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Security and Support Battalion Operations

October 2007

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Headquarters, Department of the Army

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Security and Support Battalion Operations

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Preface

The purpose of field manual interim (FMI) 3-04.119 is to standardize all security and support aviation battalion operations. Together with other regulatory guidance, this FMI aids personnel in the planning, train up, and execution phases of security and support (S&S) aviation missions. A highly trained, skilled aviation force and a well planned operation are essential to success, regardless of duty status (Title 10, Title 32, or state active duty [SAD]).

An FMI is a Department of the Army (DA) publication that provides expedited delivery of urgently needed doctrine the proponent has approved for use without placing it through the standard development process. Unless an FMI is rescinded, information it disseminates is incorporated into a new or revised field manual (FM). FMIs expire after 2 years unless superseded or rescinded.

This FMI applies to the Active Army, the Army National Guard (ARNG)/Army National Guard of the United States (ARNGUS), and the United States Army Reserve, unless otherwise stated.

The operational concepts described in FMI 3-04.119 are based on Army doctrine as established in FM 3-0 and FM 3-04.111. This manual is intended for all security and support battalion (S&S BN) commanders, staffs, and U.S. military personnel expected to conduct operations with security and support aviation battalions.

The focus is employment and sustainment of S&S BN operations in a permissive environment. A permissive environment is an operational environment in which host country military and law enforcement agencies have the control, intent, and capability to assist in operations a unit intends to conduct. Tactical operations (TACOPS) are used to describe operations performed by the battalion or its subordinates in support of homeland security (HS)/homeland defense (HD); therefore, it is not synonymous with combat operations.

This publication assists Army branch schools in teaching aviation operations. The proponent for this publication is Headquarters, U.S. Army Training and Doctrine Command. Send comments and recommended changes on DA Form 2028 (Recommended Changes to Publications and Blank Forms) to Commander, U.S. Army Aviation Warfighting Center, ATTN: ATZQ-TDD-D, Fort Rucker, Alabama 36362-5263 or complete the Directorate of Training and Doctrine (DOTD) electronic change request form at https://www.us.army.mil/suite/doc/7288766. Other doctrinal information can be found on the Internet at the Aviation Doctrine Branch homepage (https://www.us.army.mil/suite/page/394729), Army Knowledge Online (AKO).

This publication has been reviewed for operations security (OPSEC) considerations.

Chapter 1

Missions and Organization

Security and support battalions (S&S BNs) are Army National Guard (ARNG) multi-purpose modified table of organization and equipment (MTOE) aviation units that support the Nation's homeland security (HS)/homeland defense (HD) operations. These units are designed to be primarily deployed and employed in permissive environments and have been organized utilizing the modular design. The S&S BN is capable of operating as a battalion, company, or platoon in support of other units as dictated by mission requirements. The S&S BN provides aviation support to the Department of Homeland Security (DHS) and federal, state, and local law enforcement agencies.

Permissive Environment

Operational environment in which host country military and law enforcement agencies have control as well as the intent and capability to assist in operations a unit needs to conduct.

SECTION I – OVERVIEW

1-1. S&S BNs are an enabling component of the ARNG aviation force. This requires S&S BNs to possess the capability for quick responsiveness to support military early-entry contingencies as well as conduct simultaneous operations immediately upon arrival in the area of operations (AO).

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1-2. S&S BNs also inherently conduct civil support operations in support of HS/HD as an organizational element of the controlling task force commander (TFC), local authorities, or the state's joint force headquarters (JFHQ). These units fall under the control of The state Adjutant General (TAG) and the supervision of the state Army aviation officer (SAAO). This command and support relationship maximizes efficient operations and serves as a mission enabler for the local community the unit is supporting.

1-3. The S&S BN provides an enhanced aviation capability to meet the growing demands of HS/HD. It also provides support for counterdrug (CD) operations and other domestic support missions while maintaining divisional readiness if activated. The S&S BN also assists with airborne reconnaissance and observation support for drug interdiction, surveillance, and other missions as required. Each S&S BN is capable of providing observation type aircraft and aircrews with advanced imaging and communication systems to support operations over a wide range of geographical locations.

FULL SPECTRUM OPERATIONS

1-4. The Army's operational concept, full spectrum operations, is the core of this doctrine (figure 1-1, page 1-2). Operations conducted overseas simultaneously combine three components—offensive, defensive, and stability operations. Within the U.S., operations simultaneously combine offensive, defensive, and civil support operations. The operational concept summarizes how Army Forces adapt to the requirements of the operational environment and conduct operations within it. Army Forces operate through ever-changing combinations of full spectrum operations using synchronized action, joint

interdependent capabilities, and mission command. The effort accorded to each component is proportional to the mission and varies with the situation. Each component of full spectrum operations—offense, defense, stability, and civil support—is necessary in any joint operation. Refer to FM 3-0 for further information.

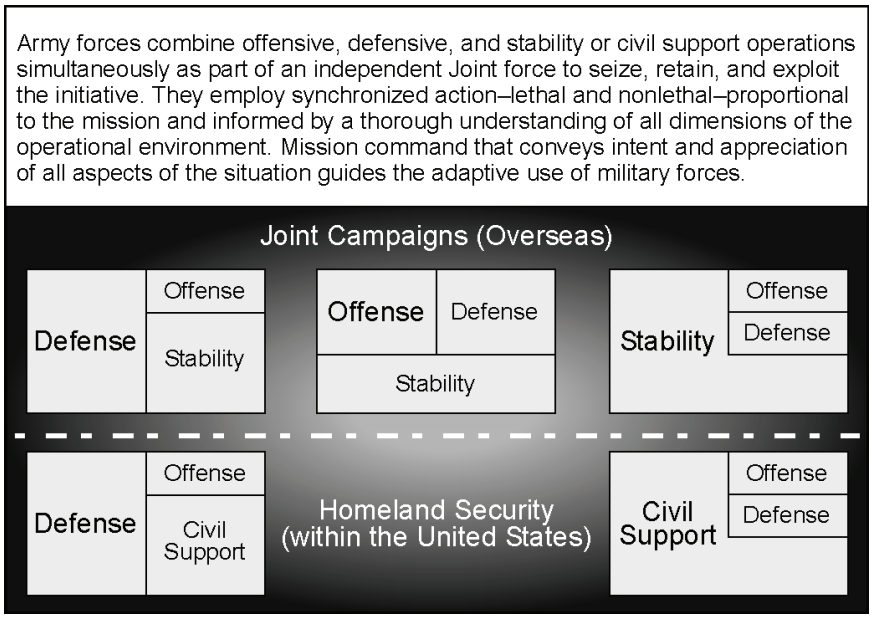


Figure 1-1. Full spectrum operations

THE SPECTRUM OF CONFLICT

1-5. The spectrum of conflict ranges from stable peace to general war (figure 1-2). It is a descriptive model that categorizes conflict with common characteristics. The spectrum of conflict is not a linear progression. The four primary descriptors along the spectrum are not static points or exclusive. Any region may exhibit more than one type of conflict. The levels of conflict and corresponding politically motivated violence may vary in different areas of the world and within a theater.

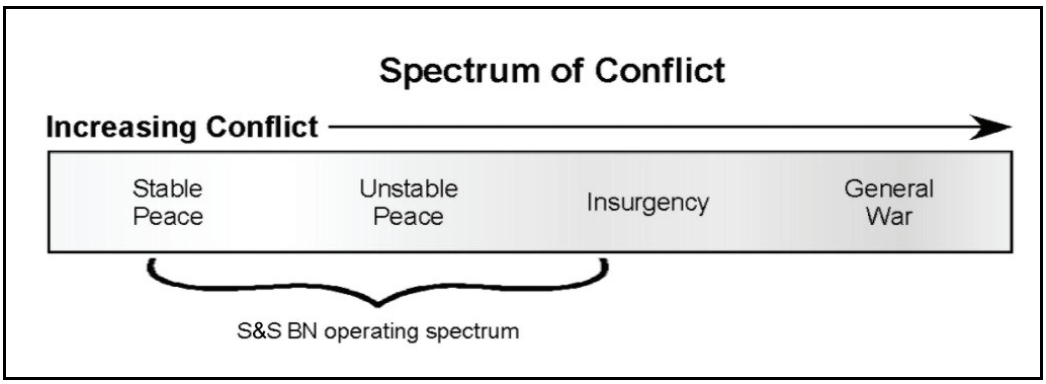


Figure 1-2. Spectrum of conflict

1-6. The magnitude of violence varies over a spectrum of conflict. This spectrum of conflict is the backdrop for all operations. It is a way of thinking about war by placing levels of violence on an ascending scale that portrays the setting for military operations.

1-7. At one end of the spectrum is stable peace, an ideal situation characterized by little or no violence. S&S BN units normally operate in the stable peace spectrum. The activities of states, corporations, and nongovernmental organizations (NGOs) are confined to peaceful interaction in politics, economics, and other areas of interest. Peaceful interaction may include competition, cooperation, and assistance.

1-8. Where one or more factions threaten or use violence to achieve their objectives, stable peace may degenerate into unstable peace. S&S BNs may, but rarely, operate in this spectrum. An unstable peace may result as the levels of violence decrease in the aftermath of more violent confrontations when the combatant factions agree to cease fighting but fail to follow through. In some cases, outside powers may apply force to limit conflict. The objectives of peace operations include keeping violence from spreading, containing violence that has occurred, and reducing tension among factions. Accomplishing these objectives create an environment in which other instruments of national power may be used to return the parties to peaceful interaction.

1-9. Continuing along the spectrum, the next category is insurgency. (An insurgency may include the widespread use of terrorist tactics.) Joint doctrine defines an insurgency as an organized movement aimed at the overthrow of a constituted government through use of subversion and armed conflict (joint publication [JP] 1-02). It is a condition of ongoing conflict involving significant intra- or interstate violence but short of large-scale operations by conventional forces. An insurgency may occur in the aftermath of a major combat operation (MCO), the degeneration of an unstable peace, or emerge on its own.

1-10. At the far end of the spectrum is general war. General war is armed conflict between major powers in which the total resources of the combatant factions are employed, and the national survival of a major faction is in jeopardy (JP 1-02). In general war, conventional and unconventional forces compete for military supremacy. MCOs predominate. Major combat aims to defeat the armed forces of an enemy and eliminate (or at least severely limit) the military threat. Commanders do this primarily through offensive and defensive operations accompanied by stability operations. These stability operations primarily shape the environment to ensure order and security in the areas controlled by friendly forces and to prepare for post-conflict operations. Commanders reduce the level of conflict to smaller, less coordinated actions by gradually decreasing numbers of disaffected parties. These actions move the situation down the spectrum of conflict until achieving stable peace. Refer to FM 3-0 for further information.

SECTION II – MISSIONS

SECURITY AND SUPPORT BATTALION

1-11. The primary missions of the S&S BN are to conduct air movement, provide aerial C2, and provide reconnaissance support to designated military or civilian authorities.

1-12. The S&S BN has the capability to perform mission sets based on the battalion requirement to fulfill an active duty role as well as a state/national support role. The S&S BN will conduct other operations as directed by Title 10 or Title 32 command authority.

1-13. S&S BN missions are conducted in support of either military actions or domestic operations within or outside the CONUS. S&S BN missions include—

- Reconnaissance.
- Security.
- Air movement.
- C2 support.
- Casualty evacuation (CASEVAC).

CAPABILITIES

BATTALION

1-14. The S&S BN plans and coordinates—

- Insertions and extractions of small tactical/security teams.
- Supply and resupply of troops and civilian personnel with food, water, and equipment.
- Recovery of downed aircraft and personnel.
- Health and services aid to support civil and military authorities.
- Support for counterterrorism operations.
- Disaster relief support operations.
- Enhanced communications capabilities.

COMPANY

1-15. The security and support (S&S) company plans and executes—

- Twenty-four-hour mission support capabilities.
- Supply and resupply of troops, civilian personnel, food, water, and equipment.
- Recovery of downed aircraft and personnel.
- Health and services aid to support civil and military authorities.
- Security and observation in support of counterterrorism operations.
- The aerial platform to support line of sight (LOS) and non-line of sight (NLOS) communications in the AO.
- CD observation support utilizing thermal imaging systems (TISs) and the high-powered illumination system (HPIS).
- Coordination of C2 procedures when operating in controlled and restricted airspace.
- Border and shoreline operations.
- Insertions and extractions of small tactical/security teams.
- Disaster relief support operations.

SECTION III – ORGANIZATION

SECURITY AND SUPPORT BATTALION

1-16. The S&S BN consists of a headquarters and headquarters company (HHC) and three S&S aviation companies (figure 1-3).

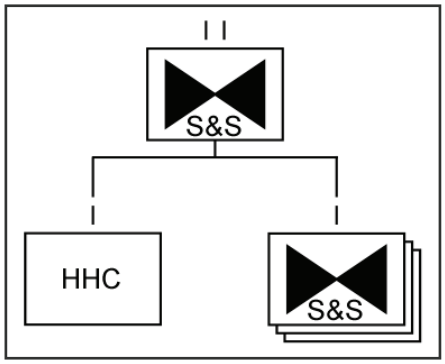


Figure 1-3. Security and support battalion

STAFF ORGANIZATION

1-17. The battalion staff (figure 1-4) is organized into personal staff, special staff, and coordinating staff (refer to FM 6-0). The staff consists of officers and enlisted personnel who plan, supervise, and synchronize operations according to the battalion commander's concept and intent. Key personnel must be positioned where to best carry out their duties. The following paragraphs provide brief descriptions of key battalion staff elements with further discussion contained in chapter 2. With the exceptions of scope, duties, and responsibilities, the battalion staff is similar to those of higher echelon staff.

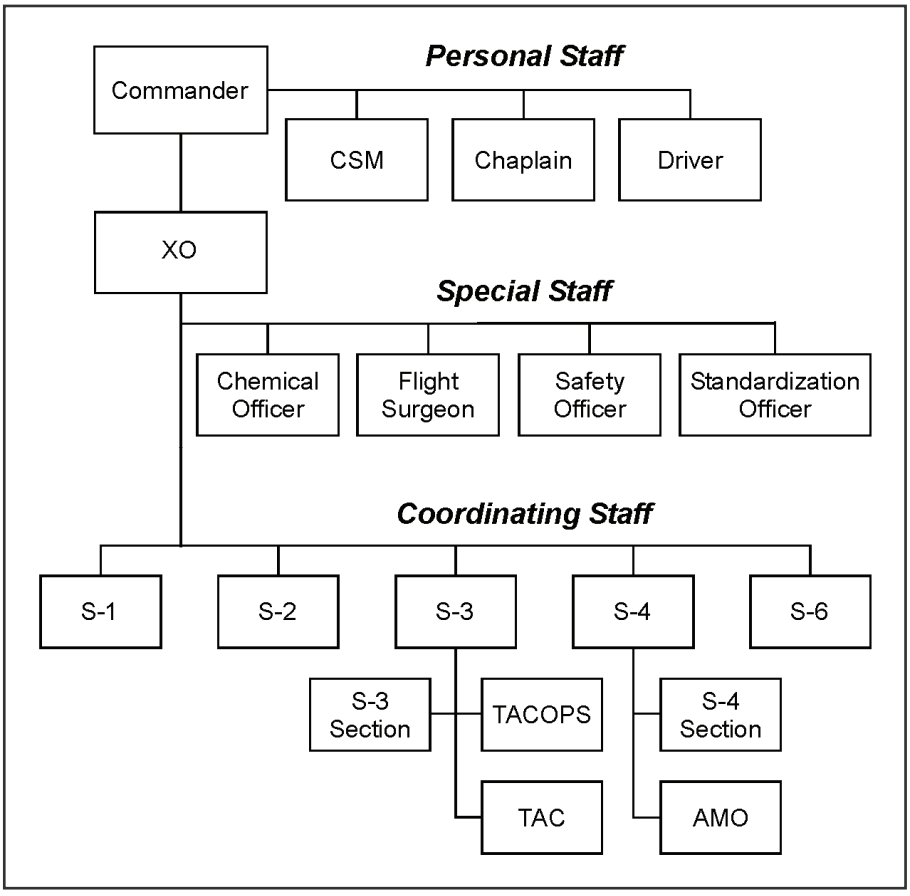


Figure 1-4. Security and support battalion staff organization

Personal Staff

1-18. The personal staff is under the commander's immediate control but may work through the executive officer (XO) or a specific coordinating staff officer for control purposes. Members of the personal staff normally have direct line of communications (LOC) to the commander due to the confidential nature and broad scope of their assigned duties.

Special Staff

1-19. Special staff officers assist the battalion commander and other staff members to perform their functional responsibilities.

Coordinating Staff

1-20. The coordinating staff is composed of the commander's principal assistants and is responsible for one or a combination of broad fields of interest (personnel, intelligence, operations, logistics, planning, and communications). Coordinating staff members help the commander synchronize and supervise execution of plans, operations, and activities. Collectively through the XO, they are accountable for the commander's entire field of responsibility.

HEADQUARTERS AND HEADQUARTERS COMPANY

Organization

1-21. The S&S BN HHC (figure 1-5) consists of a command group; company headquarters section; supply section; automotive maintenance section; field feeding section; command, control, communications, and computer operations (C4OPS) staff officer (S-6) communications/automation section; medical treatment team; and unit ministry team (UMT).

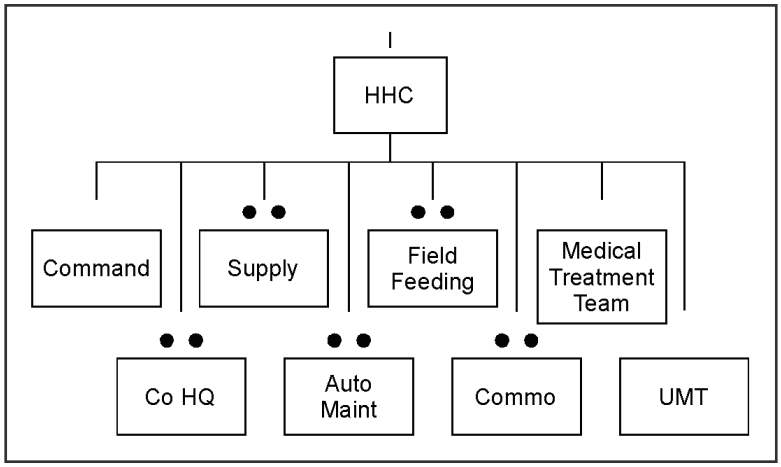


Figure 1-5. Headquarters and headquarters company organization

1-22. The HHC supports a higher headquarters commander and his or her staff. It provides—

- Personnel and equipment for C2 functions of the battalion.
- Security and defense of the command post (CP).
- Unit-level personnel service.
- UMT support.
- Medical treatment.
- Logistical support.
- Chemical, biological, radiological, and nuclear (CBRN) support.

Supply Section

1-23. The supply section manages distribution of supplies in support of the battalion. It utilizes Unit Level Logistics System-Ground (ULLS-G) and standard Army retail supply system (SARSS)-1 interfaces providing supply receipt and issue management for all classes of supplies except class VIII (medical).

Automotive Maintenance Section

1-24. The automotive maintenance section provides maintenance expertise for component replacement and limited component repair.

Field Feeding Section

1-25. The field feeding section provides class I food service and preparation for the battalion. This section can prepare hot meals and distributes prepackaged or prepared food, or both, from the assembly area (AA).

Communications Section

1-26. The communications section executes implementation of the battalion communications systems. It performs unit-level maintenance on ground radio and field wire communications equipment. The communications section monitors the maintenance status of signal equipment, executes preparation and distribution of the signal operating instructions (SOI), and manages communications security (COMSEC) activities. The communications section's responsibilities include supervision of electronic mail on both unclassified and classified nets and the local area network (LAN).

Medical Treatment Team

1-27. The HHC medical treatment section provides health service support (HSS) to battalion and companies. At battalion level, the medical section consists of a flight surgeon, physician's assistant, and health care specialists provide emergency medical treatment (EMT) and assist with advanced trauma management procedures related to their occupational specialties. This team coordinates with the supporting medical platoon in the aviation support battalion (ASB) to assist in medical evacuation (MEDEVAC) from the point of injury to the Level I medical treatment facility (MTF)/battalion aid station (BAS) and beyond. The medical sergeant informs the personnel staff officer (S-1) and first sergeant (1SG) of casualty status and coordinates with the logistics staff officer (S-4) for nonstandard evacuations as needed.

Unit Ministry Team

1-28. The UMT provides religious support to all personnel assigned or attached to the battalion and company. The chaplain advises all unit commanders on religious, moral, and Soldier welfare issues, and establishes liaison with UMTs of higher and adjacent units.

SECURITY AND SUPPORT HELICOPTER COMPANY

1-29. Each of the three S&S aviation companies (figure 1-6, page 1-8) consists of a company headquarters, class III platoon, two S&S flight platoons, and an aviation maintenance platoon.

Company Headquarters

1-30. Each company has a headquarters platoon that consists of a flight operations section, supply section, automotive maintenance section, field feeding section, and communications section.

Supply Section

1-31. The supply section manages distribution of supplies in support of the company.

Automotive Maintenance Section

1-32. The ground maintenance section provides maintenance expertise for component replacement and limited component repair. Field maintenance units are tailored to systems of the supported unit.

Field Feeding Section

1-33. The field feeding section provides class I food service and preparation (from the company AA) for the S&S company. This section can prepare hot meals and distributes prepackaged, prepared food, or both, from the AA.

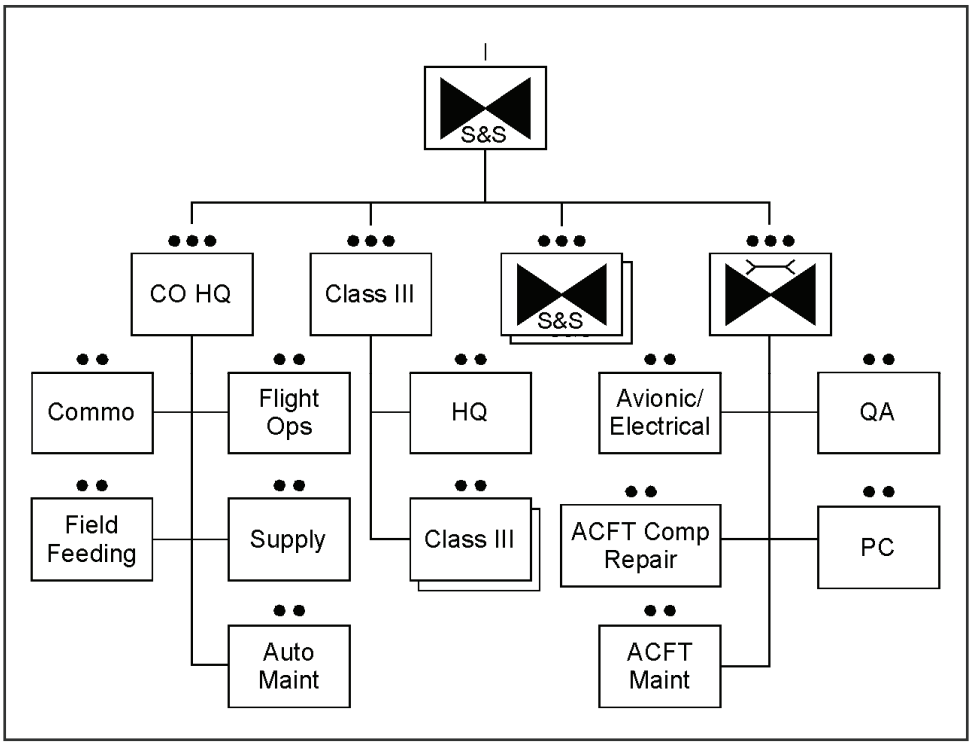


Figure 1-6. Security and support helicopter company organization

Communications Section

1-34. The communications section monitors the maintenance status of signal equipment, executes preparation and distribution of the SOI, and manages COMSEC activities.

Class III Platoon

1-35. The class III platoon consists of a headquarters section and two class III sections.

Security and Support Helicopter Platoons

1-36. The S&S helicopter company has two platoons consisting of four OH-58A/C aircraft each (UH-72A LUH to be fielded).

Aviation Maintenance Platoon

1-37. The aviation maintenance platoon is organized with a quality assurance section, production control section, aircraft maintenance section, aircraft component repair section, and an avionics/electrical section.

Chapter 2

Command and Control

C2 is the exercise of authority and direction by a commander of assigned and attached forces. Command includes the authority and responsibility for effectively using available resources to accomplish missions. Control regulates forces and functions that are necessary when executing the commander's intent.

Note. When referring to tactical operations within this manual, it is used to describe operations conducted by the battalion or its subordinates in support of HS/HD, natural disasters, and CD. Battalion missions are performed in permissive environments; therefore in this manual, tactical is not synonymous with combat operations.

SECTION I – COMMAND AND CONTROL

2-1. While C2 may be discussed separately for understanding, in practice it is an entity. The commander cannot command effectively without control and cannot exercise control without command. The commander uses C2 to make effective decisions, manage uncertainty of threat, employ forces efficiently, and direct successful execution of military operations. The goal of C2 is mission accomplishment, while the object of C2 is force effectiveness. When the commander is unable to exercise C2 himself, his or her staff will assist. Commanders exercise authority and direction through and with assistance of a C2 system.

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COMMAND

2-2. Command is the art of motivating and directing people and organizations to accomplish missions. Command requires visualizing the current and future states of friendly and threat forces and formulating concepts of operations to achieve mission success.

CONTROL

2-3. Control of forces and functions aids commanders and staffs in computing requirements, allocating means, and integrating efforts. Control is necessary to determine the status of organizational effectiveness, and to identify variance and correct deviations from set standards. Control permits commanders to acquire and apply the necessary means to accomplish intent and develop specific instructions from general guidance. Ultimately, it provides commanders a means to measure, report, and correct performance. Control allows commanders freedom to operate, delegate authority, place themselves in the best position to lead, and synchronize actions throughout the operational area.

COMMAND RELATIONSHIPS

2-4. All personnel and assets assigned to the S&S BN are members of the ARNG and can be employed by one of three operational authorities. These authorities include—

- United States Code (USC) Title 32, National Guard.
- SAD.
- USC Title 10, Armed Forces.

2-5. S&S BNs are subject to both federal and state laws related to training, equipping, and employing forces. S&S BN personnel individually, as well as units or parts of units, may be ordered to duty in either Title 32 or Title 10 status, or under provisions of SAD in accordance with the laws of each state. Planners must consider appropriate legal factors when recommending the operational authority under which to activate S&S BN units and personnel involved in domestic operations. The decision of proper status is made by appropriate command authorities based on specific mission requirements and thorough analysis of the supported operation.

UNITED STATES CODE TITLE 32 AUTHORITY/DIRECTIVES

2-6. S&S BN units and personnel operate under the provisions of 32 USC 902 during training assemblies and annual training (AT) periods. Title 32 is a federally-funded status wherein C2 is exercised by respective state governors through the individual TAGs. Provisions falling under 32 USC 502(f) have been authorized by the President acting through the Secretary of Defense (SECDEF) for operational activities (for example, security after 9-11 and Hurricane Katrina). Personnel involved in full-time CD support operate under 32 USC 112.

2-7. Title 32 USC authorizes and supports S&S BN training activities. The SECDEF, on state governor request and if deemed necessary, may authorize Title 32 domestic operational employment of National Guard (NG) personnel and units in support of HD activities (32 USC 502f).

2-8. Performing domestic operations in Title 32 status does not subject personnel or units to limitations imposed upon federal (Title 10) forces by provisions of the Posse Comitatus Act (PCA) (18 USC 1385). This statutory restriction prohibits using active duty Army and Navy. PCA applies to the Navy and Marine Corps pursuant to Department of Defense Directive (DODD) 5525.5.

Note. The PCA of 1878 prohibits certain members of the U.S. armed forces or employees of the U.S. military from enforcing laws on civilians.

2-9. With regard to HS/HD support activities, Title 32 places operational C2 with civilian leadership (state governor, TAG, and task force [TF]) command structure most familiar with the local AO and civilian agencies requiring support.

Full-time National Guard Duty

2-10. Title 32 allows the governor, with the approval of the President or the SECDEF, to order a member to duty for operational HD activities in accordance with sections of USC (table 2-1, page 2-3).

Table 2-1. Title 32 United States Code

32 USC § 502(f)* - Individual Duty Training and Annual Training (AT) On approval of the SECDEF, NG personnel may be ordered to full-time National Guard (FTNG) duty to perform operational activities. FTNG duty is training or other duty, other than inactive duty, performed by a member of the NG.
32 USC § 901(1) - HD Activities HD activity' means an activity undertaken for military protection of a U.S. territory or domestic population, or of U.S. infrastructure or other assets determined by the SECDEF as critical to national security, from a threat or aggression against the U.S.
32 USC § 902 - HD Activities: Funds** The SECDEF may provide governor funds to employ NG units/members to conduct HD activities he or she determines necessary and appropriate.
Notes. * Used for airport security missions after 9/11 and for Hurricane Katrina response efforts. ** Federal law provides the governor the ability to place a Soldier in full-time duty status under state C2 but directly funded with federal dollars. Even though this duty status is authorized by federal statute, PCA does not apply, allowing the governor to use the guard in a law enforcement capacity and chain of command rests within the state.

STATE ACTIVE DUTY STATUS

2-11. In another type of command relationship, governors may authorize NG to perform civil support missions in accordance with the state code and/or constitution. During periods of SAD, costs will be funded by the state except when federal funds are provided for CD, counterterrorism, or weapons of mass destruction (WMD) activities in Title 32 status. Command of the NG is exercised through the TAG or his or her designated representative. Because of the local nature of disasters, most civil support operations are carried out at the direction of the governor, keeping NG personnel under state control (either SAD or Title 32 status).

2-12. The governor can activate NG personnel to "state active duty" in response to natural or manmade disasters or HD missions. SAD is based on state statute and policy as well as state funds, and Soldiers and Airmen remain under the C2 of the governor. PCA does not apply.

UNITED STATES CODE TITLE 10 AUTHORITY/DIRECTIVES

2-13. S&S BN units and personnel may be employed in the continental United States (CONUS) or outside the continental United States (OCONUS) in Title 10 status (table 2-2, page 2-4). Personnel and assets become elements of the active federal military force. When Title 10 is activated, NG units are mobilized and deployed under sole C2 of the federal government. They are not available to the governor for execution of state missions and are subject to legal restrictions imposed by 18 USC 1385 when conducting domestic operations.

Note. Active duty means full-time duty in the active military service of the Title 10 allows the President to federalize NG forces by ordering them to active duty in their reserve component (RC) status or calling them into federal service in their militia status.

Table 2-2. Title 10 United States Code

10 USC § 12301(d) - Voluntary order to active duty At any time, a member of the NG may be ordered to active duty voluntarily with his or her consent and the consent of the governor.
10 USC § 12302 - Partial mobilization In time of national emergency declared by the President, the SECDEF may order any unit and member to active duty for not more than 24 consecutive months.
10 USC § 12304 - Presidential reserve call up When the President determines it necessary to augment active forces for an operational mission, he or she may authorize the SECDEF to order any unit and member to active duty for not more than 270 days.
10 USC § 331* - Federal aid for state governments Whenever insurrection occurs in any state against its government, the President may, on request of its legislature or governor (if the legislature cannot be convened), call into federal service the militia of other states, in the number requested by that state, and use the armed forces, as he or she considers necessary to suppress the insurrection.*
10 USC § 332* - Use of militia and armed forces to enforce federal authority Whenever the President considers that unlawful obstructions, combinations or assemblages, or rebellion against U.S. authority make it impracticable to enforce U.S. laws in any state or territory by the ordinary course of judicial proceedings, he or she may call into federal service the militia of any state, and use the armed forces, as he or she considers necessary to enforce those laws or to suppress the rebellion.*
10 USC § 333* - Interference with state and federal law The President, by using the militia or armed forces, or both, or by any other means, shall take such measures as he or she considers necessary to suppress, in a state, any insurrection, domestic violence, unlawful combination, or conspiracy, if it— • Hinders execution of the laws of that state and the U.S.within the state, that any part or class of its people is deprived of a right, privilege, immunity, or protection named in the Constitution and secured by law, and the constituted authorities of that state are unable, fail, or refuse to protect that right, privilege, or immunity, or give that protection; or • Opposes or obstructs the execution of laws of the U.S. or impedes the course of justice under those laws. In any situation covered by clause (1), the state shall be considered to have denied the equal protection of the laws secured by the constitution.*
10 USC § 12406 - Air and Army NG Air and Army NG called into federal service in case of invasion, rebellion, or inability to execute federal law with active forces.
**Note.* This section is a statutory exception to PCA.

NATIONAL GUARD DUTY COMPARISON

2-14. Table 2-3, page 2-5, summarizes the differing characteristics of SAD, FTNG duty (Title 32), and active duty (Title 10).

Table 2-3. National Guard duty status matrix

	FTNG Duty (Title 32)	*SAD*	*Active Duty (Title 10)*
C2	State Governor[1]	State Governor	Federal President[2]
Who performs duty	Federally-recognized militia (NG)[3]	Militia	AC[4], RC, and NG of U.S.[3]
Where duty performed	CONUS	CONUS in accordance with (IAW) state law	Worldwide
Pay	Federal pay and allowances	IAW state law	Federal pay and allowances
Federal reimbursement	N/A personnel costs paid by federal funds	IAW Stafford Act[5] or Cooperative Agreement[6]	N/A personnel costs paid by federal funds
Tort immunity	FTCA[7]	IAW state law	FTCA[7]
PCA[8] application	No	No	Yes
USERRA[9]	Yes	No, IAW state law	Yes
SCRA[10]	Yes	No, IAW state law	Yes

1 - 32 USC § 502(f)(1)
2 - Under Presidential reserve call-up (10 USC § 12304), partial mobilization (10 USC § 12302), or full mobilization (10 USC § 12301(a))
3 - 10 USC §§ 3062(c) and 8062(c)
4 - Active component (AC)
5 - Stafford Act (42 USC § 5121) for disaster-related activities
6 - Cooperative agreement if to perform an authorized NG function
7 - Federal Tort Claims Act (28 USC §§ 2671-2680) (FTCA) [U.S. represents and pays judgments, if any]
8 - Posse Comitatus Act (18 USC § 1385) [SAD and Title 32 Guard not considered part of active military]
9 - Uniformed Services Employment and Reemployment Rights Act of 1994 (38 USC §§ 4301-4333)
10 - Servicemembers Civil Relief Act (50 USC App. §§ 500-548, 560-591)

SECTION II – SECURITY AND SUPPORT BATTALION-SPECIFIC CONSIDERATIONS

2-15. Each S&S BN is an organic unit with its subordinate companies and detachments divided among multiple states' NG organizations. This type of stationing provides the NG with flexibility regarding application of assets in support of domestic contingencies; however, it also results in the need to review mission requests and their specific context to determine proper operational authority. This review ensures effective C2 relationships are established to support mission execution. Refer to FMs 5-0 and 6-0 for additional information.

UNIT ACTIVATION

2-16. Examples of scenarios that place additional C2 intricacies on the S&S BN command are contained in the following paragraphs.

IN-STATE SUPPORT FOR INTERNAL DOMESTIC OPERATIONS (STATE CONTROL)

2-17. In this type of activation, a unit is activated by its respective TAG. Status and C2 procedures are structured by the individual state emergency operations plan/emergency response plan (EOP/ERP). Operational authority falls under Title 32 USC or SAD. If operational support requirements exceed assets available within the affected state, the governor may request assistance from other state's NG organizations.

DOMESTIC CRISIS RESPONSE/CONSEQUENCE MANAGEMENT OPERATIONS

2-18. Domestic crisis response activation relates to a state control or operational control (OPCON) unit activated by an individual TAG and directed to support domestic crisis response/consequence management operations in another state under provisions of an emergency management assistance compact (EMAC). Personnel status determination (Title 32 or SAD) will be made by individual TAGs after coordinating with the state's governor and the National Guard Bureau (NGB). Supporting/deploying units and/or their assets will normally be OPCON to specifically-identified units in the supported state, while operational C2 will be structured in accordance with the applicable operation plan (OPLAN). Operations directorate of a joint staff (J-3) planners and plans directorate of a joint staff (J-5) planners maximize integration of the local S&S command structure into both the contingency plan and immediate response processes. Resulting OPLANs and operation orders (OPORDs) stress the habitual or MTOE command relationships in establishing task organization.

UNIT EMPLOYMENT/DOMESTIC OPERATIONS

2-19. A designated S&S BN or subordinate company may be employed to support domestic contingencies. The NGB specifies operational authority in the mobilization order based on mission requirements and operational circumstances as well as guidance and appropriate directives received from the Department of Defense (DOD). In this circumstance, the S&S BN may be activated under provisions of Title 32 USC. This status provides certain advantages over Title 10 for conducting operations CONUS; however, as Title 32 is a federal status where forces remain under state control, laws concerning involuntary activation vary by state. NGB and involved state NG emergency support planners must coordinate prior to mobilization to determine individual state requirements and laws. This coordination promotes continuity when developing mobilization plans and provides the opportunity for staff recommendations on operational authority prior to unit activation.

TITLE 10 MISSIONS

2-20. The S&S BN is activated under Title 10 operational authority for OCONUS deployments or as directed by DOD to support CONUS missions. For OCONUS operations, C2 is organized per respective corps command requirements and directives. For CONUS operations, C2 is organized in accordance with the appropriate OPLAN/OPORD supporting the designated commander.

SECTION III – COMMAND AND CONTROL ORGANIZATION

2-21. CPs serve the C2 needs of the commander and staff. The dynamics of the operational environment require the highest level of organizational and operational efficiency within every CP. Battalion C2 elements and facilities are positioned according to the situation and include—

- Command group.
- Tactical command post (TAC CP).
- Main CP.

BATTALION COMMAND GROUP

2-22. The battalion command group consists of the battalion commander and representatives from the battalion staff and supporting units the commander chooses. At a minimum, this includes the operations staff officer (S-3) and intelligence staff officer (S-2). The command group may operate from ground vehicles or an aircraft. It is not a command facility per se, but a grouping of critical decision makers that may operate separately from the main CP or TAC CP periodically. The command group may deploy when personal observation or presence is necessary to accomplish the mission. When designated as a battalion TF, the staff may be augmented to meet C2 requirements necessary for a TF.

TACTICAL COMMAND POST

2-23. The TAC CP is established as a C2 organization that directly assists the commander in controlling current operations. This CP must be able to communicate with higher headquarters, adjacent units, employed subordinate units, and the main CP. The TAC CP is equipped with communications equipment and Army Battle Command System (ABCS) that support the Army warfighting functions. It monitors the battalion command and operations and intelligence (O&I) nets and the higher headquarters command and O&I nets. The TAC CP assists the commander in controlling current operations by—

- Maintaining the common operational picture (COP) and assisting in developing situational understanding (SU).
- Analyzing information for immediate intelligence.
- Developing threat intelligence of immediate interest to the commander.
- Maneuvering forces.
- Coordinating operations.
- Coordinating with adjacent units and forward air defense (AD) elements.
- Monitoring and communicating sustainment requirements, primarily classes III and V, to the main CP.

2-24. The TAC CP is small in size and electronic signature that facilitates security and rapid, frequent displacement. Its organization layout, personnel, and equipment must be described in the unit standing operating procedure (SOP). The TAC CP section must be augmented to operate on a continuous basis.

2-25. The TAC CP is composed of designated personnel from the appropriate staff sections. TAC CP personnel may also include—

- Standardization instructor pilot (SP), TACOPS officer, and safety officer (SO).
- S-2, air liaison officer (ALO), and engineer, if available.
- Representatives from the logistics cell.

MAIN COMMAND POST

2-26. The main CP is a C2 facility that contains the portion of the battalion headquarters in which the majority of planning, analysis, and coordination occurs (FMI 5-0.1). It serves as the synchronization point for the entire operation. The main CP has a broader and more future-oriented focus than the TAC CP. Led by the XO, the main CP focuses on controlling and synchronizing ongoing shaping operations, assisting the commander and TAC CP in the execution of the decisive operation, and planning future operations. The main CP maintains the COP by receiving information from the TAC CP and from higher, lower, and adjacent units. The main CP controls current operations when the TAC CP is not employed.

2-27. Main CP personnel consist of the personal, coordinating, and special staff. This workforce may include the S-2, S-3, S-4, and S-6. It may also include the UMT, flight surgeon with medical treatment teams, battalion SO, battalion standardization officer, and HHC headquarters elements.

2-28. The commander operates from the main CP when not operating from the TAC CP, command vehicle, or an aircraft. The main CP is usually organized into the operations cell and plans cell. The operations cell usually functions in shifts ensuring 24-hour ability; the plans cell may or may not operate on a 24-hour cycle.

FUNCTIONS

2-29. The main CP—

- Maintains communications with subordinate, higher, and adjacent units.
- Provides information and assistance to the commander and subordinate commanders.
- Operates on a 24-hour basis.
- Conducts future planning continuously.

- Maintains a continuous estimate of the situation.
- Maintains situational awareness (SA) across Army warfighting functions.
- Maintains the status of the reserve.
- Receives, evaluates, and processes tactical information from subordinate units and higher headquarters.
- Maintains maps graphically depicting friendly, threat, and noncombatant situations.
- Maintains journals.
- Validates and evaluates intelligence of interest to the commander.
- Relays instructions to subordinate units.
- Coordinates maneuver, maneuver support, and sustainment requirements.
- Maintains aircraft, maneuver support, and sustainment capabilities and status.
- Tracks and logs gains and losses.
- Submits reports to higher headquarters.
- Makes recommendations to the commander.
- Prepares and issues fragmentary orders (FRAGOs), OPORDs, OPLANs, intelligence summaries, intelligence reports (INTREPs), and situation reports (SITREPs).

