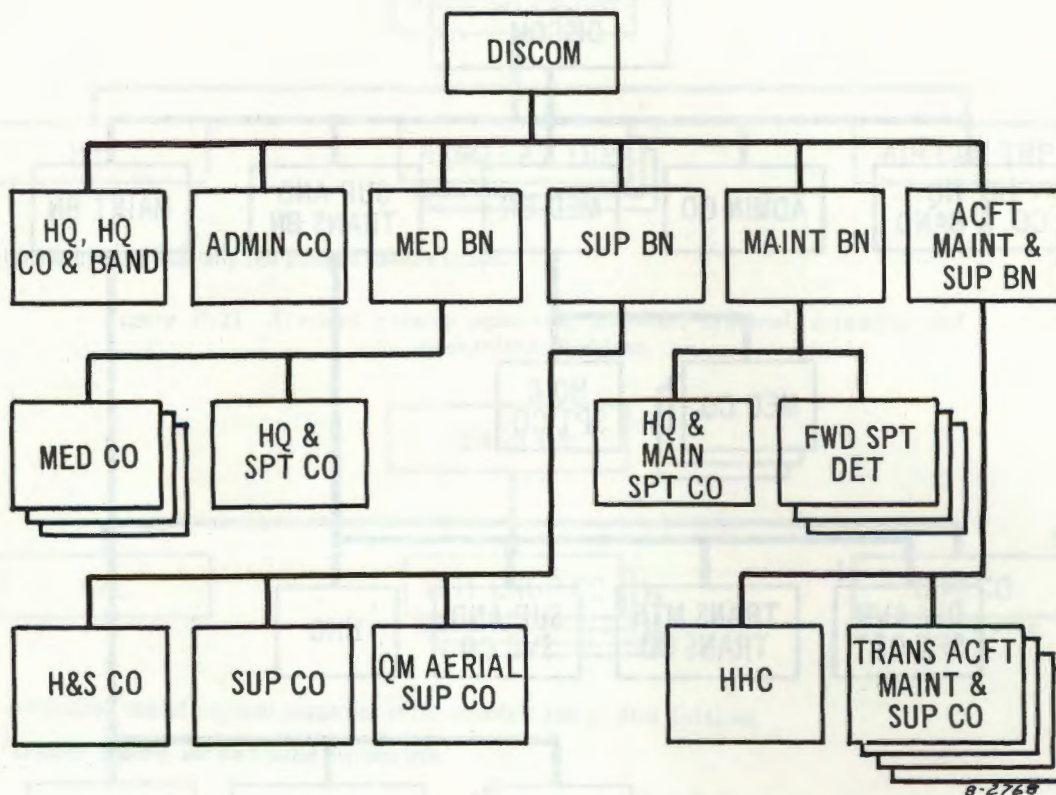
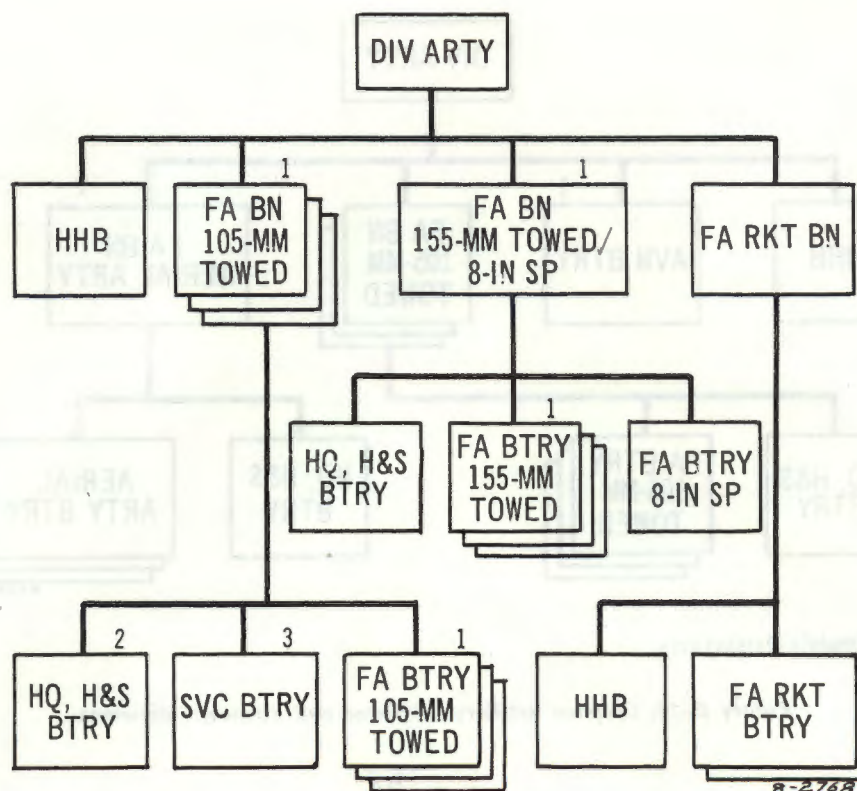


Figure B-17. Support command, airmobile division.

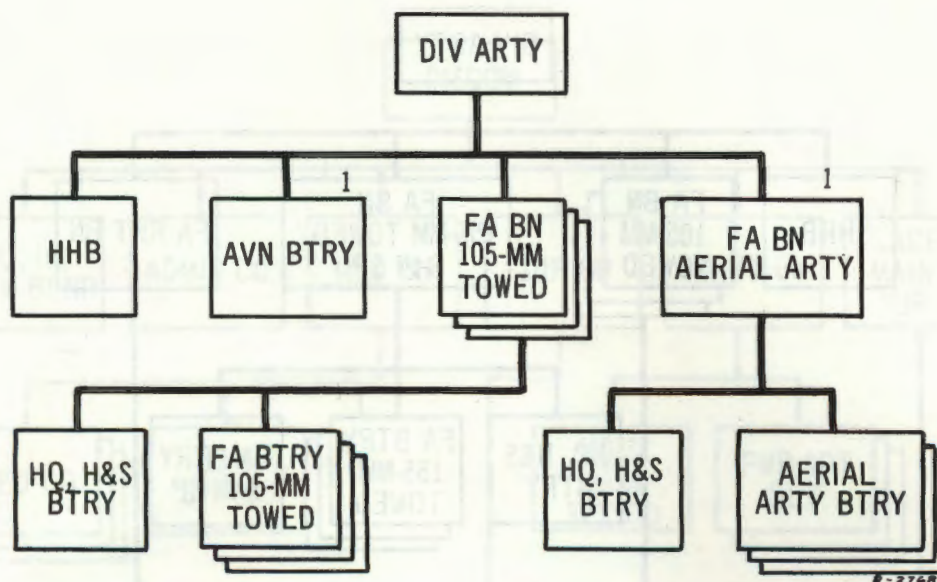


¹155-mm self-propelled in armored and mechanized divisions.

²Headquarters and headquarters battery, armored and mechanized divisions.

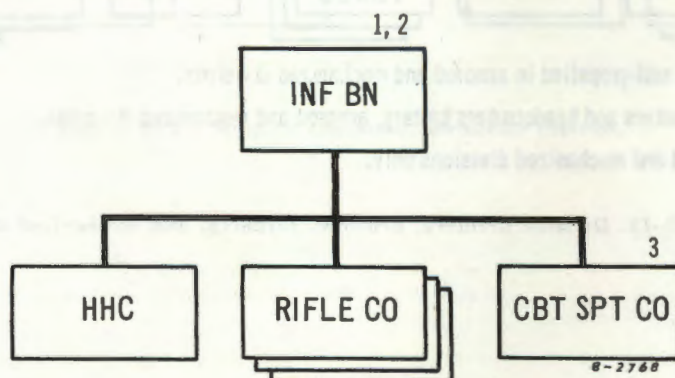
³Armored and mechanized divisions only.

Figure B-18. Division artillery, armored, infantry, and mechanized divisions.



¹ Airmobile division only.

Figure B-19. Division artillery, airborne and airmobile divisions.

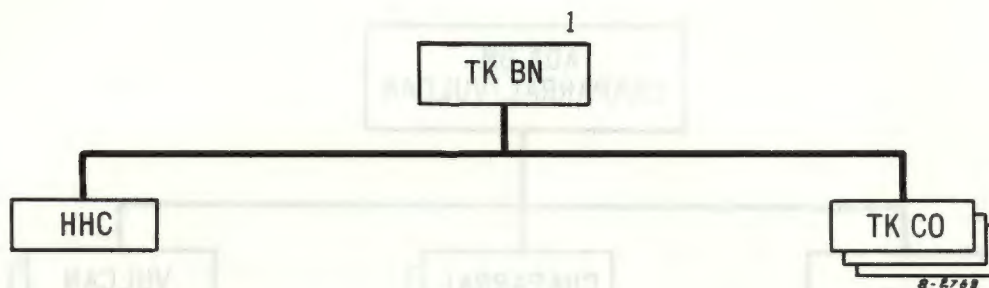


¹ Mechanized infantry in armored and mechanized divisions.

² Airborne infantry in airborne division.

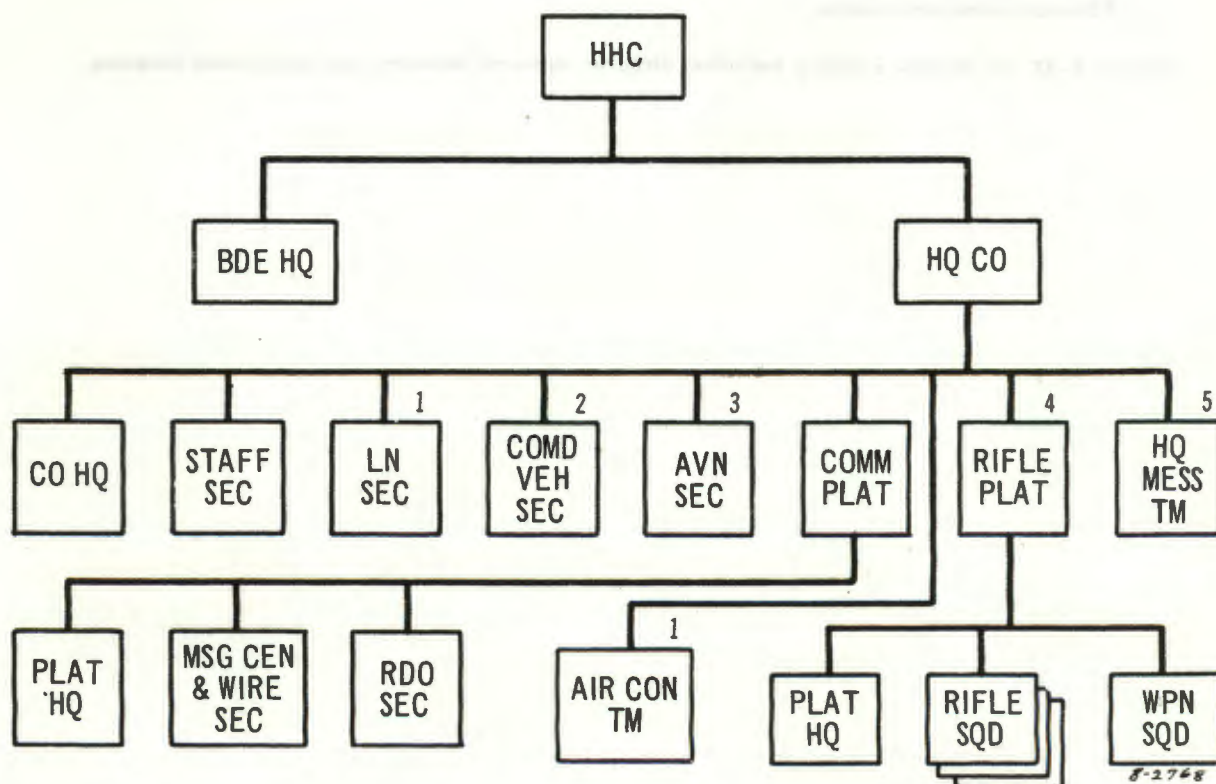
³ Airmobile division only.

Figure B-20. Infantry battalion, division.



¹Not authorized in airborne and airmobile divisions.

Figure B-21. Tank battalion, armored, infantry, and mechanized divisions.



¹ Except airmobile division.

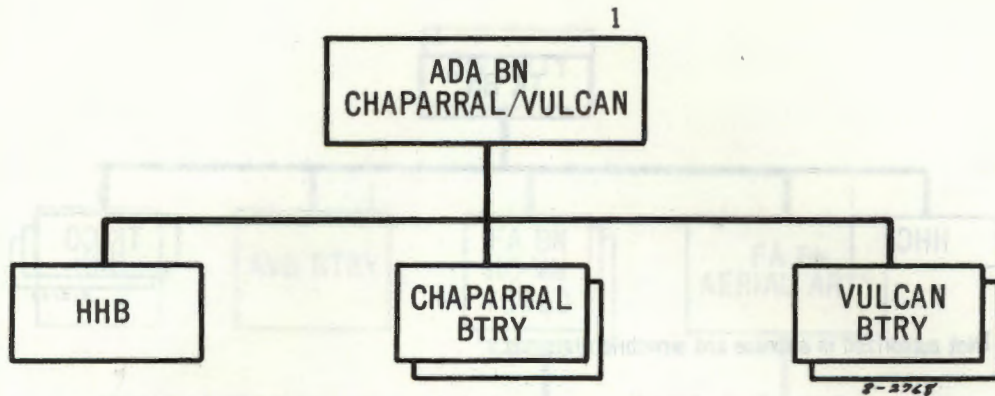
² Armored and mechanized divisions only.

³ Platoon in airmobile division.

⁴ Mechanized rifle platoon in armored and mechanized divisions.

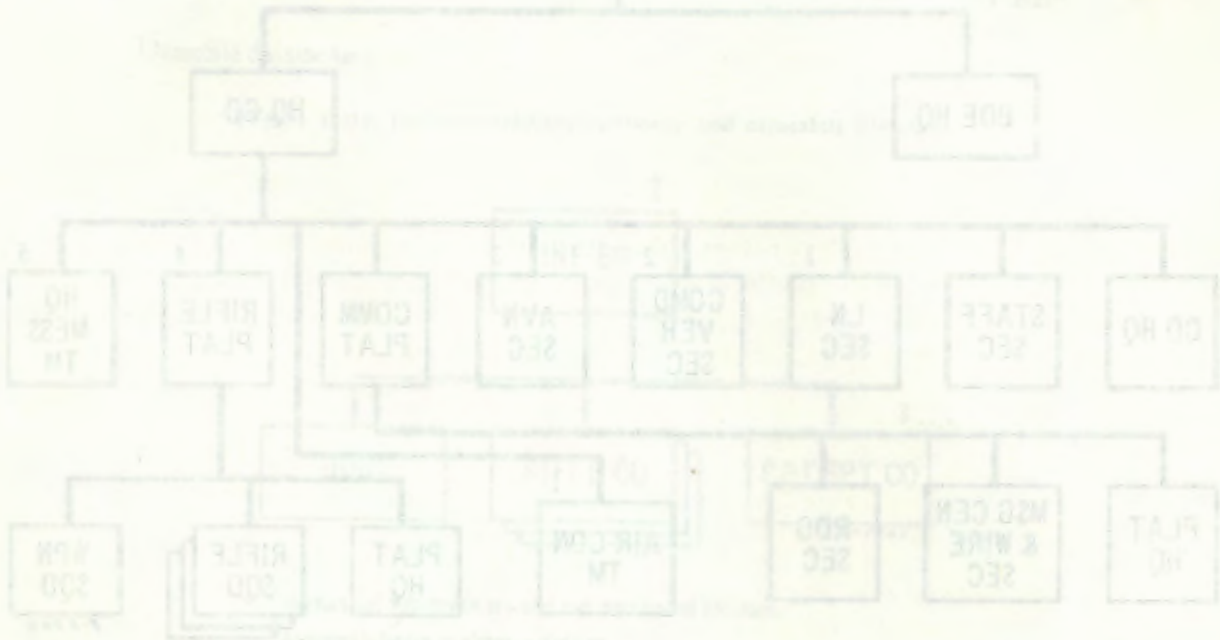
⁵ Airmobile division only.

Figure B-22. Headquarters and headquarters company, brigade.



¹Towed in airborne division.

Figure B-23. Air defense artillery battalion, airborne, armored, infantry, and mechanized divisions.



APPENDIX C

STANDING OPERATING PROCEDURES

(NATO STANAG 2004, CENTO STANAG 2004, SEATO SEASTAG 2004, ABCA SOLOG 26; NATO STANAG 2008, SEATO SEASTAG 2008, ABCA SOLOG 5R2; NATO STANAG 2020, CENTO STANAG 2020, SEATO SEASTAG 2020, ABCA SOLOG 16R; NATO STANAG 2022, SEATO SEASTAG 2022, ABCA SOLOG 2R2; NATO STANAG 2079, CENTO STANAG 2079, SEATO SEASTAG 2079, ABCA SOLOG 48R; NATO STANAG 2099, CENTO STANAG 2099, SEATO SEASTAG 2099; NATO STANAG 2101, CENTO STANAG 2101, SEATO SEASTAG 2101, ABCA SOLOG 104; NATO STANAG 2103, ABCA SOLOG 123; NATO STANAG 2104, CENTO STANAG 2104, ABCA SOLOG 130; NATO STANAG 2130)

Section I. GENERAL

1. Definition

A standing operating procedure (SOP) is a set of instructions, having the force of orders, that covers those features of operations that lend themselves to a definite or standardized procedure without loss of effectiveness. These procedures are applicable unless otherwise prescribed. This allows flexibility to be retained in special situations.

2. Content

A standing operating procedure states the commander's desires regarding the conduct of routine and recurring operations of his command and reduces the amount of detail required in orders. It may include policy, guidance, areas of special emphasis, and expedient measures. Content varies with the type of organization, the level of command, the state of training of the unit, and the commander's desires.

3. Example

a. Section II contains a sample standing operating procedure for an infantry division. This standing operating procedure is generally applicable to all army divisions; however, it requires modification to incorporate procedures peculiar to other types of divisions, e.g., the airborne division.

b. This sample SOP provides additional background on the nature of division operations. While current doctrine provides the basis for this standing operating procedure, the procedure itself does not establish doctrine.

Section II. A SAMPLE STANDING OPERATING PROCEDURE

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Annex M. Electronic Warfare (to be published)	

(Classification)

— Infantry Division
Fort Leavenworth, Kansas
1 September 19__

STANDING OPERATING PROCEDURE NO. 3

COMBAT OPERATIONS

I. GENERAL

A. Purpose. This SOP standardizes routine recurring combat, combat support, and combat service support procedures within the division and applies unless 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 Bde.
- b. 2d Bde.
- c. 3d Bde.
- d. Division artillery.
- e. Division support command.
- f. Division troops.

2. Major division command installations.

a. Division tactical command post. Commanding general; aides; G2, G3, division artillery representative, signal representative; other staff officers as commanding general deems necessary; MP security escort; and operating personnel.

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b. Division main. Commanding general; aides; chief of staff; G1, G2, G3, G4, G5 sections; TOC: headquarters commandant; chemical, engineer, air defense artillery, Army aviation, provost marshal, signal, and surgeon sections; the chaplain; division traffic headquarters; liaison officers; command operation company (minus), signal battalion; and MP company (minus).

c. Division alternate. Assistant division commander; aides, others, as designated.

d. Division rear. Administration company; information inspector general, staff judge advocate, finance, chaplain, and adjutant general sections; replacement detachment, and division rear operations platoon, signal battalion.

D. Combat Orders and Distribution.

1. Operation orders limited in distribution to major subordinate commands, battalion and separate task force, and separate company. Others informed by commander or liaison officer.