SITE SELECTION

2-30. Security and communications with higher, subordinate, and adjacent headquarters are the most important considerations when selecting any CP site. Adequate protection, accessibility to adequate entry and departure routes, drainage, and space for dispersing are other site selection considerations. An adequate landing zone (LZ) should also be nearby. The S-3 selects the general location of the CP, while the HHC commander and S-6 normally select the exact location. When selecting the general location of the CP, the S-3 should also select at least one alternate site should the primary site prove inadequate.

2-31. The S&S BN is required to operate in tactical and nontactical permissive environments. A permissive environment may rapidly transition to a hostile environment; therefore, the unit must be prepared to select sites and manage the CP in offensive and defensive operations.

During Offensive Operations

2-32. During offensive operations, the TAC CP should be well forward. In fast-moving operations, the main CP may have to operate on the move. Staff coordination and communications are usually degraded when CPs are moving; thus, CPs must train to operate while moving.

During Defensive Operations

2-33. During defensive operations, the main CP normally locates farther to the rear minimizing its vulnerability. The exact location depends on threat, terrain, road network, and ability to communicate.

MOVEMENT

Planning Considerations

2-34. The HHC commander quickly gains an understanding of mission requirements. The commander translates these requirements into a movement order, assembles the convoy, and issues the order. Noncommissioned officers (NCOs) must organize and assemble the convoy, conduct precombat checks/precombat inspections (PCCs/PCIs), and ensure personnel complete rehearsals. The convoy commander creates a terrain model and writes and prepares to issue the order.

2-35. During troop leading procedures (TLP), the HHC commander (and subordinate leaders, as necessary) performs standard tasks prior to a tactical road march that include—

- Conducting an analysis of mission, enemy, terrain and weather, troops and support available, time available, and civil considerations (METT-TC) factors. This helps assess the threat situation and determine probability of air or ground attack.
- Developing a timeline for preparation and movement of the main CP.

- Designating a marshalling area to organize the march column and conduct final inspections and briefings.
- Establishing detailed security measures.
- Identifying action drills.
- Designating the movement route, including the start point, required checkpoints, rally points, and release points (RPs). Additional control measures that may need identifying include critical areas, defiles, choke points, rest and maintenance stops, and danger areas.
- Organizing, briefing, and dispatching the quartering party.
- Specifying the march speed, movement formations, vehicle and serial intervals, catch-up speed, lighting, and times of critical events.
- Establishing the order of march. Key headquarters positions in the order of march must enable continuous C2 and maximum protection using available assets. Based on its size, the organization divides into multiple serials.
- Planning for contingency actions and rehearsing actions on contact. Contingency plans should cover vehicle breakdowns, lost vehicles, and accidents.
- Coordinating for sustainment including refueling, mess operations, vehicle recovery, military police assistance, and MEDEVAC.
- Preparing and issuing an OPORD on completion of the planning tasks.

Displacement

2-36. The main CP can displace in either a single or phased move. The method selected depends on METT-TC, distance to be moved, and communications requirements. Movement degrades communication on all nets; however, it is imperative higher headquarters, battalion, and subordinate command nets are maintained. This may require alternate communications means, such as aircraft or vehicle-mounted systems. An administrative move may entail both the main CP and TAC CP moving simultaneously to a new AO. When operations are ongoing, moving the main CP is accomplished in a phased move requiring displacement of the TAC CP. Critical aspects of C2, such as contact with higher headquarters and subordinate units, must be maintained during displacement. Displacements are planned to ensure the main CP is stationary during critical phases of TACOPS.

2-37. Usually, the main CP hands C2 operations over to the TAC CP and displaces by echelon using the following technique:

- The main CP conducts an update briefing for the TAC CP and transfers C2.
- The first echelon eavesdrops while moving to the new location.
- The second echelon continues to execute CP responsibilities.
- The first echelon establishes itself at the new location and updates its SU with information it receives from the second echelon.
- The first echelon assumes responsibility for CP operations and the second echelon displaces.
- Once the second echelon is established, the TAC CP conducts an update briefing for the main CP.

2-38. During movement, the number of messages to the CP should be minimal. This may require reconfiguration of auto-send and auto-forward functions to route traffic to the TAC CP during main CP displacement.

Displacement Steps

2-39. The battalion XO/S-3 issues a warning order (WARNO) for main CP movement. Leaders usually identify more than one site and route for the new main CP location; however, the site is not finalized until it has been reconnoitered.

2-40. The S-3 establishes the general area for the new CP. The HHC commander, signal officer, command sergeant major (CSM) (or senior NCO), and a CBRN team conduct detailed reconnaissance. The following are steps for displacement:

- The reconnaissance party identifies possible routes and sites. Locations must provide effective communications and accommodate all required aircraft, vehicles, and equipment. Several possible site locations must be identified, reconnoitered, and planned to provide flexibility.
- The reconnaissance party makes route and site sketch maps showing exact element locations within the new CP location.
- The aviation SO surveys the site for aircraft parking suitability.
- The S-3 or commander approves the primary and alternate sites.
- A ground/air movement order is published with decision points and a security plan.
- Security personnel and guides are dispatched. The security force ensures the area is clear of threat and contamination, and guides prevent wrong turns and assist elements in occupation. Signals are especially important for low visibility and night displacements.
- Reporting and coordinating functions are shifted as required. The shift may be within main CP echelons to the TAC CP or rear or alternate CP.
- CP and HHC elements prepare and execute movement per SOP. The main CP may displace in one echelon if the TAC CP can provide C2 for the interim. If the TAC CP cannot execute required C2, the main CP displaces in two echelons:
  - The first echelon displaces with enough assets and personnel to establish minimum C2.
  - The second echelon remains in place and provides C2 until the first echelon assumes control, then it displaces.

Quartering Party

2-41. The quartering party assists the HHC in moving to and occupying a new AA in a new site of operations. The HHC dispatches a quartering party to the prospective site in advance of the main body to—

- Reconnoiter the site and routes used to approach and occupy it.
- Secure the area prior to occupation.
- Organize the area prior to the main body's arrival.

2-42. On receipt of the movement WARNO, a reconnaissance team from the quartering party travels to the new area. If either the routes or AAs prove unsatisfactory, the quartering party advises the XO/S-3 of their findings and recommends changes, if possible. The HHC tactical standing operating procedure (TACSOP) should designate members of the reconnaissance team to assist reconnaissance in special ways, such as—

- Determining if the new area can support HHC operations and C2.
- Determining if the location selected can support the main CP.
- Identifying sites able to support communications and retransmission (RETRANS).
- Conducting CBRN reconnaissance of the new site.
- Providing additional security, as available.

2-43. Time available for the reconnaissance team to complete its mission varies depending on the situation. The reconnaissance team reconnoiters routes the main body will use, and identifies built-up areas, grades, fords, obstacles, destroyed infrastructure impeding movement, and defiles affecting the move. The team identifies alternate routes to the new site and rally points. Once the HHC selects a site, it conducts CBRN reconnaissance. The reconnaissance team leader then compiles graphics for the routes and area, and sends them to the quartering party via Force XXI Battle Command—Brigade and Below (FBCB2), if available. If FBCB2 is not available, the information is given to the main body on arrival at the AA or a messenger may be dispatched to the en route main body. When possible, the team leader directs a security element to observe the new site. The remainder of the team returns to the main CP as some members of the reconnaissance team may also be part of the quartering party.

2-44. While the reconnaissance team operates, the HHC 1SG assembles and conducts PCIs of the quartering party. The quartering party should be prepared to move 2 hours prior to actual movement of the main body. The HHC TACSOP includes quartering party task organization and operation. Elements in the quartering party include representatives from each element comprising the main CP:

- HHC section.
- S-3 representative.
- S-6 representative.
- Signal team.
- CBRN reconnaissance team.
- Security team.
- Additional vehicles as required.

2-45. The HHC commander prepares and issues a movement order. During the move from the start point through the RP to the site, the quartering party verifies the route selected by the reconnaissance party is still able to support unit operations. When the quartering party reaches the new site, it verifies the site will support the main CP and begins to prepare the site for occupation by the main body. The quartering party first establishes security and communications. The quartering party identifies and marks vehicle and crew-served weapons positions, and routes from the RP to the AA and positions. Guides from specific sections help position vehicles when they arrive.

MAIN BODY ACTIONS

2-46. On arrival of the first main CP convoy serial at the RP, quartering party guides meet the main body and guide it into position. Once all vehicles are in position, each platoon/section establishes 100 percent local security. Platoon/section sergeants walk the perimeter with a quartering party guide, making adjustments to crew-served weapons or individual fighting positions, if needed. Platoon/section sergeants ensure all positions tie into the CP perimeter and coordinate fires with left and right positions.

2-47. Once the last serial arrives, the HHC commander inspects the main CP perimeter. If satisfied with the defensive layout, the commander can reduce security to a level appropriate to the threat condition. All sections begin the occupation timeline (table 2-4), and each vehicle immediately deploys rolls of concertina wire on the perimeter.

Table 2-4. Example of main command post occupation timeline

Perform within	*Tasks to perform*
5 minutes	Clear RP without stopping and pick up quartering party guides. Move directly to marked positions. Account for personnel, equipment, and sensitive items. Report sent to HHC commander.
30 minutes	Maintain security and air guard. Digital and frequency modulated (FM) communications established. Vehicles in final positions. Main CP vehicles connected. Crew-served weapons in hasty fighting positions. Hasty defensive and survivability positions designated. Entry point gate established with barriers and communications to the main CP. Sector sketches started. CBRN-detection equipment emplaced. Initiate set-up of main CP.

Table 2-4. Example of main command post occupation timeline

Perform within	*Tasks to perform*
60 minutes	Platoons/sections establish landline communications to each crew-served weapon position. Logistic support areas (LSAs) sites finalized. Complete security plan. Complete set-up of TAC CP. Establish casualty collection points (CCPs). Emplace inner concertina wire around CP.
90 minutes	Begin emplacement of outer ring of wire or berm. Landline communications checks completed. LSAs established. Establish security defense level. Vehicle/tent camouflage started.
2 hours	Guard and patrol rotation started. Continued improvement of machine gun and individual fighting positions. Helicopter LZ identified and marked. Sector sketches to HHC commander.
4 hours	Refuel and resupply basic load. Update maintenance status. Perimeter wire continued until triple strand is emplaced. Quick reaction force (QRF) rehearsal. Camouflage complete. Continued improvement of machine gun and individual fighting positions. Implement CP shifts and sleep plan. Check load plans.

COMPANY COMMAND POST

2-48. The company CP is an austere setup and not specifically designed to be a staff level planning and tracking environment. The bulk of the company's mission information comes from battalion, brigade combat team (BCT), or TF. The company CP is for company specific mission planning, briefings, and rehearsals. Often, the company CP is collocated within the same shelter grouping as the company maintenance and supply personnel offering limited space designated specifically for mission planning. The company CP operates under the same principles as the main CP.

SPLIT-BASED OPERATIONS

2-49. Split-based operations are operations of platoons/sections independent of the company headquarters. Modularity of forces supporting BCTs requires companies to operate while geographically separated and with a decentralized command. Company headquarters may be collocated with their platoons, or the platoons may be deployed forward in support of a BCT, an aviation battalion task force (ABTF), or TF. Companies must be able to deploy, sustain threat operations, and fight wholly or as independent platoons or sections.

CAPABILITIES

2-50. Aviation company capabilities are a combat multiplier for the ground tactical commander. Modularity of companies allow for a "plug and play" capability for BCTs, ABTFs, and TFs. Aviation companies are capable of 24-hour continuous operations for short periods of time. Sustained operations

involving surges, such as in an offensive operation, drains the unit causing a reduced capability following the operation. This permits required aircraft maintenance and allows for management of fighter endurance for aircrews. The aviation modular design also allows assets of the corps and theater to reinforce the brigade providing an added capability to BCTs, ABTFs, and TFs during surge operations. This design also supplies aviation support following surge operations, while BCT-, ABTF-, and TF-organic aviation unit companies are in a reduced capability time frame.

SECTION IV – COMMAND AND STAFF RESPONSIBILITIES

BATTALION ELEMENTS

COMMAND SECTION

Commander

2-51. The commander's main concerns are accomplishing the mission and taking care of Soldiers. A successful commander delegates authority and fosters an organizational climate of mutual trust, cooperation, and teamwork. The commander leads the battalion, and mentors, guides, trains, and inspires leaders and Soldiers. Commanders must also possess an in-depth knowledge of threats (environmental, physical, human, or technical) their units will encounter while conducting military, HD, and security missions. The battalion commander should demonstrate proficiency at the pilot in command (PC) level as early as possible while in command.

2-52. The battalion commander must understand the impact of units and Soldier actions on the modern battlefield that incorporate military permissive environments, HD, and HS. The battalion commander relies on staff and subordinate commanders to advise and assist in planning and supervising operations. The commander must understand the staff's capabilities and limitations, and train them to execute operational concepts during his or her absence. The commander institutes cross training among the staff; thus, the unit can still operate when losses occur. The commander also is responsible for safety and standardization under all conditions—military or domestic. The commander develops and directs a battalion safety and standardization program. He or she is also responsible for demonstrating a positive and proactive commitment to environmental stewardship and protection. It is essential for the commander to institute necessary training for Soldiers in media operations and rules of engagement/rules for the use of force (ROE/RUF).

Commander's Location

2-53. When subordinate units are not conducting TACOPS (military or domestic), the battalion commander normally operates from the vicinity of the main CP. During operations, the commander moves to a position to best make decisions necessary to influence the outcome of the operation, while maintaining communications with higher, lower, and adjacent units. The best location for the commander may be the main CP or TAC CP, or forward with aviation companies/detachments supporting such operations as C2, disaster relief, or counterterrorism. This decision is based on METT-TC as well as the commander's assessment of the amount of personal presence essential to mission accomplishment. Even as digital linkages improve the ability to see the battle, at times there may be no better option than personal presence.

Staff Communications with the Commander

2-54. For some information, the commander must be informed immediately. It is essential the commander provide the staff with guidance on types of information considered critical, typically through commander's critical information requirements (CCIR). Many commanders emphasize the CCIR by posting them in the CP and disseminating to all Soldiers.

2-55. Staff members provide the commander with critical, concise, accurate information and coordinate with higher and lateral units to provide the commander with running estimates. The XO is integral in

establishing brief guidance, and ensuring the commander is not burdened with time-consuming, lengthy, or meandering discussions. Critical information is communicated to the commander on a priority basis set by command guidance. Established briefings to the commander are open and frank but follow a set agenda.

2-56. The staff reduces demands on the commander's time by—

- Obtaining, analyzing, and providing information.
- Anticipating the situation.
- Making recommendations. The staff does not ask the commander for solutions; it presents issues, offers courses of action (COAs), and recommends one of those COAs.
- Preparing plans and orders.
- Supervising the execution of orders.
- Coordinating the operation.

Executive Officer

2-57. The XO is second in command and the principal assistant to the commander. The scope of XO duties are often tailored by requirements of the commander; however, as a general rule, the XO directs, supervises, and ensures coordination of staff work and logistics except in those specific areas reserved by the battalion commander. During operations, the XO is generally positioned in the main CP directing and coordinating the staff. The XO remains current on tactical and logistics situations. As staff coordinator and supervisor, the XO—

- Formulates and announces staff operating policies.
- Ensures the commander and staff are informed on matters affecting the command.
- Supervises main CP operations.
- Is responsible for execution of staff tasks and coordinated efforts of staff members.
- Ensures the staff performs as a team and assigns definite responsibilities.
- Transmits the commander's decisions to the staff and subordinate commanders, when applicable. Staff members can deal directly with the commander; however, they are obligated to inform the XO of the commander's instructions or requirements.
- Establishes and monitors liaison and liaison activities.
- Supervises sustainment operations.
- Oversees force protection measures in fixed-base operations.

Aviation Safety Officer

2-58. The SO is the commander's principal assistant during the risk management process and monitors all battalion missions to identify and address potential hazards. The SO recommends actions that permit mission accomplishment in the safest manner possible. The SO can serve as the other crew member for the battalion commander or S-3.

Aviation Standardization Officer

2-59. The SP is the primary advisor to the commander for the standardization program. The SP develops, integrates, implements, monitors, and manages the aircrew training and standardization programs. He or she also advises, as required, on the crew selection process, and the employment of aircraft systems, sensors, and weapons. He or she is a principal trainer and peer leader for subordinate unit instructor pilots (IPs). The SP may serve as the other crewmember for the battalion commander or S-3.

Command Sergeant Major

2-60. The CSM is the commander's primary advisor concerning enlisted Soldiers and acts in the name of the commander in other duties as directed. The CSM focuses attention on functions critical to success of the operation. The CSM assists the commander in the following ways:

- Monitors food service and other logistics operations.
- Conducts informal investigations.

- Assists in controlling battalion movements.
- Leads the battalion advance or quartering party during a major movement, coordinating closely with the HHC commander, if needed.
- Establishes ground QRF guidelines for AA security.
- Monitors subordinate unit morale.
- Provides recommendations and expedites procurement and preparation of enlisted replacements for subordinate units.

HUMAN RESOURCE SECTION

Personnel Staff Officer

2-61. The S-1 has coordinating responsibility for finance, religious activities, public affairs, and legal services support for the unit. The S-1 is normally collocated with the S-4 in the main CP, and they must cross-train to conduct continuous operations.

2-62. The S-1 is responsible for all matters concerning human resources including personnel readiness and services. The S-1—

- Manages personnel strength and replacement.
- Works with the flight surgeon to plan health services.
- Coordinates morale support activities and legal, financial, and postal services.
- Maintains the awards program.
- Oversees the administration of discipline, law, and order with the provost marshal (if present) and brigade judge advocate.
- Provides casualty operations management.
- Prepares the personnel estimate.

Chaplain

2-63. The chaplain provides religious support to all personnel assigned or attached to the battalion. The chaplain advises the commander on religious, morale, and welfare issues, and establishes liaison with UMTs of higher and adjacent units. The chaplain and chaplain's assistant compose the UMT, which usually operates from the same location as the S-1.

Flight Surgeon

2-64. The flight surgeon advises and assists the commander on matters concerning the medical condition of the command to include preventive, curative, and restorative care. The flight surgeon periodically flies with aircrews to monitor medical and environmental factors affecting crew readiness and is responsible for conducting flight physicals for unit personnel. The flight surgeon determines requirements for requisition, procurement, storage, maintenance, distribution, management, and documentation of medical equipment and supplies. He or she also operates the BAS, usually found in the AA.

INTELLIGENCE SECTION

2-65. The S-2 section prepares intelligence collection plans, receives and analyzes operational environment information, disseminates intelligence products, and provides up-to-date intelligence information that assists in planning for and coordinating operations. The S-2 staff section also performs the following functions:

- Facilitates the intelligence preparation of the battlefield (IPB) process.
- Participates in development of the decision support template.
- Coordinates intelligence collection activities.
- Updates the commander and staff frequently on threat situation and trends.

- Maintains isolated personnel reports (ISOPREPS).
- Works closely with the commander and S-3 ensuring updated intelligence information is used to plan battalion operations.
- Develops the intelligence, surveillance, and reconnaissance (ISR) plan with the S-3.
- Performs terrain analysis.

Intelligence Staff Officer

2-66. The S-2 assists the S-3 in matters concerning ISR. The S-2 provides current information; prepares the intelligence estimate; and analyzes intelligence of tactical value concerning terrain, weather, and threat. This intelligence helps facilitate planning and execution of threat operations.

OPERATIONS SECTION

2-67. The S-3 section maintains routine reporting and coordinates activities of liaison personnel. The S-3 section produces orders for battalion operations, including recovery of personnel. In the C2 area, the S-3 section ensures procedures are in place to resolve complexities posed by different communications systems, Army Tactical Command and Control System (ATCCS), and connectivity with aircraft.

Operations Staff Officer

2-68. The S-3 is responsible for matters pertaining to operational employment, training, and mission execution of battalion and supporting elements. The S-3 monitors the battle, ensures necessary assets are in place when and where required, develops the ISR plan, anticipates developing situations, and prepares the operations estimate. The S-3 maintains close coordination with the S-4 and S-1 for logistics and status of personnel.

Assistant S-3 (Flight Operations Officer)

2-69. The commander designates the battalion flight operations officer. NCOs and flight operations specialists assist the flight operations officer. Flight operations responsibilities include—

- Monitoring and briefing applicable portions of special instructions (SPINS) and air tasking order (ATO) relevant to operations.
- Providing relevant airspace command and control (AC2) measures to mission aircrews.
- Incorporating applicable AC2 measures into the scheme of maneuver.
- Maintaining AC2 overlay.
- Establishing and maintaining the flight-following net (air traffic control [ATC] network) for unit aircraft, when required.
- Coordinating air traffic services (ATS) requirements.
- Coordinating with higher headquarters for additional aviation support when required.
- Monitoring fighter management.
- Maintaining the aircrew information reading file (AIRF).
- Maintaining the flying hour program and individual flight record folders.

Tactical Operations Officer

2-70. The TACOPS officer advises the battalion commander and staff on appropriate techniques and procedures for each mission. He or she should be included in all aviation mission planning. The TACOPS officer can serve as the other crew member for the battalion commander or S-3, as well as a principal trainer and peer leader for company TACOPS officers. Other responsibilities include, but are not limited to—

- Integrating the unit's operational plan into the theater airspace structure.
- Assisting with development of unit tactics, techniques, and procedures (TTP).

- Managing the organization's personnel recovery (PR) program.
- Assisting in the military decisionmaking process (MDMP).
- Operating the battalion Aviation Mission Planning System (AMPS).

Chemical Officer

2-71. The chemical officer advises the commander on CBRN operations, decontamination, smoke, obscurants, and flame. He or she works directly for the S-3 and is responsible for integrating CBRN into all aspects of operations. The chemical officer may have other S-3 section responsibilities and can act as an assistant S-3 or battle captain when directed.

Chemical, Biological, Radiological, and Nuclear Noncommissioned Officer

2-72. The CBRN NCO assists and advises the HHC commander in planning for and conducting operations in a CBRN environment. He or she is usually located with the HHC CP. The CBRN NCO plans, conducts, and/or supervises CBRN defense training, covering such areas as decontamination procedures and use and maintenance of CBRN-related equipment. Specific duties of the CBRN NCO include—

- Assisting the commander in developing HHC operation exposure guide in accordance with higher headquarters guidance.
- Making recommendations to the commander on CBRN surveys and/or monitoring, decontamination, and smoke support requirements.
- Requisitioning CBRN-specific equipment and supply items.
- Assisting the commander in developing and implementing the unit CBRN training program.
- Inspecting HHC elements to ensure CBRN preparedness.
- Processing and disseminating information on threat and friendly CBRN capabilities and activities including attacks.
- Advising the commander on contamination avoidance measures.
- Coordinating, monitoring, and supervising decontamination operations.
- Providing recommendations to the commander on mission-oriented protective posture (MOPP) levels.

LOGISTICS SECTION

2-73. The S-4 section provides supervision and coordination of food service, supply, transportation, and maintenance support for the battalion. The aviation maintenance company assists the S-4 section in development of key information to include—

- Maintenance status (aircraft, vehicles, unmanned aerial systems [UAS], and equipment).
- Classes of supply status and forecasts.
- Logistics synchronization matrix.
- Resupply schedule.
- Forward arming and refueling point (FARP) status and locations.

Logistics Staff Officer

2-74. The battalion S-4, as the battalion logistics planner, coordinates with companies concerning the status of maintenance, equipment, and supplies. He or she is also responsible for the logistics estimate. The S-4 coordinates with supporting units and higher headquarters staffs ensuring logistics support is continuous.

Aviation Materiel Officer

2-75. The aviation materiel officer (AMO) works with the S-4 and is an advisor to the battalion commander and staff for aviation materiel issues. The AMO reviews reports and makes recommendations

on aviation logistics and maintenance issues. He or she also ensures close coordination with the aviation maintenance company and supporting ASB commanders. The AMO is usually a maintenance test flight examiner and serves as a trainer and peer leader for the subordinate unit's aviation maintenance officers. He or she is responsible for providing the aviation maintenance contents of the reading files.

COMMAND, CONTROL, COMMUNICATIONS, AND COMPUTER OPERATIONS SECTION

2-76. The S-6 section plans for, coordinates, and oversees employment of communications systems and performs unit-level maintenance on ground radio and field wire communications equipment. It installs, operates, and maintains the battalion radio RETRANS site. Signal responsibilities include supervision of electronic mail on classified and unclassified nets and the unit LAN.

Command, Control, Communications, and Computer Operations Officer

2-77. The S-6 advises the commander on signal matters, CP location, signal facilities, and best use of signal assets. He or she monitors the maintenance status of battalion signal equipment, coordinates preparation and distribution of the SOI, and supervises COMSEC accounting activities.

BATTALION CELLS

Operations Cell

2-78. The operations cell includes the following personnel:

- **The battle captain**, designated as mission dictates, continuously monitors operations within the TAC CP ensuring proper personnel are available for operations management. He or she does not command the battle but performs battle tracking and makes operational decisions within assigned responsibilities. Each operations cell has two to three battle captains to maintain 24-hour operations.
- **The tactical operations officer noncommissioned officer in charge (NCOIC)** is responsible for—
  - TAC CP movement, set-up, and maintenance.
  - Shift schedules and organization within the TAC CP.
  - Other functions as assigned.
- **The operations NCO** assists the TAC CP NCOIC and is responsible for—
  - Maintaining unit status.
  - Receiving and processing reports.
  - Keeping the unit's journal.
- **Intelligence personnel** (S-2, NCO, and intelligence analysts) are responsible for all intelligence functions to include—
  - Alerting the commander, XO, or S-3 to situations meeting established CCIR.
  - Receiving incoming tactical reports.
  - Processing intelligence information.
  - Assisting in movement, set-up, and maintenance of the TAC CP.

Plans Cell

2-79. The plans cell, due to its personnel-intensive nature, is activated as required. Normally, the plans cell chief is the senior S-3 representative and includes the—

- Primary staff.
- TACOPS officer.
- Attached unit representatives.

Logistics Cell

2-80. The logistics cell is composed primarily of the S-1 and S-4 sections and representatives from attached sustainment elements. The logistics cell—

- Monitors and assists in C2 of sustainment assets by maintaining contact and coordination with higher and adjacent units while continuously updating personnel and logistic situations.
- Maintains SA and SU ensuring sustainment elements are not adversely affected by threat actions, friendly movements, or ongoing operations.
- Analyzes and disseminates sustainment information, maintains the sustainment situation map, and requests and synchronizes sustainment as required.
- Ensures reports are submitted and received on time.
- Plans for future operations in synchronization with the plans cell to ensure sustainment is integrated into the mission effort.

2-81. The logistics cell also includes radio/telephone operators (RTOs). They alert the leadership of any situation requiring attention and may be the only people who hear transmissions or see critical information. RTOs cannot assume all information monitored is seen by the TAC CP at large.

STAFF RESPONSIBILITIES

Estimates

2-82. Running estimates may be informal at battalion level and below; however, they must address operational environment activity, project COAs, and predict results. Careful IPB, selection of important threat indicators, and development of contingency plans facilitate estimates and allow for timely response. The XO is the key person in this process and ensures the staff maintains a proper perspective.

2-83. A running estimate supports the commander's vision and decisionmaking. Staffs continuously update their conclusions and recommendations based on the impact of new facts (see FM 6-0). Staff sections provide these updated conclusions and recommendations to the commander as required (see FM 5-0). The coordinating staff provides running estimates during the conduct of operations by using personnel, intelligence, operations, and logistics estimates.

Maintains the Common Operating Picture

2-84. The staff provides the commander with an accurate picture of the AO. Delays in receiving or disseminating critical information adversely affect the entire operation. The staff must identify key indicators and push for quick and accurate reports from both subordinate and higher headquarters. Information flow, both horizontally and vertically, must be on a priority basis. Operational conditions dictate priorities.

COMPANY ELEMENTS

HEADQUARTERS AND HEADQUARTERS COMPANY

Company Headquarters

2-85. The company command section consists of the commander and 1SG. They are responsible for providing control and supervision of operations within the support area and support for battalion staff and organic operational elements.

Commander

2-86. The commander's responsibilities include leadership, discipline, tactical employment training, administration, personnel management, supply, and communications activities. These responsibilities require the commander to understand capabilities of unit Soldiers and equipment and how to employ them

to the best tactical advantage. At the same time, the commander must be well versed in threat organizations and doctrine.

2-87. The commander's mission involves more than company support; he or she is instrumental in providing support for the entire organization. The commander must be flexible, using sound judgment to make accurate and timely decisions based on the higher commander's intent and tactical situation. He or she must be able to visualize the operational environment, describe situations and operations, and direct subordinate leaders by using clear and complete OPORDs.

Executive Officer

2-88. The XO is the second in command of the company. The XO is a key figure in assisting the HHC commander. The XO—

- Coordinates with the battalion when the company commander is not available.
- Receives new orders and begins TLP when the commander is operating forward.
- Leads the company when the company commander directs.
- Oversees FARP and field feeding operations.
- Manages company sustainment requirements.

First Sergeant

2-89. The 1SG is the company senior NCO. He or she is the commander's primary tactical advisor and an expert in individual and NCO skills. The 1SG enforces unit discipline and is the company's primary sustainment operator. He or she helps the commander plan, coordinate, and supervise logistics activities supporting the tactical mission. The 1SG also assists the commander in the following ways:

- Monitors NCO development, promotions, and assignments. This includes assessment of the company's battle focused Soldier and NCO leader training programs.
- Identifies, plans, and assesses Soldier performance on training tasks supporting collective (unit) tasks on the mission essential task list (METL).
- Provides recommendations and expedites procurement and preparation of enlisted replacements for the company.
- Executes and supervises routine operations including—
  - Enforcing TACSOPs.
  - Coordinating and reporting personnel and administrative actions.
  - Supervising supply, maintenance, communications, and field hygiene operations.
- Implements the local security plan.
- Supervises, inspects, and/or observes all matters designated by the commander.
- Plans, rehearses, and supervises key logistics actions supporting the tactical mission. These activities include—
  - Resupplying classes I, III, and V products and materiels.
  - Maintenance and recovery.
  - Medical treatment and evacuation.
  - Processing replacement/returned to duty.
- Serves as quartering party NCOIC when necessary.

Supply Sergeant

2-90. The supply sergeant coordinates all supply requirements and actions with the 1SG and S-4. He or she requests, receives, issues, stores, maintains, and turns in supplies and equipment for the company. Usually, the supply sergeant's position is located with the HHC CP or near the ASB support area. The supply sergeant communicates with the HHC using the TF administrative and logistics (A&L) radio net or FBCB2. The supply sergeant's specific responsibilities include—

- Managing HHC cargo truck(s) and water trailer, and supervising the supply specialist.

- Monitoring unit activities and/or the tactical situation.
- Anticipating and reporting logistics requirements.
- Coordinating unit logistics requests and monitoring their status.
- Coordinating and supervising organization of the HHC logistics package (LOGPAC).

Human Resources Specialist

2-91. The human resources specialist performs personnel and administrative functions in support of the company. He or she advises the commander and members of the unit on personnel matters. He or she also prepares military and nonmilitary correspondence, messages, recurring and special reports, requisition forms, regulations, directives, SOP, and similar material.

SECURITY AND SUPPORT AVIATION COMPANY

Commander/Detachment Commander

2-92. The company commander is a warfighter, responsible for integration of his or her company into the combined arms fight. He or she leads, mentors, guides, and inspires company Soldiers. He or she is a highly proficient aviation leader and strives for qualification as a PC as early as possible into command. The commander is responsible for training platoon leaders and evaluating crews and individuals as well as assessing training. The company commander is responsible for aircraft maintenance ensuring aircraft are available to meet the battalion commander's intent. He or she also determines crew selections as well as composition of flight teams. The 1SG, platoon leaders, IPs, TACOPS officer, and PCs assist the commander in ensuring crews are mission ready.

First Sergeant/Detachment First Sergeant

2-93. The 1SG is the senior NCO and senior enlisted aviation maintainer at company level. He or she is the commander's primary advisor concerning enlisted Soldiers and performs other duties as directed by the commander. The 1SG focuses attention on functions critical to success of the operation. The 1SG assists the commander in the following ways:

- Provides recommendations and expedites procurement and preparation of enlisted replacements for the company.
- Supervises daily maintenance operations.
- Organizes, deploys, and supervises all support elements assigned, attached, or OPCON to the company. This includes food service, transportation, maintenance, and other support personnel.
- Coordinates medical, mess, supply, administrative, and other logistics support.
- Receives, consolidates, and forwards all administrative, personnel, and casualty reports to the battalion main CP.
- Establishes and organizes the company resupply point.
- Leads company ground movements when required and establishes AAs.
- Monitors NCO development, promotions, and assignments. This includes assessment of company battle focused Soldier and NCO leader training programs.
- Identifies, plans, and assesses Soldier performance on training tasks supporting collective (unit) tasks on the METL.

Flight Operations Officer

2-94. The flight operations officer utilizes NCOs and flight operations specialists to assist in managing flight operations. The flight operations officer responsibilities include—

- Monitoring and briefing applicable portions of SPINS and the ATO relevant to operations.
- Providing relevant AC2 control measures to mission aircrews.
- Maintaining AC2 overlay.

- Establishing and maintaining the flight-following net (ATC network) for unit aircraft, when required.
- Coordinating ATS requirements.
- Maintaining the AIRF.
- Maintaining the flying hour program and individual flight record folders.

Tactical Operations Officer

2-95. The TACOPS officer advises the commander on appropriate aircraft survivability equipment (ASE) techniques and procedures for each mission. He or she should be included in all aviation mission planning. The TACOPS officer serves as a crew member for unit missions. Other responsibilities include, but are not limited to—

- Assisting with TTP development.
- Managing the organization's PR program.
- Assisting in MDMP.
- Assisting aircrews with mission planning utilizing AMPS.

Aviation Liaison Officer

2-96. The liaison officer (LNO) (a TOE position) represents the company at the headquarters of another unit, agency, or emergency operations center (EOC) to facilitate coordination and communication between the two units. LNOs ensure supportability of the COA and relay a clear task and purpose to the parent unit. LNOs provide the supported unit with the following:

- Capabilities, limitations, and tactical employment of aviation and ATS assets.
- Assistance in preparing aviation estimates, plans, orders, and reports.
- Assistance in planning aviation missions.
- Coordination with airspace users and the higher AC2 element for airspace management.
- The operational status of aviation assets and their effects on the supported unit's mission.
- Informing appropriate aviation units of current and possible future operations.
- Continuous communications with aviation units supporting the ground unit.

2-97. The LNO must have access to current battalion status information to provide the most accurate picture of aviation capabilities. Constant communication with the parent unit is essential for updates on aircraft, maintenance, aircrew, and FARP status if applicable.

Platoon Leader

2-98. The platoon leader leads his or her platoon in TACOPS and is responsible for crew selection recommendations and mission accomplishment. The platoon leader, assisted by unit IPs, ensures crews are properly selected and trained. Platoon leaders are expected to develop proficiency in the aircraft and attain the designation of air mission commander (AMC) and PC, while ensuring crews are proficient in TTP. The platoon leader is responsible for all maintenance operations of the platoon to include—

- Updating the commander on all aircraft status changes.
- Developing and implementing a tracking system to monitor critical maintenance services such as scheduled, unscheduled, and deferred maintenance; phases/progressive preventive maintenance; the flow chart and status chart; and parts and work order requests.
- Supervising daily maintenance operations.

Platoon Sergeant

2-99. The platoon sergeant (PSG) is the key assistant and primary adviser to the platoon leader. He or she provides advice concerning enlisted Soldiers and performs other duties as directed by the platoon leader.

The PSG assesses Soldier training proficiency with input from section leaders who are responsible for identifying Soldier and collective tasks that require training. The PSG assists the platoon leader by—

- Ensuring the platoon has aircraft available to accomplish assigned missions.
- Providing recommendations to the platoon leader for enlisted replacements.
- Coordinating medical, mess, supply, administrative, and other logistics support for the platoon.
- Reviewing maintenance forms ensuring crew chiefs (CEs) verify deficiencies and completing additional forms as necessary.
- Ensuring maintenance forms are submitted and appropriate tracking is initiated.
- Monitoring status of replacement parts to include parts on order and valid parts requisition numbers.
- Ensuring all recoverable parts are turned in.
- Leading platoon ground movements and conducting pre-execution checks when required.
- Providing input to platoon leader's collective task assessment.
- Ensuring Soldiers are prepared for and attend training.
- Monitoring NCO development and promotions.
- Identifying, planning, and assessing Soldier performance on training tasks that support individual and collective (unit) tasks on the METL to include maintenance tasks.

Aviation Standardization Officer

2-100. SPs assist the commander in developing and implementing the unit aircrew training program (ATP) as well as providing quality control via the commander's standardization program. He or she also assists the commander in crew selection and may serve as an AMC during threat operations. The SP normally performs as a member of the company operations planning cell. Along with his or her primary responsibilities, the SP mentors and professionally educates all unit crewmembers. SPs provide expertise to the commander on unit, individual, crew, and collective training and perform the following functions:

- Serves as a member of the battalion standardization committee.
- Advises the commander on development of commander's task list (CTL).
- Monitors unit standardization and ATPs.
- Maintains unit individual aircrew training folders (IATFs).
- Monitors unit no-notice programs.
- Develops company situational training exercises (STXs) that accurately reflect current operations and accurate aircraft capabilities.
- Attends training meetings.

Instructor Pilot

2-101. IPs are responsible for assisting the platoon leader in properly training mission ready crews. IPs provide quality control for the ATP via the commander's standardization program. Although IPs work directly for the platoon leader, they receive guidance and delegated tasks from the battalion SP. This ensures training is standardized throughout the battalion, provides for an economy of force effort in the company, and contributes to professional development of the IP. Along with their primary responsibilities of the standardization program, they mentor and professionally educate all unit crewmembers. IPs are also responsible for—

- Performing as a designated IP and/or instrument examiner.
- Conducting no-notice evaluations.
- Assisting the battalion SP in maintaining IATFs.
- Assisting in development of company STXs.
- Assisting the battalion SP and TACOPS officer in CTL development.

Unit Trainer

2-102. Unit trainers (UT) are PCs designated to instruct in areas of specialized training. They assist IPs in unit training programs and the achievement of established training goals. Areas they instruct are—

- Night vision goggles (NVGs).
- Instrument flight.
- Tactics.
- Border and corridor qualifications.
- Local area qualifications.

Maintenance Test Pilot

2-103. Maintenance test pilots (MTPs) assist the commander as his or her primary advisor for all maintenance programs. They assist the commander in developing and managing the unit maintenance program and maintaining a high level of aircraft proficiency. The MTP must be involved in all day-to-day maintenance aspects of the company, coordinating required resources as necessary and ensuring their efficient use. The MTP—

- Ensures the timely completion of maintenance test flights and maintenance operational checks.
- Advises the platoon leader and PSG on maintenance operations.
- Serves as an operational mission pilot.
- Conducts pilot training on maintenance related subjects and troubleshooting fundamentals.

Aviation Life Support Equipment Officer

2-104. Aviation life support officers (ALSOs) assist, advise, and represent commanders in all matters pertaining to the aviation life support system (ALSS). ALSOs—

- Review, analyze, and develop procedures ensuring ALSS planning, budgeting, and maintenance.
- Ensure training of aircrew personnel in proper operation, use, and operator maintenance of survival equipment and techniques.
- Supervise the life support section and ensure qualified personnel are available to conduct life support and survival training and maintenance of organizational-level aviation life support equipment (ALSE).
- Maintain a current file of regulations, procedures, and technical manuals (TMs) pertaining to inspection, maintenance, and use of assigned life support equipment.
- Ensure units have adequate information and training before using new equipment or system changes.
- Ensure units encourage life support suggestions and operational hazard reports.
- Ensure materiel deficiency reports are submitted on life support equipment failing to operate.
- Participate as an ALSE member on the unit aviation safety council.
- Assist higher headquarters in standardizing the ALSS program.

2-105. Additionally, the commander appoints ALSE technicians and specialists to assist, advise, and represent the ALSO in all matters pertaining to ALSE. Technicians—

- Establish a library of ALSE publications and necessary forms and ensure the unit's pinpoint distribution account is updated.
- Ensure all ALSE is maintained in a high state of readiness by inspecting, cleaning, fitting, testing, adjusting, and repairing equipment.
- Maintain files on inspection, maintenance, expiration dates, and supply pertaining to ALSE.
- Participate as enlisted representatives at aviation safety meetings and conferences.
- Participate in local ALSE steering council meetings.
- Inspect all controlled drugs used in survival kits and vests.

SECTION V – PLANNING CONSIDERATIONS

BATTALION CONSIDERATIONS

2-106. The battalion develops its operational plans parallel with both higher headquarters and subordinate companies. Units plan, coordinate, and rehearse concurrently while the operational plan is in development. Examples of ongoing preparation include—

- Fighter management cycles.
- Task organization.
- Aircraft designation and configuration.
- Auxiliary fuel tank distribution and management (if applicable).
- Communications planning.
- Airspace C2 coordination.
- Review of the current airspace control order (ACO), ATO, and SPINS.
- Tasks and responsibilities (company, platoon, team, aircrew).
- Selected rehearsals and training.
- FARP movement, composition, and emplacement.
- Maintenance support movement, composition, and emplacement.
- Plans and procedures for recovery of personnel and equipment, specifically downed aircrew pickup points (DAPPs), in-stride/immediate aircrew recovery, and downed aircraft recovery teams (DARTs).
- Weather (to include inadvertent instrument meteorological conditions [IIMC] and vertical helicopter instrument recovery procedures).
- Passage of lines planning.
- AA departure procedures.
- Bump plan.

MILITARY DECISIONMAKING PROCESS

2-107. To plan and coordinate missions effectively, the commander and staff follow MDMP (figure 2-1, page 2-26). Staff planners must focus on the aviation planning considerations described in the above section to formulate a complete plan. Because of the complexity inherent in the process, battalions should practice the process regularly prior to deployment. FMI 5-0.01 covers the MDMP process in detail.

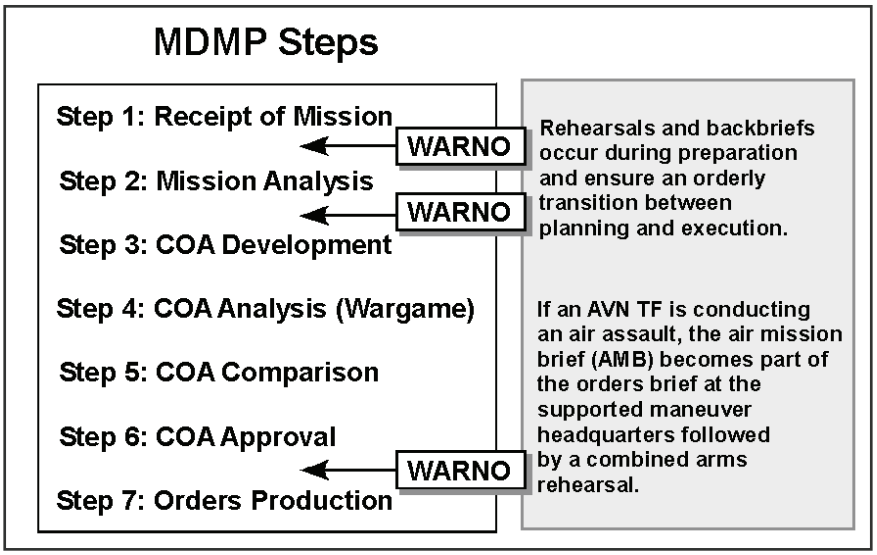


Figure 2-1. Military decisionmaking process

2-108. The dynamic battlefield often does not allow a complete MDMP due to time constraints. The commander and staff must know current aircraft and crew availability to immediately assess feasibility of mission requests.

2-109. The steps of an abbreviated MDMP are the same as those of the full process; however, the commander performs many of them mentally or with less staff involvement. The commander may direct a COA based on experience to expedite planning. The products developed during an abbreviated MDMP may be the same as those developed using the full process; however, they are usually less detailed and some may be omitted altogether.

COMPANY CONSIDERATIONS

TROOP LEADING PROCEDURES

2-110. Although MDMP is essential to mission accomplishment, effective TLP are equally important. Commanders with a coordinating staff use MDMP. Company-level and smaller units do not have formal staffs and use TLP to plan and prepare for operations. Figure 2-2, page 2-27, depicts TLP along with key planning tasks. The box on the left shows TLP steps. The middle box (METT-TC) represents the initial METT-TC analysis leaders conduct to develop an initial assessment. This occurs in TLP steps 1 and 2 and is refined in plan development. The box on the right depicts plan development tasks. Plan development occurs in TLP steps 3 through 6. These tasks are similar to the steps of MDMP (see FM 5-0, chapter 3).

2-111. TLP must be a part of the SOP and its checklists. Although quick directives can accomplish much in certain circumstances, a missed step can easily lead to mission shortfalls or failure. Written TLP steps provide a guide the leader applies in ways consistent with the situation and leader and subordinate leader experience.

2-112. Leaders use TLP when working alone or with a small group to solve tactical problems. A company commander may use the 1SG, platoon leaders, SP, and SO to assist during TLP. Additionally, aviation company commanders utilize planning cells to perform much of the TLP process.

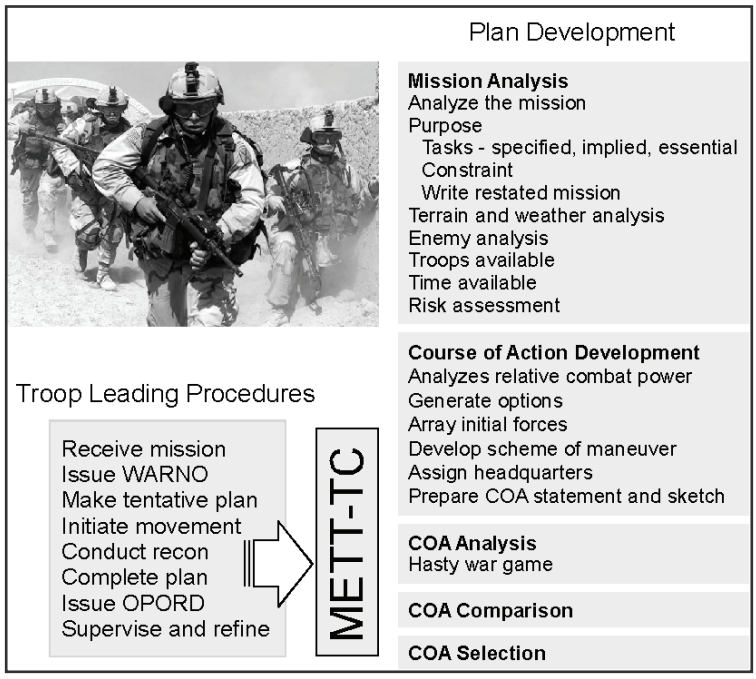


Figure 2-2. Troop leading procedures and key planning tasks

PLANNING CELLS

2-113. Company planning cells are utilized by the commander to organize and effectively execute the mission. This section defines a method for planning conducted at company level, and the process a company follows to ensure completion of required tasks for mission planning.

2-114. The company commander or senior officer acts as the mission AMC. He or she selects crews and assigns them to planning cells. The AMC assigns suspenses for planning cells providing products to the reproduction/distribution cell.

Process

2-115. The following process establishes information requirements necessary to successfully plan and execute company missions. Cells conduct planning concurrently. After receipt of the WARNO, the following information is needed to begin planning: (Some of this information can be generated into AMPS.)

- Situation along routes and AO.
- Mission, objective or target time, and any alternate missions.
- Weather and light data for time of operation.
- Number of aircraft required.
- Location of specified passage points (PPs) or corridors with occupying unit designation, call-sign, and frequency.
- Specific tasks for planning cells.
- Time and place of OPORD.
- AMPS integration.
- Cell assignments matrix (table 2-5, page 2-28).

Table 2-5. Example cell assignments matrix

Route Planning Cell
Operate AMPS: • Select air control points (ACPs), altitudes, airspeeds, and formations with friendly situation graphics. Coordinate with other units as needed. • Calculate/confirm time/distance/heading (TDH) data. Verify grid coordinates and TDH data with another cell member. • Identify obstacles and hazards. Coordinate with weather/hazards cell. • Coordinate with operations cell concerning mission timeline. • Produce/update AMPS graphics (flight plan, control measures, battlefield graphics, and essential data). • Provide reproduction/distribution cell with kneeboard products. • Load mission from AMPS to data transfer cartridges (DTCs) and provide to all copilots at briefing.
Communications Cell
Develop communication sets for the mission. Ensure aircraft COMSEC equipment in all mission aircraft (including spares) is keyed and operational (KY-58, KIT 1C, single-channel ground and airborne radio system (SINCGARS) and Have Quick). Collect frequency and selective identification feature/identification, friend or foe (IFF) data from OPORD, ACO, aviation planning guide (APG), automated network control device (ANCD), SOP, and the flight information publication (FLIP) covering all mission aspects from communications check to completion. Prepare unit communications card. Provide reproduction/distribution cell with timely data.
Performance Planning Cell
Obtain mission load data. Obtain planning weather data (temperature and pressure altitude [PA]). Prepare a generic performance planning card (PPC). Calculate fuel-planning data for all mission phases. For unit aircraft equipped with internal tanks, perform planning allowing for two contingencies—Auxiliary tanks operational (if installed), and tanks full but do not transfer fuel. Calculate minimum fuel including return to FARP/AA (commonly code worded as “bingo”) and visual flight rules (VFR) reserve. Place all calculations and data on unit PPC/fuel planning card and provide timely data to route planning cell and reproduction/distribution cell.
Operational Planning Cell (usually composed of commander and team leaders)
Selection of observation posts (OPs). Control measures for routes and/or zones. Team employment procedures. Integration into ground tactical plan. Provide reproduction/distribution cell with timely data. Brief actions on the objective at unit mission briefing.
Weather, Notices to Airmen (NOTAMs), Hazards Cell
Compare forecasted weather and mission requirements. Consider illumination, sunrise/sunset times. Review NOTAMs, airman advisories (AIRADs), and ACO for any items influencing the mission including IIMC recovery airfields. Update wire hazards map.

Table 2-5. Example cell assignments matrix

Provide reproduction/distribution cell with timely data. Brief weather, NOTAMs, and hazards at unit mission briefing.
Flight Plan/Mission Brief/Risk Assessment Cell
Complete mission brief and risk assessment sheets. Make available to crews prior to mission briefing. Inform the AMC if initial risk assessment warrants any amendments to the mission profile. Complete flight plan or collect data for flight operations log. Obtain squawk codes, prior permission required, and diplomatic clearances as required. Provide reproduction/distribution cell with timely data.
IIMC Cell
Develop an IIMC recovery plan. Long en route portions may require more than one recovery airfield. Select appropriate instrument approach procedures at each recovery airfield. Prepare an IIMC plan and post on unit IIMC card. Obtain FARP layout data and post on unit FARP sketch. Provide reproduction/distribution cell with timely data.
Reproduction/Distribution Cell
Actively collect and safeguard all data provided by planning cells. If possible, photocopy uniform packets for all crewmembers. Arrange in the same order and clip together. Post mission briefing boards as soon as possible allowing aircrews to post their own mission packets if reproduced packets are not available. Distribute packets prior to start of mission briefing. Assist AMC with mission brief preparation to include posting graphics/overlays to briefing maps. Products that are reproduced and distributed: • Route cards. • FARP and objective sketches. • Communication card. • PPC. • Weather, NOTAMs, and hazards briefs. • Flight plan/mission brief/risk assessment. • IIMC recovery plan. • Threat risk assessment. • Mission execution matrix (if not provided from battalion).

FLIGHT CONSIDERATIONS

FLIGHT-FOLLOWING FOR SECURITY AND SUPPORT MISSIONS

2-116. On any emergency response mission, the necessity for rapid-response, unusual and unpredictable operation times, and the potential for operations in remote areas makes traditional methods of flight-following for S&S missions unavailable or unreliable. S&S units must be prepared for the worst-case scenario, and their aircraft must be able to operate and flight-follow totally independent of traditional modes. When flight-following facilities are available, they should be utilized; however, the unit should have a backup plan. Army aviation support facilities (AASFs) do not provide sustained 24-hour coverage. Flight service stations (FSSs) provide flight-following support; however, a local flight plan for a given period of time is the only option when operating within specific boundaries. S&S BN units should have

methods of ensuring accurate flight-following procedures. These methods should maximize the use of readily available technologies that provide NLOS flight-following and command SA.

Responding to a Disaster

When military helicopters responded to the aftermath of Hurricane Katrina, all ground-based landline/electrically-powered and cell phone communication systems were inoperable. Satellite phones were the only viable ground-based communication systems available. No Federal Aviation Administration (FAA)/FSS/ATC agencies were capable of communication or airspace control. The first aircraft to arrive on the scene provided internal flight-following with each other and initiated their own ATC/routing procedures by using emergency frequency 121.5 and local airport common terminal advisory frequencies.

Position Reporting and Overdue Aircraft Procedures

2-117. Contact with aircraft for reporting purposes should occur at scheduled intervals but not less than hourly. If the hourly position report is overdue, units should attempt to make radio contact with the aircraft as well as the controlling agencies and supported organization. If a law enforcement officer is onboard, his or her agency should be contacted to verify if the officer has been in recent contact. Position reporting requirements for operations should be included in the unit SOP and include—

- Elements of risk and threat considerations.
- Maximum time allowed between position reports based on risks and threats.

2-118. If contact cannot be established with an overdue aircraft, the officer in charge (OIC)/operations section of the S&S unit should be contacted and a unit pre-accident plan initiated. The S&S BN SO, in accordance with Army regulation (AR) 385-95, is responsible for ensuring procedures are incorporated into the unit pre-accident plan for military and civil support operations performed by S&S units. The pre-accident plan should include—

- List of emergency contact phone numbers in the sequence to be contacted.
- Modifiable communications contact section for deployments.

Locally Produced Flight-Following Logs

2-119. Operation's flight-following logs are well suited for tracking aircraft during support of law enforcement, disaster support, or search and rescue (SAR) mission profiles. See FM 3-04.300 for information on flight-following logs.

TEMPORARY FLIGHT RESTRICTIONS

2-120. S&S missions involve flight operations into and within temporary flight restriction (TFR) areas. S&S personnel often work directly with or for the emergency control authority agency requesting establishment of the TFR. If a TFR is not already established, the S&S commander may want to request one to ensure safe airspace for S&S operations. Title 14 Code of Federal Regulations (CFR) defines the detailed policies, procedures, and restrictions associated with a TFR. See the Aeronautical Information Manual (AIM) for a summary of these requirements.

2-121. S&S BN aviation operation personnel, to include company aviators, must be familiar with TFR requirements and procedures when supporting missions such as natural disaster relief or HS/HD. Aviators should expect to see a varying degree of TFR structures based on the airspace plan for the operation. Typical of TFR structures is to break the airspace into sectors and layers with operational times, as well as horizontal (geographic), vertical (altitude), and time (operating hours/days) boundaries. These procedures are used to manage high-density air traffic supporting relief or HS/HD missions. Additionally, the S-3, company flight operations personnel, and aviators must acquire, coordinate, and remain current with the

ACO for operating within the TFR. For detailed information on TFR regulatory requirements, see Title 14 CFR part 91.137.

AIR DEFENSE IDENTIFICATION ZONES

2-122. S&S BN units may conduct operations in support of HS/HD/CD/natural disaster/or antiterror operations that require operating within the U.S. air defense identification zone (ADIZ). Personnel must understand the requirements necessary for operating in and around the ADIZ to include—

- **Flight plan.** An instrument flight rules (IFR) or defense visual flight rule (DVFR) flight plan must be filed with an appropriate aeronautical facility for generally all operations entering an ADIZ and operations entering or exiting the U.S. and operating into, within, or across the contiguous U.S. ADIZ regardless of true airspeed. The flight plan must be filed before departure except for operations associated with the Alaskan ADIZ. In this case, the airport of departure has no facility for filing a flight plan, and it may be filed immediately after takeoff or when within range of the aeronautical facility.
- **Two-way radio.** For the majority of operations associated with an ADIZ, an operating two-way radio is required. For exceptions, see Title 14 CFR section 99.1.
- **Transponder requirements.** Unless otherwise authorized by ATC, each aircraft conducting operations into, within, or across the contiguous U.S. ADIZ must be equipped with an operable radar beacon transponder having altitude reporting capability (mode C). The transponder must be turned on and set to reply on the appropriate code or as assigned by ATC.
- **Position reporting.** Adhere to the following requirements:
  - **For IFR flights**, the pilot will use normal IFR position reporting.
  - **For DVFR flights**, the estimated time of ADIZ penetration must be filed with the aeronautical facility at least 15 minutes prior to penetration except for flight in the Alaskan ADIZ (in which case report prior to penetration).
  - **For inbound aircraft of foreign registry**, the pilot must report to the aeronautical facility at least 1 hour prior to ADIZ penetration.
- **Aircraft position tolerances.** These include—
  - **Over land**, the tolerance is within plus or minus 5 minutes from the estimated time over a reporting or penetration point and within 10 nautical miles from the centerline of an intended track over an estimated reporting or penetration point.
  - **Over water**, the tolerance is plus or minus 5 minutes from the estimated time over a reporting or penetration point and within 20 nautical miles from the centerline of the intended track over an estimated reporting or penetration point (to include the Aleutian Islands).

Land-Based Air Defense Identification Zones

2-123. Land-based ADIZs are activated and deactivated over U.S. metropolitan areas as needed, with dimensions, activation dates, and other relevant information disseminated via NOTAM. Pilots operating within a land-based ADIZ must report landing or leaving the land-based ADIZ or if flying too low for radar coverage.

WARNING

Pilots unable to comply with all requirements of a land-based ADIZ or those entering without authorization risk interception by military fighter aircraft.

SECTION VI – COMMAND AND CONTROL EQUIPMENT

COMMUNICATIONS

2-124. Battalion elements frequently operate over extended distances from their controlling headquarters. Communication systems should be redundant and capable of meeting internal and external requirements. Long-range communications can be augmented through signal support. The key is to establish these systems before they are needed.

2-125. Operations at extended distances beyond LOS may require additional assets such as cellular, high frequency (HF), tactical satellite (TACSAT), or RETRANS to maintain communications. UH-72A airborne C2 aircraft should have secure voice radio communications equipment and SA equipment for all battalion-level and long-range operations.

CIVIL AGENCY COMMUNICATIONS CONNECTIONS

Law Enforcement/Civil Compatible Multiband Radio

2-126. S&S BN units require an alternate means of communicating with law enforcement and civil authorities. A law enforcement/civil compatible multiband radio provides units with the functionality to effectively communicate with law enforcement and civil agencies. The multiband radio should have a frequency range of 29.7 to 960 megahertz amplitude modulation (AM)/FM. Various operating modes include—

- **Single channel operation.** Provides two-way communications.
- **Simulcast mode.** Transmits on multiple frequency bands at the same time.
- **Relay-simulcast mode.** Allows the airborne unit to function as a combined mobile relay station/simulcast unit, best described as a party-line.
- **Body-wire relay mode.** Allows the airborne unit to receive (monitor) a low-band FM transmitter while still having two-way communications on another frequency band.
- **Repeater mode.** Allows the airborne unit to retransmit a received signal on two selected systems of the same band.
- **Duplex mode.** Allows the airborne unit to transmit and receive simultaneously on a preset channel (like a telephone).
- **Phone patch.** Allows the airborne unit to utilize the civilian telephone system. This requires ground based receivers located within a specified range.

Communicating with Civil Agencies

2-127. Effective communication with civil agencies is critical to S&S BN mission success. Civil-military band radio systems can provide communication in the nonsecure mode (in the clear). With the latest technology systems, these systems are able to provide matching digital encryption (secure mode) and trunking capability with some agencies.

Impedance Matching Panel

2-128. If a unit does not have the capability to communicate with civil agencies, they must use an impedance matching panel. The impedance matching panel permits S&S BN units to communicate with civil agencies when time may not be available (emergency rapid response operations, in support of law enforcement or HS/HD) to determine and program the required modulation, frequencies, tones, encryption-keys, and encoding mode (analog or digital) into their aircraft radios.

2-129. Experience has shown the use of a standardized portable-radio to aircraft interface (impedance matching panel) is the most efficient method enabling common capabilities between the S&S BN and supported agencies with noncompatible radios. The panel allows a representative of the civil agency to

simply plug a handheld portable radio into the aircraft intercom communication system (plug and play). This connection provides sufficient communications between the aircraft and supported agencies while incorporating the supported agencies modulation, frequencies, repeaters, tones, encryption, and encoding data.

Note. To conduct flights with an impedance matching panel and antenna, an airworthiness release (AWR) must be installed. The assembly consists of the panel, antenna, and connector (pigtail). The pigtail extends out of the panel and is used to interconnect a handheld radio into the aircraft internal communication system.

2-130. The S&S BN S-3 must coordinate with civil agencies to determine the number of portable radios requiring interconnection capability by their units. This coordination determines the amount and types of pigtails the unit is required to have on hand. The connectors are normally locally fabricated items.

RESPONSIBILITIES

2-131. All levels of command gain and maintain communications with necessary headquarters and personnel. Communications methods and procedures, to include those for restoring communications, should be established in unit SOPs and practiced during battle drills and flight operations. Traditional communications responsibilities are—

- **Higher to lower.** The higher unit establishes and maintains communications with a lower unit. An attached unit of any size is considered lower to the command to which it is attached.
- **Supporting to supported.** A supporting unit establishes and maintains communications with the supported unit.
- **Reinforcing to reinforced.** A reinforcing unit establishes and maintains communications with the reinforced unit.
- **Passage of lines.** During passage of lines (forward, rearward or lateral), the passing unit establishes initial contact with the stationary unit. However, the primary flow of information must be from the unit in contact.
- **Lateral communications.** Establishing communications between adjacent units may be fixed by the next higher commander, order, or SOP. If responsibility is not fixed, the unit commander on the left establishes communications with the unit on the right.
- **Rear to front communications.** A unit positioned behind another unit establishes communications with the forward unit.

Regardless of establishment responsibility, all units must take prompt action to restore lost communications.

DISRUPTION

2-132. Communications, particularly electromagnetic, are subject to disruption in even the best conditions. Disruption may result from unintentional friendly interference, intentional threat action, equipment failure, atmospheric conditions, electromagnetic pulse (EMP), or terrain interference. To compensate for intermittent communications, the commander should—

- Provide for redundancy in means of communication.
- Ensure subordinates understand the commander's intent so they know what to do during communications interruptions.
- Avoid overloading communications systems.
- Ensure personnel follow signal security and COMSEC practices.

OPERATIONS SECURITY

2-133. OPSEC includes measures taken to deny threat information about friendly forces and operations. OPSEC consists of physical, information, and signal security; deception; and counter surveillance. Since these categories are interrelated, the commander normally chooses to employ multiple techniques to counter a threat. Commanders analyze hostile intelligence efforts and vulnerabilities, and execute OPSEC countermeasures and survey their effectiveness. Commanders can then better counter specific hostile intelligence efforts.

BATTALION COMMUNICATION NETS

Internal Radio Nets

2-134. The battalion establishes internal radio nets to organize and control information passed via each net. They include—

- **Command net.** A frequency modulated secure command net, controlled by the S-3, used for battalion C2. As a rule, only commanders, XOs, or S-3s communicate on the net. The command net is used by commanders for sending and receiving critical information current operations.
- **Operations and intelligence net.** The S-2 controls the O&I net. Routine operations and INTREPs are sent using this net; it functions as a surveillance net when required. O&I is not normally monitored by the brigade or subordinate commanders; it is used for details and discussion leading to analysis that are relayed to the appropriate commander. The unit XO, operating in the TAC CP, ensures analysis is done and relayed in a timely manner by appropriate means. When used, the main CP monitors the O&I net allowing anticipation of critical support requirements and problems.
- **Administrative and logistics net.** This net is controlled by the S-1 and S-4 and used for A&L traffic. The A&L net, like the O&I net, is not normally monitored by the battalion or subordinate commanders.

2-135. The battalion commander communicates with his or her company commanders on the battalion command net. This net is FM secure. Very high frequency (VHF) and ultrahigh frequency (UHF) secure radios may be used as backups for the FM-secure radio. The TAC CP may use the FM-secure radio to communicate with the battalion trains and FARP elements through the battalion A&L net. Battalion elements may also communicate with the FARP on the command net; at a minimum, FARPs should monitor the command net. If the A&L net is not active, the O&I network is an alternative to communicate A&L requirements. Table 2-6 illustrates typical battalion internal radio nets.

Table 2-6. Battalion internal radio networks

Network	*Battalion*						*Company*
Station	*CMD FM*	*CMD HF (AM)*	*O&I FM*	*A&L FM*	*AVN UHF*	*FS FM*	*UHF/VHF*
Command Group	X	X	A	A		X	
TAC CP	N		X			X	
Battalion Detachments	X	X		X	X		
Company CPs	X	X	X	O/A		O/A	
Platoons							A
1SG				X			A
FARP	X			X			
N –Network control station X – Enter network A – Enter network as required O – Monitor			AVN – aviation CMD – command FS – fire support				

External Radio Nets

2-136. The battalion TAC CP is responsible for maintaining communications with higher, adjacent, and subordinate units. When deployed, the battalion TAC CP may communicate directly with these units. If the situation or terrain prohibits direct contact by the TAC CP, the main CP may act as a communications relay. When airborne, the battalion commander may communicate directly with higher headquarters, adjacent units, and subordinate elements via FM-secure radio. The main CP and TAC CP, if deployed, operate the battalion command and O&I nets. These elements also maintain communication with higher headquarters on their command O&I and A&L nets.

2-137. Because of distance factors involved, HF radios or satellite communications (SATCOM) may be required to communicate and maintain contact with higher headquarters. Other external radio nets may be established through supporting elements such as the field artillery (FA) Tactical Fire Direction System, AC2, and forces participating in joint air attack team operations. Table 2-7 illustrates typical external radio networks for the battalion.

Table 2-7. Battalion external radio networks

Division Control						
Station/ Network	**DIV CMD FM**	**DIV REAR CMD FM**	**DIV CMD AM**	**DIV O&I FM**	**DIV Area Common User**	**DIV AC2 FM**
Command Group*	X	X[1]		X	X[3]	
TAC CP*	X[2]	X[2]	X	X[2]	X[3]	X[3]
Brigade Control						
Station/ Network	**BDE CMD**	**BDE O&I FM**	**BDE A/L FM**	**DIV Area Common User**	**AVN BDE UHF**	
Command Group*	X	O/A	A	X	X	
TAC CP*	X[2]	X				
X – Enter network A – Enter network as required O – Monitor * – Enter AC2 network as required		1 – When performing rear area operations 2 – When deployed; otherwise, main CP 3 – Always active		DIV – division BDE – brigade		

COMMAND AND CONTROL SYSTEMS

2-138. The C2 system is defined as the facilities, equipment, communications, procedures, and personnel essential to a commander for planning, directing, and controlling operations of assigned forces.

ARMY BATTLE COMMAND SYSTEM

2-139. ABCS provides unit commanders with the electronic architecture to build SA. Signal planning increases the commander's options by providing the requisite signal support systems for varying operational tempos (OPTEMPO). These systems pass critical information at decisive times; thus, they leverage and exploit tactical success and make future operations easier. FM 3-04.111 provides additional information on ABCS. The three levels of ABCS are—

- Global command and control system-Army.
- ATCCS.
- FBCB2.

ARMY AIR-GROUND SYSTEM

2-140. Joint forces, ground and air, must be able to operate aerial vehicles (AVs) and weapons systems within airspace with maximum freedom consistent with priorities, degree of operationally acceptable risk, and the joint force commander's intent. The AC2 system is the airspace management component of the Army air-ground system (AAGS). It outlines the Army's integration of airspace usage and C2 within the

framework of the theater air-ground system. These systems, in whole or in part, are placed in each echelon from maneuver battalion to numbered Army. FM 3-52 and FM 3-04.111 provide more information.

SECTION VII – BRIEFINGS, REHEARSALS, ASSESSMENT

BRIEFINGS

OPERATION ORDER BRIEF

2-141. The OPORD briefing provides information, specific instructions, and a thorough overview of the mission. The briefing is organized to follow the written order's format and is presented by a single briefing officer, who may be the commander, assistant, staff officer, or special representative depending on the mission nature or headquarters level (FM 5-0).

MISSION BRIEF

2-142. In an operational situation or when the mission is of a critical nature, individuals or smaller units may need more specific data, which may be provided by a mission briefing. The mission briefing reinforces orders, provides more detailed requirements and instructions for each individual, and explains the significance of each individual role.

AIR MISSION BRIEF

2-143. The air mission brief (AMB) is a focused adjunct to the OPORD where the commander approves the plan. The term AMB is used to mean both the written product and briefing itself. The AMB should not be a working meeting; an OPORD should have already been published. The AMB is essentially a backbrief to the commander. All units involved in the operation should attend and receive a copy of the order.

2-144. The AMB focuses on concepts, sequence of events, and reasons the staff developed the sequence for the mission. The slightest change in route selection, LZs/pickup zones (PZs), or other elements of the mission can significantly affect other aspects of the plan.

2-145. Changes to the mission after the AMB must be approved by the commander. It is difficult to resynchronize the different combat systems in the time remaining between the AMB and mission execution. Unit personnel attending should bring—

- An air mission checklist.
- Maps.
- An execution matrix.
- An ANCD for receiving frequency set changes/updates.
- An AMPS DTC for receiving changes/updates to routes.

2-146. Briefing products produced may include—

- Mission.
- Friendly graphics.
- AC2 procedures.
- A communication card (frequencies/call-signs).
- An execution matrix.
- Routes (AMPS cartridge).
- An ANCD frequency set load.
- A risk assessment/mission brief/mission schedule.

TEAM BRIEF

2-147. Team briefings can occur at different levels. The team can be briefed by the battalion or company for specific missions or missions in larger operations (teams being briefed by battalion for missions supporting battalion PR or QRF operations). Information and products reviewed during the brief include—

- PPC.
- Actions on contact.
- Contingency planning.
- Scheme of maneuver.
- Battle handover (BHO) procedures.
- Weather, NOTAMs, and hazards briefs.
- Flight plan/mission brief/risk assessment.
- IIMC recovery plan.
- Threat risk assessment.

CREW MISSION BRIEF

2-148. The PC briefs the mission and flight requirements demanding effective communication and proper sequencing and timing of actions according to a unit-approved crew mission briefing checklist. The appropriate aircraft type aircrew training manual (ATM) contains an example of a detailed crew mission briefing checklist and instructions for completing this task. Unit SOPs address crew briefing checklists. Brief update and changes to include—

- Execution matrix.
- Routes (AMPS cartridge).
- Route cards.
- Communication card.
- PPC.
- Weather, NOTAMs, and hazards briefs.
- Flight plan/mission brief/risk assessment.
- IIMC recovery plan.
- Threat risk assessment.

MILITARY SUPPORT TO CIVIL AUTHORITIES BRIEF

2-149. When the S&S BN is to perform military support to civil authorities (MSCA) operations, it is recommended the S&S BN commander or his or her representative conduct an information briefing to the EOC they are supporting or the TF commander they are assigned. This briefing includes considerations for employment in accordance with National Guard regulation (NGR) 500-1. Emphasis is placed on S&S BN capabilities and ROE/RUF.

2-150. When conducting MSCA missions, it is important to note that state laws and established policies on the RUF/standing rules for the use of force can vary state to state. The S&S BN commander must be aware of the policies for the assigned AO and detail them in the briefing.

ANNUAL COUNTERDRUG BRIEFING

2-151. In addition to initial and AT in CD-support program doctrine, Soldiers and Airmen in support of law enforcement agencies (LEAs) are given additional briefings when the nature of operations indicates reinforcement is advisable. Special briefings on RUF (as outlined in FM 3-19.15, chapter 7), force protection, security, chain of custody, and/or other basic program provisions (as outlined in NGR 500-1) may be advisable when contact with suspects seems probable. It may also be prudent to review these topics if the unit will conduct multijurisdictional operations or operations involving motor convoys, new terrain,

or civilians, or perform air operations with new personnel. Counterdrug coordinators (CDCs) and supervisors determine which briefings are appropriate.

REHEARSALS

2-152. Once commanders are satisfied and personnel understand the concept of operation, they must rehearse the plan. The rehearsal is not the brief to commanders; the purpose is to validate synchronization of subordinate units' tasks to execute the commander's intent. A rehearsal is essential for success in operations. FM 6-0 contains a discussion of rehearsal types, techniques, responsibilities, and conduct.

2-153. Rehearsal types include—

- Confirmation brief.
- Backbrief.
- Combined arms rehearsal.
- Support rehearsal.
- Battle drill or SOP rehearsal.

2-154. Techniques include—

- Full dress rehearsal.
- Reduced force rehearsal.
- Terrain model rehearsal.
- Sketch map rehearsal.
- Network rehearsal.
- Map rehearsal.

2-155. Although a full dress rehearsal is preferred, a terrain model rehearsal is most common. The terrain model must represent the unit’s area of influence and be large enough for participants to easily traverse. An effective rehearsal is dependent on an accurate terrain model, complete with key terrain features, obstacles, and unit positions (friendly and threat) correctly portrayed. Additionally, an effective technique for utilizing terrain models is to increase the scale of the objective area for better visualization by rehearsal participants. A standardized terrain model kit is an effective tool to reduce setup time.

2-156. Rehearsals are accomplished at all levels. They may be conducted separately at each echelon, in one large rehearsal, or using a combination of the two. Rehearsals are as detailed as time and resources permit. They may be a series of full-up, live-fire rehearsals or as simple as a quick review on the map. All rehearsals must include reviewing or conducting the following:

- Actions on the objective.
- Maneuver and movement.
- Critical event rehearsals (such as FARP and egress).
- Contact drills en route.
- Contingencies.

SEQUENCE AND ATTENDANCE

2-157. Rehearsals follow a script and proceed in action, reaction, and counteraction sequence. Script elements include—

- Agenda.
- Attendee response sequence to actions.
- Unit actions response checklist (standardized format).
- Sequence of events.

2-158. Rehearsals ensure adequate attention is given to critical aspects of the mission. Rehearsals include a representation of threat and cover—

- Actions at the objective.
- Threat positions and disposition.
- Friendly scheme of maneuver/ground tactical plan.
- Actions on contact.
- Occupation of reconnaissance or security positions, holding areas (HAs), and landing plans.
- Flight plans including primary/alternate routes, ingress/egress procedures at the objective, maneuver formations, flight techniques, and altitudes.
- Actions in the AA (communication checks, line up for takeoff, takeoff, landing on return).
- FARP information.
- CASEVAC procedures.
- IIMC procedures.
- In stride/immediate downed aircrew recovery procedures.
- Contingency plan TTP (such as change of mission and aircraft equipment malfunction).

All critical members of elements attend the rehearsal. Critical members are those with key parts in the operation and whose failure to accomplish a task could cause mission failure. This includes civilian agency representative when applicable.

QUESTION RESOLUTION

2-159. The battalion commander and staff may conduct or observe the rehearsal. Detailed questions ensure units thoroughly understand the mission and provide the battalion with verification it has accomplished its planning. Examples of critical questions to be answered during the rehearsal include—

- What are contingencies at the objective for various threat actions?
- Who provides rear or flank security?
- Who collects and sends spot reports, whom do they call, and on which net?
- Where do crews get the time sequencing for Have Quick (unless automatic)?
- Who initiates communications checks?
- Who coordinates with the ground force commander?
- Who confirms call signs, nets, and authenticators?
- What radio calls (digital and voice) are required during the conduct of the operation?
- What are the success criteria; how do we know if they have been met?
- What are the mission criteria; who selects the criteria?
- What are the divert criteria; who makes that decision?
- What are the mission abort criteria?
- What are the in-stride downed aircrew procedures?
- What are the CASEVAC procedures?
- What are the ROE?
- What are the ASE requirements and settings?
- What are the critical times (PP, time on target, RP)?
- Who makes battle damage assessment (BDA) reports, to whom, and when?
- What is the bump and spare aircraft plan?
- Where are the FARPs, and what are the procedures?

CONFLICT RESOLUTION

2-160. Conflicts may arise during a rehearsal. The commander must ensure conflicts are resolved, and the rehearsal does not become a war game. Wargaming should have been accomplished during the planning

process. The rehearsal ensures all members of the unit understand their roles and how they contribute to success. It is not the time to develop a new plan but, if required, refinements may be made.

ADDITIONAL REHEARSALS

2-161. The communications exercise (COMMEX) mirrors mission signal requirements. The COMMEX ensures assignment of nets, equipment capabilities, range, RETRANS, and COMSEC requirements. All mission elements participate in the COMMEX. A common communications card is highly recommended and provides a quick reference guide to frequencies and call signs.

2-162. Company rehearsals are required to cover key company events not portrayed at the battalion rehearsal, such as formation, bump plan, departure sequence, radio calls, and actions on the objective. Attendees include all aircrews and key leaders.

COMPLETION

2-163. At the end of any rehearsal the commander must receive correct responses from every member present concerning mission/actions at the objective, commander's intent, and timetable for mission execution. Following rehearsal and prior to executing the mission, commanders conduct PCIs ensuring PCCs on aircraft and mission equipment are complete.

Precombat Checks

2-164. Aircrews and vehicle operators conduct PCC that include—

- Posting graphics on maps.
- Completing aircraft performance planning.
- Preflight/before operations preventive maintenance checks and services (PMCS).
- Ensuring proper configuration of vehicles and aircraft.
- Ensuring DTC upload.
- Ensuring IFF is loaded.
- Ensuring COMSEC is loaded.
- Verifying communications checks.

END OF MISSION DEBRIEFING AND AFTER-ACTION REVIEW

DEBRIEFS

Mission Debrief

2-165. Units conduct mission debriefs as soon as practical on mission completion with all mission personnel attending. Mission debriefs cover mission planning, preparation, and execution phases with a focus on how to improve the operation.

Battalion Intelligence Officer

2-166. The frontline Soldier is a valuable intelligence source—fighting for and confirming intelligence. Their sighting and reporting of activity (or lack thereof) may make the difference between victory and defeat. The S-2 debrief is an essential part of gathering information. Crews provide the S-2 with all sketches, checklists, and video imagery collected during the mission.

Company

2-167. Commanders ensure unit personnel conduct mission debriefs as soon as practical on mission completion with all mission personnel attending. Additionally, the commander ensures higher headquarters S-2/S-3 receives debrief information and is afforded the opportunity to debrief the crew if warranted.

Team

2-168. Platoons and sections operating independently from company headquarters (in support of a BCT for example) conduct the same debriefs and are responsible for submitting information to the S-2/S-3 and platoon's/section's respective commander.

Crew

2-169. Commanders must emphasize the critical importance of crew debriefs and crew coordination, not only during flight mission execution but in the crew internal debrief. Unit SPs/IPs must ensure crews are trained and execute crew coordination before, during, and after flight.

2-170. The crew debrief provides information that assists the crew in enhancing mission execution, safer operations, and error reduction. The commander should institute and promote the posting of crew coordination lessons learned to a forum (an example is posting key points in the company CP). The forum allows other crews to learn through an aircrew's experience as not all problems are associated only with the aircraft and crews. This event becomes a mission enhancer for future flight operations.

2-171. Many errors occur in the interaction between aircraft crews and supported ground units. Aviation units habitually work with the same ground units. The sharing of learned errors from past experience to all flight crews allows these crews to be aware and prepared and adjust risk as necessary based on crew feedback. This same learned information is also forwarded to the ground unit commander.

AFTER-ACTION REVIEW

2-172. An after action review (AAR) is a structured review process of an event, focused on performance standards, enabling Soldiers to discover for themselves what happened, why it happened, and how to sustain strengths and improve on weaknesses. It is a tool that leaders and units can use to obtain maximum benefit from every mission or task. The AAR consists of the following parts:

- Review what was supposed to happen (training plan).
- Establish what happened.
- Determine what was right or wrong with what happened.
- Determine how the task should be done differently next time.

2-173. Unit AARs focus on individual and collective task performance by identifying shortcomings and the training required to correct any deficiencies. Leader AARs focus on tactical judgment and contribute to learning by providing opportunities for leader development. AARs with trainers, evaluators, observer controllers (OCs), and opposing forces (OPFORs) provide additional opportunities for leader development (FM 7-1).

Reports to Higher

2-174. All AARs are forwarded to the next higher headquarters S-3. Commanders emphasize key critical elements within the AAR.

Application to Future Missions Training

2-175. Each AAR has a direct impact on the next mission or training event. Commanders review and annotate recommendations from AARs. The commander can then implement the recommendations necessary to enhance mission execution and safety. The commander ensures all leaders (officers and NCOs) review the AAR along with his or her noted comments. These can include improvements to the SOP, TTP, and battle drills and, at a minimum, include mission critical elements. This allows officers and NCOs to learn from the AAR and understand the commander's guidance on recommendations.

2-176. Following the reviews and commander's guidance, recommendations are highlighted in planning the next mission or training event. Following the mission or training, a debriefing covers the results of the implemented recommendation. The commander reviews the outcome and determines if he or she wants to continue as recommended or modify the recommendation for a better outcome.

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Chapter 3

Employment

This chapter details S&S BN employment to support the DOD, DHS, NGB, and individual states. Mission execution orders for units supporting national disasters will be directed from these agencies through the appropriate chain of command to the respective battalion/company/detachment.

SECTION I – OVERVIEW

3-1. S&S BNs provide national and state agencies with aviation assets in support HS/HD and as directed by DOD. S&S BNs additionally assist local, state, and federal law enforcement agencies in CD operations.

Note. Support of CD operations will only be conducted with qualified personnel performing duty in the proper status.

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3-2. S&S BNs are widely dispersed and can provide aerial C2 and light utility air movement support to the civil support team (CST) mission. When employed CONUS, S&S BN elements must be readily available commensurate with the nature of the mission. To meet this requirement, units develop a comprehensive plan for administrative actions, logistic considerations, maintenance requirements, and movement. Plans must include possible contingency mission scenarios for each battalion mission set.

MISSION SETS

3-3. The primary missions of the S&S BN are to conduct air movement, provide aerial C2, and provide reconnaissance support to designated military or civilian authorities.