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
- Division support command
- Each general and special staff section
- File

3. Division signal officer will assign message reference numbers for combat orders and annexes, appendixes, tabs, and inclosures thereto. When an annex, appendix, tab, or inclosure receives the same distribution and is issued at the same time as the basic order, it will bear the same message reference number. When annexes, appendixes, tabs, or inclosures receive a different distribution or are issued before or after the basic order, they will bear a separate message reference number.

4. Major subordinate commands 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 CP location and time of opening and closing. Report location of CP, airstrips, and heliports with each change in CP location.

b. Headquarters remain operational during moves.

c. To reduce the possibility of multiple loss of major headquarters as a result of enemy use of nuclear munitions, major command headquarters maintain a minimum of 5,000 meters from each other.

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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 that 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 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 commands establish sequence of alternate command facilities and report to division.

2. Liaison.

a. Chief of staff establishes and maintains liaison officer facility.

b. Liaison officers from brigades, division support command, division artillery, separate battalion, and squadron and attached combat units not attached to subordinate commands report to chief of staff prior to march or combat operation.

c. Units establish liaison from supporting units to supported unit, from subordinate unit to headquarters to which unit is attached, and laterally between units from left to right. Division flank units establish and maintain liaison with adjacent parallel headquarters.

d. G3 provides situation map for liaison officers.

3. Signal communication.

a. General.

(1) Report loss or compromise of SSI or SOI to G2 and division signal officer immediately.

(2) Responsibility for establishing signal circuits: higher to lower, left to right, and supporting to supported, unless otherwise specified.

(3) Annex A, Signal.

b. Radio.

(1) Use of radio restricted (netting, flash, or immediate message permitted) when 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 PW (to include wounded); interrogate briefly for information of immediate tactical value and identification. PW found to have any knowledge of enemy special weapon activity will be segregated and reported to G2 immediately. All other interrogation by IPW teams at division PW collecting point and division clearing station.

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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, sent to division PW collecting point, without delay.

d. Report capture of enemy aircrews, guided missile, and nuclear, biological or chemical weapons personnel to G2 immediately.

2. Captured documents. Cryptomaterial and documents containing information on nuclear, biological, or chemical weapons delivered immediately to G2. Other documents are sent through S2 except as below. All documents are marked with date, time, and place found or captured, including name and rank of PW. Documents 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, electronic devices, armament, nuclear material, or biological and chemical agents is 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 reports receipt of materiel to division G2 and requests disposition instructions.

c. Captured documents indicating new tactics or procedures, captured enemy material of new type or that may indicate new tactics or procedures, or items suspected of being dangerous, reported promptly by capturing unit, inspected by technical intelligence team, and evacuated as directed by technical intelligence team. Special attention given to protection, reporting, and expedited turn-over of captured cryptomaterial, messages, code books, and signal instructions.

4. Maps and terrain models. Requisitions in excess of prescribed allowance direct to DISCOM through G2.

5. Weather. G2 obtains and disseminates weather reports to division staff and to major subordinate commands.

a. Normal weather reports furnished twice daily or as deemed necessary.

b. Special reports:

(1) Aviation weather forecasts for division area and flight routes every 6 hours.

(2) Reports every 2 hours to include winds and other data required for nuclear munition employment fallout prediction.

(3) Severe weather warnings accompany 2-hour reports or are broadcast as spot transmissions during intervals between reports.

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6. Reconnaissance.

a. General.

(1) Flash message. Use flash message report for approach of enemy armor, aircraft, naval or amphibious landing craft, or airborne troops. Include number type, location, direction of movement, speed, altitude (if applicable), time observed, and identification of observer. Use NBC 1 report (Observer's Initial Report) to report enemy nuclear, biological, or chemical attacks and transmit with FLASH precedence to NBC center. For the format of a nuclear report, see Appendix 1 to Annex F.

(2) Report immediately.

(a) Known or suspected enemy troop concentrations suitable for nuclear attack, or indications of their existence or development.

(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 munitions, such as presence of special troop units in area, registration of heavy artillery, limited withdrawal of forward units without apparent tactical reason, cover on forward troops, or use of missiles with HE warheads.

(d) Effect of our nuclear or chemical munitions. Estimated enemy casualties, equipment, and vehicles destroyed or rendered unusable, extent of area affected, and any obstacles to our movement created. Air burst 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 include changes of company or larger units, counterattack 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 special weapon 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, radar, and primary sectors of ground radar sets to G2.

(3) SHELREP, MORTREP, 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 1400 hours daily. Immediate air reconnaissance requests submitted at any time.

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(2) Reports.

(a) Major subordinate commands forward organic aviation visual air reconnaissance reports to G2 air.

(b) Pilot and observer personnel, regardless of the type of mission flown, report to the TASE any intelligence observed while in flight.

(3) Briefings and debriefings.

(a) A representative of G2 air section briefs and debriefs pilots, observers, or air photographers operating from the division airfield.

(b) Requesting units be prepared to assist G2 air representative in the briefing and debriefing of pilots, observers, or air photographers.

7. Counterintelligence.

a. Civilians infiltrating through division zone or sector to or from enemy-occupied territory apprehended and turned over to intelligence personnel.

b. Unoccupied areas reconnoitered periodically, employing ground or air patrols as appropriate. Maximum use made of ground surveillance equipment.

c. See Annex B, Fire Support Coordination, for illumination procedures.

d. Units check evacuated installations, bivouac, and assembly areas to insure no classified or identifying material left in area.

e. Pass system established in conformity with division security plan. Control measures and guard system inspected and tested frequently.

f. CP and directional signs use assigned code titles.

g. Known or suspected loss or compromise of codes or other classified material will be reported immediately to G2.

h. Communication security: compliance with current SOI, SSI, and operation order.

i. Daily air and ground visual or photo checks by all units to determine effectiveness of camouflage measures.

j. Security instructions for nuclear munitions and delivery means will be coordinated in the operation and counterintelligence plans.

k. Recovery of any friendly personnel specially trained in nuclear warfare will be reported to G2 without delay.

l. Suspected enemy agents will be reported immediately to G2.

m. 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.

n. 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.

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8. Elements isolated behind enemy lines.

a. Elements isolated behind enemy lines take all measures to defend against enemy or friendly conventional or special fires.

b. Using methods prescribed in Annex C, Methods of Reporting Location of Units, and current SOI, report locations, strengths, available communications equipment, available maps, and status of supply to parent headquarters.

C. Procedures.

1. Fire support coordination. See Annex B, 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. Division support command commander coordinates and executes rear area security and area damage control plans for the division support area. Additional security for protection of division nuclear delivery units provided as required; requests to G3.

3. Development of the situation. Units reconnoiter and clear resistance within capabilities. Reconnaissance and security elements habitually locate obstacle bypass for heavy vehicles.

4. Tactical operations. Contact maintained left to right, from supporting to supported units.

a. Tactical air support. Requests for preplanned missions submitted to TASE not later than 1600 on the day prior to the desired activity. Immediate requests submitted any time.

b. Unit progress. After contact with enemy, units report location of elements every 2 hours, on reaching assigned objective, or on crossing designated phase line or checkpoint.

c. Nuclear.

(1) The operation order announces nuclear allocation. Allocation to the commander is for planning purposes only. Release is required for authority to fire. Only very low-yield and low-yield weapons may be allocated to subordinate commanders.

(2) Release authority for nuclear or chemical munitions is division commander or designated representative.

(3) Individual protective or other restrictive measures included in coordination instructions in operation 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.

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(d) If known, estimated enemy casualties, equipment, and vehicles destroyed or rendered unusable, and extent of area affected.

(6) See Appendix 1, Nuclear Strike Warning, to Annex B, Fire Support Coordination, for nuclear strike warning procedures.

d. Engineer.

(1) Submit requirements directly to supporting or attached engineer units. Division troops, support command, attached units, and other units without direct support submit requirements to division engineer.

(2) All units report immediately to nearest engineer unit and to division engineer the location of friendly and enemy minefields and other obstacles, to include prepared or prepositioned ADM and conventional demolitions, by most expeditious means. Report clearance, removal, or neutralization of obstacles.

e. Chemical and biological.

(1) See Annex D, Actions To Reduce Effects of Enemy Chemical and Biological Attack, for defensive measures. Offensive use only on order of division commander.

(2) Troop safety for chemical agents will be negligible risk for unprotected troops.

f. Smoke. See Annex B, Fire Support Coordination.

g. Defense against air attack.

(1) See Annex J, Air Defense.

(2) Maintain dispersion of vehicles and ground installations at all times.

h. Bomb and shell disposal. Units mark location of unexploded shells and bombs and report location to division support command in 6-digit coordinates. Use flash message report for suspected nuclear munitions. Establish safety precautions.

i. Actions to reduce effects of enemy nuclear, biological, or chemical munitions attack. See Annex D, Actions To Reduce Effects of Enemy Chemical and Biological Attack, and Annex E, Actions To Reduce Effects of Enemy Nuclear Attack.

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 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, e.g., fire support, air support, barrier.

c. Warning order to own troops for friendly special munition attack:

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(1) Time of attack for scheduled fires will be disseminated in the operation order and appropriate fire plan. Procedures for warning of on-call fires and fires on targets of opportunity, see Appendix 1, Nuclear Strike Warning, to Annex B.

(2) Postponement of nuclear, biological, or chemical munition attacks. Transmit in clear by fastest communications means available the message "Tarry, target number — instructions later" followed by transmission of appropriate instructions.