3-4. The S&S BN has the capability to perform mission sets based on the battalion requirement to fulfill an active duty role as well as a state/national support role. The S&S BN will conduct other operations as directed by Title 10 or Title 32 command authority.

3-5. S&S BN missions can be conducted in support of either military actions or domestic operations within or outside the CONUS. S&S BN missions include—

- Reconnaissance.
- Security.
- Air movement.
- C2 support.
- Casualty evacuation (CASEVAC)

INSIDE THE CONTINENTAL UNITED STATES

Intrastate Missions

3-6. States conducting operational CD and security missions within their state borders will, to the extent required by and in accordance with the laws of the involved agencies, establish written memorandum of understandings/memorandum of agreements (MOUs/MOAs) between the involved and supported agencies.

3-7. Intrastate mission sets for S&S BN units include—

- **Support of law enforcement agency (LEA) domestic CD eradication operations.** This includes, but is not limited to, aerial support, logistic support, communications support, intelligence, planning support, operational staff coordination, medical support, physical security, ground transportation, eradication and destruction of contraband, and spraying of herbicides, in accordance with Environmental Protection Agency (EPA) regulations and state laws.
- **Support of natural disasters.** This includes providing airmobile operations in support of LEAs, state emergency management agencies, and civil authorities.
- **Security missions in support of state directives.**

Interstate Missions

3-8. States conducting operational CD missions outside their borders will, to the extent required by and in accordance with the laws of the involved states, establish written MOUs/MOAs between the involved states. At a minimum, TAG, through the CDCs, will coordinate notice of the intent to conduct interstate operations prior to commencing such operations.

3-9. Interstate mission sets for S&S BN units include—

- **Support of LEA domestic CD eradication operations.** This includes, but is not limited to, aerial support, logistic support, communications support, intelligence, planning support, operational staff coordination, medical support, physical security, ground transportation, eradication and destruction of contraband, and spraying of herbicides in accordance with EPA regulations and state laws.
- **Support of natural disasters.** This includes providing airmobile operations in support of LEAs, state emergency management agencies, and civil authorities. This is accomplished between states through the EMAC; however, it is generally for the use of NG personnel in SAD status not a Title 32 status. States may develop state to state compacts to facilitate employments between states for response outside of EMAC agreements.
- **Security missions in support of EMAC or national directives.**

OUTSIDE THE CONTINENTAL UNITED STATES

3-10. S&S BN units support operational deployments OCONUS in permissive environments as directed by DOD.

RULES OF ENGAGEMENT

3-11. ROE are designed to control application of force and are prepared and issued by higher headquarters. Commanders must clearly understand ROE and ensure all unit Soldiers recognize them. ROE situations should be rehearsed in detail before deploying or executing a mission. Personnel should never incur a situation in which they are unsure whether force should be used and what types of force, to include deadly force, are warranted.

RULES OF INTERACTION

3-12. All personnel must be thoroughly familiar with the higher headquarters rules of interaction (ROI) limitations. These rules must be carefully considered, particularly when regarding civilian effects, the legal status of isolated persons, and restrictions on fires and types of weapons. ROI should be briefed to unit members and rehearsed with realistic scenarios on a regular basis to ensure understanding and disseminate changes.

3-13. ROI embody the human dimension of stability and civil support operations. They lay the foundation for successful relationships with the many factions and individuals that play critical operational roles. ROI encompass an array of interpersonal communication skills, such as persuasion and negotiation.

3-14. ROI are essential tools individual Soldiers need when dealing with nontraditional threats prevalent in stability and civil support operations. Some areas of concern include political friction, unfamiliar cultures, and conflicting ideologies. In turn, ROI enhance Soldier survivability in such situations. ROI, when applied with good interpersonal communication skills, improve the ability of military personnel to accomplish the mission while reducing possible hostile confrontations. ROI are based on applicable ROE for a particular operation; they must be tailored to the specific region, culture, and/or population affected by the operation.

COMMON TERMS

3-15. Common terms are defined in table 3-1.

Table 3-1. Common terms

JFHQ – Joint Force Headquarters
The direct liaison at state level with the NGB joint operations center (JOC) for mission requests. Requests may be for response, stand-by, or assist missions.
TAG – State The Adjutant General
ARNG or Air National Guard (ANG) officer responsible for management of the NG of a state, territory, or Puerto Rico. The District of Columbia (DC) has a commanding general and performs most functions of a TAG.
SAAO – State Army Aviation Officer
ARNG officer responsible for aviation operations within the state or when state forces are deployed under Title 32 operations. A coordinating relationship between the CDC and SAAO will exist with a MOU outlining duties and responsibilities of both parties.
DOMS – Director of Military Support
Facilitates issue resolution at the state level. Manages expenditures for MSCA from the defense emergency response fund, directs and coordinates generic- and incident-specific plan development for MSCA through DOD planning agents, and procures resources for JFHQ planning and response tasks.
CDC – Counterdrug Coordinator
Responsible for all management control aspects of the Counterdrug Support Program within his or her state. Ensures programs and functions are conducted effectively and efficiently to include ongoing operational employment of state FTNG CD assets used in support of approved missions.
CST – Civil Support Teams
WMD CSTs are NG units providing a specialized capability to respond to a CBRN incident primarily in a Title 32 operational status within the U.S. and its territories, as established by USC Title 10 Section 12310.
LEA – Law Enforcement Agency
An organization, coordinating council, or TF comprised of several law enforcement agents, empowered by federal, state, or local law to investigate, enforce, or prosecute criminal laws regarding

Table 3-1. Common terms

illegal drugs and controlled substances.
MACA – Military Assistance to Civil Authorities
The broad mission of civil support consisting of the three mission subsets of MSCA, military support to civilian law enforcement agencies (MSCLEA), and military assistance for civil disturbances (MACDIS).
MSCA – Military Support to Civil Authorities
DOD activities and measures to assist and support any civil government agency in planning, preparing for, or responding to the consequences of civil emergencies or attacks, including national security emergencies. MSCA is governed by DODD 3025.1.
MSCLEA – Military Support to Civilian Law Enforcement Agencies
DOD activities and measures to assist federal, state and local LEAs in CD, counterterrorism, and other law enforcement operations such as security for special events to include designated national special security events. MSCLEA is not governed by any one DODD.
MACDIS – Military Assistance for Civil Disturbances
DOD activities and measures to assist federal, state, and local government and LEAs in the U.S., its territories, and possessions to prepare for or respond to civil disturbances, including response to terrorist incidents. MACDIS is governed by DODD 3025.12.

MILITARY SUPPORT TO CIVIL AUTHORITIES

3-16. MSCA includes but is not limited to support similar to that described for immediate response (see special segment below) in either civil emergencies or attacks, during any period of peace, war, or transition to war. It includes response to civil defense agencies but not military assistance for civil law enforcement operations.

3-17. MSCA generally falls under each state's disaster relief tasks. The S&S BN, company, or detachment would take direction from the incident commander in accordance with each state's ERP. Generally, the request for military support would come through the state's emergency operations manager (EOM)/emergency operations support team/EOC.

Immediate Response

Imminently serious conditions resulting from any civil emergency or attack may require immediate action to save lives, prevent human suffering, or mitigate great property damage. When such conditions exist and time does not permit prior approval, local commanders are authorized to take necessary action to respond to requests of civil authorities. All such necessary action is considered immediate response and may include—

- Rescue, evacuation, and EMT of casualties, maintenance or restoration of emergency medical capabilities, and safeguarding the public health.
- Emergency restoration of essential public services (including firefighting, water, communications, transportation, power, and fuel).
- Emergency clearance of debris, rubble, and explosive ordnance from public facilities and other areas to permit rescue or movement of people and restoration of essential services.
- Recovery, identification, registration, and disposal of the dead.
- Monitoring and decontaminating radiological, chemical, and biological effects; controlling contaminated areas; and reporting through national warning and hazard control systems.
- Roadway movement control and planning.
- Safeguarding, collecting, and distributing food, essential supplies, and materiel on the basis of critical priorities.
- Damage assessment.
- Interim emergency communications.
- Facilitating the reestablishment of civil government functions.

For more information on immediate response, refer to DODD 3025.1.

INCIDENT COMMAND SYSTEM

3-18. The incident command system (ICS) is a management system used in the U.S., Canada, and other countries to organize emergency response by offering a scalable response to incidents of any magnitude. Incident management teams (IMTs), combined with crews of multiagency staff, use the concepts outlined in the ICS to react to an emergency situation.

3-19. As part of the Federal Emergency Management Agency's (FEMA) National Response Plan, the system was expanded and has become the National Incident Management System (NIMS). The system is designed to grow and shrink with the incident, permitting more resources to be smoothly added into the system when required, and the release of resources when no longer necessary.

National Incident Management System

3-20. The NIMS is a comprehensive, national and state approach to incident management that is applicable at all jurisdictional levels and across functional disciplines. The intent of NIMS is to—

- Be applicable across a full spectrum of potential incidents and hazard scenarios, regardless of size and complexity.
- Improve coordination and cooperation between public and private entities in a variety of domestic incident management activities.

Emergency Management Assistance Compact

3-21. EMAC provides for mutual assistance between states in managing any emergency or disaster declared by the governor of the affected state(s), whether arising from natural or manmade disasters, technological hazard, civil emergency aspects of resources shortages, community disorders, insurgency, or enemy attack.

3-22. This compact also provides for mutual cooperation in emergency-related exercises, testing, or other training activities using equipment and personnel simulating performance of any aspect of the giving and receiving of aid by party states or subdivisions of party states during emergencies, such actions occurring outside actual declared emergency periods. Mutual assistance in this compact may include the use of the states' NG forces, either in accordance with the NG mutual assistance compact or by mutual agreement between states.

State Emergency Operating Plan

3-23. Each state's NG has developed an EOP or ERP that outlines the conduct of operations and employment of assets in support of domestic operations. This plan is developed and managed by the individual state J-3. S&S BNs must develop training plans and operational support procedures to meet mission tasks as outlined in their state's EOP/ERP.

State Joint Operations Center

3-24. The JOC is established in each state and operated continuously or activated during disaster/emergency operations. Normally, the JOC is comprised of selected personnel from the JFHQ in the affected state. The JOC reviews and approves mission requests from area EOCs and assigns the mission to the supporting unit.

Coordinating Lines of Authority

3-25. Coordinating lines of authority is based on the unique circumstances of each event. They will vary and are complex but flexible in their administration. Commanders and their staff must appreciate the unique challenges that occur with the implementation of lines of authority to effectively and efficiently accomplish their designated tasks. Units must be flexible in their dealings with supported agencies and anticipate changes in command relationships during different phases of the response.

Governor's State Plan

3-26. Each state will submit for review an annual Governor's State Plan to the NGB, ATTN: Counterdrug Office. The plan will be approved and signed by the governor and state's attorney general in accordance with 32 USC 112(c). The state plan must include a certification by the governor that activities carried out in conjunction with federal law enforcement agencies serve a state law enforcement purpose. The plan must also include a certification by the attorney general that the missions/activities in the plan are consistent with, and not prohibited by, state law. Certifications and approvals by the governor and attorney general (or equivalent) cannot be waived. Plans are prepared in accordance with instructions published by the Counterdrug Office. The CDC is responsible for the submission of the Governor's State Plan for CD support. The Governor's State Plan will not include plans for the ARNG Alcohol and Drug Abuse Prevention and Control Program (ADAPCP) or the ANG Drug Abuse Testing Program. The Governor's State Plan must also annotate the carriage of weapons in support of law enforcement agencies.

Memorandum of Understanding/Agreement

3-27. A MOU/MOA between the state and any supported LEA or community-based organizations (CBOs) is required for CD support for more than 30 consecutive days. The agreement must be approved and signed by both parties before support is provided. All MOUs/MOAs will be reviewed and documented by the J-3 with the LEAs/CBOs annually to ensure they meet support requirements. Agreements will address topics listed in NGR 500-2, as a minimum, and specify the responsibilities and obligations of both parties.

3-28. MOUs/MOAs address support in a general manner but must cover all areas of concern. If a more specific agreement is required, an OPLAN with a cover memorandum may augment the MOU/MOA.

HOST STATE/HOST NATION CONSIDERATIONS

3-29. S&S BNs can expect to work with states other than their own as well as U.S. government, host nation, and international agencies. These agencies may have different organizational structures than the U.S. military. The chain of command, support responsibility, reporting requirements, and authority to approve specific actions must be clearly briefed and understood by all parties before initiating the mission. Prior coordination and flexibility are keys to mission success. Units must maintain liaison with local police, ATS, and civil and local authorities.

UNIFIED/INCIDENT COMMAND AND MISSION HANDOVER

3-30. A mission handover is a coordinated operation between two units to transfer responsibility for mission support from one element to another. The mission handover maintains continuity of the combined arms fight and protects the combat potential of both forces. Ground handovers, such as aircraft passing back through friendly lines, are usually associated with a passage of lines.

3-31. Mission handover is a common S&S BN operation. It occurs between S&S BN company reconnaissance units during relief on station, and between reconnaissance units and ground units. Reconnaissance units can also assist in BHOs between ground units.

SECTION II – OPERATING ENVIRONMENTS

3-32. Because of the unique mission of S&S BN units, NG personnel will operate primarily in urban environments performing stability and civil support operations. Follows is a discussion of the challenges facing the S&S BN when conducting missions in support of natural disasters and emergencies in an urban environment.

URBAN ENVIRONMENT

PLANNING CONSIDERATIONS

3-33. Although S&S BNs are designed to operate in permissive environments, commanders must be aware of the harsh reality of possibly having to deploy to unstable and hostile theaters where the availability of antiaircraft weaponry is likely. As such, commanders must “plan for the worst”. In urban areas, fields of fire are restricted, landing areas are limited, and buildings provide cover for threat forces to engage helicopters with near impunity. The presence of noncombatants, protected structures, and important resources and facilities demands careful weapons and munitions selection to minimize collateral damage. The proximity of threat and friendly ground forces increases the risk of fratricide. Communications may be degraded by numerous structures. Thermal effects from paved surfaces and the channeling effects of buildings can cause wind conditions to vary significantly from point to point. Special, restrictive ROE should be expected. Maintaining standoff in these situations is essential to aviation survival.

3-34. Manmade structures and the density of noncombatants in urban terrain affect the tactical options available to commanders and aircrews. Whether engaged in major theater war; small scale contingencies; or security, stability, or civil support operations; there is an increasing likelihood that aviation units will conduct operations in urban terrain. This is partly due to growing populations but is also the result of a potential adversary's tendency to create a noncontiguous battlefield rather than attempt to face U.S. forces directly. S&S BN units should expect potential adversaries to use urban terrain for cover and concealment to reduce U.S. combat superiority. A noncontiguous battlefield also assists the enemy in taking advantage of weapons restrictions and the reduced options available to commanders under ROE, ROI, and the Law of War. ROE and ROI must be rehearsed, practiced, and reinforced continually throughout the operation. FM 3-06.1 and FM 3-04.111 contain additional information.

CIVIL CONSIDERATIONS

3-35. Operations in urban terrain nearly always affect noncombatants. Units should maintain liaison with local police, ATC, civil, and military authorities. Additional concerns are—

- **Care of civilians.** Civilians may be removed from the area or protected in their homes. In some cases, aviation forces may be required to arrange for supply, transportation, medical care, and other support.
- **Security.** The threat of espionage, sabotage, and terrorism must be carefully considered and guarded against.
- **Civilian interference with military operations.** The battalion must ensure civilians do not interfere with the execution of military operations. The battalion relies on MPs, staff judge advocate representatives, and human intelligence teams to liaison with local law enforcement officials and gain their aid in controlling displaced civilian flow while assisting in identification and interrogation of any suspicious displaced persons moving through the AO.

AIRCREW THREAT CONSIDERATIONS

3-36. Special threat considerations in urban operations include the following:

- Threat forces may infiltrate urban terrain and ambush helicopters from positions inside buildings; the presence of snipers increases the vulnerability to ambush.
- Every building and structure in an urban area is a potential threat position.
- Portable surface-to-air missile systems are difficult to detect in and among buildings.
- Difficulty in distinguishing combatants from noncombatants places participants under additional psychological stress.
- Defending forces normally have the advantage of familiarity with terrain.
- Aircraft are more vulnerable to low-tech weapons in urban combat.
- Because LZs may be scarce and therefore predictable, air assault/air movement operations in mass may be vulnerable to threat fires.
- Urban terrain provides excellent cover and concealment for a variety of weapon systems. Coupled with restrictions on airspace available for maneuver, these weapons become a more significant threat to aircraft than they normally are in open terrain. These weapons include—
  - **Antiarmor rockets.** Antiarmor rockets, such as the rocket-propelled grenade, are readily available, inexpensive, and standard equipment at the small unit level, even in irregular forces. They are unguided, have effective ranges of less than 500 meters, and are a threat to rotary-wing aircraft.
  - **Small arms and machine guns.** Small arms and machine guns can also become a more significant threat in an urban environment. These weapons can be placed on the upper floors of buildings so the threat can fire down on helicopters. They are small and light-weight and can easily be moved to unexpected positions (see ranges in table 3-2).

Table 3-2. Typical threat small arms and machine guns

Small arms	*Ranges up to*
5.56mm and 7.62 x 39mm rifles	500 m
7.62mm machine guns and sniper rifles of similar caliber	1,000 m
.50-caliber/12.7mm machine guns and sniper rifles	2,000 m
mm – millimeter; m - meter	

RECONNAISSANCE IN URBAN ENVIRONMENT

3-37. Varying terrain in urban environment poses several challenges for teams conducting reconnaissance missions. Small villages and named areas of interest can be located in flat areas or nested on a hill or on

both sides of a valley. These areas make a clear field of view (FOV) difficult and sometimes unavailable without having an aircraft fly up to or over the reconnaissance objective.

Mountainous Terrain

3-38. To gain valuable observation of the target area or to confirm or deny activity in the urban area, it may be necessary to utilize the following systems and techniques.

AMPS/Falcon View

3-39. S&S BN units should use AMPS in the planning process to verify LOS from a closer vantage point to the reconnaissance objective without compromising security of the reconnaissance team.

OverlappingFields of View

3-40. Another effective technique is to overlap FOVs of reconnaissance teams from different angles to the target. By choosing a series of OPs surrounding the objective area or target, the team can cover two of the cardinal directions while still providing security to other aircraft if needed. It may be necessary to place the lead aircraft at a vantage point higher than the target to see the topside, and the wing aircraft at the bottom to gain observation of the entire target.

ObstacleField of View

3-41. Conducting technical map reconnaissance, in conjunction with the AMPS LOS, is a proven method to gain observation. When gaining the best vantage point to the objective, personnel should take into account that vegetation and manmade structures may hinder LOS. At times, the best FOV is achieved by checking rise-over-run and keeping the team high enough to maintain observation. In other instances, it may be prudent to be deceptive and maintain a constant flight path past the objective area, with the attitude to the aircraft flying abeam the target, employing aircraft site systems. This technique works well in restrictive terrain locations, spurs, and valleys where the only observation may be directly over the target.

Constant Movement

3-42. Movement allows a team to gain SA of an entire reconnaissance area. A natural response is to look up to high ground when hearing an aircraft. Employing one aircraft on high ground draws the attention of villagers and provides a lower altitude aircraft the opportunity to move close to the objective without drawing attention to it. This permits the aircraft to be in position to provide support when required. In locations where OPs do not provide the best observation, fly-by reconnaissance is employed.

Flat Terrain

3-43. To gain observation of a target area in this type environment, it may be necessary to employ the techniques described in the following paragraphs.

Maintain Constant Orbit

3-44. Maintaining constant orbit around the objective provides the team 360-degree observation and affords LOS on different axes of view in and out of the reconnaissance area. Distance between lead and wing aircraft may vary depending on area size; however, as the lead aircraft turns to look down a road, alley, or contiguous area, the wing aircraft can support the FOV from the reverse side. It becomes critical to employ onboard systems that assist in augmenting visual cues the aircrew employs to acquire targets. This technique reduces dead space and the unobserved area the lead aircraft may not view after passing the location on the ground. The wing aircraft is responsible for following and supporting the lead by providing observation at a distance to the lead aircraft that will provide enough reaction time to influence the situation.

Alternate Right or Left Orbit

3-45. When standoff distance is greater than 1,500 meters, an orbit is conducted around the reconnaissance area. The copilot employs the onboard site system at a standoff distance to search the area in different FOVs, providing reconnaissance information on the objective area. When reconnaissance requires the team to move closer to gain a more detailed picture or support a ground element, the rotation changes around the target to a right orbit. This technique allows the pilot to observe targets at a closer range to employ suppressive fires quickly and guide ground elements on the target.

Higher Vantage Point and Slower Airspeed Observation

3-46. Recognizing obstacles of an urban flat area and the built-up features obstructing FOV, the team must adapt to the obstructions and gain observation by flying at a higher altitude and operating at slower airspeeds. By employing these two techniques, the team views the ground floor of buildings, roads, or open areas otherwise obstructed by some other natural or manmade obstacle. A small row of roadside trees or a two- or three-story building is an obstruction when attempting to gain observation on a location where activity may occur. By increasing the flight path above ground level (AGL), the reconnaissance team now has an advantage over unobserved locations. Increasing AGL observation coupled with reducing airspeed only increases the amount of time the team can maintain observation of a target.

EMPLOYMENT OF LASERS

3-47. A laser assists ground forces with target identification. When employing lasers, the aircrew must use positive verbiage to identify movement to the ground element. Even when a laser spot is seen on a target, all references need to be in cardinal directions for ease of guidance. When giving a clock direction (or a variant to a clock direction) for guiding ground forces, it is imperative to call all movements off the ground element and not aircraft attitude. This is especially important when calling directions in an urban environment and can be employed by calling a direction and a certain number of houses/buildings from the ground elements position to a target location. Some techniques used by reconnaissance teams in support of ground elements include the following air-to-ground and ground-to-ground laser.

Air-to-Ground Laser Use

3-48. The AIM-1 infrared (IR) marking system provides a direct beam onto a target when viewed under a night vision device (NVD). The AIM-1 laser may be utilized inside the cockpit for copilot/observer use as a marking tool. The copilot/observer has the AIM-1 on a lanyard connected to the ALSE vest. It is employed to identify a target during an air-to-ground "walk-on" of a target. The AIM-1 is also used to—

- Identify a target handover.
- Illuminate a location on the ground for relief on station.
- Mark a LZ/PZ for helicopters.
- Mark targets for ground forces.

3-49. Place the "hit spot" of the AIM-1 higher on a target (third story of a house, top of a building) to allow ground forces to view the target from ground level and maneuver into position on the identified reference point. When city lights are intense, the use of the AIM-1 laser is also better identified towards the top of a building when viewed from ground level. When employing the AIM-1 laser during "walk on" phase, move the beam in a zigzag or circular pattern for easier identification by the ground force. By moving the laser hit spot in front of ground elements as they continue to move, it provides a ground path from the unit to the target.

Ground-to-Ground Laser Use

3-50. Most ground units employ a PAC-4 laser marking system attached to their personal weapons or a commander's pointer. These lasers are the same style as the AIM-1 in that they are used to mark targets when using NVDs. The ground element can direct movement of suspected targets to aircrews supporting the ground plan for target location, identification, or acquisition.

STABILITY AND CIVIL SUPPORT

FUNDAMENTALS

3-51. The current terror threat and the impending danger of a natural disaster operate across an integrated, seamless global sphere. Many events trigger responses across multiple jurisdictions and different levels of government. The NG is exceptionally suited for its HS role. Its geographically dispersed forces with links to local communities and state and local governments allow for a rapid and integrated response. Because of its unique dual constitutional authority, the NG serves to bridge the "zone of ambiguity" across state and federal government boundaries. The NG is the only U.S. military force responding across both state and federal jurisdictions, leveraging SAD, FTNG duty (Title 32), and active duty (Title 10).

EMPLOYMENT

3-52. The majority of missions assigned to aviation companies during stability or civil support operations either conform to or build upon their standard reconnaissance, security, and air movement roles. Major differences in unit operations during stability or civil support operations occur in the C2 relationships between the aviation unit and its higher headquarters, and the greater requirement for restraint in potentially hostile situations.

Categories of Operations

3-53. During stability operations, the aviation company primarily performs its METL-related tasks and remains prepared for potential escalation to full armed conflict. During civil support operations, the company uses its systems capabilities to increase the effectiveness of the overall effort. Simultaneously, the aviation company must remain prepared for renewed hostilities or civil disorder. Many of these missions will be performed as an integrated piece of overall U.S. military capability—often with joint, interagency, and multinational forces and NGOs; therefore, leaders should familiarize themselves with joint operational procedures and terms.

Stability

3-54. Combatant commanders employ Army Forces in stability operations OCONUS and U.S. territories promoting and protecting U.S. national interests. Stability operations are designed to influence threat, and the political and information dimensions of the operational environment. These operations include developmental, cooperative activities during peacetime and coercive actions in response to crisis. Stability operations are normally conducted in noncontiguous AOs. Refer to FM 3-0 for additional information.

Civil Support

3-55. Civil support operations use Army Forces to assist civil authorities in preparation for or response to crises and relief of suffering (figure 3-1, page 3-12). Army Forces provide essential support, services, assets, or specialized resources to help civil authorities deal with situations beyond their capabilities. Civil support operations are conducted to meet the immediate needs of designated groups for a limited time, until civil authorities can do so without Army assistance. In extreme or exceptional cases, Army Forces may provide relief or assistance directly to those in need. More commonly, Army units assist civil authorities or NGOs in providing support. Civil support operations are usually noncontiguous. Refer to FM 3-0 for more information.



Figure 3-1. Civil support operations

PLANNING CONSIDERATIONS

3-56. The company commander faces challenges differing from those involved in conventional operations. Discussions of some of the planning factors commanders must consider are found in the following paragraphs.

Mission Analysis

3-57. Perhaps the greatest obstacle for the commander to overcome in stability or civil support operations is defining the unit mission. Mission analysis begins when the commander receives the OPLAN, OPORD, or FRAGO. The commander must pay particular attention to limitations imposed by ROE, ROI, and political considerations.

Command Relationships

3-58. It is critical that command relationships for stability or civil support operations be established early. Company elements may deploy or be employed for stability or civil support operations without its parent

headquarters. Companies or sections may work for another service or U.S. nonmilitary agency, such as the Drug Enforcement Administration (DEA) or Federal Bureau of Investigation. A clear understanding of the command, control, and support relationships reduces confusion and allows the unit to integrate early and with proper resource support requirements.

Advance Party Operations

3-59. Advance party personnel need a comprehensive overview of unit mission, capabilities, requirements, commander's intent, and CCIR before deploying. The advance party must coordinate with the gaining or outgoing command, higher headquarters, and local population. The commander must carefully select advance party personnel. For example, deploying to another country with an undeveloped logistics base may require the advance party be heavily logistics weighted and contain foreign language specialists, while other missions such as CD operations can be weighted with operational personnel. Regardless of commander choice, the advance party must receive guidance and focus prior to deployment and keep the commander informed concerning their actions and current situation.

Split-Based Operations

3-60. The aviation company, or some of its elements, will often deploy on stability or civil support operations into a theater having an immature logistics base. Split-based operations are logistics operations that may be conducted in-theater from the unit's home station. The commander who deploys on a split-based operation must consider the type of support required from home station. The commander must also pay special attention to communications between the theater of operations and home station, and to the means of transportation available providing a timely flow of logistics.

Force Protection

3-61. Force protection is essential throughout stability or civil support operations. Coordination for an external security force should be accomplished before deployment to the AO. A continually updated intelligence picture, coupled with aggressive local patrolling, is an essential element.

SPECIAL CONSIDERATIONS

Host Nation Considerations

3-62. Commanders may have to adapt to local procedures to accomplish the mission. Civil and military laws, airspace procedures, radio frequency usage, ground convoy clearances, flight restrictions, refueling procedures, product disposal procedures, local customs, and host nation contracting vary from country to country. The commander must consider these factors prior to executing stability operations. Serious complications can develop when host nation requirements are not met, with repercussions ranging from mission restrictions to mission failure.

State Considerations

3-63. During declared CONUS disasters or emergencies, the S&S BN/company/detachment may be called on to supplement efforts and resources of state and local governments. Such operations may include responding to natural or manmade disasters, controlling civil disturbances, conducting CD activities, combating terrorism, firefighting, or aiding law enforcement. The aviation company may be employed to augment C2 requirements, provide air movement, conduct SAR, or assess damage.

SECTION III – RECONNAISSANCE

FUNDAMENTALS

3-64. Reconnaissance is focused collection that provides information on threat, weather, terrain, and other information through visual observation, sensors, or other means of detection. Reconnaissance also provides the supported commander a means to formulate, confirm, or modify the unit COA before, during, and after missions.

3-65. S&S BN reconnaissance operations are performed similarly when operating in the military and/or civil role. Operating in the military role provides a unit with an operationally-configured aircraft, while performing in the civil role, terminology changes from threat to suspect, target to house or vehicle, and disaster site to area of concern. Under favorable conditions, aviation reconnaissance operations can furnish early information concerning the threat's/suspect's general disposition and movements to a considerable depth beyond friendly positions/locations. Aviation reconnaissance relies on the human dynamic aided by technical means such as onboard sensors, processors, displays, and UAS.

3-66. Aviation reconnaissance complements ground reconnaissance and other ISR resources. Aircraft and UAS reconnoiter with greater speed and depth but lack the highly detailed, close terrain, and all-weather capability of ground reconnaissance. Army aviation can also provide a detailed Soldier's-eye perspective of the AO, but the Soldier lacks the capability to produce the wide-area detection that high-altitude surveillance assets can provide.

FORMS OF RECONNAISSANCE

3-67. The purpose of reconnaissance is to detect a target or activity if it exists. Reconnaissance forms vary depending on the geography, size of the search area, and nature of the target. Four forms of reconnaissance are typically used—zone, area, route, and aerial surveillance (table 3-3).

Table 3-3. Forms of reconnaissance

Recon Type	*Definition*
Zone	Conducted to search large areas where the location of the target is unknown. A line of departure (LD), lateral boundaries, and a limit of advance (LOA) must define the search area. Use easily identifiable boundaries (rivers, roads, fences, and ridge lines) to define zones. Large zones may be broken into smaller zones to expedite and organize the search.
Area	Conducted to search a specific area for a target or activity. The area should be completely enclosed by a boundary line and may be defined as a square block radius within a city, residence, ground route, etc.
Route	Focuses along specific LOC such as a road, railway, air route, or cross-country mobility corridor. It provides new or updated information on route conditions such as obstacles and bridge classifications, and threat and civilian activity along the route. It includes the route and all terrain along the route from which the threat could influence friendly force movement. The commander normally assigns this mission when a specific route is required for friendly movement. Often conducted as part of a zone reconnaissance.
Aerial Surveillance	Aerial surveillance is defined as systematic observation to obtain detailed information of a specific target or area. The focus of surveillance is generally a point target such as a house, car, section of road, or any other defined area.

EQUIPMENT

GLOBAL POSITIONING SYSTEM

3-68. The global positioning system (GPS) involves receiving position data from satellites and continuously plotting and updating the aircraft's current position. Additionally, the system has the capability of navigating to designated points that are either entered manually or in conjunction with data loaded into the GPS utilizing AMPS. GPS receivers provide a moving map display feature that shows aircraft position.

TACTICAL DIGITAL INFORMATION LINKS

3-69. S&S BN units need digital/video downlink capabilities to enhance C2, SA, and real-time damage assessments. Tactical digital information links (TADILs) involve exchanges of bit-oriented digital information. Tactical and video downlinks are a subset of the overall TADIL system. Systems currently fielded in S&S companies are components of the unit's legacy CD function and have considerable mission utility for supporting antiterrorism, force protection, and HD.

THERMAL IMAGING SIGHT

3-70. Airborne TIS operations are affected by variables in both the environment and platform. Environment variables include thermal loading, temperature, humidity, and terrain. Platform variables include altitude, airspeed, and operator proficiency. System employment is dependent on environmental conditions, crew experience, and outside influences such as ATC. Certain search techniques used by S&S company aviation assets provide a combat multiplying effect to the capabilities of the observation role.

Search Techniques

Anchored Searches

3-71. TIS searches may be anchored to a particular feature and concentrated on possible target locations relative to that feature. These features may be natural or manmade and a particular point or small area. A building where a fugitive was last seen may serve as an anchor for other likely hiding locations. A road may serve as the anchor with a search conducted by sweeping 20 yards on either side of the road. Terrain features offering likely concealment, such as a streambed, may also anchor a search.

Free Searches

3-72. A free search is a zone reconnaissance performed to check all heat sources in the search zone. The pilot controls the search by systematically flying a pattern covering the entire area of interest.

Scan Techniques

3-73. The types of scan techniques used with TIS are manual and autoscan. Both are effective for a systematic scan using the aircraft skid tips as visual barriers; however, the autoscan feature reduces operator workload. The operator scans left until the skid tip is seen on the display monitor unit and then scans right until the other skid tip appears. This technique yields a field of scan of approximately 60 degrees. The skid tips also help keep the distance of the scan far enough in front of the aircraft to allow for reaction time when a possible target is detected. The speed of the scan is dependent on terrain and altitude.

Target Acquisition

3-74. Target acquisition is an important advantage of the TIS system. Targets are easier to acquire if first detected in front of the aircraft. A target is typically identified in wide FOV; the TIS is then switched to narrow FOV for closer target identification, and the aircraft is maneuvered as necessary to maintain contact.

Terrain Association

3-75. The LEA observer or pilot on the controls may initially identify targets visually and then assist the TIS operator in acquiring the target using terrain association. The pilot locates an easily identifiable feature (uniquely shaped building, road intersection, bridge), states the approximate clock position (or azimuth) and elevation to guide the TIS operator to the vicinity, and gives the TIS operator directions to the target.

Orbits and Orbit Reversal

3-76. Depending on the TIS system and configuration, an orbit is a common maneuver used to maintain contact with the target. An orbit direction can easily be reversed without losing TIS contact by leveling the wings and gradually increasing the orbit diameter. The field of regard limitations of the TIS may require the aircrew to maneuver the aircraft when the TIS azimuth approaches 120 degrees. The aircraft may be turned inside the orbit toward the target to reverse orbit direction.

HIGH-POWERED ILLUMINATION SYSTEM

3-77. The HPIS enhances support to law enforcement agencies. Operation protocols will vary; however, the following items describe potential techniques for its use:

- **The one-two search.** This tactic features the sequential use of the HPIS and TIS. The HPIS is used first to scan an area. If the target is not acquired, the TIS is then used.
- **Black and white search.** This is a technique used to deceive the suspect. The helicopter orbits the search area while maneuvering the HPIS around the outside of the primary search area setting up a perimeter. The primary search area is scanned with the TIS.
- **Left/right search.** Another deception technique similar to the black and white search is to fly a search pattern with the HPIS angled in one direction and the TIS angled toward the direction where the suspect is assumed to be located. The suspect is unaware he or she is being observed.

OBSERVATION

3-78. Observation missions gather information and are performed after a law enforcement agent determines there is reasonable evidence to suspect illegal activity is in progress, has occurred, or is likely to occur. Crewmembers must be aware of methods used by the threat to avoid detection and the special mission equipment available that offers distinct advantages during an observation mission such as the TIS and HPIS.

VEHICLE OBSERVATION

3-79. Vehicle observation missions are among the most difficult to plan and prepare. The movements and destination of the target can rarely be determined in advance. As a result, great flexibility must be maintained to ensure contact with the designated target is not lost. Suspects also employ counter-observation techniques intended to prevent or inhibit ground and aerial observation. The following techniques are a sample of commonly observed behavior:

- **Sky watch** designates a passenger to watch for aircraft. The passenger may lie in the back seat looking up through the rear window or he or she may periodically stick his or her head out the window.
- **Chase or scout car** utilizes a second vehicle either following or leading the route of the suspect vehicle. The chase car usually has responsibility for detecting vehicles and aircraft following the suspect. Spacing allows the chase car an opportunity to detect aircraft following the suspect. The scout car may employ tactics to divert the law enforcement agent from the actual target vehicle.
- **Heat run technique** is when a suspect pulls off the route and parks periodically allowing the target an opportunity to check for following vehicles and listen for observation aircraft. Suspects may drive for long periods to travel short distances, doubling back over the route mixed with stop and go maneuvers. This makes it difficult for vehicles or observing aircraft to follow the

vehicle undetected. Sometimes the aircraft is least detectable when it is nearly directly over the vehicle.

3-80. If the vehicle stops or slows down, an aircraft may be flown at a high hover, slower airspeed, or maneuvered as required. As a technique, a figure eight flown behind the vehicle will assist in maintaining contact without risk of detection.

SECTION IV – SECURITY

FUNDAMENTALS

3-81. The commander conducts security operations to provide reaction time, maneuver space, and intelligence to the supported unit/agency and protect the force from surprise. Aviation units normally support ground units or require ground augmentation to perform security missions. S&S BNs support border and shoreline security operations in which crews are primarily concerned with detection, identification, location, and reporting. S&S BNs are well suited for security missions primarily due to their organic special equipment. When S&S BN units support security operations, they—

- Orient on the force or facility to be secured by providing advance, flank, or rear security by operating between the main body and known or suspected threat units. This provides 360-degree screening of a port, airhead, base camp, or other site.
- Perform continuous reconnaissance using zone, area, route, or aerial reconnaissance by—
  - Gaining all possible information about the threat and terrain.
  - Locating areas of interest and providing the supported LEA with information about potential threat(s).
  - Providing reaction time and maneuver space. The covering force provides the supported unit with 360-degree security and reaction time to respond to the threat.
  - Maintaining threat contact to ensure a continuous flow of information about threat activity.

PLANNING CONSIDERATIONS

3-82. Planning considerations include—

- Conducting a thorough map reconnaissance to familiarize the unit with terrain, structures, and wires.
- Establishing and maintaining communications with supported elements.
- Determining flight modes to be used.

CAPABILITIES

3-83. Commanders consider METT-TC when employing their company in a security role. Tasks such as a screen, guard, and area security may normally be assigned to the company; however, other missions such as fill the gap, LOC security, and cover may be assigned to the company but require augmentation. Depending on METT-TC, the company may not be fully capable of conducting the associated tactical tasks within the operational environment without augmentation.

3-84. S&S BNs execute security operations as independent operations or in a supporting role to the ground maneuver commander. The higher commander's intent and purpose for security, combined with the mission's duration within the operational environment, determines the required augmentation. Requirements to conduct sustained operations, defeat or destroy threat forces, or accept decisive engagement may require task organization to include mechanized or light infantry, tank, direct support (DS) or reinforcing artillery, intelligence systems, UAS, electronic warfare (EW) assets, and communication nodes. Full Spectrum Operations in an urban environment and other stability operations may require MPs, psychological operations, and civil affairs augmentation.

SECTION V – AIR MOVEMENT

FUNDAMENTALS

3-85. Air movement is the transportation of equipment, materiel, supplies, and personnel by utility, cargo, fixed-wing (FW) assets for operations other than air assault. Air movement operations are conducted in support of current and future operations.

PLANNING CONSIDERATIONS

3-86. An air movement operation requires extensive pre-coordination with the supported force ensuring loads are properly rigged and placed in the PZ. It is the responsibility of the unit owning the load to provide rigging and slings. If backhaul of slings and other rigging equipment is necessary for subsequent moves, this must also be coordinated. Proper sequencing and placement of loads in the PZ decreases pickup time requirements. Training to rig and prepare loads for movement is vital for supported units.

SECTION VI – COMMAND AND CONTROL SUPPORT

3-87. Maintaining C2 is a critical operation. S&S BN aircraft equipped with SA communications enhance their effectiveness to provide C2. Aviation units may provide communication enhancement through airborne transmission or relay equipment; however, the lack of dedicated assets for this mission may require the use of ground RETRANS and relay assets.

3-88. Aviation assets also provide timely transportation for LNOs and command and staff teams to coordinate operations between separate units, transmit intelligence, and verify unit situations and location.

COMMAND AND CONTROL NODES

3-89. S&S BN aircraft may be configured to provide maneuver commanders with an aerial C2 platform. C2 aircraft may be equipped with a command console allowing commanders to move rapidly around the AO while maintaining communications with their subordinate units. C2 aircraft also provide timely information to support critical decisions without sacrificing mobility and efficiency.

PLANNING CONSIDERATIONS

3-90. C2 aircraft must operate within a designed airspace structure. Normally, a restricted operations zone (ROZ) or ACA will be established for C2 aircraft. A unit must consider several factors when selecting a suitable ROZ.

SCHEME OF MANEUVER

3-91. The ROZ must be located in an area that supports the maneuver commander's plan and does not conflict with current operations of the supported unit. The S-3, or S-3 (Air), of the supported unit should request the ROZ. It may be necessary to plan for multiple ROZs. In offensive operations, on order ROZs are needed, so C2 aircraft can move forward and continue to provide effective C2.

THREAT

3-92. Aviation battalion S-2s and S-3s must carefully analyze the threat and impact potential threats can have on aircraft working in a ROZ. Often aircraft operate in a ROZ for an extended period of time and may go above the coordinating altitude. A careful analysis of the ROZ by the aviation unit ensures the ROZ can support the ground maneuver commander's concept and remain clear of high threat areas.

COMMUNICATIONS

3-93. The ROZ location must permit LOS communications capable of being maintained with all unit elements. Altitude is a factor in ROZ selection. Higher altitudes allow for better communications but increase the threat risk. A careful analysis of METT-TC factors will assist in selecting an area that provides security and uninterrupted communications.