2. Reports. Commands, separate task force, and separate units will submit the following reports.

<u>Report</u>	<u>How submitted</u>	<u>Precedence</u>	<u>Time</u>
a. Intelligence (para II B).			
Flash message report all types	By expeditious means	FLASH	At once
BOMREP, SHELREP, and MORTREP	By expeditious means	IMMEDIATE	At once
INTSUM	Radio, radiotele- typewriter, or messenger	ROUTINE	As of 0600, 1200, 1800, and 2400 daily
Radioactive and toxic contamination	By expeditious means	IMMEDIATE	At once
NBC 1	By expeditious means	FLASH	At once
b. Operations.			
Loss of contact with friendly units	By expeditious means	IMMEDIATE	At once
Unit progress report	By expeditious means	IMMEDIATE	See para II C4b
SITREP	Message form	ROUTINE	As of 1800 daily; reach division headquar- ters by 2200 daily
Operational report (See AR 1-19)	Formal written report (RCS CSFOR 65)		As of 2400, end of each quarter (Mar, Jun, Sep, Dec) of follow- ing month

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E. Special Considerations.

1. Actions to reduce effects of nuclear attack. See Annex E, Actions To Reduce Effects of Enemy Nuclear Attack, with Appendixes 1, 2, and 3.

2. Fallout, radiological monitoring, and survey. See Annex F, 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 Reduce 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 (minus), division troops, and division 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 of heads of march serials. Annex C, Methods of Reporting Location of Units.

c. Priority. Nuclear delivery units, tactical troop movements, medical vehicles, ammunition vehicles, construction crews, staff cars, and messenger vehicles.

d. Density and rate.

(1) Night. Close column 20 meters between vehicles (density 78 vehicles per km) at average speed 16 kmph. Maximum speed 24 kmph.

(2) Daylight. Open column 75 meters between vehicles (density 12 vehicles per km) at average speed 24 kmph. Maximum speed: wheel, 40 kmph, track, 32 kmph.

(3) Infiltration. Irregular dispatch, two vehicles per km at 20 to 32 kmph.

(4) Time interval. Company is the basic march unit. Time interval between company march units, 2 minutes; between battalion march serials, 5 minutes; between major march serials, 10 minutes.

e. Halts. Fifteen minutes after first hour. Thereafter, 15 minutes after each 2 hours for vehicle moves and 10 minutes after each 50 minutes for foot moves. Keep road clear. Commander determines cause of all unscheduled halts and takes appropriate action. Refueling halts as 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, selected air defense artillery messenger, medical vehicles, and vehicles displaying red emergency flags. Convoys pass only on permission of halted column commander.

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(SOP 3— — Inf Div)

h. Vehicle marking. Lead vehicles of serial carry blue flag and display cerise panel. Rear vehicles in serial carry green flag and display white panel.

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 or near the brigade trains area:

a. Division support command.

(1) Forward support company of the maintenance battalion.

(2) Division forward distribution points for classes I, III, and fast-moving II, IV, VI, VII, and X supplies.

(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. MP company (committed Brigades only).

(1) One MP platoon.

(2) A PW 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 unit (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.

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C. Reports. Following reports will be submitted by battalion and separate companies:

<u>Report</u>	<u>How submitted</u>	<u>Time</u>
1. Logistical:		
Special logistical reports	As directed	When called for
Status of major items of equipment minus vehicles	Radio, teletypewriter, radioteletypewriter, telephone or messenger	As of 1800 by 2200 to support command with information copy to G4
Combat vehicle status report	Radio, teletypewriter, radioteletypewriter, telephone or messenger	Daily as of 1800 by 2200 to support command with information copy to G4
POL status report	Radio, teletypewriter, radioteletypewriter, or telephone	Daily as of 1200 by 1400 to support command with information copy to G4
2. Personnel:		
Personnel daily summary	Radio, teletypewriter, radioteletypewriter, or telephone	Daily as of 1800 by 2200 to G1 information copy to AG
Casualty report	Radio, teletypewriter, radioteletypewriter, or telephone	Daily as of 1800 by 2400 to AG
Special strength report	Radio, teletypewriter, radioteletypewriter, or telephone	When called for, through G1 to AG

D. Detailed Considerations.

1. Combat service support.

- a. Coordinate through division support command. See B above.
- b. Materiel and services.

(1) Supply.

(a) General. Unit distribution of all classes, except class V, by division to brigade or separate battalion trains area. Supply of class V by supply point distribution.

(b) Class I. One B ration or three meals combat individual in reserve in S and T battalion; nine meals, combat individual, for crew or personnel assigned to each vehicle. Begin ration cycle with supper meal.

(c) Classes II, IV, VI, VII, and X. Units requisition through S and T battalion. S and T battalion determines and maintains limited stocks of fast-moving items. Direct-exchange items from S and T bat-

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talion. Requisitions for items in excess of allowances and regulated or critical items through command channels.

(d) Class III. Issued on basis of empty tank truck or container for container. S and T battalion attaches tank trucks to units as appropriate. Each wheeled vehicle carries minimum reserve of 10 gal; except 1/4 ton truck, 5 gal. Individual vehicles refuel at any supply point on route.

(e) Class V. Units maintain basic loads. Replace expenditures from ASP or division class V distribution point, when authorized, on DA Form 581 (Request for Issue and Turn in of Ammunition) signed by DAO. Establish and replace nuclear chemical ammunition loads on orders. Separate DA Form 581 for nuclear munitions; 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 DA Form 581 for quantity in excess of basic load.

(f) Class VIII. Requisition through medical battalion.

(g) Class IX (except cryptomaterial). Requisition through maintenance battalion.

(h) Class IX (cryptomaterial). Requisition through signal battalions.

(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. S and T battalion evacuates from collecting point.

(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 division transportation officer will specify number of persons or tonnage.

(c) Emergency supply by air. Requests for supply by air to division support command, giving amount and identification of supply required, location and description of primary and alternate DZ or LZ: date, time, and method of delivery (airlanded, 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 division support command.

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(b) Decontamination. Decontamination of areas, supplies, and equipment because of NBC munition 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 cryptomaterial). 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. Cryptomaterial direct to signal battalion.

3. Medical equipment direct to medical battalion.

2. Personnel.

a. Replacements. On 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 and administration company on AG notification.

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, MP 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. PW 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.

d. 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 supports each brigade. Division collecting and evacuating section supports division troops.

(3) Isolated burials only when unavoidable. Report location of graves to division support command.

(4) Nonradioactive personal effects on body remain with deceased until arrival at cemetery.

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(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) Radiologically or chemically contaminated remains and personal effects not evacuated until decontamination completed.

e. Civilian personnel. When division is authorized to employ local civilian labor, it submits requisitions 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 coordination 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, includes associates and eyewitnesses.

(4) Unit mail delivery with class I supply (unit distribution).

(5) Unit commanders arrange with finance section 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.

g. Personnel procedures. Personnel receiving battlefield commissions will normally be assigned to own battalion or squadron and may be assigned to own company.

h. 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.

3. Civil affairs.

a. General. Division retains responsibility for all civil affairs activities in area except those specifically delegated to subordinate units.

b. Resources. Safeguard public works, utilities, fuel and oil storage, and supply installations.

c. Logistical support.

(1) Maximum use of civilian resources for civilian relief, camps, control, and health.

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(2) Minimum military support for civilian relief on approval this headquarters.

d. Reports. Units immediately report capture of key civilian officials, national treasures, and stores of supplies to G5.

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Annexes: A—Signal
 B—Fire Support Coordination
 C—Methods of Reporting Location of Units
 D—Actions To Reduce Effects of Enemy Chemical and Biological Attack
 E—Actions To Reduce Effects of Enemy Nuclear Attack
 F—Prediction of Fallout, Radiological Monitoring, and Survey
 G—Army Aviation
 H—Rear Area Security
 I—Division Tactical Operations Center
 J—Air Defense
 K—Civil Affairs (to be published)
 L—Psychological Operations (to be published)
 M—Electronic Warfare (to be published)

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Infantry Division
Fort Leavenworth, Kansas
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Annex A (Signal) to SOP No. 3

1. COMMUNICATION CENTERS

a. Administrative and tactical echelons will operate communications centers continuously.

b. During operations, use 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. Division signal officer determines frequency of delivery and pickup.

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 corps or army logistical nets, and division HF radio 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 on 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 seconds of open-air time from conclusion of preceding station transmission before initiating its report.

c. Interference. Report interference between tactical stations to the next higher command. Include call signs, frequency, and time of interference and signal strength of interfering station.

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(Anx A (SIG) to SOP 3— Inf Div)

d. Security.

(1) Authenticate when opening or closing a net, when imposing or lifting radio listening silence, during frequency changes, and on 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 when time and personnel availability permit. When 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 a minimum of two field wire circuits to subordinate units. Division signal battalion provides a 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 friendly 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 of the division line route map, circuit diagram, and traffic diagram forwarded to brigade and division artillery headquarters to assist in reestablishing the communications system when a major disruption occurs.

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(Anx A (SIG) to SOP 3— Inf Div)

e. Repair. If wire circuits are damaged, repair as efficiently as possible and report exact location of the damaged circuits to the division signal officer.

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 MESSENGER SERVICE

Aviation battalion be prepared to fly air messengers.

8. SIGNAL SECURITY

a. Complete authentication codes, map coordinate codes, operation codes, and other security 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 cryptomaterial 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 airphoto coverage to G2 air; all other photo requests to division signal officer.

10. MISCELLANEOUS

The division signal officer determines location of area signal centers.

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— Infantry Division
 Fort Leavenworth, Kansas
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Annex B (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 _____ Div, as an identification prefix, for all targets designated by division agencies.

b. Unit Prefixes. The following letter prefixes are assigned to division units. The originating unit will identify each target by assigning a 4-digit number preceded by the 2-letter prefix (the division and the unit identification letters), except for nuclear targets.

<u>Unit</u>	<u>Designator</u>
1st Bde	A
2d Bde	B
3d Bde	C
Atch bdes	D, E
Div arty bns	F-K
Attached arty bns	L-W
Not used	X
Div arty FDC	Y
Div FSE	Z

c. Nuclear target numbers are classified. See Annex B (Fire Support Coordination), Corps SOP, for numbers allocated to units of this division.

d. Enemy Artillery and Mortar Location. All counterbattery targets, to include artillery and mortar positions, will be assigned target number 8000-8999.

e. Toxic Chemical Targets. Toxic chemical targets will be identified by numbers within the 9000-9999 numerical series.