ROUTES TO/FROM THE RESTRICTED OPERATIONS ZONE

3-94. Flight routes must be developed that will support the aircraft's transition to the ROZ. These flight routes must be planned carefully, should avoid over flight of friendly artillery units, and should be opened and closed as needed by C2 aircraft.

EMPLOYMENT

3-95. S&S BN units provide the aerial platform required to support civil authorities with C2 operations. S&S BNs transport authorities to coordinate ground support personnel actions, provide LOS communication relay for TFCs, and relay communications between TFC and LEA personnel involved in the mission.

SPLIT-BASED OPERATIONS

3-96. S&S BN units may be deployed to operate independently and in various locations not located with or near the base of operations.

SECTION VII – CASUALTY EVACUATION

FUNDAMENTALS

3-97. A CASEVAC aircraft is one with no medical equipment or medical personnel onboard; designation does not change by adding a combat lifesaver. CASEVAC from the AO is a critical element of the overall HSS system. It must be immediately available and capable of moving seriously wounded, injured, or ill personnel from the battlefield or AO. Although both air and ground evacuation must be integrated in the FHP mission, air CASEVAC will be the primary preferred mode of evacuation of wounded and injured Soldiers when MEDEVAC is not available or in close proximity to the injured individual(s). Referred to as "casualty backhaul," it typically occurs in conjunction with air assault operations where the aircraft takes on the wounded after completing their troop or sling load drop off at an LZ. The commander and crews must be prepared to conduct CASEVAC missions at any time.

3-98. S&S BN aircraft have the advantage of providing decreased en route times to the MTF compared to ground vehicles. The light utility helicopter (LUH) may be capable of transporting up to eight injured (nonlitter) personnel; however, they have limited CASEVAC capabilities and do not provide onboard medical equipment or dedicated medical personnel for patient care.

CLASSIFICATIONS

3-99. Three classifications of CASEVAC crews (vehicles, personnel, and associated equipment) are—

- **Dedicated.** Dedicated crews are identified and reserved for the CASEVAC mission exclusively. This tasking may be for a period of hours or months. Similar to a MEDEVAC crew, they are not called on to perform another mission. This is the highest level of classification for CASEVAC.
- **Designated.** Designated crews are tasked to perform the CASEVAC mission when called on. These crews may have a variety of priorities with CASEVAC not necessarily being the highest.

- **Lift of opportunity.** Crews performing a CASEVAC lift of opportunity have no specific prior designation as a CASEVAC platform. This does not indicate a lack of CASEVAC planning but does not ensure CASEVAC resources will be available at any given time.

3-100. None of the above classifications are associated with any certain level of medical care. In any configuration, it is highly desirable to have aeromedically trained personnel onboard to administer treatment. Without this capability, further harm may come to the patient(s). Therefore, when executing CASEVAC, it is advisable to evacuate the least injured using CASEVAC assets and more injured with MEDEVAC assets. Available medical personnel at the pickup site can assist in determining the priority for evacuation.

3-101. During the planning process for CASEVAC, the same availability methodology is used to assist CASEVAC crews for en route medical care personnel. Because of the coordination necessary between the CASEVAC crews' parent unit and the medical unit providing personnel for en route care, prior planning is especially critical.

3-102. Aeromedical care is a specialized task. Nonmedical personnel not trained in this particular area of medicine may cause further harm to the patient. If possible, prior training/orientation should be coordinated when serving in the CASEVAC role.

PLANNING CONSIDERATIONS

3-103. In planning CASEVAC support operations, the commander and his or her unit must consider several factors during mission analysis. The three primary factors are the patient's condition, TF commander's intent, and distance to an immediate care facility. The overriding consideration, as to the evacuation platform and destination facility, is the patient's medical condition. For the S&S company to conduct CASEVAC missions, the battalion or higher headquarters generates the order, or the mission may be covered under the existing OPORD as a follow-on mission or implied task.

3-104. Planning considerations for CASEVAC missions include—

- HSS plan for the operation. (Where are the wounded to be dropped off?)
- Location of MTF (typically, initial treatment will be at the PZ).
- Staging area.
- Laager area.
- PZ/LZ locations.
- ATO/ACO/SPINS.
- Special equipment (such as litter installation).
- Actions on objective.
- Flight routes and corridors.
- Actions on contact.
- Friendly and threat situation at time of launch.
- Weather for duration of mission time.
- FARP locations and operational times (when conducting CASEVAC operations, typically highest casualty flow is H+2 or greater).
- Flight restrictions due to injuries (for example, head injury must maintain low altitude).
- COMSEC requirements (ensure frequencies for MTF and supported unit are loaded).
- Downed aircraft procedures with casualties aboard.
- Ambulance transfer or exchange points if any (typically at PZ).

SPECIAL CONSIDERATIONS

3-105. Adequate fuel for the mission is critical especially during large air movements, air assaults, and offensive movements. Deep air assaults consume large amounts of fuel, and commanders must not only account for the required amount for the air assault mission but also the requirements for any CASEVAC

missions that may follow upon completion of the offensive operation. Casualty flow or buildup usually occurs at H+2 or later due to a time lag between injury and movement to a CCP. Refuel vehicles and FARPs, unless meticulously planned, must transition to resupply operations following large or deep air assaults. Additionally, refuel vehicles and FARPs may be moving forward with the offensive operation. The CASEVAC commander or leader must ensure fuel for these follow-on missions will be available.

3-106. Communication during CASEVAC operations is critical. Aircrews must have proper frequency hop sets for the units supported and the medical support units. A properly planned HSS plan should—

- Require the supporting unit (medical unit/CASEVAC) to monitor the supported unit (infantry/civil authority) frequency.
- Establish a CASEVAC discreet frequency, which operates single channel in the red. Failure to do so results in a disparity between the actual casualty evacuations required and the evacuations requested through other channels (such as the A&L net). This occurs because combat units do not monitor this net while in the fight; they typically monitor the combat aviation net or may step down to the brigade tactical net or O&I net.
- Establish a discreet frequency for medical treatment personnel at drop-off location(s). This may or may not be frequency hop secure (usually located at the PZ).

3-107. A threat situation is always critical. Once the mission has started, the most accurate threat situation information comes from forces conducting the operation. CASEVAC crews must constantly monitor and aggressively seek out threat information from forward operating forces whether they are aviation or ground forces. The threat is not stagnant and, due to combat operations, an LZ considered safe to land in earlier (cold) may now be unsafe to land in (hot).

CIVILIAN MEDICAL CARE COORDINATION

3-108. S&S BN units must establish definitive civilian medical care coordination. Aircrews require information concerning the medical facility's location, the medical care available, as well as landing area availability and limitations. This information permits the unit to accurately determine if the facility can provide the proper care for the patient.

SECTION VIII – PERSONNEL RECOVERY

3-109. All commanders must plan for picking up isolated personnel. The Army has no aircraft dedicated solely to perform PR; however, all utility helicopters must be prepared to accomplish this mission.

3-110. S&S BN commanders should consider PR when planning missions. Aircrews performing single- or multiship missions should be prepared to perform PR missions and ready to respond if necessary. Special operations and joint aircraft units have the training and equipment required to perform PR missions. Nevertheless, S&S BN planners must include in-stride aircrew recovery planning in every operation. ALSS provide aircrews with valuable tools to improve in-stride recovery.

3-111. Aviation units must also be prepared to assist in PR efforts. Downed aircrew recovery planning should begin before units employ or immediately after AO arrival. A complete aircrew recovery posture is developed using a planning process fully complementary to ongoing operational planning. Flexible recovery plans must have contingencies employing all joint PR-capable resources in the most efficient and effective manner.

CATEGORIES

3-112. PR operations can be placed into immediate and delayed categories. Commanders must recognize and prepare for both types of PR operations.

IMMEDIATE RECOVERY

3-113. Immediate recovery is the rescue of downed aircrews during the conduct of a mission. For example during a team insertion, immediate recovery would be accomplished by having an aircraft in the flight or vicinity follow a downed aircraft to rescue the flight crew. Immediate recovery is the most effective method for rescuing downed aircrews. Immediate pickup of downed aircrews is desirable because additional mission aircraft are normally in the area, threat forces have not had the opportunity to react, and medical treatment, if required, will be most beneficial. Certain factors must be considered when planning for immediate recovery.

Continuation of Mission

3-114. Immediate recovery may take aircraft away from the primary mission. Commanders must consider the intent of the mission and decide if it is feasible to take an aircraft away from an ongoing mission to conduct an immediate recovery mission. If the mission is considered critical, the aviation commander must consult with the operational commander before executing immediate recovery. The aviation commander may designate a flying spare aircraft to conduct immediate recovery if required.

Pickup Aircraft

3-115. The commander may designate specific aircraft with the responsibility to conduct immediate recovery, or the responsibility may fall on the nearest aircraft in support of the downed aircraft. The commander must specify and select the aircraft to be used during the planning process.

Recovery Aircraft Location

3-116. The aircraft designated for immediate recovery may be a part of the mission and formation or an additional aircraft. The commander must decide where to position PR aircraft so it can best support the pickup of downed aircrews and not interfere with the ongoing mission.

Army Airspace Command and Control

3-117. Separate airspace control measures may be developed to allow PR aircraft to extract downed aircrews without interfering with the ongoing mission. If PR aircraft use the same structure as mission aircraft, effective C2 must be established to deconflict aircraft.

DELAYED RECOVERY

3-118. Delayed recovery is planned as part of the commander's operations. Rescue coordination center and joint search and rescue center assets are used as part of a delayed recovery operation; however, commanders may also use internal assets. A delayed recovery normally occurs after completion of the current mission and includes a detailed plan for conducting rescue of downed aircrew members. PR-designated aircraft must be integrated thoroughly into the plan.

CONCEPTS

3-119. Aircrews providing PR must understand the operation they support. If utility helicopters are not supporting their parent headquarters, they should be OPCON to the operational commander. Aircrews must be integrated into the planning process and attend all planning meetings and rehearsals. The commander must establish a PR concept to support his or her operations. PR concepts may include—

- Moving PR aircraft as part of the operation, following maneuver elements, and maintaining a standoff distance to provide PR coverage, if necessary.
- Moving PR aircraft forward to a HA and awaiting a call to conduct PR, if necessary. Using this method, the commander may establish a ROZ for PR aircraft to remain airborne.
- Keeping PR aircraft at another location (AA, FARP) and assuming the appropriate readiness condition (REDCON) level as determined by the commander.

COMMAND AND CONTROL

3-120. PR C2 must be planned in advance. A C2 node and AMC must be designated for the PR operation. Units must devise procedures to form the PR force, move the force forward, and conduct the rescue of the downed aircrew. During the mission, the C2 node is responsible for coordinating fires, deconflicting security and the rescue aircraft, and controlling the rescue of the aircrew. The following are some PR C2 considerations:

- **Signaling.** Signaling procedures must be developed to allow for quick pickup of downed aircrew members. It may become necessary for the downed crew to evade and leave the aircraft site.
- **Drop off location.** PR crews must be thoroughly briefed on where to deliver downed crewmembers once rescued. If they are not injured, crewmembers may be returned to the aviation unit AA. If injured, the crew must be taken to a medical facility. PR crews should have the frequencies and call signs of MTFs and their locations programmed into their navigation devices.
- **PR team makeup.** The commander must determine the makeup of the team conducting the delayed recovery. This operation should consist of attack or reconnaissance assets (for security), a C2 facility, and at least two aircraft for the rescue operation (allowing for faster search times). Additionally, the commander should designate medical personnel to accompany the recovery aircraft for initial medical aid.

ASSISTANCE TO CIVIL AUTHORITIES

3-121. PR missions fall under the provisions of emergency transportation when loss of life or limb is threatened. SAR-type PR missions vary depending on the situation. PR missions may be accepted and performed in either a federal or state status. CDCs and SAAOs should further coordinate through their state EOCs for these support requests.

3-122. PR missions are a specific, critical, and intense type of reconnaissance. Aerial reconnaissance and observation techniques apply. Aircrews should select appropriate mission equipment to optimize the chance of successfully detecting lost personnel. Search patterns in accordance with JP 3-50 are utilized.

SECTION IX – OTHER OPERATIONS

3-123. This section expands on other operations the S&S BN can execute; however, these operations are performed less frequently. In any event, units must be trained and maintain currency in all S&S BN-assigned missions.

COUNTERDRUG OPERATIONS

FUNDAMENTALS

3-124. The NG provides FTNG CD personnel support to federal, state, and local LEAs, and CBOs. NG personnel engaged in CD support activities for which federal funding is provided by 32 USC 112 must be acting in support of LEAs and/or CBOs. NG counterdrug programs can only provide support to LEAs and/or CBOs that have a counterdrug nexus as the primary purpose. S&S BN personnel performing CD operations and utilizing CD equipment must be on CD orders.

PLANNING CONSIDERATIONS

3-125. Planning considerations include—

- Conducting a thorough map reconnaissance ensuring familiarization with terrain, structures, and wires.
- Establishing and maintaining communications with supported units.
- Determining flight modes to be used.

Special Considerations

3-126. Special considerations include—

- Threat.
- Weather.
- Environment.
- Moon illumination.

CATEGORIES OF OPERATIONS

Domestic Cannabis Suppression/Eradication Operations Support

3-127. These operations include, but are not limited to—

- Aerial, logistic, communications, intelligence, planning, and medical support.
- Operational staff coordination.
- Physical security.
- Ground transportation.
- Eradication and destruction of contraband.
- Spraying in accordance with EPA regulations and state laws.

Transportation Support

3-128. FTNG CDC personnel provide aerial transportation of LEA personnel/equipment, persons in LEA custody, and seized property or contraband as part of ongoing time-sensitive CD operations. These units can also provide transportation support when security or other special circumstances reasonably necessitate NG support, and there is a counterdrug nexus.

Aerial Reconnaissance

3-129. FTNG CDC personnel conduct reconnaissance/observation of airspace and maritime or surface areas (land and internal waterways of the U.S. and its territories) for illegal drug activities that include, but are not limited to the cultivation of marijuana or delivery of illegal drugs. Reconnaissance may be directed toward suspected drug trafficking airstrips, drop zones, corridors or suspicious aircraft, watercraft, and motor vehicles.

3-130. For CD TIS missions, specific legal restrictions apply when employing onboard imagery systems in support of law enforcement counter-narcotic operations. The commander and operational planners will refer to NGR 500-2 for further information on legal considerations to ensure compliance with intelligence oversight requirements.

INSERTION/EXTRACTION OPERATIONS

FUNDAMENTALS

3-131. S&S BNs perform small team insertions and extractions, typically in support of LEA actions. Mission equipment may include special purpose infiltration/exfiltration system (SPIES) or fast rope insertion/extraction system (FRIES) equipment, rappelling ropes, and hoists. Additional training or rehearsals are required to maintain proficiency.

CATEGORIES OF OPERATIONS

Special Purpose Infiltration/Exfiltration System Operations

3-132. SPIES operations provide a means of exfiltrating a limited number of Soldiers/personnel (based on aircraft limitations) over short distances. It is not recommended for infiltration due to excessive team member exposure. SPIES operations require a thorough briefing for all participants prior to mission execution. Careful coordination is crucial when additional assets, such as aerial observers, are employed. For additional information on SPIES, refer to FM 3-05.210, FM 7-93, and the applicable ATM.

Fast Rope Insertion/Extraction System Operations

3-133. FRIES operations are able to insert troops and equipment into areas unsuitable for helicopter landing. The LUH may have provisions for two fast ropes, one on either side of the cargo door area. The fast rope consists of a polyester rope, which is 1¾ inch in diameter, olive drab in color, and comes in four standard lengths (30, 60, 90, and 120 feet). Fast rope serves to insert troops without the aircraft contacting the ground or an obstacle. FRIES is used for team insertion/extraction in various settings to include—

- DART in mountainous terrain.
- Urban settings with no room to land.
- Pinnacles and ridgelines.
- Decks of ships.

3-134. The commander and SP must ensure crewmembers are trained, thoroughly briefed, and complete rehearsals prior to conducting FRIES. The insertion/extraction is performed from the lowest altitude possible with 40 feet being optimal. Crew coordination is critical to successfully decelerating the aircraft and maintaining a stationary hover so troops can exit the aircraft safely. For detailed information on FRIES, refer to FM 3-05.210 and FM 7-93. Table 3-4 defines the different types of insertion/extraction operations.

Table 3-4. Types of insertion/extraction operations

Type	*Effective for*	*Additional information*
Helocast	Inserting combat swimmers/combat divers	Characterized by penetration flights into hostile or politically sensitive areas to infiltrate, resupply, and exfiltrate operational elements. Completed during hours of darkness or periods of limited visibility by both conventional and nonstandard aircraft.
Rappelling	Inserting teams into pre-selected areas	Flown during hours of darkness or periods of limited visibility by both conventional and nonstandard aircraft.
Hoist	PR	Hoist provides PR whenever the location is unsuitable for aircraft landing.

COUNTERTERRORISM SUPPORT OPERATIONS

3-135. NG S&S BNs and their subordinate elements are a critical component of each TAG's response capability for domestic operations (with the exception of CD missions). When serving as a component of an overall response to terrorist threats or activities, the S&S BN will be organized for C2 in accordance with the state EOP/ERP or appropriate higher headquarters OPLAN/OPORD. The S&S BN provides a readily accessible tool for use in immediate response to counterterrorism and other domestic operational contingencies. State and S&S BN leadership should plan on early and active involvement in counterterrorism mission training scenarios and operations.

3-136. During the conduct of counterterrorism and other domestic operational missions, S&S BN/subordinate elements may be organized to perform missions in support of both military entities and civilian agencies. Units must develop working relationships and contingency plans with NG CSTs.

OPERATIONAL CONSIDERATIONS

3-137. Given the unique capabilities resident in the S&S BN, leaders must ensure that special mission equipment is effectively employed during counterterrorism and other domestic operational contingencies. Leaders also utilize their unit's extensive experience operating in support of civilian entities and their familiarity with local AOs.

3-138. During counterterrorism mission planning, unit support and mission execution varies little from that established for other domestic operational mission sets; however, the unique threat encountered and the potential for active threat or environmental hazard inherent in counterterrorism operations require consideration of additional factors in mission planning.

QUICK REACTION FORCE OPERATIONS

FUNDAMENTALS

3-139. A QRF is any force poised to respond on very short notice, typically in less than 15 minutes. The QRF provides the TF commander an on-call capability to react to contingencies within the AO. The QRF package is based on anticipated mission requirements and the crew and aircraft assets available. Because of the short-fused launch order, mission success requires extensive pre-planning by QRF aircrews and the supporting operations cell. While the reaction time afforded to the QRF is challenging, the actual missions performed are within the S&S company METL. S&S companies are frequently tasked as an element of the QRF with a main mission of troop transport or reconnaissance.

3-140. The S&S company supports the QRF as a pre-positioned force within the AA or responds to contingencies via a "change of mission". When operating as a pre-positioned force, the S&S company QRF is expected to support 24-hour coverage or until relieved by higher headquarters. The S&S commander must plan and allocate resources (aircraft, aircrews, and maintenance support) to execute the tasking.

PLANNING CONSIDERATIONS

3-141. The QRF AMC is the focal point of all coordination between the supporting staff and QRF. Prior to assuming the mission, the AMC—

- Obtains a tactical update brief and determines the status of on-duty QRF elements and/or ongoing missions. This action determines the possibility of a relief-in-place or immediate launch.
- Obtains a weather brief for the duration of the duty shift plus 2 hours.
- Files an evasion plan of action and the flight plan for the entire QRF package. All mission planning except takeoff time, route-of-flight, duration-of-flight, and destination is completed.
- Completes a mission risk assessment and obtains approval from the TF/battalion commander. The mission risk assessment should approve no lower than medium risk operations. Approved operations include all tasks on the crew's CTL, all conditions (day, night, NVD), and all modes of flight that may be encountered during the duty period. The crews are briefed to operate in the worst weather forecasted during the duty period or go/no-go weather.
- Completes crew mission kneeboard packets for each aircraft providing all known information.
- Conducts an AMB with all known information and ensures each aircrew completes applicable crew and passenger briefings.
- Ensures all aircraft, crews, and support personnel assume the designated REDCON level. All aircraft are preflighted and individual equipment checks are completed prior to assuming the mission. Depending on unit SOP and mission, communications (includes spare aircraft) and weapons checks are completed prior to mission assumption.
- Ensures QRF package maintains REDCON level as briefed until alerted or relieved.
- Conducts detailed static rehearsal of anticipated missions.

- Immediately informs controlling flight operations of any developments that will interfere with QRF launch.

SPECIAL INSTRUCTIONS

3-142. Change of mission is the most common QRF tasking received by the S&S company. Change of mission occurs when the S&S company is conducting a current tasking and is given a new task and purpose. The higher headquarters issues a FRAGO to the team consisting of the supported unit's call sign, frequency, rally point, command relationship (attached, OPCON, under tactical control TACON), and a general task and purpose. Typically, the team can expect to execute troop transport, limited security, and reconnaissance when given a change of mission. See chapter two for a description of command relationships.

3-143. Once a team receives a change of mission, the AMC contacts the supported unit and provides the aircraft call sign and type, time on station, and mission restrictions. The supported unit provides the reconnaissance team with the task, purpose, and situational update to include threat activities, friendly forces activities and location, control measures, and any information necessary to conduct the mission.

3-144. Once the team has received the planning information from the supported unit, the AMC conducts TLP for team employment and notifies its higher headquarters. Additional resources and support are determined. If the S&S company is supporting aviation elements, coordination is conducted to determine flight formations, routes, movement methods, and actions on the objective. The most preferred method of planning and coordination is face to face with the supported unit.

TYPES OF OPERATIONS

Deliberate

3-145. A deliberate QRF mission is planned and carefully coordinated with all involved elements to provide synchronization of combat power at the decisive point. The mission requires thorough reconnaissance, evaluation of all available intelligence and relative combat strength, analysis of various COAs, and other factors affecting the situation. To conduct a successful QRF mission, the S&S BN must effectively integrate with the overall ground scheme of maneuver or the joint, operational, or tactical plan to shape the threat prior to ground force contact.

Hasty

3-146. A hasty QRF mission is one in which the unit has not been afforded time to make extensive preparations. It is conducted with the resources immediately available to maintain momentum or take advantage of the threat situation. The objectives are to overwhelm the threat quickly and seize the initiative. Speed is paramount. The hasty QRF mission also depends on timely and accurate information. When contact is made, commanders must immediately evaluate their chances of success. Hasty QRF missions may serve as a precursor to a deliberate QRF mission or may result from unexpected threat contact.

SHIPBOARD OPERATIONS

3-147. Army helicopter operational capabilities are greatly expanded when ships are available for overwater operations. Shipboard operations require special training prior to landing on or operating from ships. See JP 3-04.1. Important considerations include—

- **The United States Navy** possesses a vast variety of ships equipped with helipads. S&S BN units planning to conduct overwater operations must be prepared and qualified to perform deck landings. Refer to Naval Air Engineering Center-Engineering (NAEC-ENG)-7576 for more information.
- **The United States Coast Guard (USCG)** has a limited number of vessels providing landing capabilities for Army helicopters; however, with the HS/HD role the USCG now provides, S&S

BN aircraft should be prepared to perform missions utilizing these vessels. Refer to NAEC-ENG-7576 for more information.

- **Nonmilitary.** S&S BN aircraft may be required to operate from vessels not organic to any branch of service. Aircrews must be cognizant of differences between these and military vessels.

UNMANNED AIRCRAFT SYSTEM OPERATIONS

3-148. UAS linked to battalion assets enhance operations. Maximum use of UAS and joint assets can significantly reduce requirements on the commander's internal security resources. UAS units can perform all basic observation tasks freeing helicopters for higher priority actions while reducing flying hour requirements and/or crew endurance needs. Every opportunity to use UAS, including those of other services, should be exploited. See FM 3-04.15 for additional information.

3-149. Communication and coordination with UAS controllers are essential for proper UAS integration. UAS are normally controlled from within intelligence sections. If a UAS unit conducts the screen of an area or accepts handover to or from a reconnaissance unit, C2 must be planned in detail to ensure proper coverage of the area. Combined UAS and reconnaissance operations are an excellent force multiplier. SOPs, battle drills, rehearsals, and training exercises contribute to success.

EMPLOYMENT

Unmanned System to Aviation Unit Handover

3-150. The staff section controlling the UAS acquires the threat force and maintains observation. After staff analysis, the high priority targets are handed off to the combat aviation brigade (expeditionary) (CAB[E]) for continued observation or destruction (figure 3-2).

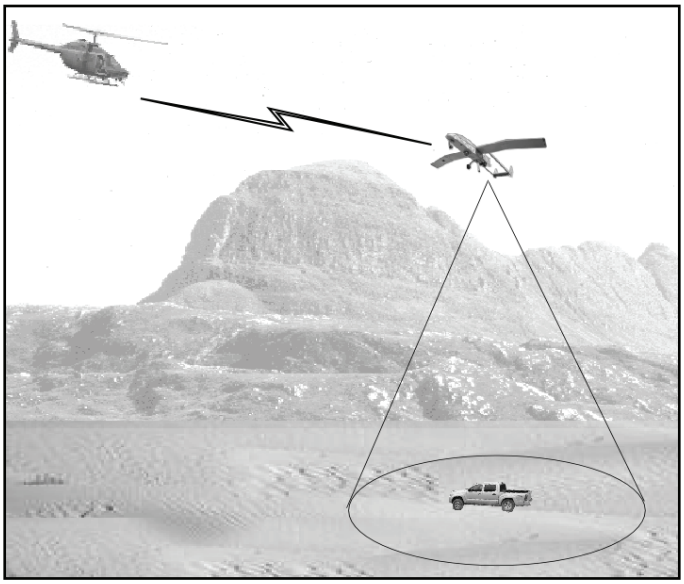


Figure 3-2. Unmanned aerial system to aviation unit handover

Aviation Unit to Unmanned System Handover

3-151. The aviation unit acquires the threat force and maintains observation. High priority targets are then handed over to the staff section controlling the UAS for continued observation and engagement by FA or close air support (CAS). The aviation unit conducts a bypass of threat forces and continues the reconnaissance effort or moves back to a forward assembly area or AA. This option enhances aviation unit survivability but increases UAS risk (figure 3-3, page 3-29).

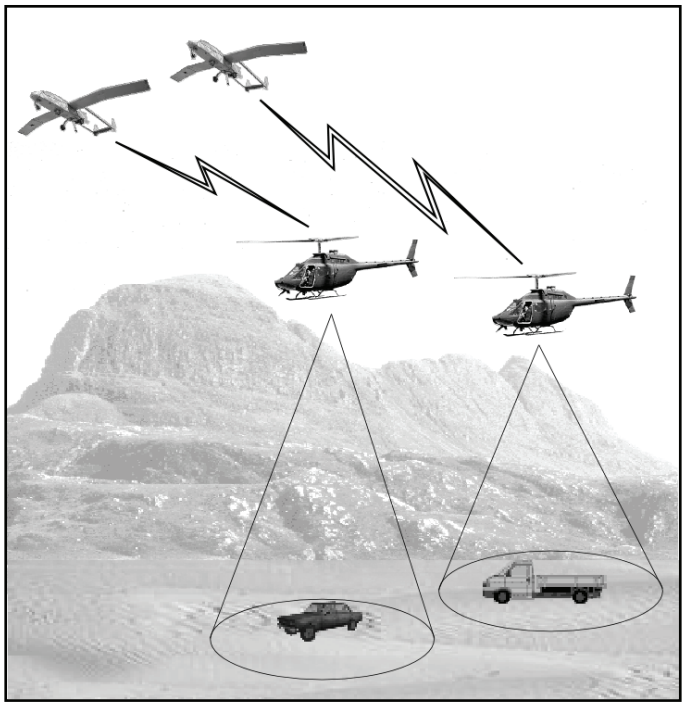


Figure 3-3. Aviation unit to unmanned aerial system handover

Aviation Unit and Unmanned System Sectors

3-152. The aviation unit and staff section controlling the UAS are assigned sectors based on METT-TC. If the situation dictates, they can switch sectors. This option maximizes the capabilities of both systems but requires the most coordination. It allows the aviation unit to extend its AO and concentrate manned elements on the most critical sector (figure 3-4).

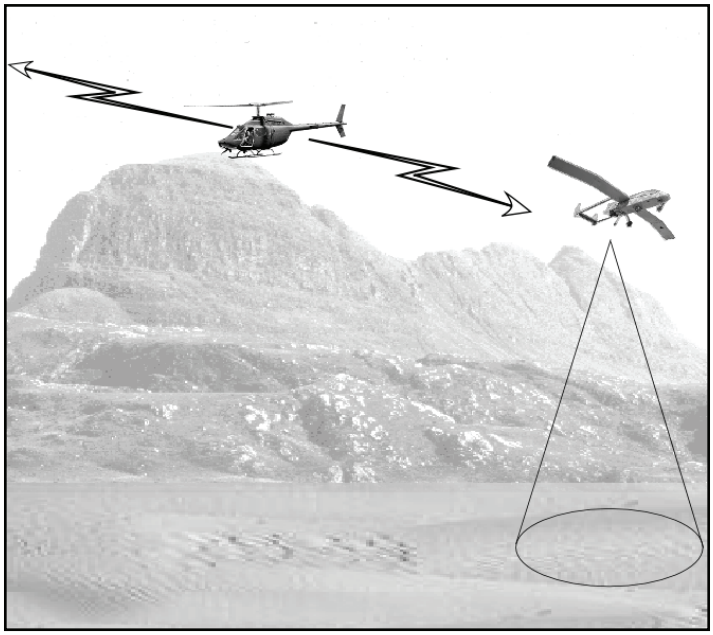


Figure 3-4. Aviation unit and unmanned aerial system sectors

RECONNAISSANCE, SURVEILLANCE, AND TARGET ACQUISITION OPERATIONS

3-153. UAS capabilities make them ideal to support reconnaissance and surveillance missions. Locating threat systems is a critical mission for UAS. UAS can jam threat acquisition and tracking emissions, but otherwise remain in the passive mode. UAS can cue supported forces during screen, guard, and cover missions. Likewise, during economy of force missions, UAS can alert dispersed forces to mass their effects on a particular threat force. Weather can have a limiting effect on UAS assets.

DECONTAMINATION IN SUPPORT OF HOMELAND SECURITY

FUNDAMENTALS

3-154. During an incident involving a CBRN release, the target could be a military installation, unit, or activity or a civilian site. Targets could include critical infrastructures or members of the public. DOD maintains significant decontamination resources (personnel, equipment, and supplies) to be used to support a request for federal assistance. Additionally, service decontamination resources may likely be used to respond to an incident or accident at a military installation.

3-155. S&S BN commanders have the responsibility to designate a decontamination location and coordinate approval with DHS. Aviation battalion, airfield, maintenance, and FARP commanders and OICs must organize the capabilities and personnel of permanent, tenant, and transient organizations to support decontamination operations.

CONSIDERATIONS

3-156. There are important differences between a hazardous material (HAZMAT) incident and CBRN incident. Responders must be aware of these differences and take proper precautions for self-protection and protection of other responders and the public during response actions. See FM 3-11.5 for in-depth information on decontamination operations in support of HS. Decontamination considerations applying to consequence management operations include—

- With most CBRN materiel, responders must complete decontamination swiftly to save lives and minimize the number of victims. Although a rapid response is required due to the speed many of the toxic chemical agents affect the body, responders must resist rushing in to assist until properly prepared.
- The number of expected victims is the first major difference between a standard HAZMAT situation and CBRN incident. Responders may be required to control, triage, decontaminate, and track a large number of people at the site of a CBRN incident. Scene control may involve a large area with a mass victim situation and numerous responders wanting to assist with the press corps seeking information about the incident. A response of this magnitude requires more personnel and materiel than may be available; therefore, detailed contingency planning, training, and exercising is required in advance.
- A terrorist CBRN incident is a federal crime scene. During the decontamination process, responders must make every effort to preserve evidence for eventual use in apprehending and prosecuting the perpetrators.
- Runoff control is required to reduce the spread of the hazard. Because of its potential toxicity, decontamination runoff must be kept away from sewer drains, groundwater, streams, and watershed areas. If runoff cannot be controlled, notify the appropriate agencies (sewer, water, and environmental).
- Aviation units can worsen the incident by spreading chemical agents in an effort to help.

3-157. The potential for exponentially increasing panic and cross contamination after a CBRN release is staggering. Responders called on to assist in the decontamination process must possess the ability to execute decontamination procedures properly; thus negating the exponential effects and enhancing victim confidence.

Chapter 4

Maintenance and Logistics Operations

This chapter describes emerging maintenance and logistics doctrine and day-to-day Army NG maintenance operations to include the interaction between the S&S BN and the supporting AASF. These functions assist in maintaining and supplying the force during continuous operations. The S&S BN cannot function as a stand-alone organization; support maintenance and classes of supply come from an organization outside company organic capabilities, both within the battalion and CAB(E). This chapter further discusses how to coordinate items of support and request and receive support from the CAB(E) ASB. A thorough understanding of the mission is critical to successful aviation logistics and sustainment.

SECTION I – MAINTENANCE AND LOGISTICS FUNDAMENTALS

4-1. Aviation logistics organizations must be capable of placing the right logistics resources at the right place and time and accepting modular "plugs" of both military and civilian personnel to meet workload surges. Aviation logistics organizations primarily consist of an ASB within aviation brigades at division and theater levels and an aviation maintenance company and forward support company (FSC) with each operational aviation battalion. These units collectively form the framework for aviation logistics in the Army's redesigned force structure.

Contents

Section I – Maintenance and Logistics Fundamentals 4-1
Section II – Aviation Maintenance Operations 4-11
Section III – Unit-Specific Maintenance and Logistics 4-14

4-2. The S&S BN supply and maintenance support structure includes the aviation battalion's HHC and aviation maintenance platoons. The CAB(E) ASB consists of a headquarters and support company (HSC), network support company (NSC), distribution company (DISTRO company), and aviation support company (ASC).

MAINTENANCE PRINCIPLES

4-3. Maintenance is a combat multiplier. When threat forces have relative parity in numbers and quality of equipment, the force combining skillful use of equipment with an effective maintenance system has a decisive advantage. This force has an initial advantage in that it enters battle with equipment that is likely to remain operational longer. A subsequent advantage is it can repair damaged equipment, make it operational, and return it to the battle faster.

4-4. Well-trained and equipped forward maintenance elements are critical to mission success. They must have the proper personnel, equipment, and tools as well as immediate access to high usage replacement parts. Field maintenance units concentrate on rapid turnaround of equipment to the battle, while sustainment-level maintenance units repair and return equipment to the supply system.

4-5. The maintenance system is organized around forward support. All damaged or malfunctioning equipment should be repaired onsite or as close to site as possible.

UNIT-LEVEL MAINTENANCE OPERATIONS

Maintenance Support Structure

4-6. The maintenance support system is a two-level structure—field maintenance and sustainment maintenance.

Field Maintenance

4-7. Field maintenance is performed by CAB(E) personnel. Aviation battalions perform maintenance within their capability both in flight companies and internal aviation maintenance companies. Battalions are authorized to perform unit maintenance detailed in TMs in accordance with AR 750-1. The ASC contained within the ASB is equipped with enhanced sets, kits, outfits, and tools (SKOTs) to perform intermediate maintenance detailed in aircraft TMs.

Sustainment Maintenance

4-8. Sustainment maintenance is performed within field repair activities, Army Depot, Aviation Classification Repair Activity Depot (AVCRAD), and original equipment manufacturer (OEM) either by contracted representatives or within their factories. On a case-by-case and limited basis, the CAB(E) may obtain authorization via the assigned Aviation and Missile Command (AMCOM) logistics assistance representative (LAR) to affect repairs classified as depot in accordance with aircraft TMs. Army depots are often positioned at CONUS-located fixed bases. A graphic depiction of two level maintenance and the relationship of field to sustainment maintenance is shown in figure 4-1.

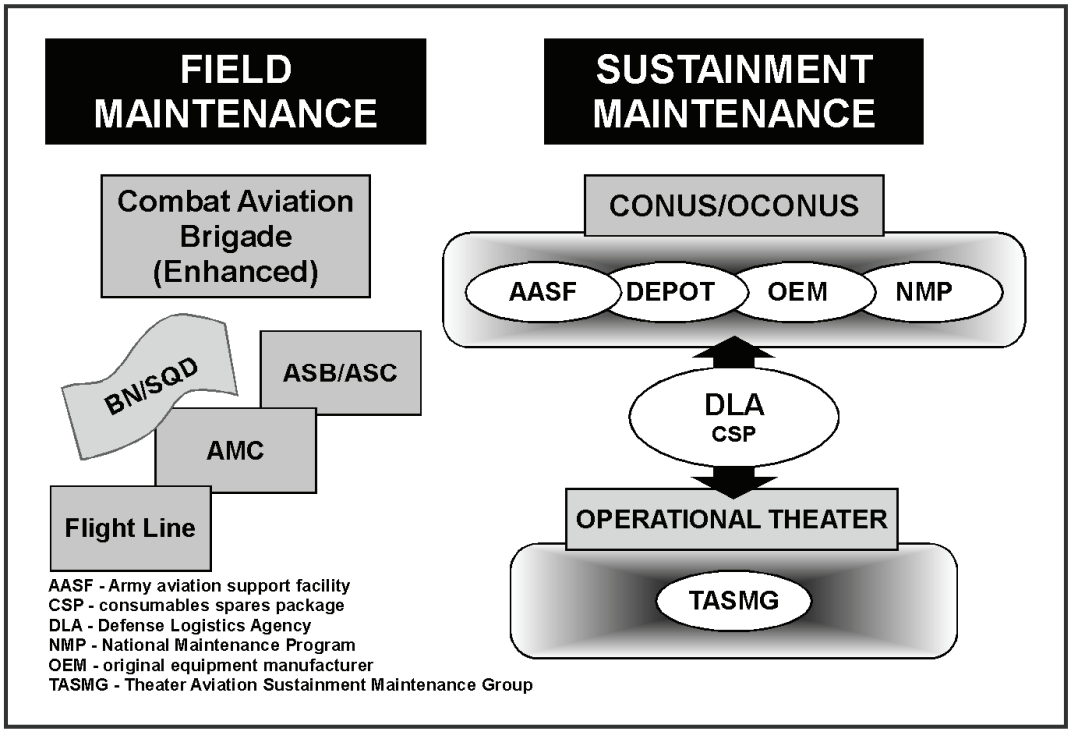


Figure 4-1. Two-level aviation maintenance and sustainment

Scheduled Maintenance

4-9. Commanders avoid situations that cause an excessive number of aircraft requiring scheduled maintenance at the same time and situations in which scheduled maintenance must be over flown. All imminent scheduled maintenance should be accomplished before deployment or initiation of surge operations. Refer to FM 3-04.500 for further information concerning scheduled maintenance flow.

Phase Maintenance

4-10. Ongoing operations, training exercises, and deployments can have a major impact on readiness (for example, flying too many aircraft into scheduled maintenance at a critical time). Operating tempo, deployments, training, and availability of resources (tools, maintenance personnel, repair parts, special equipment) must be considered when planning phase maintenance inspections.

Unscheduled Maintenance

4-11. Unscheduled maintenance or repair is generated by premature or unexpected malfunction, improper operation, or battlefield damage. Maintenance support teams (MSTs) should be identified prior to missions and assigned scheduled shifts to quickly react to unscheduled maintenance requirements, ensuring aircraft availability for follow-on missions.

LOGISTICS

4-12. It is essential for all leaders, not just logisticians, to understand the fundamentals for supporting military operations. By understanding how the logistician is trained, manned, and equipped for sustainment operations, the supported commander will know what to expect. The following paragraphs discuss logistics characteristics and methods of resupply.

CHARACTERISTICS

4-13. Historically, success is dependent on unity of effort between the initial operation and its sustainment operations. The commander succeeds/fails by how well logistics operators in the operational environment understand and adhere to logistics characteristics. Logistics (sustainment) characteristics are—

- Responsiveness.
- Simplicity.
- Flexibility.
- Attainability.
- Sustainability.
- Survivability.
- Economy.
- Integration.

A successful commander emphasizes accurate and timely reporting and incorporates logistics leaders into the planning and preparing process prior to execution.

METHODS OF DISTRIBUTION

4-14. Logistics units distribute supplies to using units by different methods (see table 4-1).

Table 4-1. Methods of distribution

Methods	*Characteristics*
Push System	Initial go-to-war system. Initial quantities based on strength data and historical demand.
Supply Point	Supplying unit issues from a supply point to receiving unit. Receiving unit is responsible for transportation in moving supplies from supply point to unit area.
Unit	Supplying unit delivers supplies to receiving unit. Prevalent design capability of modularity for logistics units. Used by ASB. Army's doctrine for distribution-based logistics.
Throughput	Shipments bypass one or more echelons in the supply chain. Reduces handling and speeds delivery forward. More responsive to user needs. Efficient use of transportation assets. Reduces exposure to pilferage and damage.

SUPPLY OPERATIONS

4-15. The battalion coordinates and requisitions supplies for companies. The supply sergeant obtains and delivers supplies. Some items are handled internally, while coordination is made with the battalion S-4 for transportation assets (internal/external) to deliver bulky items (see table 4-2 for classes of supply).