3. SAFETY

a. Air Safety. Restrictions on artillery fires during airstrikes and airmobile operations controlled by division FSE in the TOC. Orders transmitted through fire support channels.

b. Ground Safety.

(1) No-fire line. Responsibility of direct support battalions to recommended location. Division artillery disseminates location.

(2) Fire support coordination line. Designated by corps; units recommended changes; ALO advises air support units of location.

(3) Risk criteria. See SOP, paragraphs IIC4d(4) and IIC4f(2).

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(Anx B (Fire Spt Coord) to SOP 3— — Inf Div)

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

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 will be forwarded from the battalion TACP direct to the DASC at corps. Intermediate headquarters will monitor and acknowledge receipt. No further transmission is required unless the request is disapproved.

6. NAVAL SUPPORT

a. Direct support ships of the echelon concerned, using naval gunfire procedures, will furnish naval gunfire. 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 ANGLICO attached, ANGLICO channels through FSE will be employed to request and control naval gunfire and naval/marine air.

e. Division artillery responsible for survey control to naval gunfire radar beacon.

7. AIR DEFENSE ARTILLERY

a. The airspace control element (ACE) of the TOC is responsible for coordinating air defense with other combat and combat support agencies located at the TOC.

b. The ACE of the TOC coordinates the flight of division aircraft with the air defense units.

c. The TASE informs the ACE element of all known air support of reconnaissance missions in the division zone.

d. The FSE coordinates the employment of air defense artillery elements employed in a ground support role.

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 ACE.

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(Anx B (Fire Spt Coord) to SOP 3— — Inf Div)

(5) The CG must approve fallout-producing bursts. When fallout is authorized, the predicted pattern should lie within the zone of the commander employing the weapon. If not, fires must be coordinated with the adjacent commander or, lacking concurrence, approved by the next higher commander.

b. Targets for chemical and biological munitions:

(1) Destruction requires 30-percent casualties within the target area.

(2) Neutralization requires 10-percent casualties within the target area.

(3) Contamination of terrain or materiel with VX requires the same concentration that produces 30-percent casualties in the target area. Use 50-percent coverage for HD. Periodic refresher fire may be required to maintain the required level of contamination of terrain or material when these agents are employed.

(4) Targets of unknown composition are assumed to have protective masks available.

(5) The CG must approve the use of toxic chemicals. When toxic chemicals are authorized, the predicted pattern should lie within the zone of the commander employing the weapon. If not, fires must be coordinated with the adjacent commander or, lacking concurrence, approved by the next higher commander.

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Appendix: 1-Nuclear Strike Warnings

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Appendix 1 (Nuclear Strike Warning) to Annex B (Fire Support Coordination) to SOP No. 3

1. PURPOSE

This appendix establishes 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.

5. MESSAGE FORMAT

a. Message to Battalion-Size and Larger Units.

(1) ALFA: Code-word indicating nuclear strike and target number (see SOI, item _____).

(2) DELTA: Date/time group for time of burst in ZULU time. The time after which the strike will be canceled (ZULU time).

(3) FOXTROT: DGZ in UTM coordinates.

(4) HOTEL: Indicate air or surface burst.

(5) INDIA: All bursts: MSD in hundreds of meters (4 digits) for negligible risk to (see SOI, item _____); warned, protected personnel; warned, exposed personnel; and unwarned, exposed personnel.

(6) YANKEE: All bursts when there is a less than 99-percent assurance of no military significant fallout. Direction measured clockwise from grid north to the left and then to the right radial lines (degrees or mils-state which) 4-digits each.

(7) ZULU: All bursts (less ADM) when there is less than a 99-percent assurance of no militarily significant fallout. Effective windspeed in kmph to nearest kilometer (3 digits). Downwind distance of zone I to nearest kilometer (3 digits). Cloud radius to nearest kilometer (2 digits). Use of ZULU line precludes use of ZULU INDIA line.

(8) ZULU INDIA: All ADM bursts: Effective windspeed in kmph to nearest kilometer (3 digits). Downwind distance of zone 1 in hundreds of meters to nearest hundred meters (4 digits). Downwind distance of zone II in hundreds of meters to nearest hundred meters (4 digits). Cloud radius in kilometers in hundreds of meters to nearest hundred meters (3 digits). Use of ZULU INDIA line precludes use of ZULU line.

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 SOP).

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(App 1 (Nuc Strike Wng) to Anx B to SOP 3— — Inf Div)

(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 influenced by burst.

b. Warning messages given FLASH precedence.

c. Acknowledgment indicates notification of platoon-size units.

d. Weapons not to be delivered earlier than desired time of burst. Backup weapon, if first weapon fails, fired within 15 minutes of desired time of burst.

e. Personnel assume required degree of protection 2 minutes before desired time of burst. Remain protected 2 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 officers 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 C (Methods of Reporting Location of Units) to SOP No. 3

1. TIME OF REPORTS

Every 2 hours or as phase lines or checkpoints are reached.

2. UNCLASSIFIED LOCATION REPORTING

a. Procedure is the same for checkpoint reports whether checkpoints are located on routes of march, on phase lines, or generally throughout the area.

b. Checkpoints are terrain features recognizable on the ground (e.g., towns, road junctions, stream junctions, hilltops). They are designated by small circles and numbered. Area covered will normally extend at least 4,000 meters beyond division objective.

c. Report by giving location or distance and direction from checkpoint and direction of movement.

d. Checkpoints issued by G3 with each complete OPORD or by fragmentary message.

e. Brigade, battalions, squadrons, and division artillery issued blocks of numbers for selection of additional checkpoints within their zones for subordinate units.

3. CLASSIFIED LOCATION REPORTING

a. Coded map coordinates. Numerical coordinates are encoded using effective edition of applicable SOI item.

b. Terrain identification. Current edition of operations code.

c. Location. Current edition of map overlay cryptosystem.

4. SECURITY

a. Report loss or compromise of any classified location reporting code immediately to G2 and division signal officer.

b. Upon receipt of information that any classified location reporting code or system has been lost or compromised, the signal officer will direct holders to use specified alternate or reserve systems.

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Annex D (Actions To Reduce 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 Appendixes 1-3 to Annex E, Actions To Reduce 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 NBC matters through command channels. Designated NBC personnel report information to NBC center by most direct means available.

b. NBC 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 NBC 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 NBC defense.
(2) Proper and expeditious processing of captured enemy NBC personnel and equipment.

(3) Inspection and maintenance of NBC equipment.

(4) Appropriate warning to be transmitted on unit voice radio command net immediately on confirmation of NBC alert.

(5) Individual and unit decontamination.

b. Division chemical officer will—

(1) Provide technical advice and assistance to division and unit commanders and staff officers.

(2) Prepare training aids concerning enemy equipment and NBC agents.

(3) Provide advice concerning the supply and maintenance of items of NBC protective equipment, and supervise NBC training and technical intelligence activities.

(4) Recommend and exercise technical supervision of NBC operations.

(5) Maintain contamination situation map and advise commander on actions to reduce casualties.

(6) Coordinate field decontamination projects.

c. Division support command commander responsible for issue of protective clothing and arrangements for decontamination of clothing by higher echelon supporting the division.

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(Anx D (Actions To Reduce Effects of En CB Atk) to SOP 3— — Inf Div)

d. Division engineer responsible for decontamination operations requiring earthmoving equipment, constructing protective shelter beyond the capability of using units, and furnishing potable water.

e. Division surgeon responsible for obtaining analysis of biological samples from field army medical laboratory and advising the commander on actions to reduce casualties.

f. Division provost marshal responsible for traffic control.

5. TYPES OF ALERTS

a. Possible NBC attack (enemy capable of CB attack): alert to be given by this headquarters. See paragraph 6a(1).

b. Imminent NBC attack (enemy believed preparing for NBC attack): alert to be given by this headquarters. See paragraph 6a(2).

c. Actual attack (enemy NBC attack in progress): alert to be given by first individual detecting the attack. See paragraph 6b.

6. PROCEDURE IN CASE OF NBC ATTACK

a. Action prior to attack.

(1) Units alerted for possible NBC 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 NBC 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) Announce "all clear," as determined by unit commander.

(2) Decontamination. See Appendix 3 (Rescue, Labor, and Decontamination Squads) to Annex E.

(3) Resupply of protective equipment.

(4) Mark and report contaminated areas to higher, lower, and adjacent units.

(5) Use NBC 1 report (Observer's Initial Report) in reporting enemy special weapon attack and transmit with FLASH precedence to NBC center.

(6) See Appendix 2 (CAT) to Annex E.

(7) See Appendix 1 (Area Damage Control) to Annex E.

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.

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(Anx D (Actions To Reduce Effects of En CB Atk) to SOP 3— — Inf Div)

8. DECONTAMINATION

- a. Units perform organizational decontamination.
- b. Submit requirements for field decontamination or third echelon decontamination to division chemical officer.

9. SUPPLY

Emergency requisition for NBC and radiac equipment submitted by most expeditious means.

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— Infantry Division
 Fort Leavenworth, Kansas
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Annex E (Actions To Reduce 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 1, Area Damage Control, for actions required to avoid or reduce effect on combat service support operations.

c. See Annex D (Actions To Reduce Effects of Enemy Chemical and Biological Attack) for procedures peculiar to NBC operations.

2. PLANNING

a. Units organize and designate personnel for CAT (App 2, CAT).

b. Units organize and designate personnel for rescue, labor, and decontamination squads (App 3, Rescue, Labor, and Decontamination Squads) and for NBC teams to include chemical detection and radiological survey parties.

c. Orders.

(1) Orders 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 or units.

(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.

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(Anx E (Actions To Reduce Effects of En Nuc Atk) to SOP 3— Inf Div)

(3) Passive protective means. Units—

- (a) Disperse and dig in when permitted by situation.
- (b) Construct shelters in stabilized situation.
- (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 on 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) Individual actions under fallout: actions that can be taken by individuals to reduce 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:

(a) Acquire the following protection in the order listed: remain in the shelter until the area has been determined safe or until 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 of wood construction or of 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, and canvas.