Table 4-2. Classes of supply

Classes	*Provisions*
Class I*	Subsistence, including free health and welfare items.
Class II	Clothing, individual equipment, tentage, tool sets and kits, hand tools, administrative, and housekeeping supplies and equipment (including maps). Includes items of equipment other than major items, prescribed in authorization/allowance tables and items of supply (not including repair parts).
Class III*	Petroleum, oils, and lubricants (POL), petroleum and solid fuels, including bulk and packaged fuels, lubricating oils and lubricants, petroleum specialty products, coal, and related products.
Class IV	Construction materials, including installed equipment, and all fortification/barrier materiels.
Class V*	Ammunition of all types (including chemical, radiological, and special weapons), bombs, explosives, mines, detonators, pyrotechnics, missiles, rockets, propellants, and other associated items.
Class VI	Personal demand items (nonmilitary sales items).
Class VII	Major items: A final combination of end products that is ready for its intended use (principal item) such as aircraft, mobile machine shops, and vehicles.
Class VIII	Medical materiel, including medical particular repair parts.
Class IX/ IX (A)*	Repair parts and components, including kits, assemblies and subassemblies, reparable and nonreparable, required for maintenance support of all equipment.
Class X	Materiel to support nonmilitary programs, such as agricultural and economic development, not included in Classes I through IX.
* Supplies and equipment critical to successful operations	

4-16. To manage unit supply operations, the supply sergeant uses commander's guidance, authorization documents (MTOE, hand receipts, TMs, and FMs) and external supply SOPs (ASB, ASC, or FSC). The battalion SOP provides detailed procedures for requesting, receiving, storing, inventorying, issuing, and turning in supplies and equipment.

4-17. Supply operations involve acquisition, management, receipt, storage, and issuance of all supply classes except class VIII. FM 3-04.500, FM 4-0, JP 4-0, JP 4-03, and FM 10-1 contain additional information.

Class I

4-18. The battalion S-4 requests class I supplies automatically on the daily strength report. Class I ration requests are consolidated by the S-4 section and forwarded to the CAB(E) S-4 or appropriate support area if operating independently. Extra rations usually are not available at distribution points; therefore, ration requests must accurately reflect personnel present for duty including attached personnel. The CAB(E) S-4 section draws rations from the distribution point and issues them to the battalion. Company 1SGs have the added responsibility of ensuring all attached, OPCON, and DS elements within their respective AOs are included in the head count.

Class II

4-19. The supply officer/sergeant uses the Unit Level Logistics System-Supply (ULLS-S4) to request class II supplies and equipment; expendable items such as soap, toilet tissue, and insecticide are distributed during LOGPAC operations. Section leaders and/or PSGs submit requests to the supply officer/sergeant, who then must obtain budget approval from the parent organization S-4 before submitting the ULLS-S4. The items are then distributed to the battalion using supply point distribution. In some cases, the items may be throughput from division or theater to subordinate battalions.

Class III

4-20. Units normally use fuel forecasts to determine bulk POL requirements. The company 1SG submits requests for POL to the parent organization S-4. Battalions consolidate company forecasts and estimate the amount of fuel required based on projected operations, usually for the period covering 72 hours beyond the next day. Battalion S-4s forward requests through the brigade S-4 to the appropriate materiel management center (MMC). Fuel trucks from the ASB return to battalion areas either as a part of the LOGPACs or to refueling points in FARPs.

4-21. Class III bulk for the CAB(E) is delivered by division or corps sustainment brigade assets. The division sustainment brigade can store a one-day supply of class III bulk. The fuel is stored and distributed from collapsible bladders or 5,000-gallon tanker trailers. Class III bulk is normally delivered to the ASB and routinely delivered by the sustainment brigade as far forward as the aviation brigade support area (BSA). However, it may be delivered as far forward as battalion FARPs in certain situations.

Class IV

4-22. Consisting of construction materiels, class IV item are used by battalions for fighting positions, perimeter defense, and access points. Commanders should ensure the SOP specifies vehicle loads for each item. The company supply officer/sergeant requests these items using ULLS-S4.

Class V

4-23. Normally, the S-4 requests ammunition from the appropriate MMC. Ammunition managers use combat loads rather than day of supply (DOS). Combat loads measure the amount of class V a unit can carry into combat on its weapons system. Once the request has been authenticated, the ammunition is distributed to the battalion S-4 by the ASB's DISTRO company.

Required Supply Rate

4-24. Required supply rate (RSR) is the estimated amount of ammunition needed to sustain the operations of a combat force without restrictions for a specific period. RSR is expressed in rounds per weapon per day and is used to state ammunition requirements. The battalion S-3, in conjunction with the S-4, normally formulates the battalion RSR, although it is often adjusted by higher headquarters.

Controlled Supply Rate

4-25. Controlled supply rate (CSR) is the rate of ammunition consumption (expressed in rounds per day per unit, weapon system, or individual) supported for a given period. It is based on ammunition availability, storage facilities, and transportation capabilities. A unit may not exceed its CSR for ammunition without authority from higher headquarters. The battalion S-4 compares the CSR against the RSR; then remedies shortages by requesting more ammunition, suballocating ammunition, cross-leveling, or prioritizing support to subordinate units. The battalion commander establishes CSRs for subordinate units; the company commander ensures company requirements are anticipated, requested, and received.

Basic Load

4-26. Basic load is the quantity of ammunition authorized by the theater commander for wartime purposes and is required to be carried into combat by a unit. The basic load provides the unit with enough ammunition to sustain itself in combat until the unit can be resupplied. The unit basic load (UBL) may not be the appropriate load to conduct operations based on contingencies. Any deviation from the UBL is requested early for approval and resourcing.

Combat Load

4-27. Combat load is the quantity of supplies, such as fuel or ammunition, carried by the combat system or Solider into combat. The commander knows the required combat load for each system and Soldier per individual mission requirement.

Class VI

4-28. Class VI supplies are made available through local procurement, transfer from theater stocks, or requisitioning from the Army and Air Force Exchange Service (AAFES). When a post exchange is not available, the S-1 is responsible for overseeing and submitting class VI requests.

Class VII

4-29. Class VII items are controlled through command channels and managed by the supporting MMC. Each echelon manages requisition, distribution, maintenance, and disposal of these items ensuring visibility and operational readiness. Units report losses of major items through both supply and command channels. Replacement requires coordination among materiel managers, class VII supply units, transporters, maintenance elements, and personnel managers. Class VII items are issued based on battle loss reports a company submits to its parent organization S-4. Each battalion should have a property book officer (PBO) to account for these items, any stay behind equipment (SBE), or other theater issued stock items received in the theater of operations.

Class VIII

4-30. Class VIII items are ordered and distributed through the ASB and the United States Property and Fiscal Office of the state in which the S&S BN is assigned.

Classes IX and IX (A)

4-31. Class IX supplies include repair parts and documents required for equipment maintenance operations. The 1SG coordinates with the ASB supporting repair part requests. The company also obtains repair parts by exchanging reparable parts, including batteries for NVDs and man portable radios.

4-32. Class IX (A) combat spares are used to fill requisitions. If the item is not stocked on the combat spares or is at zero balance, the requisition is passed to the supply support activity (SSA). This SSA fills the request from its authorized stockage list (ASL) stocks or passes the requisition to the MMC. The ground maintenance sections of ASBs maintain the class IX ASL for ground equipment. The ASC maintains the class IX (A) combat spares.

Class X

4-33. Division level or higher provides instructions for request and issue of class X supplies.

ADDITIONAL LOGISTICS CONSIDERATIONS

Standard Army Maintenance System

4-34. This system includes Standard Army Maintenance System (SAMS)-1 and SAMS-2. See FM 3-04.500 for more information.

Standard Army Maintenance System-1

4-35. SAMS-1 enables automated processing of DS/general support (GS) maintenance shop production functions, maintenance control work orders, and key supply functions. Requisitions are prepared automatically and automatic status is received from SARSS-1. SAMS-1 interfaces with other systems such as Unit Level Logistics System (ULLS) and Standard Army Retail Supply System-Objective (SARSS-O). It also provides completed work order data to Logistics Support Activity (LOGSA) for equipment performance and other analyses.

Standard Army Maintenance System-2

4-36. SAMS-2 is an automated maintenance management system used at the FSC and ASB level. It enables monitoring of equipment non mission capable (NMC) status, and controlling and coordinating maintenance actions and repair parts usage to maximize equipment availability. SAMS-2 receives and processes maintenance data to meet information requirements of the manager, and fulfill reporting requirements to customers, higher SAMS-2 sites, and the wholesale maintenance level. Data can be accessed instantly to enable management control, coordination, reports, analysis, and review. SAMS-2 provides maintenance and management information to each level of command from the user to wholesale and DA levels.

Standard Army Maintenance System-Enhanced

4-37. Standard Army Maintenance System-Enhanced (SAMS-E) augments ULLS-G, SAMS-1, and SAMS-2 by incorporating Windows graphical user interface operating systems. This change is a maintenance systems modernization initiative that complies with the Chief of Staff of the Army's "Good Enough" guidance allowing SAMS-E to act as a bridge between current functionality and the enterprise resource planning solution. The following are benefits with SAMS-E:

- Replicates the functional capabilities of current legacy systems, ULLS-G and SAMS-1 and 2.
- Reduces the number of computers and operators on the battlefield.
- Operates in the Windows 2003/XP environment; ULLS-G and SAMS-1 become integrated and utilize the same relational database as SAMS-2.
- Meets requirements of AR 25-2, DODD 8500.1 and Department of Defense Instruction (DODI) 8500.2.
- Enables ordnance corps' two-level maintenance concept.
- Allows improved operational support with its Windows capabilities.

Property Book and Unit Supply Enhanced Program

4-38. The Property Book Unit Supply Enhanced (PBUSE) program provides close to real time, accurate visibility of the unit's property book account operating on the AKO portal. It proves a responsive and efficient means to maintain accountable records for the Army's inventory of property. The previous program only provided snapshots of the account when last updated. Benefits of PBUSE include—

- Replacing the Standard Property Book System-Redesign (SPBS-R) and ULLS-S4.
- Offering total asset visibility of unit-level weapons systems and stocks.
- Using one common platform (light weight Pentium laptop) versus multiple platforms.
- Improving operational support with its web-enabled capabilities (operates on any computer with web connection).
- Providing office automation, e-mail, on-line help and an end user manual, and automated catalog changes.
- Providing support for unit transfer/TF/split operations.
- Using fewer data sources due to the centralized database.

Standard Army Management Information System Architecture

4-39. Standard Army Management Information System (STAMIS) architecture consists of computer hardware and software systems that automate diverse functions based on validated customer requirements. STAMIS facilitates vertical and horizontal flow of logistics and maintenance status information to units Army wide (figure 4-2, page 4-9). See FM 3-04.500 for more information.

Standard Army Retail Supply System-Objective

4-40. The SARSS-O is a STAMIS for retail supply operations and management. The system includes all units and installations (active Army, RC, and NG). SARSS-O provides supply-related data to the Integrated Logistics Analysis Program (ILAP) system. SARSS-O comprises the following integrated systems:

- SARSS-1 at SSA level.
- SARSS-2AD at division and corps sustainment brigade MMC level.
- SARSS-2AC/B at corps and theater MMC levels.
- SARSS-Gateway, formerly known as objective supply capability.

Unit Level Logistics System

4-41. The ULLS consist of software and hardware that automate the logistics system for unit supply, maintenance, and materiel readiness management operations. ULLS prepare unit supply documents, maintenance management records, readiness reports, and property records. ULLS consist of three applications—Unit Level Logistics System-Aviation, (ULLS-A), ULLS-G, and ULLS-S4.

Unit Level Logistics System-Aviation

4-42. ULLS-A enables aviation production control officers to generate and manage unit-level work orders and post their status to the maintenance request register. It also provides quality control officers automated component, inventory, and inspection master files. Production control receives a maintenance master data file updated and supplied from LOGSA.

4-43. The Army Material Status System (AMSS) reporting capability within ULLS-A replaces the manual readiness reporting requirements outlined in AR 700-138. AMSS is the commander's link to monitoring the supply and maintenance posture of the unit.

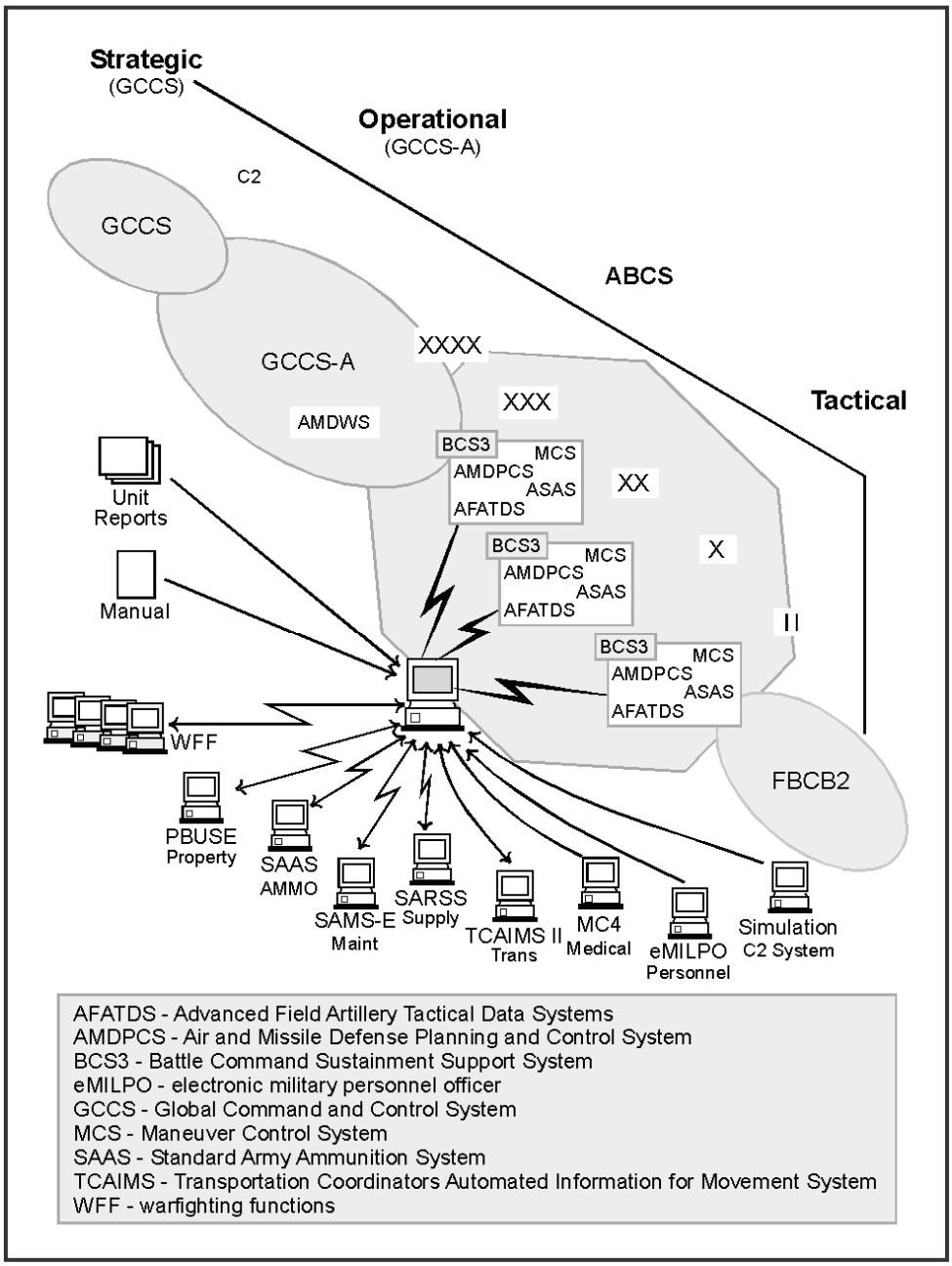


Figure 4-2. Standard Army management information system architecture

Unit Level Logistics Syste-Ground

4-44. ULLS-G is located in units with an organizational maintenance facility. It automates vehicle dispatching, prescribed load list (PLL) management, and TAMMS. The automotive information test interrogator is connected directly to the ULLS-G. ULLS-G is linked to the wholesale supply system through SARSS-Gateway.

Unit Level Logistics System-Supply

4-45. ULLS-S4 is located in unit-level supply rooms and battalion and brigade S-4 sections. ULLS-S4 automates the supply property requisitioning/document register process, hand/sub-hand receipts,

component, budget, and logistics planning activities. It also receives and produces AMSS reports generated by ULLS-G/A systems or another ULLS-S4 system. ULLS-S4 interfaces with SPBS-R, the Standard Army Ammunition System, SARSS-O at the DS level, the Standard Army Intermediate Level Supply System, SARSS-Gateway, and BCS-3.

Integrated Logistics Analysis Program

4-46. The ILAP family of existing and planned management information utilities provides logistics and resource managers with integrated views of cross-functional data. Data are taken from the STAMIS at local, regional, and national levels, and from the Defense Finance and Accounting Service. These data are then integrated and displayed at levels of aggregation appropriate for each management level.

Defense Automatic Addressing System

4-47. The Logistics Information Processing System, maintained by the defense automatic addressing system (DAAS), is DOD's central repository for information on the status of requisitions. It also augments global transportation network in monitoring the status of nonunit cargo shipments.

Aviation Life Support Systems

4-48. Commanders ensure mission-required ALSE is on hand in sufficient quantities and in serviceable condition. To meet the Army's demanding transformation requirements, newer and more complex integrated systems are being fielded. These systems demand better maintenance planning, higher maintenance skills, and dedicated facilities.

4-49. Commanders are required to establish an ALSS maintenance management and training program budget to meet resource requirements. Funding for equipment, supplies, and repair parts is imperative. When preparing the budget, review AR 95-1, common table of allowance (CTA) 8-100, CTA 50-900, CTA 50-909, and applicable MTOEs and tables of distribution and allowances.

Army Aviation Support Facility

4-50. AASFs are located within each state and territory. The AASF performs field-level and limited sustainment-level maintenance. The level of sustainment maintenance is limited by SKOT. The capabilities of the AASF are defined in National Guard Bureau Pamphlet (NGB PAM) 750-2 (Aviation Maintenance). NGB PAM 750-2 can be viewed online at https://gko.ngb.army.mil/Login/welcome.aspx.

Aviation Classification Repair Depot

4-51. AVCRADs are currently located in Connecticut, Mississippi, Missouri, and California. The AVCRAD performs sustainment-level maintenance. The AVCRAD is the ARNG's highest level of aviation maintenance support and supports the AASF and other aviation activities to include OCONUS deployments. The capabilities of the AVCRAD are defined in NGB PAM 750-2.

Maps

4-52. Unit personnel submit requests for unclassified maps to the battalion S-4 and requests for classified maps through the battalion S-2. If a digital topographic support system team is attached, personnel may also request customized AO maps from the main CP.

Support by Host Nation

4-53. Logistics support and transportation may be provided by host nation organizations and facilities. Common classes of supply may be available and obtained from local civilian sources. Items may include barrier and construction materiels, fuel for vehicles, and some food and medical supplies. Requisition and distribution are coordinated through logistics and liaison channels.

SECTION II – AVIATION MAINTENANCE OPERATIONS

4-54. Aviation maintenance platoons within each battalion continue to provide unit-level maintenance. The ASC assigned to the ASB provides primarily intermediate maintenance and secondary backup unit maintenance to CAB(E) battalions.

4-55. Aviation maintenance is performed on a 24-hour basis. The governing concept is to replace forward and repair rearward so units can rapidly return aircraft for operational needs. Emphasis is on component replacement rather than repair. Such replacement requires increased stockage of line replaceable units (LRUs) and quick change assemblies. Damaged or inoperable aircraft requiring time-consuming repair actions are handled in more secure areas toward the rear. See FM 3-04.500 for more information.

MANAGEMENT BALANCE

4-56. The flying hour program and operational readiness rates must be balanced ensuring bank hours (hours remaining per aircraft until phase) are available to meet the operational needs required during daily missions/deployment and/or training. Commanders and maintenance officers evaluate available resources using the problem, people, parts, plan, tools, and time (P4T2) concept and adjust them accordingly. Another tool available to commanders and maintenance officers for managing aircraft maintenance is the flowchart.

FLOWCHART

4-57. The flowchart is a simple but effective method used by maintenance officers. ULLS-A provides a flowchart outlining bank time to assist maintenance managers in scheduling maintenance. The flowchart—

- Prevents an unnecessary backlog of scheduled maintenance inspections under normal conditions.
- Prevents a corresponding sudden surge in requirements for aircraft parts.
- Allows the unit maintenance officer a degree of control over individual aircraft hours flown.
- Provides a graphic depiction of future scheduled maintenance requirements.

OPERATIONAL READINESS RATE

4-58. The ability of an aviation unit to perform its wartime mission depends heavily on its aircraft operational readiness rate. Higher operational readiness rates are a direct result of effective maintenance and logistics management by all aviation maintenance leaders, officers, and technicians. Reducing aircraft downtime proportionally increases aircraft availability providing the battalion commander with mission-ready aircraft (refer to FM 3-04.500).

AIRCRAFT RECOVERY

4-59. The battalion is responsible for coordinating aircraft recovery; the aviation maintenance company is responsible for conducting the recovery. A successful recovery operation is a highly coordinated effort between the owning organization and its ASB support, other supporting units, and the ground element where the operation is to take place. If recovery is beyond the aviation maintenance platoon team's capability, ASB support is requested. Overall, control of recovery rests with the CAB(E) TAC CP. The S&S BN relies on the ASB in accomplishing aircraft recovery. AASFs recover aircraft within their state.

PLANNING CONSIDERATIONS

4-60. Recovery operations and, to a lesser degree, maintenance evacuations can be easily detected and attacked by threat forces. Units must plan command, control, and coordination for recovery operations in advance. Recovery and evacuation procedures must be included in unit SOPs, contingency plans, OPORDs, and AMBs. Recovery personnel must assess the following factors:

- Aircraft identification and type.
- Location of downed aircraft.

- An evaluation of damage, to extent possible, so needed battle damage assessment and repair (BDAR) personnel, equipment, and parts requirements can be estimated.
- Number of people onboard and their status.
- Types of special equipment packages installed on aircraft.
- Tactical situation and proximity to threat.
- Adaptability of the site for insertion of a DART/BDAR team.
- Time available (planning time for aviation maintenance platoon/ASB support preparation and rigging is 30 to 60 minutes, which may vary based on METT-TC).
- Weather.
- Information on crew capability to assist. For example, the aircraft commander may be able to fly the aircraft out, eliminating the need for an aviator.

Courses of Action

4-61. The unit SOP provides guidance to determine which action is appropriate for the situation. The unit can choose to—

- Make combat repairs, defer further maintenance, or return aircraft to service.
- Make repairs for a one-time flight and fly the aircraft to an appropriate maintenance area.
- Rig aircraft for recovery (by ground or air) and arrange for transport.
- Selectively conduct controlled exchange, destroy, or abandon aircraft in accordance with TM 750-244-1-5 and unit SOP.

AERIAL/GROUND RECOVERY

4-62. General procedures are typically covered in unit SOPs. FM 3-04.513 provides detailed procedures for preparing and performing recovery operations for specific aircraft. FM 3.04-120 provides doctrinal guidance on requirements, procedures, and C2 tasks involved in planning, coordinating, and executing airspace control functions. Unless a battalion has attached or assigned UH-60s or CH-47s, it must request them to conduct an aerial recovery. Parallel planning using P4T2 for a ground recovery should occur while any aerial recovery operation is ongoing.

BATTLEFIELD MANAGEMENT OF DAMAGED AIRCRAFT

4-63. BDAR/recovery operations are normally planned and coordinated in conjunction with PR operations. Recovery operations move an aircraft system or component from the battlefield to a maintenance facility. Recovery may require on-site repair for a one-time flight or movement by another aircraft or surface vehicle. In extreme circumstances, only portions of inoperative aircraft may be recovered. An aircraft is cannibalized at a field site only when the combat situation and aircraft condition are such that the aircraft would otherwise be lost to threat forces. See FM 3-04.500 and FM 3-04.513 for more detailed information on aircraft recovery.

Recovery Teams

4-64. S&S BNs prepare for aircraft recovery contingencies by designating a DART and thoroughly coordinating with the supporting ASB or TF maintenance support. The DART always includes a MTP, maintenance shop platoon personnel, aircraft assessor, and technical inspector. The technical inspector may also be the assessor. All members are trained to prepare aircraft for recovery. The team chief ensures rigging equipment and quick-fix BDAR kits (tools, hardware, POL products, repair parts, and TMs) are kept ready for short-notice recovery missions. Aircraft recovery can turn into PR if the tactical situation changes; recovery teams are integrated into the QRF. FM 3-04.513 contains a sample aircraft recovery and evacuation SOP.

SPECIAL ENVIRONMENTS

4-65. CBRN environments are demanding for maintenance planners and commanders. Decontaminating aircraft and crews is manpower intensive and reduces the number of aircraft available to perform missions for a longer period than for maintenance alone. S&S units may have to operate in a CBRN environment based on the HS/HD/antiterror or disaster relief missions. This includes operations involving hazardous chemicals, smoke, and fumes. The S&S BN S-3 ensures coordination has been made with civil authorities. Policies and procedures for these operations are detailed in the SOP.

4-66. CBRN decontamination of aircraft, equipment, and personnel is accomplished before delivery to the maintenance site, if possible. The increased risk associated with night recovery operations must be weighed against the urgency to recover the aircraft considering time, weather, need for security, and tactical situation.

VEHICLE AND GROUND EQUIPMENT MAINTENANCE/RECOVERY

MAINTENANCE SUPPORT STRUCTURE

4-67. Ground maintenance support for each battalion is provided by their organic HHC. Sustainment-level units provide maintenance assistance as required.

Preventive Maintenance Checks and Services

4-68. The operator or crew and organizational maintenance personnel perform unit maintenance including scheduled and unscheduled unit-level maintenance, repair, and PMCS. PMCS maintains operational readiness of equipment through preventive maintenance and early diagnosis of problems.

Field Maintenance

4-69. Field-maintenance units are tailored to the systems of the supported unit. They provide the organizational and DS levels of maintenance with a multicapable mechanic, extensive maintenance expertise, component replacement, and limited component repair.

Sustainment Maintenance

4-70. Sustainment maintenance is characterized by extensive component repair capability. It repairs damaged systems for issue through the supply system as classes II, VII, or IX items. This level of maintenance is normally found at theater or depot level.

RECOVERY PROCEDURES

4-71. The recovery manager coordinates recovery operations with an overall repair effort to best support the commander's priorities and tactical situation. FM 4-30.31 describes technical aspects of vehicle recovery operations.

4-72. When the unit is required to recover but lacks the physical means to recover an item, it requests assistance from the supporting maintenance element. Management of recovery operations is centralized at battalion whenever possible.

4-73. Maintenance personnel repair equipment as far forward as possible within the limits of the tactical situation, amount of damage, and available resources. Recovery vehicles return equipment to the rear no further than necessary, usually to the maintenance collection point of the supporting maintenance unit.

4-74. Recovery missions interfering with TACOPS, or compromising security, are coordinated with the tactical commander.

SUSTAINMENT DURING OPERATIONS

4-75. Sustainment operations occur throughout the AO, not just within the sustainment area or noncontiguous support areas. Sustaining operations determine how fast forces reconstitute and how far forces can exploit success. At the tactical level, sustaining operations establish the tempo of the overall operation.

4-76. S&S BN units must meet the requirements for self defense and security. In supporting HD, natural disaster, and antiterror operations, the S&S BN is required to perform the same force protection and security operations as a unit in combat. In OCONUS operations, battalion assets operate in austere environments in which their organic forces may be the only force protection and security forces available.

4-77. Aviation logistics units must be trained, equipped, and manned to operate in a hostile environment while accomplishing their mission. All commanders must acknowledge the basic concept that as security requirements increase, the ability to conduct sustainment operations decreases. Accepting risk in the sustainment (contiguous spaces) or unassigned areas (noncontiguous spaces) is no longer a valid concept.

4-78. The aviation logistics commander must consider what level of force protection his or her unit can accomplish while still performing sustainment and support operations (for example, destroy Level I, defeat Level II with assistance, and employ a tactical combat force for Level III). This does not presume a 100 percent level of sustainment operations can occur 100 percent of the time. Sustainment may fluctuate depending on the threat level and operations. If the threat is stronger than the ability of the aviation logistics unit to destroy or defeat it, other forces are required to sustain logistics operations at the level desired.

4-79. Aviation logistics leaders must understand the concepts of command as discussed in chapter 2 of this manual. This requires logistics Soldiers gain and sustain competency in executing the individual- and collective-level combat tasks required.

4-80. Maneuver commanders must allocate combat power as an essential part of the sustainment mission. This allows maneuver forces to defend high-risk aviation logistics units and open and maintain, as necessary, ground and aerial lines of communication. Combat unit(s) may escort combat logistics patrols, reinforce a perimeter defense, or occupy an area with sufficient force for a stated period of time to eliminate an air or ground threat.

4-81. The implied task for the aviation logistics commander is to integrate the maneuver commander's forces into his or her security plan. All logistics leaders must also be capable of defending an assigned AO by employing organic assets. As appropriate, the aviation logistics commander should coordinate with the CAB(E) or battalion S-3 for assistance in development of the area defense plan.

SECTION III – UNIT-SPECIFIC MAINTENANCE AND LOGISTICS

FLIGHT COMPANY

4-82. Flight line or company maintenance activities primarily maintain Army aircraft by conducting scheduled maintenance. Unscheduled maintenance is conducted within the unit's capability. Strict and disciplined company operations maintain assigned aircraft according to prescribed policies and procedures. Followed properly, these policies improve overall unit readiness.

4-83. CEs perform aircraft launch and recovery operations, and maintain aircraft logbooks in accordance with Army guidance and unit SOPs. They perform both scheduled and unscheduled unit maintenance to include replacement of major subsystem components, maintenance operational checks, and main and tail rotor vibration analysis. Battalion flight companies receive back-up support from the ASB ASC to perform both scheduled and unscheduled maintenance.

4-84. Leaders must strictly adhere to established standards and maintenance procedures. Assigned flight crews must conduct detailed preflight and postflight inspections according to applicable TMs and ensure all identified deficiencies and malfunctions are promptly and accurately entered into the aircraft logbook.

AVIATION MAINTENANCE PLATOON

4-85. The aviation maintenance platoon is comprised of three modular aviation support sections—a maintenance section and component repair section (see chapter 1 for organizational structure).

4-86. In some situations, normal maintenance procedures must be expedited to meet operational objectives. In such cases, the unit commander may authorize use of aircraft combat maintenance and BDAR procedures. Aircraft maintenance and BDAR is an aviation maintenance platoon responsibility and utilizes backup support from the ASB. This concept uses specialized assessment criteria, repair kits, and trained personnel to return damaged aircraft to the battle as soon as possible. Often, these repairs are only temporary. Permanent repairs may be required when the tactical situation permits. This method is used to meet operational needs; it is not used when the situation allows application of standard methods. For additional information, refer to FM 3-04.513.

Maintenance Section

4-87. The maintenance section provides quick, responsive internal maintenance support and repair within its capability. When assigned to support aircraft managed under the phase maintenance concept, the maintenance section is the primary provider. The aviation maintenance platoon troubleshoots airframe and component malfunctions and performs maintenance and repair actions requiring less than three days to complete. The aviation maintenance platoon is authorized to perform maintenance at unit level, in accordance with the maintenance allocation chart (MAC). The maintenance section operates and maintains aircraft ground support equipment (AGSE) with assistance from the component repair section as necessary, and operates and performs unit-level maintenance on aviation ground power units (AGPUs), generators, and ground support equipment. It also conducts BDAR and recovery within its capability. During operations, most aviation platoons or companies are located forward in the support area.

Component Repair Section

4-88. The component repair section contains assigned aviation repair specialty military occupational specialties to include avionics, engine, hydraulics, pneumatics, and sheet metal repair assets. The component repair section diagnoses airframe and component malfunctions and performs maintenance, and removes and installs LRUs within its capabilities.

Maintenance Support Teams

4-89. The aviation maintenance platoon provides mobile, responsive support through MSTs. MSTs are used to repair aircraft not onsite at the company AA and to prepare aircraft for evacuation. The aviation maintenance platoon leader and production control officer coordinate and schedule maintenance for company aircraft to include aircraft operating forward of the company AA. The members of the forward element must be able to diagnose aircraft damage or serviceability rapidly and accurately. MST operations follow these principles:

- Teams may be used for aircraft, component, avionics, or armament repair.
- When time and situation allow, teams repair onsite rather than evacuate aircraft to the rear.
- Teams must be 100 percent mobile and transported by the fastest means available.
- Teams sent forward must be oriented and equipped for special tasks.

AVIATION SUPPORT BATTALION

4-90. The ASB (figure 4-3, page 4-16) is the primary aviation logistics organization above the aviation battalion. It is organic to the CAB(E) and provides logistics functions necessary to sustain the CAB(E) during operations.

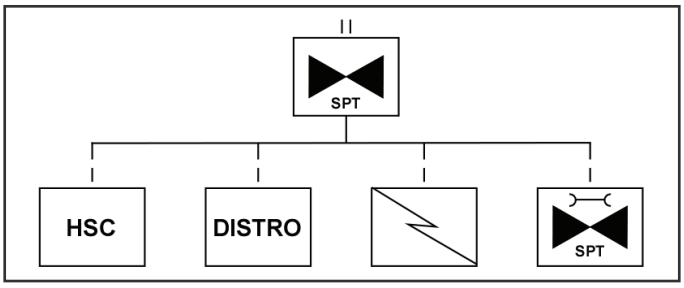


Figure 4-3. Aviation support battalion

4-91. The CAB(E) receives logistics from various elements depending on the logistics organizational structure at the brigade and division sustainment brigade. Brigade and battalion XOs are responsible to their respective commanders for supervision of sustainment operations inserting themselves where appropriate to ensure CAB(E) sustainment mission success. The brigade/battalion S-4 identifies the logistics requirements for the maneuver plan and provides them to the ASB commander as appropriate for the level of command.

MISSION

4-92. The ASB distributes supply classes I, II, III, IV, V, VIII, IX and IX (A). It performs field maintenance and recovery, both air and ground, and possesses HSS assets to conduct FHP Level I enhanced for the CAB(E). It carries logistics stocks exceeding the organic carrying capability of CAB(E) battalions; one DOS for most classes of supply except for classes III (B) and V where it is one combat load for the brigade. The ASB plans and coordinates for the CAB(E)'s logistics requirements in coordination with the brigade S-4 during the brigade's MDMP. The ASB executes replenishment operations for the FSCs and aviation maintenance companies in concert with the operational plan developed by brigade. The ASB is the parent battalion headquarters for the NSC in support of the brigade headquarters.

ORGANIZATION

4-93. The ASB consists of four companies—HSC, DISTRO company, NSC, and ASC. The ASB provides aviation and ground field maintenance, network communications, resupply, and medical support.

Headquarters and Support Company

4-94. The HSC consists of the battalion HSC. The HSC contains a typical battalion staff structure with a command section, S-1 section, consolidated S-2/S-3 section, S-4 section, UMT, S-6 section, and a support operations section. The battalion headquarters provides command, control, and intelligence and administration support for all organic and attached ASB units. The battalion headquarters also plans, directs, and supervises logistics support for the battalions of the CAB(E). The ASB has an organic combat service support automation management office (CSSAMO) that provides support to the entire brigade's automation, including ULLS-A.

4-95. The support operations section is organized to coordinate logistics support and provide distribution management to the CAB(E). The support operations section is manned to accomplish contracting, medical logistics, petroleum, ammunition, movement control, transportation, and mortuary affairs functions.

Support Company Section

4-96. The support company portion of the HSC provides ground maintenance, medical, supply, and food service support for units organic and attached to the ASB.

Maintenance Platoon

4-97. The maintenance platoon is responsible for field-level maintenance of all ASB organic ground equipment.

Medical Platoon

4-98. The medical platoon provides Level I enhanced medical care and is organized into a headquarters section, treatment section, and evacuation section. The platoon also had four ambulances. The brigade HHC and flight battalions retain their organic flight surgeons and medics. The medical platoon provides—

- EMT and acute trauma management for wounded and disease and nonbattle injury patients.
- Sick call services.
- Ground ambulance evacuation from supported units.
- Mass casualty triage and management.
- Limited patient decontamination.

Distribution Company

4-99. The DISTRO company functions as a SSA and provides the CAB(E) a single source for all supply (less class VIII) and transportation operations. The DISTRO company includes a fuel and water platoon, supply platoon, and transportation platoon. The capabilities of this company were formally provided by the main support battalion and corps support group.

Fuel and Water Platoon

4-100. The fuel and water platoon has the capability to store and distribute 105,000 gallons (one DOS) of fuel for the brigade using three load-handling system modular fuel farms. Additionally, it has the capability to set up and run multiple refuel points for brigade aircraft. The fuel and water platoon can purify 30,000 gallons of water daily and store 18,000 gallons of water. The platoon has an organic quartermaster petroleum quality assurance (QA) team assigned to provide QA testing for bulk aviation fuel. The team performs quality evaluation and provides technical assistance for handling, storing, sampling, and identifying petroleum products and their containers for the CAB(E).

Supply Platoon

4-101. The supply platoon has a SSA and ammunition transfer holding point (ATHP) section. This platoon provides classes II, III (P), IV, V, VI, VII, IX and IX (A) direct support to the brigade. The supply platoon receives, stores (limited), and issues classes II, III (P), IV, and IX. It also receives and distributes classes I and VI under distribution-based doctrine of pushing supplies to the FSCs and aviation maintenance companies, and receives and issues class VII as required. The platoon also maintains classes II, III (P), IV and IX ASLs for the brigade. The ATHP section supports the brigade with class V and operates the brigade ATHP.

Transportation Platoon

4-102. The transportation platoon's purpose is to add organic transportation and distribution capability to the brigade and increase mobility of the ASB. The transportation platoon also has the ability to transport class V and class IX to supported FSCs and ASCs.

Network Support Company

4-103. The NSC provides 24-hour network and signal support to the CAB(E). It provides signal elements designed to engineer, install, operate, maintain, and defend the network. It extends defense information systems network services to the brigade and its subordinate elements and provides basic network management capabilities. During military operations, the company executes its technical mission under functional control of the brigade S-6 based on brigade OPORDs or other directives. The S-6 directs actions

and movement of signal elements in support of brigade operations. The NSC commander maintains command authority over the company's assigned operational platoons or attached elements.

Aviation Support Company

4-104. Aircraft maintenance above aviation battalion level is provided by the ASB's ASC. The ASC is comprised of three platoons—the headquarters platoon, aircraft repair platoon (ARP), and component repair platoon (CRP). Modularity within the ASC is based on a contact support team concept and utilizes five shop equipment contact maintenance vehicles per platoon. The ASC is capable of supporting brigade split-based operations. The ASC primarily performs intermediate maintenance in accordance with the MAC; however, it also provides backup unit maintenance in support of aviation battalions. The ASC provides aviation logistics support operations for CAB(E) assets as well as aviation and ground equipment maintenance, in a sustained combat environment, to include UAS and ATC equipment. The ASC also performs production control and QA, conducts maintenance management, and provides MTP functions. Additionally, ASCs have an electro-optics test facility augmentation team assigned. The ASC also conducts BDAR and provides backup support to the aviation maintenance company.

Headquarters Platoon

4-105. The headquarters platoon contains a production control section, QA section, and technical supply section. This platoon provides internal management of repairs, quality of repairs, and logistics support within the battalion. The technical supply section operates logistics STAMIS, requisitions class IX (A) spares, and manages the battalion PLL. Oversight is provided by the battalion AMO assigned to the S-4.

Aircraft Repair Platoon

4-106. The ARP performs maintenance actions that require more than three days to complete (such as phase maintenance and preventative maintenance and services). The ARP performs in-depth troubleshooting and diagnosis of airframe and component malfunctions; fixes and fuels organic battalion equipment, ground vehicles, and AGSE; operates and performs field level maintenance on AGPUs, generators, and ground support equipment; and performs BDAR. The ARP contains modular maintenance contact teams to support battalion-level deployments (five sections—one per battalion). The primary methods of returning aviation systems to a mission capable status for a field-level maintenance activity are through use of repair parts, BDAR, controlled substitution, controlled exchange, and class VII replacement. As the senior logistician in the brigade, the ASB commander tailors the ARP to support the many ASC and CAB(E) missions. Each ARP is assigned to a supported aviation battalion. In addition, component repair organizations may be attached to the ARP to facilitate rapid turnaround of critical sustainment-level off aircraft tasks/components. The ARP is designed to provide on-aircraft and critical off-aircraft aviation field-level maintenance, both unit and intermediate, in accordance with the MAC. The ARP also performs BDAR for all assigned aircraft and UAS in the CAB(E). Long-duration low-frequency services such as phases will be accomplished at the ARP.

Component Repair Platoon

4-107. The CRP repairs LRU components to TM standard and returns them to the user. The CRP fixes NVG systems, ALSE, and avionics-electrical and hydraulic components to TM standard. It has limited capability to fabricate hydraulic lines and performs engine, prop and rotor, and armament and armament sub-system repairs. The CRP also provides limited fabrication capability using welding and machine shops and operates intermediate-level STAMIS. It also repairs and troubleshoots unit-level STAMIS with support from CSSAMO in the HSC.

Appendix A

Deployment-Redeployment Life-Cycle

This appendix addresses deployment of ground vehicles, equipment, and aircraft. The capability to quickly and safely deploy aviation assets CONUS to other CONUS locations, or from forward-deployment sites to another theater of operations, is a critical aspect of U.S. strategy. Units planning, training, and validating their movement plans greatly increase their probability for success.

FUNDAMENTALS

A-1. S&S BNs may be required to move from any location to railheads, sea ports of embarkation (SPOEs), or aerial ports of embarkation (APOEs) where they will be transported to the theater of operations. Movement to the SPOE or APOE may involve a combination of modes. If possible, aircraft are flown to the port, while vehicles, depending on distance and time available, may convoy or be shipped via rail or air. Units must also prepare to self-deploy aircraft, limited personnel, and selected equipment to almost anywhere in the world.

UNIT MOVEMENT PERSONNEL

A-2. Unit movement personnel develop SOPs and load plans. They train personnel, ensure equipment is prepared for the move, and inspect equipment before and after the unit moves. They identify, request, and coordinate additional support to move unit equipment and personnel as required.

SEA AND AIR TRANSPORT

PLANNING AND PREPARATION

A-3. Successful movement depends on detailed planning, SOPs for deployment by various methods, and identification, training, and validation of deployment and load teams. Each team member has specific duties, from preparation at home station to clearance of the port of debarkation (POD) to arrival at destination. The unit must continually validate automated unit equipment lists (AUELs) and time phase deployment lists in preparation for future deployments.

A-4. On receiving the WARNO and time permitting, advance parties proceed to both the port of embarkation (POE) and POD to provide C2 and set conditions for reception of unit personnel and equipment.

A-5. The following references discuss deployment actions and considerations:

- Unit Movement Officer (UMO) Deployment Handbook Reference 97-1, published by the U.S. Army Transportation School. The handbook can be viewed and downloaded at http://www.transchool.eustis.army.mil/UMOD/Guide/index.html.
- FM 3-04.500.
- FM 4-01.011.
- FM 4-01.30.
- FMI 3-35.

A-6. Surface Deployment and Distribution Command Transportation Engineering Agency (SDDCTEA) pamphlets provide specific guidance for preparation of equipment for movement. Download the following pamphlets from http://www.tea.army.mil/:

- SDDCTEA Pamphlet 55-19.
- SDDCTEA Pamphlet 55-20.
- SDDCTEA Pamphlet 55-21.
- SDDCTEA Pamphlet 55-22.
- SDDCTEA Pamphlet 55-23.
- SDDCTEA Pamphlet 55-24.
- SDDCTEA Pamphlet 70-1.
- SDDCTEA Pamphlet 700-2.
- SDDCTEA Pamphlet 700-4.
- SDDCTEA Pamphlet 700-5.
- SDDCTEA Pamphlet 700-6.

A-7. Aircraft preparation, lifting, and tiedown must be in accordance with appropriate preparation for shipment manuals and specific loading manuals for military aircraft (FW air shipments only). Download the following TMs from https://www.logsa.army.mil/pubs.htm:

- TM 1-1520-237-S.
- TM 55-1520-228-10.
- TM 1-1520-241-S.

A-8. Not all contingencies for unit movement can be foreseen due to the wide range of missions and world events that may occur. Units must be aware of battle book plans and war game probable and possible scenarios. Skeleton plans are established to cover contingencies.

A-9. Unit movement personnel are familiar with the POEs available to their organization and mission requirements. Special needs and considerations are addressed as early as possible for each POE. Unit movement personnel—

- Establish and periodically update telephone lists, points of contact, and special requirements for likely POEs.
- Conduct periodic leader reconnaissance of POEs to include members of unit load teams and advance party personnel.
- Identify advance party personnel and define duties.
- Identify OPSEC requirements during movement and embarkation activities.
- Plan and coordinate workspace for personnel during the embarkation phase (empty offices, borrowed tentage from nondeploying units, and rented or borrowed trailers).
- Identify and prepare requests for communications requirements (commercial lines, wire, radio, and cellular phone).
- Determine transportation requirements at POE for movement teams and key personnel (borrowed vehicles and rental cars).
- Plan messing, billeting, MTFs, refueling/defueling points, and special requirements for weapons and ammunition.

DEPLOYMENT

Movement

A-10. On receiving the order, units ferry aircraft and move ground vehicles along preselected routes to the POE. Units performing depot-level maintenance normally operate at these embarkation points. As units arrive, a dedicated sustainment support team assists in preparing vehicles, equipment, and aircraft for deployment. Preparation includes required maintenance and installation of ferry equipment.

A-11. Air and sea deployment modes terminate at the designated aerial port of debarkation (APOD)/sea port of debarkation. Depot or ASB facilities are available there or elsewhere in theater. Personnel at these facilities assist the unit with ferry equipment removal, mission equipment installation, and required maintenance and inspections. They also coordinate immediate backhaul of designated support teams and ferry equipment. On receipt of the deployment order, ASB commanders dispatch preselected facility teams. Deployment headquarters staff members locate command facilities at each termination site to facilitate integration of aircraft, vehicles, and personnel into the theater force structure.

Task Organization

A-12. Arriving elements task organize and reconfigure vehicles and aircraft as appropriate for the mission. Sustainment efforts are prioritized to build capable units and C2 architecture.

Protection

A-13. Aviation forces are vulnerable during the buildup phase when the unit is not at full strength and aircraft and vehicles may not be fully assembled to combat the threat. The security plan must be understood and executed as well as prioritized immediately on arrival at the designated POD. This plan should include passive and active measures to combat air and ground threats.

A-14. Aviation forces are often among the first units to arrive in theater. They may have to provide reconnaissance, security, and attack operations to secure a lodgment before more forces arrive in theater. This situation may require aviation units to conduct immediate and continuous operations from offshore or remote locations while the main body moves into the lodgment area.

A-15. To reduce the risk of fratricide, crew members must be knowledgeable of—

- The ground maneuver plan.
- The commander's intent.
- The composition and location of friendly forces.
- Theater-specific IFF procedures.

Training

A-16. Local area orientations, test flights, or other requirements not executed in advance may be necessary. Commanders should attempt to phase the arrival of personnel—such as IPs, test pilots, and key leaders—before the unit's main body arrives. If units are already present in country, key personnel deploy as early as possible to train with those units. The advance party is briefed on requirements and plan for their execution, so they can identify and coordinate required external support.

A-17. Acclimation training may be required. Many units moving from one environmental extreme to another need a period of adjustment to the new climate. The unit commander arranges training and conditioning to accelerate acclimation.

A-18. Most deployments involve operating in a joint or multinational environment. Early-arriving units may be able to schedule training with other services. Liaison elements from the S-3 shop are designated to ensure smooth coordination.

SELF-DEPLOYMENT

PLANNING CONSIDERATIONS

A-19. Self-deployment is usually an alternative method to rapidly move aircraft; however, it is the most likely mode for S&S BNs within the homeland area of responsibility (AOR) or state boundaries. The unit considers the following factors when planning self-deployments:

- Securing departure, flight routes, and arrival points prior to movement.
- Establishing proper facilities, personnel, equipment, and supplies at the destination ensuring quick transition to operations.

- Prepositioning ground support teams at stopover points along self-deployment flight routes. Ground support teams include personnel, equipment, and repair parts to provide limited services (POL products, supply, ammunition, HSS, communications, weather forecasting, and flight planning).
- Avoiding self-deployment over large bodies of water except in an emergency when other methods are not available. Overwater operations require extensive risk management; crewmembers must be trained and proficient with specialized ALSE and emergency procedures. For extensive legs of flight overwater, plans should include naval assets along the flight route to provide intermediate fuel stops or SAR.
- Minimizing deploying troops on self-deploying aircraft. Available space is typically used to accommodate those supplies, tools, parts, survival equipment, and limited support personnel necessary to make flights self-sustaining during the deployment.
- Coordinating alternative transport of some weapon systems, equipment, and baggage for aircraft self-deploying over long distances.
- Coordinating attack reconnaissance aircraft (or any aircraft without cargo capability) to travel with lift assets carrying emergency supplies, maintenance equipment and personnel, and backup aircrews in case of an unscheduled landing.
- Ensuring aircrews are familiar with established downed aircrew and aircraft recovery procedures.

Personnel

A-20. Aircrews and passengers may be required to obtain passports and visas for each country of intended landing. The mission may require the need for crew members or other support personnel with specific foreign language proficiency for those countries in which refueling or extended stopovers are planned.

A-21. Extensive distances may require aircrews to fly many hours. The challenge is ensuring crews are able to conduct operational missions when they arrive in theater. Commanders adjust work and rest schedules before and during deployment. Commanders must plan to rotate crews through pilot duties whenever possible. Deploying units may assist by carrying backup crews from nondeploying units on CH-47 and UH-60 aircraft.

Intelligence

A-22. Units obtain threat intelligence information for those countries to be overflown and where landings are planned. Terrorist threats, CI, and specific force protection concerns are important to aircrews for planned and potential stops. Routes into possible hostile airspace should be avoided. If unavoidable, aircraft must be escorted.

Training

A-23. Commanders must place emphasis on predeployment training. This training includes water survival, ALSE functions, fuel system management, high gross-weight operations, International Civil Aviation Organization flight planning, navigation equipment, communication requirements, shipboard operations, and rescue operations.

A-24. En route and destination environmental considerations—such as high altitude, mountainous and jungle terrain, and overwater flight—are considered. Crews must be trained for survival and in the use of special equipment required for each environment.

A-25. Theater-specific ROE, status-of-forces agreements, local customs, language training, and OPSEC requirements that can be anticipated should be performed at home station, if possible.

Logistics

A-26. Self-deploying and supporting units request and coordinate maintenance and crew-rest facilities, fuel, transportation, security, and messing for stopover-point teams and self-deploying aircrews. If U.S. ground support teams are not available, units coordinate with friendly nations to provide required services. The civil affairs staff officer (S-9) is the point of contact for staff officers who deal with host nations. If no S-9 is assigned, the S-3 performs this function.

A-27. When aviation units deploy to destinations lacking fixed-base facilities, prepositioned ground support teams perform those functions. S-4s of self-deploying and supporting units are responsible for logistics requirements along the self-deployment route and at the destination. Aviation maintenance officers organize a maintenance support operation to prepare aircraft for self-deployment and meet maintenance requirements along the route and on arrival at the destination.

A-28. Other important logistics considerations include—

- Staff members verify the availability, quantity, and type of fuel at en route fuel stops, rather than depending solely on DOD FLIPs.
- Contracting officers or class A agents, if required at stopover sites, should be members of the advance party.
- The unit issues appropriate survival equipment and clothing for climates encountered on the flight route.
- Movement planners, logisticians, and maintenance personnel facilitate mission readiness by carefully wargaming the arrival of units and equipment into the theater.

AIRCREW MISSION PLANNING

A-29. ADIZ procedures, as well as international interception signals, must be clearly understood by all aircrew members.

A-30. If applicable, all aircrew members must obtain and understand approved international clearances before departure. Both the SP and TACOPS officer provide assistance in disseminating the SPINS/ACO/APG.

Flight Organization and Aircraft Configuration

A-31. Each departing flight must contain multiple aircraft and be self-sustaining in terms of food, water, limited maintenance capability, and force protection. Aircraft with limited cargo capacity may require task organization with UH-60s or CH-47s. USAF or naval support is essential for downed aircrew recovery. Ideally, an escort PR aircraft is assigned. Without escort, each flight should include at least two aircraft with rescue hoists. The following are also important to consider:

- Maintenance personnel and MTPs are included in each flight and/or are prepositioned at various planned stopover locations.
- Depending on aircraft type and space available, a maintenance support package might include an auxiliary fuel system, tow bars, packaged POL, limited spare parts, mechanic's toolbox, and tug or tow vehicle.

Communications

A-32. Units must—

- Coordinate frequencies for internal flight-following throughout movement.
- Coordinate and verify compatibility of specific frequencies for supporting naval vessels and PR elements.
- Take SATCOM sets if available; SATCOM enables each flight to communicate its status to home station and the theater of operations.
- Coordinate and deconflict frequencies for overflight of international/host nation airspace.

- Equip advance parties with communication equipment and flight frequencies for arrival at stopover points and the POD.
- Coordinate and verify compatibility of specific frequencies for joint surveillance target attack radar system or Airborne Warning and Control System (AWACS) monitoring aircraft movement within a particular theater of operations.
- Coordinate for proper SPINS/ACO.

Equipment

A-33. Survival gear (vests, kits, and radios), rafts, rescue hoists, and food and water are essential mission equipment. Units maintain a critical equipment list at home station for planning considerations. Each flight should have multiple aircraft with extra survival equipment that can be dropped to downed crew members.

Weapons

A-34. Individual and crew-served weapons should normally remain out of sight during flight and ground operations; however, they should be loaded but not armed to assist with protection from possible sudden engagements. The controlling headquarters issues ROE when deploying units carry weapons and ammunition.

Appendix B

Aircraft Survivability

Currently, S&S BN aircraft are not equipped with ASE. This section discusses aircraft survivability information pertaining to threat systems that may target aviation assets. Aircraft survivability is a primary concern throughout planning and mission execution. Army aircrews operate in a hazardous environment of highly lethal AD threats. These systems include radar, IR, optical/electro-optical (EO), laser, and directed-energy weapons (DEWs). Proper use of survival techniques, combined with careful route planning and movement techniques, greatly reduces the threat's ability to effectively engage Army helicopters.

THREAT WEAPON SENSORS

B-1. The four major types of threat weapon sensors are radar, IR, DEW, and EO. These must be man-portable or transportable by land, sea, or aerial platforms. Actual sensor type and guidance packages for each threat should be determined and its inherent capabilities and limitations understood.

RADAR

B-2. Direct-threat radar weapons require LOS to hit the target. These radar weapons are either fire-controlled antiaircraft artillery (AAA) or, for missile systems, command-controlled semiactive radar homing, active-radar homing, track via missile, or ground-aided seeker. Radar weapons must detect, acquire, track, launch, guide (or fire a ballistic solution), and assess damage. Radar systems have trouble detecting targets with surrounding ground clutter. To better detect targets from ground clutter, radar systems can identify movement using a moving target indicator, Doppler (continuous-wave radar), or pulse Doppler. Some modern radar systems can and do track not only the movement of aircraft but also the rotor blades. Modern radar systems also cancel blind speeds (also called a Doppler notch). Even with older radar systems, aircraft had difficulty maintaining a constant speed and angle to or from one radar. It is impossible to be in Doppler notch of multiple radars.

INFRARED

B-3. All IR direct-threat weapons require LOS to be established before launch; the in-flight missile must maintain LOS with the target until impact or detonation by the proximity fuse. IR missiles require the operator to visually detect the target and energize the seeker before sensor acquisition. The operator must track the target with the seeker caged to the LOS until it is determined the seeker is tracking the target and not background objects—such as natural or manmade objects to include vehicles or the sun or energy of the sun reflected off clouds. The IR sensor is also susceptible to atmospheric conditions (haze or humidity), the signature of the aircraft and its background, flares, decoys, and jamming. Generally, IR systems are difficult to—

- Detect before launch (passive sensor).
- Predict location (portability).
- Respond to (short time of flight after launch).

LASER AND DIRECTED-ENERGY WEAPONS

B-4. Laser weapons and DEWs are two distinct categories—laser-guided or laser-aided weapons and pure laser/DEW. Laser-guided or laser-aided weapons use laser for ranging, tracking, or guiding functions for conventional explosive missiles or projectiles. Pure laser weapons/DEWs use laser and other forms of DEW to inflict damage to aircraft, its sensors, or the aircrews. Laser weapons/DEWs are of short duration and hard to detect, decoy, jam, and disable. They rely on LOS targeting, are susceptible to atmospheric conditions, and have a limited range.

OPTICAL/ELECTRO-OPTICAL

B-5. Optical/EO sensors are used as either a primary or secondary sensor for all weapon systems. Although they rely on LOS, they are, with very few exceptions, completely passive. They are limited by human eyes, atmospheric conditions, distance, jitter, and in many cases, darkness. The optical/EO sensors are most difficult to detect, can seldom be decoyed, and can be jammed in the sense of obscurants but, when located, hard to kill.

OPERATIONAL EMPLOYMENT CONSIDERATIONS

B-6. Aircraft survivability techniques must be included throughout mission planning, rehearsal, execution, and recovery operations. Intelligence drives operations, and mission planning begins with receipt of situation and mission and continues through execution and after-action review. From receipt of threat situation and mission, it is important to plan and integrate aircraft survivability functions.

COMPOSITE RISK MANAGEMENT

B-7. The S&S BN utilizes risk management to increase aircraft survivability. The following information mitigates risk and allows the commander to determine if aircraft are capable of performing requested missions based on the threat. S&S BN aircraft are not currently equipped with ASE making information more critical in determining acceptance or refusal of missions.

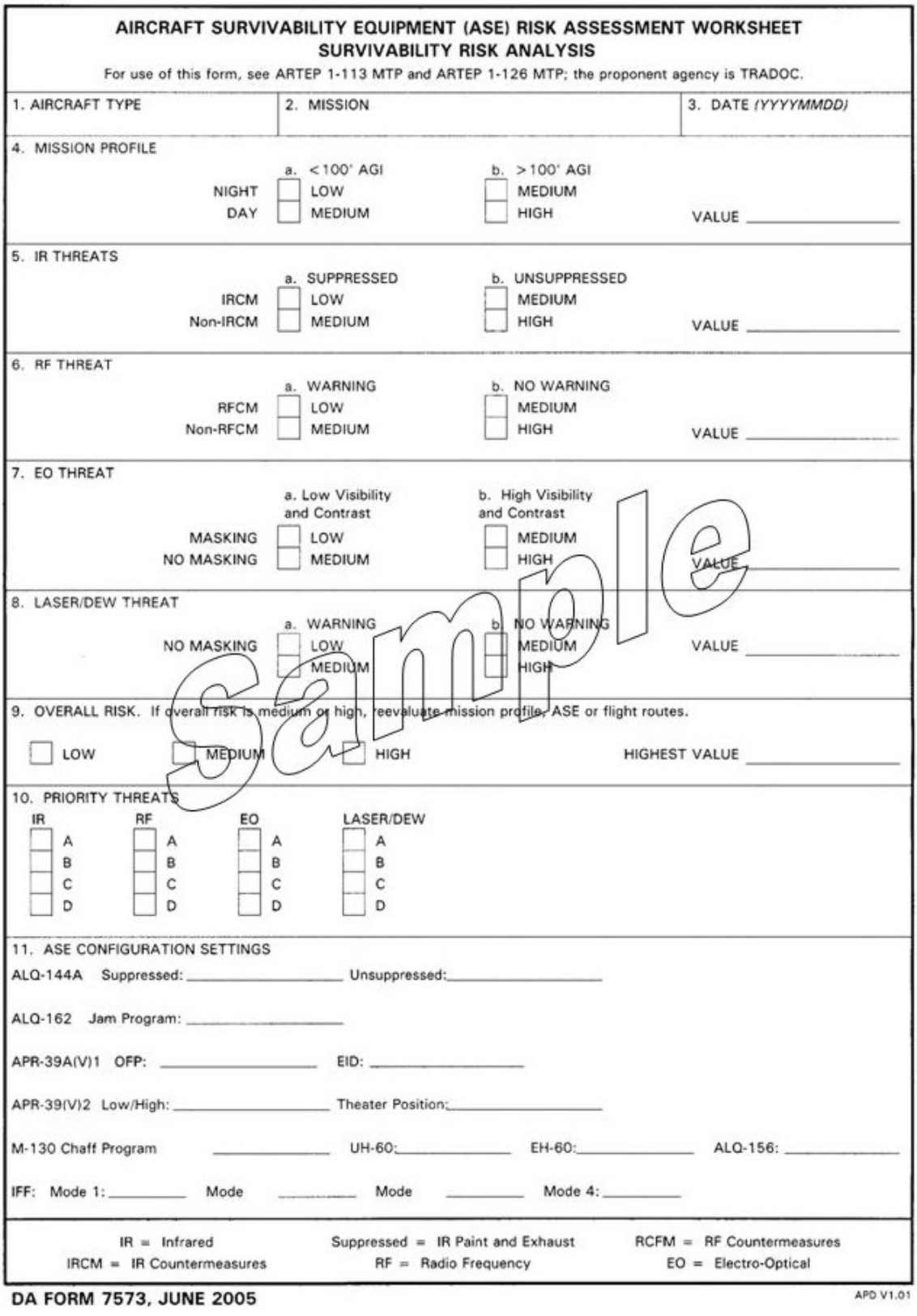
Identifying Risk

B-8. To perform a thorough risk assessment, detailed information regarding threat system capabilities and operating procedures, tactics, and locations must be analyzed to determine the threat's advantages or disadvantages in EW. Capabilities and limitations of friendly EW systems are compared to the threat's risk level associated with the mission. S-2s and TACOPS officers identify the following threats for companies:

- Radar.
- Radio frequency (RF).
- IR.
- Laser.
- Optical/EO.

Assessing Risk

B-9. Risk level is determined based on threat, ASE limitations, and mission as shown in figure B-1, page B-3. The highest risk assessment is used to determine overall risk to the mission. If risk due to IR threats is high, then overall mission risk would continue to be high risk. The risk assessment worksheet is used to determine what is causing the highest risks so controls can be developed to reduce those risks. The S&S BN is hampered due to the lack of ASE-equipped aircraft and therefore may not be able to conduct all missions assigned. Commanders must inform higher headquarters of this mission limitation so it can be included in mission planning.



AIRCRAFT SURVIVABILITY EQUIPMENT (ASE) RISK ASSESSMENT WORKSHEET
SURVIVABILITY RISK ANALYSIS

For use of this form, see ARTEP 1-113 MTP and ARTEP 1-126 MTP; the proponent agency is TRADOC.

1. AIRCRAFT TYPE	2. MISSION	3. DATE *(YYYYMMDD)*

4. MISSION PROFILE

	a. <100' AGI	b. >100' AGI
NIGHT	☐ LOW	☐ MEDIUM
DAY	☐ MEDIUM	☐ HIGH

VALUE _____

5. IR THREATS

	a. SUPPRESSED	b. UNSUPPRESSED
IRCM	☐ LOW	☐ MEDIUM
Non-IRCM	☐ MEDIUM	☐ HIGH

VALUE _____

6. RF THREAT

	a. WARNING	b. NO WARNING
RFCM	☐ LOW	☐ MEDIUM
Non-RFCM	☐ MEDIUM	☐ HIGH

VALUE _____

7. EO THREAT

	a. Low Visibility and Contrast	b. High Visibility and Contrast
MASKING	☐ LOW	☐ MEDIUM
NO MASKING	☐ MEDIUM	☐ HIGH

VALUE _____

8. LASER/DEW THREAT

	a. WARNING	b. NO WARNING
NO MASKING	☐ LOW	☐ MEDIUM
	☐ MEDIUM	☐ HIGH

VALUE _____

9. OVERALL RISK. If overall risk is medium or high, reevaluate mission profile, ASE or flight routes.

☐ LOW ☐ MEDIUM ☐ HIGH HIGHEST VALUE _____

10. PRIORITY THREATS

IR	RF	EO	LASER/DEW
☐ A	☐ A	☐ A	☐ A
☐ B	☐ B	☐ B	☐ B
☐ C	☐ C	☐ C	☐ C
☐ D	☐ D	☐ D	☐ D

11. ASE CONFIGURATION SETTINGS

ALQ-144A Suppressed: _____ Unsuppressed: _____

ALQ-162 Jam Program: _____

APR-39A(V)1 OFP: _____ EID: _____

APR-39(V)2 Low/High: _____ Theater Position: _____

M-130 Chaff Program _____ UH-60: _____ EH-60: _____ ALQ-156: _____

IFF: Mode 1: _____ Mode _____ Mode _____ Mode 4: _____

IR = Infrared
IRCM = IR Countermeasures
Suppressed = IR Paint and Exhaust
RF = Radio Frequency
RCFM = RF Countermeasures
EO = Electro-Optical

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Sample

Figure B-1. Sample aircraft survivability equipment risk assessment worksheet

Develop Controls

B-10. Threats that are highly lethal and not countered by ASE are identified, and PIRs are developed and submitted by the S-2 to higher headquarters. Additional requirements include—

- Briefing the S-3 and higher commander on any medium or high risks associated with executing the planned mission.
- Making recommendations to the higher commander to reduce risk including:
  - Adjusting routes or formations.
  - Adjusting time of mission.
  - Employing artillery and smoke to reduce threat to aircraft.
  - Requesting joint EW assets.

B-11. Units must apply risk reduction techniques to minimize risk and enhance probability of survival. These measures include—

- Planning mission time earlier or later to take advantage of night operations.
- Requesting escort aircraft to suppress threats.
- Preparing LZ/PZs with indirect fires.
- Altering flight routes to avoid known AD areas.
- Employing a deception plan to include false insertions.
- Altering formation size to reduce aircraft signature.

Implement Controls

B-12. Commanders and aircrews must take an active role in reducing risks by implementing controls and supervising their implementation. This is accomplished through the following:

- Commanders ensure threat ASE/EW considerations are briefed to all aircrews and maintenance personnel.
- Aircrews ensure IFF codes are activated and deactivated at proper times and locations during mission execution.
- Commanders collect debriefings from aircrews during AARs.

MISSION BRIEF

B-13. The ASE/EW mission briefing disseminates information and instructions to aircrews prior to the mission. At least 4 hours prior to mission execution, the AMC requests an electronic intelligence update. The briefing alerts aircrews to risks associated with threats and reviews tactics specific to the mission. These tactics include evasive maneuvers, actions on contact, multiship breakup and reformation procedures, and ROE. Figure B-2, page B-5, illustrates an example of ASE/EW mission brief format.

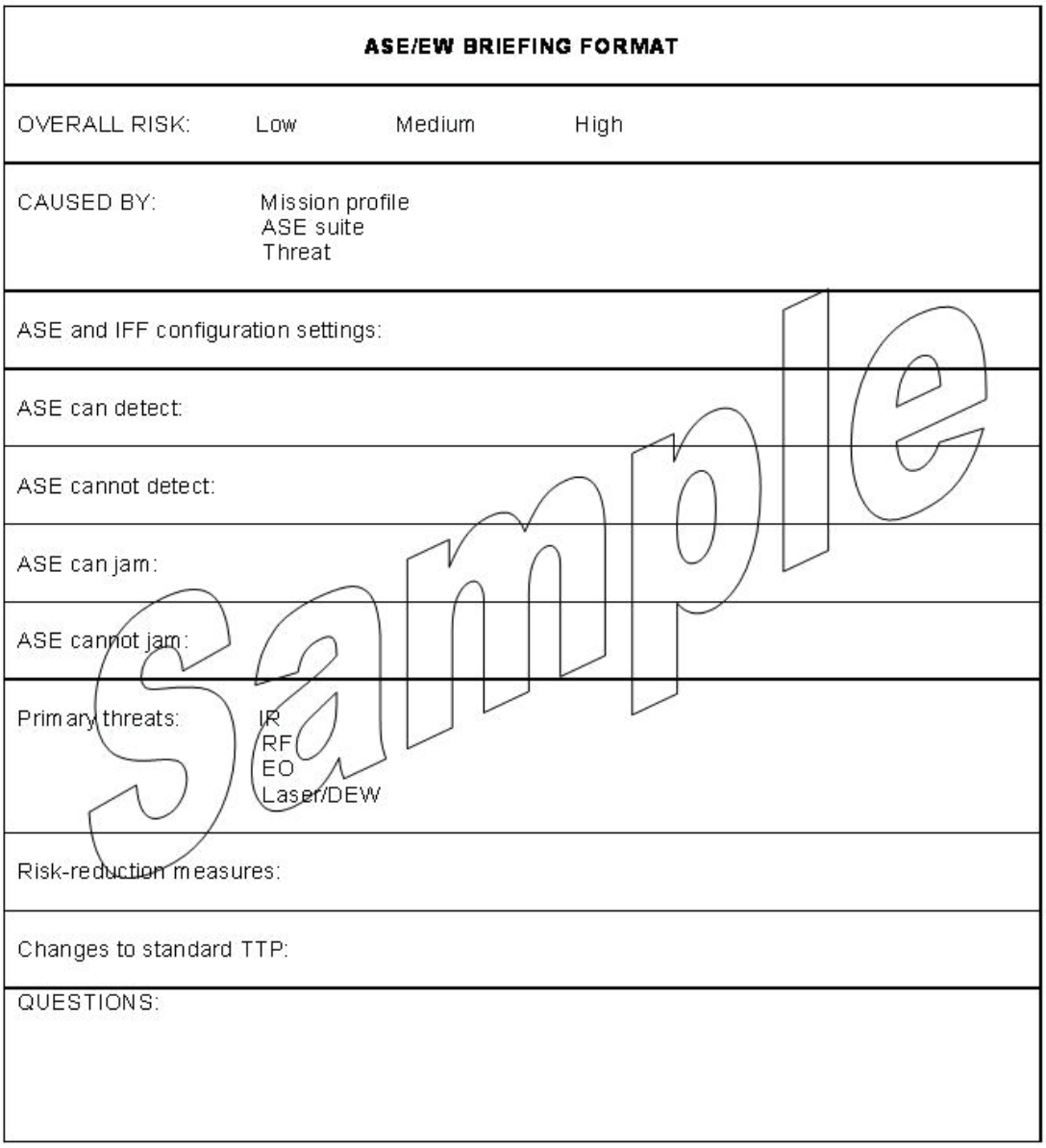
Mission Execution

B-14. During conduct of the mission, some actions must be performed without delay. When visual indications of a gun or missile are fired at the aircraft, the aircrew has seconds to perform an action that prevents the aircraft from being impacted. Three distinct parts of reacting to threat engagements are—

- Indication (determine immediate action and deploy to cover).
- Perform evasive maneuver and expend countermeasures (if applicable) if masking terrain is not readily available.
- Perform actions on contact (decision to continue or abort mission).

Crew Coordination

B-15. Crew coordination must be rehearsed to perform evasive maneuvers. Standardized terminology, such as “missile three o’clock break right” or “break left,” should be used to avoid confusion.



ASE/EW BRIEFING FORMAT			
OVERALL RISK:	Low	Medium	High
CAUSED BY:	Mission profile ASE suite Threat		
ASE and IFF configuration settings:			
ASE can detect:			
ASE cannot detect:			
ASE can jam:			
ASE cannot jam:			
Primary threats:	IR RF EO Laser/DEW		
Risk-reduction measures:			
Changes to standard TTP:			
QUESTIONS:			

Sample

Figure B-2. Sample aircraft survivability equipment/electronic warfare mission brief format

Multiship Considerations

B-16. Formations and spacing intervals should be selected to provide all aircraft the maneuver space necessary to evade hostile fire. Standardized terminology, such as “Team 2 break right, missile” or “Team 1, tracers, three o’clock, break left”, should be used to alert the flight to all actions. Briefings should include evasive formation breakup procedures and how to reestablish formation after breaking engagement. (Refer to FM 3-04.203)

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Appendix C

Army Aviation Air-Ground Integration

The S&S BN must be aware of air-ground integration. This includes when operating CONUS during HS/HD, natural disaster, and antiterrorism operations with the Army, other services, and civil authorities as well as OCONUS while supporting a host nation. Operations are integrated and synchronized so air and ground forces can simultaneously work in the AO to achieve a common objective. During such missions, the assistance of other services or coalition partners and attack reconnaissance, assault, and cargo helicopters may also be required.

SECTION I – COMBAT IDENTIFICATION

C-1. Combat identification is the process of attaining an accurate characterization of detected objects in the operational environment. Key terms and meanings are depicted in table C-1.

Table C-1. Key terms and meaning

Term	*Meaning*
Detection	The ability to classify a target as having military interest.
Recognition	The ability to classify a target by category such as wheeled, armored personnel carrier (APC)/infantry fighting vehicle, AD, or artillery.
Identification	The ability to determine the actual type of vehicle such as M1 Abrams, ZSU-23-4, BMP-2, M-109.
IR Crossover	TIS detects the difference in the emission of heat objects. On a hot day, the ground may reflect or emit more heat than the suspected target. In this case, the environment will be “hot” and the target will be “cool”. As the air cools at night, the target may lose or emit heat at a lower rate than the surrounding environment. At some point, the emission of heat from both the target and the surrounding environment may be equal. This is IR crossover and makes target acquisition/detection difficult to impossible. IR crossover occurs most often when the environment is damp/wet because the water in the air creates a buffer in the emissivity of objects. This limitation is present in all systems that use TIS for target acquisition.

GROUND UNIT AND AVIATION TASK FORCE COORDINATION

C-2. Ground maneuver commanders must understand that aviation forces can provide a significant advantage during operations. In addition, ground maneuver planners must understand the unique capabilities of Army aviation require specialized planning and coordination. Army aviation forces must be fully integrated in MDMP to ensure effective combined arms employment. Effective combined arms employment also requires aviation and ground maneuver forces synchronize their operations by operating from a common perspective. See FM 3-06.11 for additional information.

GROUND MANEUVER UNIT SUPPORT

C-3. Ground units may receive support from a variety of attack reconnaissance helicopters. Attack reconnaissance helicopters can provide area fire to suppress targets and precision fire to destroy specific targets or breach structures. Attack reconnaissance helicopters can also assist with ISR and communications using their advanced suite of sensors and radios.

C-4. Other supporting helicopters, such as the UH-60 and CH-47, may also have weapon systems (7.62-millimeter or .50-caliber machine gun) that can aid in the suppression of threat forces when operating in urban terrain. However, their primary role is to transport personnel, equipment, and supplies to these critical urban areas. Utility and cargo helicopters can provide a distinct advantage by placing personnel and weapon systems at critical locations and times to surprise and overwhelm the threat. Utility and cargo helicopters can also transport needed supplies to urban areas that may be inaccessible to ground transportation.

PLANNING REQUIREMENTS

C-5. The ground maneuver brigade, through their ALO and brigade aviation element (BAE), provides the aviation headquarters necessary information to meet planning requirements. Initial planning and the information to be passed to the aviation headquarters includes the location of the HA, air axis, and route or corridor for entry and exit through the brigade and battalion sector. Other planning requirements may include—

- Establishing a command relationship between the supported unit and supporting aircraft.
- Giving an initial task and purpose to aircrews.
- Giving ABTF current situation estimate (intelligence and operations).
- Reviewing any updates to the joint AC2 structure.
- Passing call sign and frequencies for ground elements.
- Establishing any control measures (recommended HAs, ROZs, LZs, and PZs).

WEAPONS INTEGRATION

ACTIONS EN ROUTE TO THE OBJECTIVE

C-6. The ground maneuver headquarters informs its units when aircraft are inbound. En route to the HA, the AMC contacts the ground maneuver element on the FM command network for a SITREP on threat and friendly forces. A battalion close fight SITREP may consist of the following:

- Threat situation (composition and disposition to include threat to aviation, recent threat contacts, and threats to ground maneuver elements).
- Friendly situation (including any AC2 deconfliction with UAS or indirect fires in vicinity of the operation).
- Recommended routing to the objective.
- Restrictions or constraints.

AVIATION FLIGHT CHECK-IN

C-7. It is essential to positively identify locations of friendly units and supporting aircraft. Aircrews confirm, with each other or wingmen, their positive location. Ground elements must be extremely careful when verifying any position information.

C-8. The aviation flight usually checks in using the command net of the unit having the element in contact or as directed in the mission briefing. Upon initial radio contact, the aviation flight leader executes a check-in. The flight's location may be expressed by grid coordinates or position with respect to a known point or common graphics. At check-in, the flight lead provides the following:

- Initial contact (aircraft present location).
- Flight composition, location, and estimated time en route for arrival at supported unit’s AO.
- Munitions available.
- Station time.
- Night vision capabilities and type—image intensification, thermal, or both.

C-9. The aviation team, if required, selects and occupies a holding or orbit area within FM communications range until required coordination is complete. High-density altitudes may preclude hovering by a fully-loaded aircraft. The AMC informs the ground unit leader of the orbiting pattern or series of positions his or her team will occupy.

C-10. The AMC provides the ground maneuver unit leader with his or her concept for the operation. This briefing may be as simple as relaying direction of aircraft approach or attack route (if supported by attack reconnaissance helicopters) and time required to move to the recommended LZ. On completion of coordination with the lowest unit in contact, the flight departs the holding or orbit area.

POSITIVE LOCATION/TARGET IDENTIFICATION

COMMAND AND CONTROL TECHNIQUES

C-11. C2 techniques effective during air-ground operations with Army aircraft are—

- **The reference point technique** uses a known target reference point (TRP) or an easily recognizable terrain feature.
- **The grid technique** uses grid coordinates to define the point.
- **The sector/terrain technique** uses terrain and graphics available to both air and ground units.
- **The phase line technique** uses graphics available to both air and ground units.

MARKING

C-12. There are various ways to mark a location or target. The effectiveness of vision systems on helicopters compares to those found on ground vehicles. During the day, the vision systems of aircraft allow accurate identification of targets. During periods of reduced visibility, resolution is greatly degraded, requiring additional methods of verification. This situation requires extra efforts from both ground unit and aviation element.

C-13. Some U.S. weapons can kill targets beyond ranges that thermal, optical, and radar acquisition devices can provide positive identification. Both aviation and ground forces may become overloaded with tasks in the heat of battle. Simple positive identification procedures must be established and known to all.

Friendly Positions

C-14. A method of target identification is direction and distance from friendly forces. Friendly forces mark their own positions with IR strobes or tape; NVG lights; smoke; signal panels; body position; meal, ready to eat (MRE) heaters; chemical lights; and mirrors. Marking friendly positions is the least desirable method of target location information and should be used with extreme caution. Marking friendly positions can be a more time-consuming process than directly marking a target and can reveal friendly positions to the enemy.

Threat Positions

C-15. Target marking aids aircrews in locating threat targets for attack. Ground commanders should provide the target mark whenever possible. To be effective, the mark must be timely, accurate, and easily identifiable. Target marks can be confused with other fires on the battlefield, suppression rounds, detonations, and marks on other targets. Although a mark is not mandatory, it assists in aircrew accuracy, enhances SA, and reduces risk of fratricide (see table C-2, page C-4).

Table C-2. Methods of marking friendly and threat positions

Method	*Day*	*Night*	*NVGs*	*NVS*	*Friendly Marks*	*Target Marks*	*Remarks*
Smoke	Go	No Go	Marginal	No Go	Good	Good	Easy ID. May compromise friendly position, obscure target, or warn of FS employment. Placement may be difficult due to terrain, trees, or structures.
Smoke (IR)	Go	Go	Go	No Go	Good	Good	Easy ID. May compromise friendly position, obscure target, or warn of FS employment. Placement may be difficult due to terrain, trees, or structures. Night marking is greatly enhanced by the use of IR reflective smoke.
Illumination, Ground Burst	Go	Go	Go	No Go	NA	Good	Easy ID. May wash out NVDs.
Signal Mirror	Go	No Go	No Go	No Go	Good	NA	Depends on weather and available light. May be lost in reflections from other reflective surfaces (i.e. windshields, windows, or water).
Spot Light	No Go	Go	Go	No Go	Good	Marginal	Highly visible to all. Compromises friendly position and warns of FS employment. Effectiveness depends on degree of ambient lighting.
IR Spot Light	No Go	No Go	Go	No Go	Good	Marginal	Visible to all NVGs. Effectiveness depends on degree of ambient lighting.
IR Laser Pointer (below .4 watts)	No Go	No Go	Go	No Go	Good	Marginal	Effectiveness depends on degree of ambient lighting.
IR Laser Pointer (above .4 watts)	No Go	No Go	Go	No Go	Good	Good	Less effected by ambient light and weather conditions. Highly effective under all but the most highly lit or worst weather conditions. Infrared zoom laser illuminator designator-2 is the current example.
Visual Laser	No Go	Go	Go	No Go	Good	Marginal	Highly visible to all. High risk of compromise. Effective, depending on degree of ambient light.
Laser Designator	Go	Go	No Go	Go	NA	Good	Highly effective with precision-guided munitions. Restrictive laser-acquisition cone and requires LOS to target. May require precoordination of laser codes. Requires precision-guided munition or laser spot tracker equipped.

By Direct Fire

C-16. Direct-fire weapons can deliver a mark. Although this method may be more accurate and timely than an indirect fire mark, its use may be limited by range and the visibility of the weapon's burst effect. Aircraft may be used to deliver a mark. A burst of cannon fire or a single rocket fired to the left or right of the target as a marking round may be an option. This method may alert the threat but permits target verification with reduced risk of fratricide. The preferred method is for aircraft to mark with phosphorous, high-explosive rockets, illumination, or lasers. Ground units may also mark targets with direct fire using tracers, M203 smoke rounds, or other means as coordinated by the unit.

By Indirect Fire

C-17. Artillery or mortar fires are an effective means of assisting aircrews in visually acquiring targets. Before choosing to mark by artillery or mortars, observers should consider the danger of exposing these supporting arms to threat indirect-fire acquisition systems and the additional coordination required. Marking rounds should be delivered as close to target as possible with smoke being the last round. Marking rounds are most effective when delivered within 100 meters of the target, but those within 300 meters are generally effective enough to direct armed aircraft. If the situation requires a precise mark, observers or spotters can adjust marking rounds early ensuring an accurate mark is delivered. This action may, however, alert the threat to an imminent attack.