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) After fallout has ceased, decontaminate as follows:

1. Brush clothing and personal equipment thoroughly to remove fallout particles. This should be done away from the area that individuals will occupy.

2. Bathe thoroughly, preferably by showering, and change clothing. Decontaminate or dispose of personal effects such as billfolds and watches.

3. Decontaminate individual equipment by brushing, wiping, and, as appropriate, scrubbing.

4. Decontaminate the immediate area where the individuals are located by hosing or turning the soil as appropriate (e.g., the soil

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(Anx E (Actions To Reduce Effects of En Nuc Atk) to SOP 3— Inf Div)

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 full canteens of water and sufficient rations for at least a 24-hour stay in a protected area.

(d) Wear protective masks, dust respirators, or handkerchiefs over nose and mouth if the dust or fallout particles hinder breathing.

(e) Reduce stay time in contaminated areas. Only tasks that are vital to 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, NBC 1) to Annex F (Prediction of Fallout, Radiological Monitoring, and Survey) to this SOP.

(f) Report initial time of arrival and dose rate of fallout in area. Thereafter, report as directed to NBC center.

(4) Division headquarters, division artillery, each brigade, division support command, infantry, tank, artillery, aviation, engineer, signal battalion, and squadron:

(a) When required, dispatch CAT and report action.

(b) Report Army aircraft immediately available for reconnaissance.

(5) Uncommitted units: prepare for immediate movement.

(6) Armored cavalry squadron: If not committed, provide one platoon with radiological monitoring and survey equipment available for immediate movement.

(7) Aviation battalion:

(a) Initial observer report.

(b) Hold two utility helicopters at division airstrip for use by division support command CAT.

(8) MP company:

(a) Prepare to reinforce existing traffic control posts and patrols and to establish additional ones on order.

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(Anx E (Actions To Reduce Effects of En Nuc Atk) to SOP 3— — Inf Div)

(b) Prepare to establish MP partols 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 division order.

(9) Division support command: prepare for attachment of non-effective units. Decontamination of areas, supplies, and equipment limited to those essential for operations and survival.

4. LOGISTICS

a. Support. Units operating in damaged areas obtain required supply from nearest available source.

b. Evacuation and Hospitalization.

(1) Units accomplish maximum first 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 area damage control operations in own area.

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 paragraph 3b(8).

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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, biological, or chemical munitions 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 area 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—Area Damage Control

2—Control and Assessment Teams

3—Rescue, Labor, and Decontamination Squads

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— Infantry Division
 Fort Leavenworth, Kansas
 1 September 19—

Appendix 1 (Area Damage Control) to Annex E (Actions To Reduce 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 area damage control measures will be as prescribed by division artillery, brigades, and each battalion-size 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 area damage control will be limited only by the requirements of the tactical situation.

d. Support command units located in brigade areas will support brigade area damage control operations as required.

2. RESPONSIBILITIES

a. Division G4 is responsible for general staff supervision of area 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 for area damage control plans. Plans include provisions for—

(a) Communications.

(b) Training and equipping of 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 to essential area 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 area damage control.

(3) Employment of area damage control units.

(4) Combat service support in coordination with G4.

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(App 1 (Area Dam Con) to Anx E to SOP 3— Inf Div)

(5) Determination of 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 area 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 for area 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 on procedures to be followed in an NBC attack.

7. CIVIL AFFAIRS

a. Civilian personnel, supplies, and facilities will give maximum support to area damage control operations. Military support of civil defense operations will be provided only on 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 area damage control services will be made by each organization and separate unit directly 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.

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(App 1 (Area Dam Con) to Anx E to SOP 3— Inf Div)

c. Personnel entering damaged area to assist in reestablishing control will report to CAT.

9. SIGNAL COMMUNICATION

Current SOI and SSI in effect.

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— Infantry Division
 Fort Leavenworth, Kansas
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Appendix 2 (Control and Assessment Teams) (CAT) to Annex E
 (Actions To Reduce Effects of Enemy Nuclear Attack) to SOP No. 3

1. MISSION

Reestablish military control over elements hit by enemy nuclear and chemical attack 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 officer-commander. (May be technical service officer in division support command; otherwise, must be of a combat arm.)
- b. Medical representative (when available)—coordinates medical support, including air evacuation.
- c. Supply representative—determines extent of supply required.
- d. Engineer representative (when available)—determines engineer effort required.
- e. NBC team—determines degree and extent of radiological and chemical contamination.
- f. Communications detachment—replaces minimum communications at next lower echelon.
- g. Security element—secures CAT.
- h. Transportation (including available Army aircraft)—lifts CAT.
- i. Military police representative (when available)—provides traffic control in affected area.
- j. Chemical representative (when available)—advises commander on CBR situations.

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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(App 2 (CAT's) to Anx E to SOP 3— Inf Div)

g. Report (location, dose rate, time of reading) all radiation areas over 5 RAD/Hr and chemical contamination detected in course of operation.

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— Infantry Division
 Fort Leavenworth, Kansas
 1 September 19__

Appendix 3 (Rescue, Labor, and Decontamination Squads) to Annex E
 (Actions To Reduce 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 battalion will furnish medical items required.

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) Radiac dosimeters and chemical agent detection kits, as available.

c. Squad, when necessary or as directed, will perform 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 each organize and have available four heavy rescue squads. Each squad will consist of at least one officer and 12 EM. Unit commander will determine augmentation of each squad 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.

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(App 3 (Res, Labor, and Decon Sqds) to Anx E to SOP 3— — Inf Div)

- (14) Two picks.
- (15) Four shovels.
- (16) Two sledges.
- (17) Two hatchets.
- (18) Portable lights.
- (19) Four flashlights.
- (20) Four pairs rubber gloves.
- (21) Two buckets.
- (22) Two wire cutters.
- (23) One truck, wrecker.
- (24) One bulldozer with transporter.
- (25) Radiac dosimeters and chemical agent detection kit, as available.

3. LABOR SQUADS

a. The division support command, headquarters company and band, and the administration company will organize one labor squad each consisting of at least one officer and 20 EM. Each squad will have two 2½-ton trucks and other items as prescribed.

b. Labor squad performs tasks that do not require specialized training or equipment. Such tasks include clearing debris by hand, searching for casualties, evacuating casualties, salvaging materiel, and decontaminating material. 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 NCO or specialist and nine enlisted men. Functions of squad include emergency NBC decontamination of personnel, supplies, and vital areas.

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) Radiac dosimeters and 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, M13 individual decontaminating and reimpregnating kit.
- (9) One rake.
- (10) Four brooms.

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(App 3 (Res, Labor, and Decon Sqds) to Anx E to SOP 3— — Inf Div)

- (11) Rags, 20 pounds.
- (12) Two buckets, 14 quart.
- (13) One heater, immersion type.
- (14) One ax, single bit.
- (15) DANC, and other decontamination materials as appropriate.
- (16) Soap, issue, 5 pounds.
- (17) Leather dressing, vesicant gas resistant, M2, 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, and 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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— Infantry Division
 Fort Leavenworth, Kansas
 1 September 19—

Annex F (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. REFERENCES

TM 3-210, FM 3-12, and FM 101-5.

3. ORGANIZATION

Current organization for combat.

4. DUTIES AND RESPONSIBILITIES

a. General Staff.

(1) G2 supervises the NBC center in dissemination of fallout predictions resulting from enemy employment of nuclear weapons; dissemination of radiological contamination charts; and planning radiological surveys.

(2) G3 coordinates with the NBC center concerning planned friendly nuclear employment to include dissemination of fallout predictions pertaining thereto.

(3) G5—

(a) Establishes procedures and channels for exchange of radiation information with appropriate civil agencies.

(b) Establishes local civil defense measures and capabilities to conduct radiological monitoring and survey operations.

(c) Supervises 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 munitions employment so that the CBRE can prepare and disseminate pre-strike 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 air survey missions.

(b) Furnishes aircraft and pilots for air survey missions.

(c) Insures authorized radiac dosimeters are mounted on aircraft normally used for reconnaissance and observation missions.

(d) Coordinates with CBRE for planning and conducting air radiological survey.

(3) Engineer provides personnel and equipment for decontamination operations involving use of engineer earthmoving equipment. Coordinates with NBC center on radiological information associated with employment of ADM.

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(Anx F (Pred of Fallout, RADLMON, and Surv) to SOP 3 — Inf Div)

(4) Division support command procures, distributes, calibrates, and maintains radiac instruments.

(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 NBC 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 advises 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 hour and will check a designated point within the CP area each hour.

(2) Continuous monitoring.

(a) Continuous monitoring will be initiated—

- 1. On receipt of a fallout warning (NBC 3 report).
- 2. When the unit commander orders.
- 3. After a nuclear burst has been seen or 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 radiac instrument readings will be made in the same location, except when units are moving or other factors make it impracticable. 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. Any increase or decrease from 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(5) below.

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(Anx F (Pred of Fallout, RADLMON, and Surv) to SOP 3 — Inf Div)

(c) Continuous monitoring will stop—

1. On instructions from higher headquarters.
2. When the dose rate falls below 1 RAD/Hr (except for units on the move).

d. Reporting Procedures. (See app 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 division directs. These reports will be assigned the highest precedence (other than FLASH) consistent with operational requirements for communications facilities.

(4) Communications. Communications reports will be submitted by teletype or voice through the division communications system. Units temporarily out of contact with the division signal center will use the division operations intelligence net as an alternative means.

(5) Summary reports. On 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 radiac instrument. All qualified air observers will be trained to perform air survey duties.

(2) Company-size units will train a NBC team. A minimum of two survey parties per area survey instrument authorized will be trained within the NBC team.

f. Radiological Surveys. Radiological surveys will be conducted only when essential radiological contamination data cannot be obtained from monitoring reports by units within the contaminated area.

(1) Division-controlled surveys. Requests for surveys will originate in the TOC and will be sent to the unit to conduct the survey. Readings will be forwarded directly from the surveying unit to the NBC center.

(a) Air surveys. During air surveys the aircraft flies at the lowest possible constant ground altitude and ground speed along the designated course. The monitor takes readings at equal time intervals and records them on DA Form 1971-R. He reports the location, altitude, dose rate, and time of reading in clear text by radio directly to the NBC center.

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(Anx F (Pred of Fallout, RADLMON, and Surv) to SOP 3 — Inf Div)

The monitor will determine the air-ground correlation factor for each survey and include it with his initial report.

(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 NBC centers 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 these data in the first survey report. Readings will be recorded on DA Form 1971-R. This headquarters will direct submission of reports.

(2) Unit-controlled surveys. Units will conduct surveys as outlined in 1(a) and (b) above. On completion of the survey, they will forward the results through channels to the NBC center of the TOC.

g. Communications. Operation intelligence nets will be used to report monitoring and survey information. Brigades and separate units will use the division communications system in reporting to division. Artillery units may also use artillery nets.

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Appendix: 1—Nuclear Burst Report, NBC 1

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Infantry Division
 Fort Leavenworth, Kansas
 1 September 19.

Appendix 1 (Nuclear Burst Report, NBC 1) to Annex F (Prediction of
 Fallout, Radiological Monitoring, and Survey) to SOP No. 3

1. FORMAT

Letter	Meaning
	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 detonation in local or ZULU time (state which).
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 measured at 5 minutes after the detonation in degrees or mils (state which).
M.	Stabilized cloud-top angle and/or cloud-bottom angle or cloud-top height and/or cloud-bottom height. (Measure H + 10 minutes; report in mils, degrees, meters, or feet; state which. Report top or bottom with appropriate angle.)

2. INSTRUCTIONS

a. Transmit available data promptly.

(1) Transmit all data except lines L and M immediately after bang time.

(2) Transmit lines L and M immediately after measurement of the angles. Include lines B and D with this report.

b. Transmit only those lines of the format for which data are available.

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(App 1 (Nuc Burst Rept, NBC 1) to Anx F to SOP 3— — Inf Div)

c. Transmit line E only when observation is limited and cloud measurements cannot be obtained.

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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 the situation requires. 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 division support command.

b. Tactical Grouping, Aviation Battalion.

(1) First echelon. Headquarters and headquarters detachment; the aviation GS company; and aircraft maintenance company, maintenance battalion; located at division instrumented airfield. Tactical support section, GS platoon, aviation GS company, provides command and liaison aircraft to division CG, staff, and division troops as required.

(2) Second echelon. Airmobile company located at dispersed landing areas.

c. Battalion Headquarters. Battalion headquarters provides personnel for ACE, TOC.

d. Nondivisional Aviation Support:

(1) The division aviation officer is responsible for staff supervision of Army aviation support attached to, under the operational control of, or supporting the division.

(2) The G2 supervises the employment of air reconnaissance, surveillance, and target acquisition assets attached or supporting the division.

(3) The G4 supervises the employment of logistical aircraft attached or supporting the division.

(4) The ACE coordinates the use of airspace and assigns missions to Army aircraft.

2. INTELLIGENCE

a. Reconnaissance and Surveillance.

(1) Submit air reconnaissance and surveillance mission requests to TASE.

(2) Capabilities of organic Army aviation fully exploited prior to requests for inter-Service support.

(3) Requests for airlift submitted to ACE.

b. Enemy Materiel. Aircraft maintenance company and aviation battalion provide technical assistance to division G2.

c. Aviation Chart and Photo Requests. 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

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except periods of 30 minutes prior to and following sunrise and sunset unless mutual identification between downed personnel and pickup has been established.

(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, division support command.

(2) Local security of forward airfield or airfields 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 of all airstrips prior to occupation.

(4) Requests for additional aviation support submitted as follows:

(a) Immediate, through supporting or attached element to ACE,

TOC.

(b) Other, through normal channels.

(5) NBC.

(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 provide illumination 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 ACE.

(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 GS company—

1. Be prepared to provide emergency peakload aeromedical evacuation.

2. Provides RADLSV and RADLMON of blast and fallout areas on division order.

(b) Airmobile company—

1. Provides airlift to reinforce supporting elements in RADLSV.

2. Provides airlift to reinforce supporting elements in aeromedical evacuation missions.

3. Provides airlift for transportation of CAT's.

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4. Provides airlift for emergency evacuation of personnel in fallout areas.

(10) Movement.

(a) Supporting elements displace with supported unit. Prior notification of new airfield to ACE.

(b) ACE displaces with division TOC.

(11) Communications.

(a) Wire communication to aviation battalion subordinate elements from closest division signal center.

(b) Lateral communication maintained between supporting or attached elements on forward airstrips.

(c) Aviation battalion (minus) satellites on division main signal center when possible to provide following:

1. Direct line, G2-G3 to aviation battalion operations section.

2. Direct line, ACE to aviation battalion operations section.

(d) Reconnaissance for new division airfield coordinated with division signal officer, division engineer, and G3.

(e) Communications with air traffic control 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) ACE by division headquarters company.

(2) Classes II, IV, VI, VII, VIII, IX, and X.

(a) Supporting or attached aviation element receives aviation items from aviation battalion.

(b) Aviation battalion by requisition to medical battalion class VIII; aircraft maintenance company class IX; other classes to S and T 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 logistic employment of aviation is for movement of nuclear ammunition items.

(5) Salvage. Aviation items salvaged by aircraft maintenance company.

b. Logistic Employment.

(1) Emergency air supply. By request to division support command.

(2) Aeromedical evacuation. By request to medical battalion commander.

(3) Air personnel transportation. By request to ACE, TOC.

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5. REPORTS

a. Daily status report for all aircraft submitted with vehicle status report by—

(1) Unit for organic aircraft.

(2) Aviation battalion for all other aircraft.

b. Daily operations report to G3 by ACE, TOC.

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Annex H (Rear Area Security) to SOP No. 3

1. PURPOSE

This annex prescribes procedures for rear area security planning and operations within division rear area.

2. GENERAL

General staff supervision of rear area security operations is the responsibility of G3. Security of those portions of the division rear area where support command units conduct combat service support functions is the responsibility of the division 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 division support command commander. G3 will insure the coordination of local security plans of these units with those of the division support command commander.

3. INTELLIGENCE

a. Information of enemy attack (guerrilla, special munition, ground, air, or any other) will be reported to TOC immediately. (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, division 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, division support command, will provide small provisional security detachments from sources available within division support area.

(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 under the operational control of commanding officer, division support command, for specific tasks, periods, or operations.

(3) Units and installations in division rear area are responsible for their own local security.

b. Procedures. The G4 in coordination with the G3 recommends the general location of the division support area to the division commander. The commanding officer, division support command, designates specific areas for elements of division support command. A primary consideration will be the unit's ability to accomplish its mission. Other considerations include dispersion between units and installations and the defense of the area.

c. Reports. Any incident associated with rear area security including nuclear, chemical, and ground or airborne attack will be reported imme-

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diately through command channels to G3, TOC. Reports will include map coordinates, time and type of incident, unit or units involved, extent of damage, casualties, and support required.

5. COMBAT SERVICE SUPPORT**a. Supply.**

(1) Level of emergency supply indicated in current 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 area security, division support command commander will provide additional means.

(2) Division surgeon will coordinate with higher headquarters to provide required reinforcements of division medical capability.

c. Transportation.

(1) Division support command will provide necessary additional transportation required to support rear area security operations in coordination with commander concerned.

(2) Commanding officer, division 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 the establishment of traffic control posts in the rear area.

d. Reestablishment of Combat Service Support. The division support command commander will reestablish combat service support after an incident.

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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 an accurate, detailed, and up-to-date situation (friendly and enemy) is maintained and immediately available. On 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.

2. ESTABLISHMENT AND DISPLACEMENT

a. Establishment.

(1) TOC is part of division main, and the alternate TOC is part of the alternate headquarters.

(2) Alternate TOC prepared to take over immediately if 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) Airspace control element.

(3) Electronic warfare element.

(4) Fire support element.

(5) Tactical air support element, to include a G2 air section, tactical air control party, and a G3 air section.

(6) Communications-electronics element.

(7) Administration section.

(8) G1, G4, G5, and other representation as required.

b. Division support command and other subordinate headquarters directly under division control establish liaison with TOC.

4. PLANNING

a. Current planning will be accomplished in the TOC.

b. Staff sections outside the TOC will accomplish planning for future operations and preparation of operation plans and annexes.

c. Coordination of plans with TOC elements will be made to insure ready implementation of the plan from either the existing or the expected situation 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 inter-Service coordination for current operations.

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Annex J (Air Defense) to SOP No. 3

1. REFERENCES

- a. FM 44-1.
- b. FM 44-3.
- c. FM 101-5.
- d. _____ TAF Tactical SOP: Air Defense Operations.
- e. _____ TAF Tactical SOP: Air Traffic Regulation and Identification Procedures.
- f. _____ Corps SOP: Annex _____, Air Defense.

2. APPLICABILITY

This SOP is applicable to all active air defense operations. This SOP does not cover use of air defense weapons in the ground support role (see Annex B (Fire Support Coordination)) or passive air defense measures (see unit SOP).

3. PURPOSE

This SOP—

- a. Fixes responsibilities for development, execution, and supervision of division air defense training and operations.
- b. Establishes air defense rules, procedures, and communication channels for division air defense in accordance with applicable directives.
- c. Provides a basis for subordinate unit SOP's.

4. ORGANIZATION

- a. Organic.
 - (1) _____ Chaparral/Vulcan ADA Bn (SP), division troops.
 - (2) Battalion Redeye sections.
 - (3) Nonair defense means capable of engaging aircraft—all units.
- b. Attached. Additional ADA units, to include self-propelled Hawk units, may be attached to the division to fulfill special air defense requirements.

5. RESPONSIBILITIES

- a. Division Commander. The commanding general is responsible for command of organic and attached (unless otherwise specified by the terms of attachment) air defense means. His operational control is subject to compliance with the air defense rules and procedures issued by the Commanding General, _____ Corps (reference 1f), which conform with those of the Commanding General, _____ TAF (reference 1d and 1e).
- b. Chaparral/Vulcan Battalion Commander.
 - (1) The Commander, _____ Chaparral/Vulcan ADA Bn (SP), is responsible to the division commander for the employment of all air defense units retained under division command, normally to include those air defense units attached by _____ Corps. He is also responsible for provision of the air defense section of the ACE in the TOC and for main-

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tenance of liaison and communications with external air defense headquarters and control facilities.

(2) The Commander, _____ Chaparral/Vulcan ADA Bn (SP), is the division air defense officer, with special staff duties as listed in e below.

c. All Unit Commanders.

(1) Unit commanders are responsible for command of organic and attached (unless otherwise specified by the terms of attachment) air defense units, with their operational control subject to compliance with the provisions of this SOP.

(2) Unit commanders are responsible for establishment of passive air defense measures and for use of organic nonair defense weapons against aircraft.

(3) Unit commanders will report as soon as practicable any emergency air defense actions taken contrary to the provisions of this SOP.

d. Division G3. The division G3—

(1) Is responsible for the overall establishment of the required division air defense procedures and primary and alternative channels for control of divisional air defense operations.

(2) Exercises general staff supervision over the division air defense officer.

(3) Exercises staff supervision over the ACE in the TOC.

e. Division Air Defense Officer. The division air defense officer (Commander, _____ Chaparral/Vulcan ADA Bn (SP)) is a special staff officer with duties as outlined in references 1a, 1b, and 1c. In addition, he will—

(1) Inform the G3 of air defense rules and procedures with changes thereto that influence the employment of the division's Redeye sections and nonair defense weapons used in the air defense role.

(2) Assist the G3 in planning and supervising division air defense training, to include any Redeye training conducted above the Redeye section level.

f. Brigade/Division Artillery Air Defense Officers. Brigades/division artillery will each appoint an air defense officer, on an additional duty basis, with responsibilities for relaying Redeye weapon control orders; for developing appropriate air defense SOP's; and, in conjunction with the senior commander of attached AD units, for advising the commander on employment of organic and attached air defense means.

g. Battalion Air Defense Officers. Battalions employing Redeye will each appoint their Redeye section leader as air defense officer. In addition to his normal Redeye section leader command duties, the battalion air defense officer will prepare an appropriate air defense SOP and, in conjunction with the senior commander of attached AD units, will advise the commander on employment of organic and attached air defense means.

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h. Chief, AD Element. In addition to the duties specified in references 1a, 1b, and 1c, the chief, AD element, will maintain an operational journal of all changes to rules for engagement, hostile criteria, and weapon control status; will evaluate requirements for dissemination of special friendly aircraft flight information or changes in weapon control status; will consolidate air defense afteraction reports; and will disseminate forward area alert radar (FAAR) operating times and location and rapid alert/identification display (RAID) system operating frequencies to brigades, division artillery, and armored cavalry squadron.

i. Air Liaison Officers (USAF). Air liaison officers at all echelons are responsible for informing the appropriate G3 (S3) of all Air Force air activity to occur in the division airspace. They include aircraft type, number, flight paths and times, and target areas for close air support missions.

6. FIRE CONTROL

a. General. Rules and procedures for all aspects of command, other than control of air defense fires, are prescribed in the operation orders and subordinate unit SOP's. The rules and procedures for the control of air defense fires prescribed below are binding on all subordinate commanders. See paragraph 5c(3) for emergency action provisions.

b. Rules for Engagement.

(1) Basis. Reference 1d.

(2) Peacetime. Prior to outbreak of hostilities, division air defense means will be restricted to use in self-defense against attacking aircraft.

(3) Wartime. The commanding general announces transition to the wartime rules for engagement.

(a) Nonair defense weapons. Same as peacetime ((2) above) unless commanding general orders otherwise.

(b) Air defense weapons. Conduct engagements in accordance with the announced weapon-control status (c below) and the hostile criteria (d below).

c. Weapon-Control Status.

(1) Basis. Reference 1d.

(2) Definition and authority. Air defense units are placed under one of three levels of fire restriction, as specified below.

(a) Weapon free. When under this weapon-control status, air defense units engage all aircraft not positively identified as friendly. Authority to declare this status is reserved to Commanding General, — TAF (reference 1d). The command chain (reference 1d) may place air defense units authorized to assume this status in a more restrictive status ((b) and (c) below).

(b) Weapon tight. The Commanding General, — TAF (reference 1d), establishes weapon tight as the normal status. When under this weapon-control status, air defense units engage all aircraft positively identified as hostile in accordance with the hostile criteria

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(d below). The command chain (reference 1d) may place air defense units authorized to assume this status in a more restrictive status ((c) below).

(c) Hold fire. When under this weapon-control status, air defense units do not engage aircraft, except that the right of self-defense against attacking aircraft is not denied. The Commanding General, _____ TAF, has delegated authority to declare this status to the Commanding Officer, _____ TAF CRC, and to the Commanding General, _____ Corps (reference 1d). This authority has been further delegated to the Commanding General, _____ infantry division (reference 1f), who delegates hold-fire authority to unit commanders employing organic or attached air defense units. Use of this status will be for time-limited periods as necessary to prevent premature disclosure of positions or to protect special friendly aircraft flights.

(3) Variations. Commanding General, _____ TAF, may specify that a weapon-control status apply only to a certain class (jet, nonjet) of aircraft (reference 1d). Unit commanders have the same flexibility within the previously specified limits.

d. Hostile Criteria.

(1) Basis. Reference 1e.

(2) Definition and authority. Hostile criteria provide standards by which air defense fire units judge an aircraft hostile. Authority to change the basic criteria rests with Commanding General, _____ TAF (reference 1d). Authority to change the applicability of these criteria rests with commanding general (reference 1d and 1f). Authorized hostile criteria and their applicability follow:

(a) Attacking friendly elements (Chaparral, Vulcan, Redeye, nonair defense weapons).

(b) Bearing the insignia or having the configuration of an enemy aircraft (Chaparral, Vulcan, Redeye).

(c) Discharging parachutists in numbers in excess of the normal aircraft crew without prior coordination (Chaparral, Vulcan, Redeye).

(d) Discharging smoke or spray over friendly elements without prior coordination (Chaparral, Vulcan, Redeye).

(e) Unauthorized entry into an area or zone designated as restricted or prohibited (Chaparral, Vulcan).

Note: Identification provided to fire units, operating under the weapon-tight weapon-control status, via the FAAR/RAID system or from any source removed from the fire units will be tentative and subject to positive verification by the fire unit before making an engagement decision.

e. Rules for Target Selection. Rules for target selection will be incorporated in appropriate unit SOP, based on the principle that the most threatening target will be engaged first. See reference 1a.

f. Firing Techniques. Guidance for firing techniques applicable to both air defense and nonair defense weapons will be incorporated into appropriate unit SOP. See references 1a and 1b.

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7. FLIGHT INFORMATION

a. Special Friendly Flight Information. Special friendly flight information deals with friendly aircraft activity, to include immediate and preplanned close air support missions, that is disseminated to include preplanned and immediate close air support missions to air defense fire units when the nature or size of the mission requires added emphasis on friendly aircraft protection. At times, division may desire to revert to a hold-fire weapon-control status for this purpose. The basic division policy is to inform air defense fire units of Air Force and substantial Army flights in their area of concern. Policy provides for transmission of only timely and relevant data. It does not provide for the transmission of "nice-to-know" information. Division (G3 responsibility) and subordinate units will obtain required information from the ACE and TASE and distribute it per unit SOP.

b. Hostile Flight Information. Reporting of observed hostile flights by nonair defense units is per Annex

8. EARLY WARNING

Early warning is information alerting units of impending or possible air attack.

a. Division (G3 responsibility) or the ADA battalion headquarters, whichever receives it first, will disseminate early warning received from internal or external sources provided such warning is timely and useful.

b. Warning generated by division organic FAAR's will be disseminated per ADA unit SOP to the division's Redeye teams.

9. COMMUNICATIONS CHANNELS

a. Transition to wartime rules and procedures. See Annex _____.

b. Rules for Engagement/Hostile Criteria.

(1) Normal. See paragraphs 6b and d.

(2) Changes. From Commanding General, _____ Corps (in response to Commanding General, TAF), or, in emergency, from Commanding General, _____ TAF, through air defense channels to Chaparral/Vulcan battalion to division. Division (G3 responsibility) authorizes emergency changes to brigades, division artillery, armored cavalry squadron, and Chaparral/Vulcan battalion as follows:

(a) Primary: division op/intel net (RATT 1).

(b) First alternative: division command net.

(c) Second alternative: division warning net.

(d) Third alternative:

1. To brigades, maneuver battalions, and armored cavalry squadron only: division air request net.

2. To ADA bn only: ADA bn command net, via AD element.

(3) Authentication and acknowledgment. Required.

c. Weapon-Control Status.

(1) Normal. See paragraph 6c.

(2) Changes.

(a) External and division originated. See b(2) above.

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(b) Subordinate unit originated. See unit SOP.

(3) Authentication and acknowledgment. Authentication required.

Acknowledgment required when changing to more restrictive status.

d. Special Friendly Flight Information.

(1) Division originated. See b(2) above.

(2) Subordinate unit originated. See unit SOP.

(3) Authentication and acknowledgment. Authentication required.

Acknowledgment desired but not required.

e. Early Warning.

(1) Division/ADA bn:

(a) Primary: division warning net.

(b) Second alternate: division command net.

(c) Third alternate: division op/intel net.

(2) FAAR to Redeye: designated RAID net.

f. SOI, SSI. See Annex A. Transmissions will be secure for all air defense information pertaining to future (by more than 1 hour) operations.

10. TRAINING

Subordinate commanders will insure that responsible personnel are aware of their duties relevant to employment of organic or attached air defense weapons and are capable of executing them with competence.

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