Backup Marks

C-18. Whenever a mark is provided, a plan for a backup mark should be considered. For example, direct fire may be tasked to deliver the primary mark, while a mortar may be assigned responsibility for the backup mark.

INFRARED MARKING

C-19. IR pointers, as well as other IR devices, can be used to mark targets at night for aircrews using NVGs. Unlike laser designators, these IR devices cannot be used to guide or improve accuracy of aircraft ordnance. IR pointers may expose friendly units to a threat with night-vision capability and should be used with caution. Ground units should initiate IR marks when the aircrew request "SPARKLE" and continue until the aircrew transmits "STOP" or the weapon hits the target.

TARGET MARKING BREVITY LIST

C-20. Table C-3 lists standard brevity terms.

Table C-3. Brevity list

Term	*Meaning*
Blind	Observer has no visual contact with friendly aircraft or ground position. Opposite of VISUAL.
Contact	Observer (1) Has sensor contact at the stated position. (2) Acknowledges sighting of a specified reference point.
No Joy	Aircrew does not have visual contact with the target/bandit/landmark. Opposite of TALLY.
Rope	Observer is circling an IR pointer around an aircraft to identify the friendly ground position.
Snake	Aircrew calls to oscillate an IR pointer about a target.
Sparkle	Observer acknowledges (1) Air-to-surface target marking by IR pointer. (2) Air-to-surface target marking by gunship/FAC-A using incendiary rounds.
Steady	Aircrew calls to stop oscillation of IR pointer.
Stop	Aircrew calls to stop IR illumination of a target.
Tally	Observer acknowledges sighting of a target, aircraft, landmark, or threat position. Opposite of NO JOY.
Visual	Observer is sighting a friendly aircraft or ground position. Opposite of BLIND.

OTHER OPERATIONS

SPECIAL OPERATIONS

C-21. Training at home station with special operations forces (SOF) may not be practical or available. SOF may already be in theater, but their activities may not be published. Commanders must be aware of SOF location and plan for establishment of a communications link with these units to coordinate operations. SOF are well trained in the use of all assets. Their expertise should make coordination with them flow easily, but in some instances, the aviation force leader may have to use emergency coordination measures.

OPERATIONS WITH NONTRADITIONAL FORCES

C-22. Commanders must train their leaders and Soldiers to be flexible and prepared to conduct liaison with and support elements not traditionally included in home station training. These organizations may include the Central Intelligence Agency (CIA), Department of State, DEA, domestic and foreign police agencies, and indigenous forces. General checklists may be developed to address concerns. These other agencies may not be aware of aviation capabilities. LNOs must be ready to advise and assist the supported element.

MISSION TRAINING

C-23. Integration starts at home station with—

- Development of common SOPs among aviation and ground maneuver units.
- Habitual combined training, including battle drills, to help all team elements maintain awareness of locations and needs of other elements.
- Integration of S&S BN units into the ground maneuver unit's STX/field training exercise (FTX).

C-24. Training, procedural standardization, and familiarity of team members accelerates planning and coordination, thereby establishing battle efficiency sooner, and maintains a higher tempo of combat operations. Familiarity and compliance with joint procedures are essential in allowing seamless integration with other services' ground and air units.

C-25. Commanders must insist on a high degree of combined arms training with habitually supporting units. Air and ground units regularly train and execute battle drills together making coordination and reaction in combat instinctive. Although aviation may not be available for every exercise, ground maneuver units need to understand how to effectively integrate all aviation systems in their operations. Commanders can further ensure effective integration into ground maneuver through officer professional development (OPD), noncommissioned officer professional development (NCOPD), and capabilities and limitations briefings with the ground maneuver units.

C-26. When units are unable to create a desired habitual relationship, planning and coordination processes are longer and more detailed. Rehearsals are essential with in-country training exercises accomplished whenever possible. The probability of mistakes is increased unless coordination, planning, and rehearsals are conducted. Commanders must apply risk-management procedures throughout planning and execution.

MISSION PLANNING

C-27. Mission planning encompasses mission training, rehearsal, and execution. During planning, a company analyzes the OPORD using TLP (identifying specified, essential, and implied tasks), visualizes the operational environment at various stages, develops a plan, and prepares the unit to conduct the operation. During split-based operations, platoon and section leaders must utilize these same TLP prior to conducting operations supporting the maneuver commander's intent.

C-28. Training exercises validate planning, training, and rehearsal, while the outcome emphasizes future training placement and focuses sustainment training (figure C-1, page C-7).

C-29. Mission recovery ensures readiness for subsequent missions. Recovery includes munitions reconfiguration, refueling, maintenance, CP movement, and crew changes.

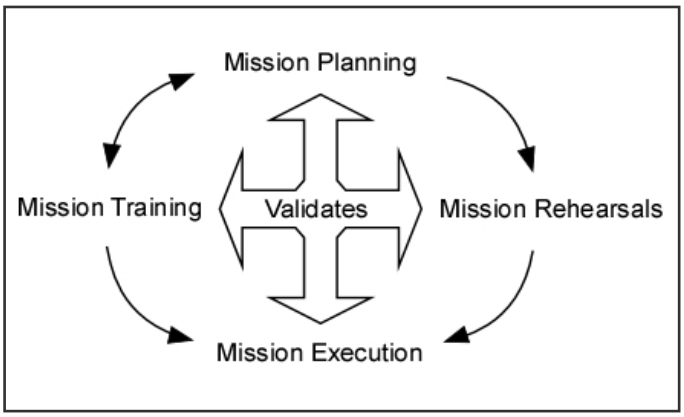


Figure C-1. Mission planning through execution cycle

Minimum Planning Requirements

C-30. The minimum information required by an Army aviation team to ensure accurate and timely support includes—

- Situation including friendly forces' location, threat situation (highlighting known air defense artillery [ADA] threat in the AO), mission request, and tentative LZ coordinates.
- Updating brigade- and battalion-level graphics via maneuver control system, AMPS, or radio communications. Updating critical items (LOA, fire control measures, and maneuver graphics) ensures better integration into the friendly scheme of maneuver.
- Ingress/egress routes into the AO including PPs into sector or zone, and air routes to the HA or LZ.
- Call signs and frequencies of the battalion in contact down to the company in contact. Air-ground coordination must be done on command frequencies to provide SA for all elements involved.
- GPS and SINCGARS time coordination. Care must be taken to ensure all units are operating on the same time schedule. All units should use GPS time that is the most accurate. A common error is for some ground units and aviation operations centers to set SINCGARS time by ANCD/CYZ 10 instead of GPS time. This results in ground and air communication failure due to time/synchronization error.

Digital transmission of information, such as coordinates, is faster and more accurate, if available. Voice communications are necessary to verify information and clarify needs and intentions.

LIAISON WITH THE GROUND MANEUVER FORCE

C-31. The BAE is a planning and coordination cell whose major function is incorporating aviation into the ground commander's scheme of maneuver. The BAE focuses on providing employment advice and initial planning for aviation missions, UAS, airspace planning and coordination, and synchronization with the ALO and fire support coordinator. The BAE also coordinates directly with the CAB(E) or supporting aviation TF for detailed mission planning. Liaison demands on aviation units are reduced by the BAE.

C-32. Although the BAE will conduct many of the functions traditionally performed by LNOs, aviation LNO teams will remain a critical part of the process and must be staffed appropriately. While the members of the BAE work directly for the BCT commander, aviation LNO teams represent the supporting aviation TF at a designated maneuver headquarters only for the duration of a specific operation. Effective employment of LNOs is imperative for coordination and synchronization. Often aviation LNO teams will coordinate with the BAE and then proceed to a supported ground maneuver battalion. An example would be an aviation LNO team in support of an infantry battalion performing an air assault to seize a key piece

of terrain as part of a mechanized BCT scheme of maneuver. Refer to training circular (TC) 1-400 for more information on BAE/liaison operations.

C-33. Aviation LNOs act as skillful representatives for their aviation TFs. The LNO must be capable of changing focus and approach depending on location and who the LNO is supporting at the time. Above all, the LNO must be knowledgeable and mission focused towards the supported unit.

C-34. LNO teams maintain and provide current—

- Aviation unit locations.
- Aircraft/equipment status.
- Crew availability and fighter management cycle status.
- Class III/V status.
- METL training status.
- Continuous updates to the aviation commander and staff on the BCT plan.

DECONFLICTION

C-35. Deconfliction is a continual process for ground, aviation, and other supporting units. During planning and execution, aviation units must deconflict operations with friendly units by coordinating—

- UAS.
- ADs.
- Smoke operations.
- Other internal aviation operations.
- Nonorganic aviation operations.
- Other services' delivery systems such as supply drops.

SECTION II – FRATRICIDE PREVENTION

C-36. Air and ground assets require effective integration in conducting operations successfully and minimizing potential for fratricide and civilian casualties. Integration starts at the home station with implementation of effective tactical SOPs, habitual relationships, and training. It continues through planning, preparation, and execution of the operation.

FRATRICIDE

C-37. Fratricide is the employment of friendly weapons and munitions, used with the intent to kill threat forces or destroy its equipment or facilities, which results in unforeseen and unintentional death or injury to friendly, neutral, or noncombatant personnel. Fratricide is a type of accident and is a real and grim consequence of war. Its effects can spread deep within a unit and are devastating.

CAUSES OF FRATRICIDE

C-38. Contributing factors to fratricide include, but are not limited to—

- Incorrect target identification.
- Incomplete planning and coordination.
- Equipment failure or improper procedures.
- Poor land navigation.
- Loss of communications.
- Position-reporting errors.

C-39. Weapons systems can detect, engage, and destroy targets at maximum range. However, weapons-sighting equipment cannot provide high resolution of targets at extended ranges, especially during limited-

visibility conditions. Use of common equipment by allied and hostile nations increases the probability of fratricide.

FRATRICIDE RISK CONSIDERATIONS

C-40. There are two types of risk—losing men and equipment to accomplish the mission and choosing a COA that may not be successful or may succeed but fail to achieve the desired effect. A commander must take such risks with prudence. Prudent risk taking emphasizes operational functions with the proper balance of administrative functions. Commanders must—

- Understand capabilities and limitations of units and components.
- Understand threat, identify weaknesses, and create opportunities to exploit threat weaknesses.
- Pursue actions that gain or retain the initiative.
- Plan for a mission or unit training.
- Train with supporting branches (joint and combined arms).
- Participate, supervise, and observe unit training.

C-41. The format for fratricide risk factors (figure C-2) parallels the five-paragraph OPORD. The considerations/factors are crucial to fratricide reduction and structured where they would likely appear in the OPORD. This is neither a change nor an addition to the OPORD format.

Fratricide Risk Factors
Paragraph 1: Situation
a. Threat forces:
Equipment and uniform similarities.
Language.
Deception capabilities and past record.
What similarities could lead to fratricide?
Location.
b. Friendly forces:
Similarities or differences (allied forces language, uniform, and equipment [combined operations]).
Differences in U.S. service's equipment and uniform (joint operation).
What similarities could lead to fratricide?
What differences could prevent fratricide?
Deception plan.
Location of unit and adjacent units (left, right, leading, follow-on).
Location of neutrals and/or noncombatants.
c. Attachments/Detachments:
Do attached elements know above information?
Do gaining units supply above information to detached elements?
Own forces:
Status of training (individual, crew, unit) proficiency.
Fatigue (at time of the operation, sleep plan).
Acclimatization to AO.
Equipment (new, old, and mix: status of NET).
MOPP requirements.

Figure C-2. Fratricide risk factors

Weather:

Visibility (light data and precipitation).

Hot, cold (effect on weapons, equipment, and soldiers).

Terrain:

Topography and vegetation (i.e. urban, mountainous, hilly, swamp, prairie, jungle, forest, woods).

Observation and fields of fire, avenues of approach, key terrain, obstacles, cover, and concealment.

Paragraph 2: Mission

Is this mission, with associated tasks and purpose, clearly understood?

Paragraph 3: Execution

a. Task organization:

Has unit worked under this organization before (familiarity)?

Are SOPs compatible with the task organization (especially with attached units)?

Uniform and equipment:

Are special markings/signals needed for positive identification (cat's eyes, chem. lights, panels)?

What special weapons and/or equipment are to be used?

Do they look/appear like enemy weapons and/or equipment?

b. Concept of operations:

1. Maneuver:

Are main and supporting efforts identified to ensure awareness of greatest fratricide danger?

2. Fires (direct and indirect):

Are priorities of fires identified?

Target list(s).

Fire execution matrix/overlay.

Location of denial areas (minefields/family of scatterable mines [FASCAM]) and contaminated areas (such as improved conventional munitions [ICM], CBRN)

Are aviation and CAS targets clearly identified?

Direct fire plan.

Final protective fire.

Sector limits (check/verify).

3. Engineer:

Barrier breaching:

Are friendly minefields, including FASCAM and ICM-contaminated areas, known?

Are obstacles, along with approximate time for reduction/breaching, identified?

4. Tasks to each subordinate unit:

Are friendly forces identified, as appropriate, for each subordinate maneuver element?

5. Tasks to sustainment units:

Are friendly forces identified to sustainment units?

6. Coordinating instructions:

Rehearsals:

Will one be conducted; is it necessary?

Are direct and indirect fired included?

Is a backbrief necessary?

Figure C-2. Fratricide risk factors (continued)

Constraints and limitations:

Are appropriate control measure clear and in the OPORD/overlay?

Control measures might include all or some of the following: AA, attack position, LD, axis of advance/avenue of approach/direction of attack, PLs, objective(s), movement times, restrictive fire line, fire support coordination line, zone of engagement, LOA, main supply route, coordination points, listening post/OP, challenge and password.

Are these control measures known by everyone who has a need to know?

What is the plan for using control measures to synchronize the battle and prevent fratricide?

Target/vehicle identification drills.

What is the immediate action drill/signal for “cease fire”/“I’m friendly” if coming under unknown/unfriendly fire?

Is there a backup action?

Is guidance included in handling dud munitions (such as ICM and cluster bomb units)?

Paragraph 4: Service Support

Ensure trains location(s) and identification marking(s) are known by everyone.

Ensure medical/maintenance personnel know routes between trains and units.

Paragraph 5: Command and Signal

a. Command:

Where is the location of the command and key staff?

What is succession of command?

b. Signal:

Do instructions include signals for special and emergency events?

Do instructions include how to identify ourselves to aircraft?

Do instructions include backup for code words/visual signals for all special and emergency events?

Are SOI/communications-electronics operating instructions distributed to units (higher, owner, left, right, leading, following)?

Figure C-2. Fratricide risk factors (concluded)

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Appendix D

Aircraft Capabilities and Limitations

OH-58A/C

CHARACTERISTICS AND CAPABILITIES

D-1. The OH-58A/C is a single pilot aircraft. The aircraft may be configured for a pilot, copilot/observer, and a maximum of two passengers. The aircraft is powered by a single T63-A-720 turbine engine. The light weight, minimum-size engine is designed for low fuel consumption, maximum reliability, and ease of maintenance. The OH-58A/C operating weights, distance capabilities, and configurations are listed in table D-1. Table D-2 provides OH-58A/C special mission capabilities.

Table D-1. OH-58A/C loads, weights, and radius

Operating Weight	***3,200 lbs 1,451 kg***	***2,800 lbs 1,270 kg***	***2,400 lbs 1,089 kg***
Fuel (lbs)	479.0 lbs 217.3 kg	479.0 lbs 217.3 kg	479.0 lbs 217.3 kg
Load	950 lbs 431 kg	950 lbs 431 kg	950 lbs 431 kg
Radius SM	113	117	124
RadiusKM	182	189	199
Endurance	3+02	3+10	3+18
lbs - pounds; SM - statute mile; kg - kilogram; KM - kilometer			

Table D-2. OH-58A/C special mission equipment capabilities

Special Mission Equipment Capabilities	
Optics - TIS	
Daylight	Color video capabilities 3.0 lux. (TIS)
Low light	Color video capabilities 0.2 lux. (TIS) Optional-laser pointer to assist ground units
HPIS	Approximately 30 million candle power focused (or flood) beam of light 120 degree L/R rotation with 10 degrees up and 70 degrees down deflection
Navigation Equipment	GPS
Flight Characteristics	
Max speed (level)	120 knots (kts)
Normal cruise speed	90 kts
Additional Capabilities	Multichannel radio capable of communicating on three frequencies simultaneously NVG
Limitations	115 knots indicated airspeed (KIAS) max airspeed with HPIS in stowed position

D-2. The OH-58A/C has the following mission capabilities:

- Interoperates with military, governmental agencies, and nongovernmental organizations.
- Sufficient range, endurance, payload, and speed to accomplish observation/reconnaissance missions.
- Conducts missions VFR during day/night and NVG conditions.
- Operates in/over urban and complex terrain.

UH-72A

D-3. The UH-72A (refer to tables D-3 and D-4) is a single pilot aircraft that may be configured for a pilot, copilot/observer, and a maximum of seven passengers in the high-density seating configuration. Two Turbomeca Arriel 1E2 turbine engines provide maximum continuous power of 692 shaft horsepower. Twin engine reliability and a fully-separated crashworthy fuel system, tandem hydraulic system, dual electric system, and redundant main transmission lubrication enhance aircraft safety.

Table D-3. UH-72A weights

Operating Weight	*Pounds*	*Kilograms*
Empty weight, wet (in standard configuration)	3,951	1,792
Max take-off	7,903	3,585
with external load	7,903	3,585
Fuel total (usable)	1,530	694
Main tank (usable)	1,307.8	593.2
Left supply tank (usable)	104.1	47.2
Right supply tank (usable)	118.2	53.6
Sling load	3,307	1,500

Table D-4. UH-72A performance data

Operating Weight Configurations	*7,903 lbs 3,585 kg*	*6,615 lbs 3,000 kg*	*5,950 lbs 2,700 kg*
Hover ceiling (feet)			
In ground effect	9,600 ft 2,925 m	15,400 ft 4,695 m	18,000 ft 5,485 m
Out of ground effect	2,530 ft 770 m	14,260 ft 4,345 m	16,800 ft 5,120 m
Distance (normal cruise speed 130 KIAS [no reserve] sea level 15°C)			
SM	370	377	380
KM	680	700	705
Flight characteristics			
Max speed (level)	145 kts	145 kts	150 kts
Normal cruise speed	131 kts	130 kts	129 kts
Endurance @ 130 KIAS sea level 15°C	2:45	2:52	2:53
Maximum endurance (65 KIAS)	3:35	3:50	3:55
Limitations			
Max operating altitude	18,000 ft (5,485 m) PA		
Min operating temp	-45°C		
Max operating temp	+50°C		

D-4. S&S BN aircraft require a capability during reconnaissance operations to identify objectives beyond normal human visual range in both day and night modes of flight with enhancement of visual acuity through minor obscurations. Capabilities enhance SAR efforts in night mode of flight to include operations performed in unpopulated rural areas. Table D-5 supplies UH-72A special mission equipment capabilities.

Table D-5. UH-72A special mission equipment capabilities

Special Mission Equipment Capabilities	
Optics - TIS	Provides standoff range for reconnaissance, observation missions without compromising the supported ground organization. Aircraft can down-link in real time images to the supported agency using web-based utility that can be transmitted over secure radio, landline, or cell phone technology.
HPIS	Night lighting enhancement capability equivalent to daylight that meets reconnaissance requirements.
Navigation equipment	GPS that allows immediate and accurate positioning of both aircraft and ground manmade objects and/or personnel spotted from aircraft.
Communications	Multichannel radio capable of communicating on three frequencies simultaneously. Frequency spectrum is capable of communicating with non-DOD agencies with NVG compatible backlighting.
Rescue hoist	System is capable of extracting personnel, ambulatory and nonmbulatory, from isolated and inaccessible locations.

D-5. The UH-72A has the following mission capabilities:

- Interoperates with military, governmental agencies, and nongovernmental organizations.
- Sufficient range, endurance, payload, and speed to accomplish observation/reconnaissance missions.
- Conducts missions VFR or IFR during day/night, and NVG conditions.
- Operates in/over urban and complex terrain.
- Operates in high altitude environments.

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Appendix E

Company/Detachment Training Considerations

Leaders must understand the responsibility for, and linkage between, collective mission-essential tasks and the individual and crew tasks that support them. A unique aspect of Army aviation is commanders must satisfy individual and aircrew training requirements as individual aviators; however, they must also provide training guidance, resources, and focus to ensure all company aviators are effectively and efficiently trained to standard. This appendix focuses on leader responsibilities, training principles, and METL development.

SECTION I – TRAINING CONCEPTS

OBJECTIVES

E-1. S&S BN units must receive training annually on the following subjects:

- National Incident Management System/Independent Study 700.
- State response plan.
- Federal response plan.
- ROE.
- Standards of conduct.
- Individual weapons training.
- Intelligence oversight training.

Additionally, personnel performing missions in support of CD operations must receive training in the subject areas listed in NGR 500-2, chapter 5, paragraph 5-17.

CATEGORIES OF TRAINING

INDIVIDUAL TRAINING

E-2. Individual training forms the basis for crew and collective training. Soldiers must be proficient in tasks directly related to the company METL for mission accomplishment. NCOs and company IPs are responsible for individual training of Soldiers assigned to the company.

CREW TRAINING

E-3. Crew training allows the company to accomplish its critical collective tasks. It builds on individual proficiency and acts as a conduit to company collective training. Company commanders, with support from the SP and senior NCOs, are responsible for crew training.

COLLECTIVE TRAINING

E-4. Collective training, the combination of individual and crew training, permits the company to train its critical collective tasks in support of the company METL. Developing individual and crew skills sets the foundation for collective proficiency. Company commanders ensure collective training is conducted with an uncooperative OPFOR, ASE collective trainer, OCs, and Multiple Integrated Laser Engagement System/Air-Ground Engagement Simulation to make training as realistic as possible.

PRINCIPLES OF TRAINING

E-5. Commanders train units to be combat ready using tough, realistic, and challenging training. Commanders and leaders use the principles discussed in this chapter to develop and execute effective training. As commanders train their units on METL tasks, senior commanders reinforce training by approving and protecting training priorities and providing resources.

COMMANDERS ARE RESPONSIBLE FOR TRAINING

E-6. Company commanders are the primary training managers for their organization, actively engage in the training process, and adhere to the principles of training. To fulfill training responsibilities, commanders and leaders at each echelon—

- Must supervise and lead training.
- Base training on the METL.
- Provide required resources.
- Train to standard.
- Develop and execute training plans resulting in proficient individuals, leaders, and units.
- Incorporate risk management into all aspects of training.
- Assess current levels of proficiency.
- Utilize training enablers to accurately assess progress.

E-7. Commanders and leaders must be personally involved. Battalion commanders train company commanders with their companies; company commanders train platoon leaders with their platoons; and platoon leaders train team leaders with their teams.

NONCOMMISSIONED OFFICERS TRAIN INDIVIDUALS AND CREWS

E-8. NCOs are responsible for conducting standards-based, performance-oriented, battle-focused training. They identify specific individual, section, and small team tasks supporting the unit's collective mission essential tasks. They plan, prepare, rehearse, execute, and evaluate training; conduct AARs; and provide feedback to the company commander. Senior NCOs coach junior NCOs and officers in individual and leader tasks by using the training management process to focus on the most important individual tasks—those critical to the collective tasks being trained.

E-9. NCOs continue to mentor newly assigned enlisted Soldiers; therefore, some tasks are trained in the units.

TRAIN AS A COMBINED ARMS AND JOINT TEAM

E-10. Combined arms is the integrated application of several arms achieving an effect on the threat greater than if each arm was used separately or in sequence. Integration involves arrangement of battlefield actions in time, space, and purpose for maximum effects of combat power at a decisive place and time to achieve combined arms effects and accomplish the mission.

E-11. Today's Army doctrine emphasizes teamwork at all echelons. When committed to battle, each unit must execute operations without additional training or lengthy adjustment periods. Leaders must regularly practice task organization of all combat units. Teams achieve combined arms proficiency and cohesiveness by training together.

Performance-Oriented Training

E-12. Soldiers train better, faster, and to a higher degree of proficiency when the task, condition, and standard is known. Hands-on training allows leaders to identify and correct training deficiencies, resulting in a more accurate assessment of combat capabilities.

E-13. Soldiers must be proficient in the basic skills required to perform their operational missions under actual conditions. The complexity of conditions increases as Soldier performance levels increase, while the standard remains constant. Soldiers learn best through repetition, using a hands-on approach.

E-14. Soldiers and leaders must execute planned training, evaluate performance, and retrain until the Army standard is achieved under the most realistic conditions possible. The same standard is enforced whether tasks are performed individually or as part of a larger operation.

TRAIN TO STANDARD USING APPROPRIATE DOCTRINE

E-15. Army doctrine directs training. Doctrinal manuals provide leaders procedures to conduct training properly (refer to table E-1). Standardized doctrinal principles are also found in applicable—

- FMs.
- TCs.
- ARs.
- NGRs.
- TMs.
- Combined arms training strategy (CATS).
- Army Training and Evaluation Programs (ARTEPs).
- Unit task lists (UTLs).
- Soldier's manuals.
- ATMs.

Table E-1. Training publications

Training Publication	*Individual*	*Crew*	*Collective*
TC 1-210	X	X	X
ATM	X	X	X
STP 21-1-SMCT	X		
STP 21-24-SMCT	X		
FM 7-0			X
FM 7-1			X
AR 220-1			X

CWO – chief warrant officer
MQS – military qualification standards
SMCT – Soldier's manual of common tasks
STP – Soldier training publication

E-16. Crews are trained using STXs and iteration training with defined tasks, conditions, and standards from appropriate manuals. When units are cross-attached, these manuals provide common doctrine and standard operational methods to permit rapid adjustment on the battlefield.

E-17. When Army standards are not published, leaders must develop challenging, attainable, and easily evaluated standards. Commanders have experienced aviation NCOs and senior warrant officers train, evaluate, and provide management assistance.

TRAIN TO ADAPT

E-18. Commanders intensify training experiences by varying training conditions, making them increasingly difficult and unpredictable. Repetitive and increasingly complex training gives Soldiers and leaders a foundation for adapting to new situations. Commanders establish a training environment that encourages initiative and recognizes the benefits of allowing leaders to learn from their mistakes.

E-19. Training experiences, coupled with timely feedback, build competence, confidence, and discipline. Commanders may remove themselves from training exercises to allow leaders to improvise with resources

at hand, exploit opportunities, and accomplish the mission within the commander's intent in the absence of orders.

TRAIN TO MAINTAIN AND SUSTAIN

E-20. Leaders must plan training objectives for command maintenance periods and ensure they are executed. Training cannot occur if essential equipment and systems (such as weapons, aircraft, wheeled vehicles, or radios) are NMC. Leaders, maintenance personnel, and operators must be trained and involved to improve and sustain unit maintenance posture. In war, Soldiers and crews perform PMCS and preventive maintenance dailies under combat conditions and without normal direction and supervision. This requires maintenance personnel and vehicle operators be proficient in their maintenance duties.

E-21. Training focuses on the total unit maintenance concept with emphasis on safe procedures during all maintenance activities. All maintenance must be on the unit training schedule. This schedule focuses on the total unit to include—

- The Soldier's equipment, such as TA-50, weapons, and protective mask.
- Major end items, such as wheeled vehicles and helicopters.

E-22. Scheduled maintenance allows units to "train to maintain" by providing time to maintain equipment to standard. Drivers' training, an important part of the unit's training program, must also be integrated into the overall schedule. The training schedule must include weekly PMCS, equipment services, and command maintenance programs.

TRAIN USING MULTIECHELON TECHNIQUES

E-23. Multiechelon training is the simultaneous training of more than one echelon on different tasks. Commanders must maintain a focus on their units' wartime mission to determine multiechelon events. Prior to a multiechelon training event, commanders assess unit proficiency determining tasks to be trained. Tasks for Soldiers and leaders are identified; leaders set and announce training objectives for subordinate leaders and Soldiers participating. If subordinate leaders are briefed prior to a scheduled major training exercise, they can plan prerequisite training to overcome known weaknesses. Leaders being trained on leader tasks are still responsible for collective and Soldier training.

E-24. For example, a company commander determines an upcoming company FTX will include a zone reconnaissance; he or she informs his or her subordinate leaders. The platoon leaders plan to train specific subtasks associated with zone reconnaissance. Because of unit-assessed weaknesses, commanders might also focus on call for fire procedures with first platoon, movement techniques with second platoon, and preparation of individual fighting positions with the headquarters company. Leaders must know unit strengths and weaknesses and plan to train, assess, and retrain to correct performance.

TRAIN TO SUSTAIN PROFICIENCY

E-25. Once units have trained to standard, they maintain proficiency through sustainment training. Sustainment training promotes task proficiency by building on skills mastered by the Soldier, leader, and unit, and uses opportunity training to constantly hone task proficiency.

E-26. Opportunity training is the conduct of preselected, preplanned critical tasks requiring little explanation. It is conducted when proficiency is reached on the scheduled primary training task and time is available. Unscheduled breaks in exercises or AA operations, or while waiting for transportation, provide time for opportunity training. Leaders use this time to sustain unit skills. For example, IPs may conduct opportunity training on vehicle identification while waiting for the platoon/company aircraft to be off-loaded at the POD.

TRAIN TO DEVELOP LEADERS

E-27. Commanders have a duty to teach subordinates how to fight and how to train. They mentor, guide, listen to, and "think with" subordinates. With respect to training, commanders teach leaders to plan in

detail, prepare thoroughly, execute aggressively, conduct effective AARs, and evaluate short-term proficiency in terms of desired long-term results. Training and developing leaders is an embedded component of every training event.

TOP-DOWN/BOTTOM-UP APPROACH TO TRAINING

E-28. The top-down/bottom-up approach to training is a team effort between company commanders and subordinate leaders—platoon leaders, SPs, 1SG, and NCOs. Commanders provide training focus, direction, and resources, while subordinate leaders identify specific unit training needs, execute training to standard in accordance with the approved plan, and provide feedback on unit training proficiency. This team effort helps maintain focus, establishes priorities, and enables effective communication between command echelons.

E-29. Command guidance flows from the top down and results in company identification of specific collective and individual tasks supporting the higher unit's mission. Input from the bottom up is essential as it identifies training needed to achieve proficiency. Leaders communicate requirements and plan, prepare, execute, and evaluate training.

E-30. The commander centralizes planning to provide a consistent training focus; however, he or she decentralizes detailed planning and execution to ensure the conduct of mission-related training sustains strengths and overcomes weaknesses unique to each section. Decentralized execution promotes subordinate leaders' initiative to train their organizations; it does not mean the commander gives up responsibility to supervise training, develop leaders, and provide feedback.

ARMY TRAINING MANAGEMENT CYCLE

E-31. The foundation of the training process is the Army training management cycle. During the METL development process, training must relate to company wartime operational plans and focus on METL tasks. The availability of resources does not affect METL development; it is an unconstrained statement of tasks required to accomplish wartime missions. Resources for training, however, are constrained and compete with other missions and requirements. Companies develop synchronized long-range, short-range, and near-term training plans to utilize available resources to train on METL tasks. After developing training plans, companies execute training by preparing for, conducting, and recovering from training. The process continues with training evaluations providing bottom-up input to organizational assessments. These assessments provide feedback to company and battalion commanders and help assess training requirements.

SECTION II – MISSION ESSENTIAL TASK LIST

E-32. A mission essential task is a collective task the company must show proficiency in to accomplish an appropriate portion of its wartime operational mission. Army organizations cannot achieve and sustain proficiency on every training task. The commander is responsible for identifying tasks essential to the company's wartime operational mission. Battle-focused METL identifies these tasks and provides the foundation for the unit training program. All company level and above units develop a METL approved by its higher command.

DEVELOPMENT PROCESS

E-33. The METL development process reduces the number of tasks required for training to proficiency and focuses the company's efforts on the most important collective training tasks. METL development keeps Army training focused on wartime operational missions. Applying METL development—

- Provides a forum for professional discussion and leader development concerning links between mission and training.
- Enables the company commander and key NCOs to crosswalk collective, leader, and individual mission tasks.
- Leads to unit leader commitment of the company training plan.

DEVELOPMENT SEQUENCE

E-34. The company commander follows a specific sequence in developing company METL. After METL review and approval, the commander selects battle tasks. A battle task is a mission essential task so critical its accomplishment determines the success of the TF or battalion METL. Similar companies may have selected different battle tasks depending on their mission. Company commanders are the lowest echelon to select battle tasks. Battle tasks assist the commander in defining training tasks that will receive—

- The highest priority for resources, such as flight hours, ammunition, training areas, facilities (to include live and virtual simulators), materiels, and funds.
- Emphasis during external evaluations.

E-35. Figure E-1, page E-7, depicts the higher-to-lower relationship (nesting) of mission and METL. It illustrates the relationship between company and higher headquarter METLs through selection of battle tasks. Battalions have METL tasks selected as brigade battle tasks. Companies have METL tasks selected as battalion battle tasks. Platoons have critical tasks selected as company battle tasks. Figure E-1 illustrates the connection between a company METL and platoon, squad/section, leader, and individual Soldier tasks.

COMPANY DEVELOPMENT

E-36. The company commander involves platoons leaders, SP, 1SG, TACOPS officer, and key NCOs in the company METL development process. Their participation ensures a better understanding of the company mission and METL and provides insights when platoon critical and platoon level leader tasks are developed. The company commander conducts the METL development process by—

- Reviewing the battalion commander's mission and METL.
- Analyzing the company assigned missions and identifying specified and implied tasks.
- Analyzing the operational environment and other external guidance to identify other tasks.
- Restating the company wartime operational mission.
- Using the mission-to-collective tasks matrix found in UTL to identify collective tasks supporting the company's restated mission, and selecting those collective tasks critical for wartime mission accomplishment. These tasks become the company's METL.
- Sequencing METL tasks in the order expected to occur during execution of the wartime operational mission.
- Back-briefing the battalion commander and obtaining approval of company METL. The battalion commander selects specific company METL tasks as battalion battle tasks.
- Providing the approved METL to platoon and other subordinate leaders.

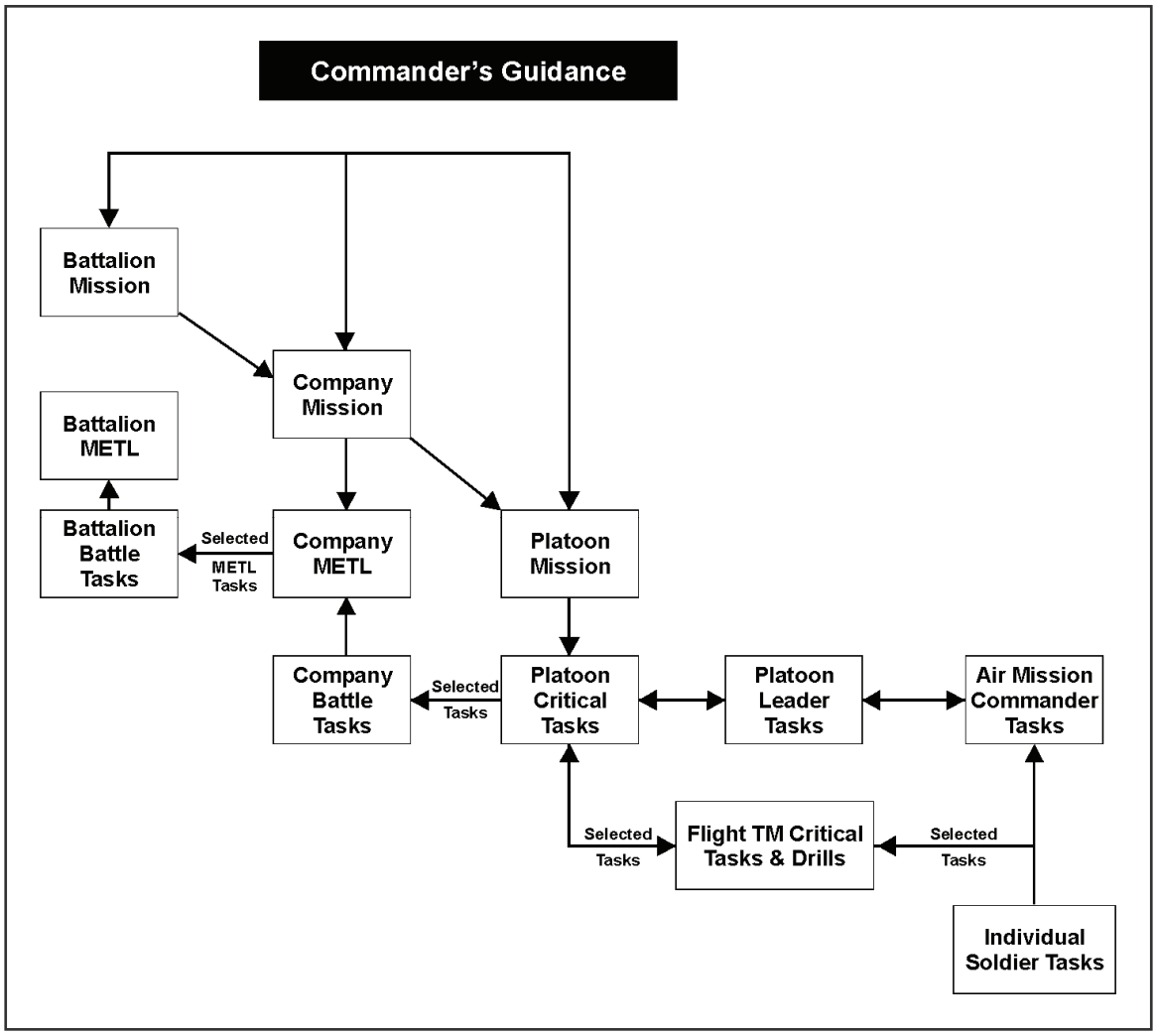


Figure E-1. Relationships between mission, mission essential task list, critical tasks, and battle tasks

E-37. The importance of METL development, followed by the collective task to individual task crosswalk at company level and below, cannot be over emphasized. Figure E-2, page E-8, illustrates the company commander's analysis sequence used during METL development. The company commander pays particular attention to company METL tasks selected by the battalion commander as battalion battle tasks. The company commander must acknowledge the critical importance of achieving and sustaining proficiency on company METL tasks necessary to the battalion accomplishing its operational mission.

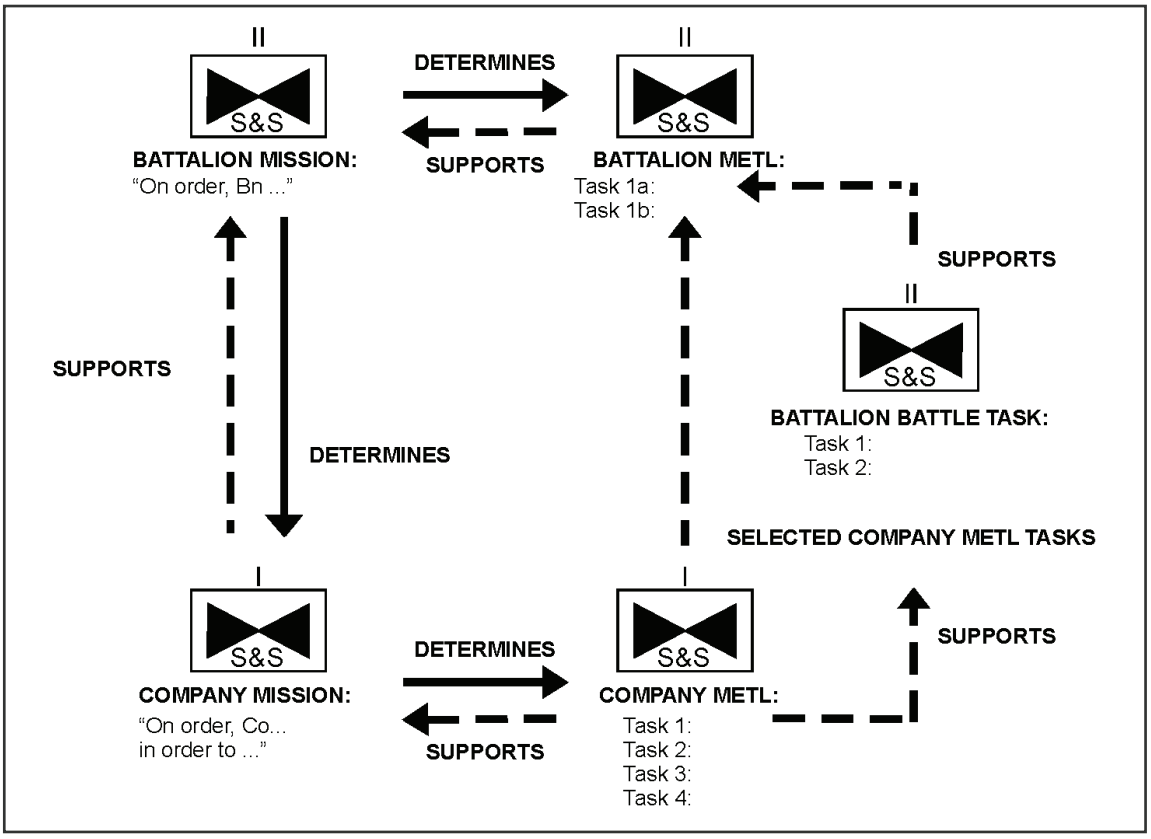


Figure E-2. Company mission essential task list development

E-38. Figure E-3, page E-8, emphasizes supporting relationships of the S&S mission and METL to the S&S BN mission and METL. The company commander uses UTL to identify mission-to-collective tasks.

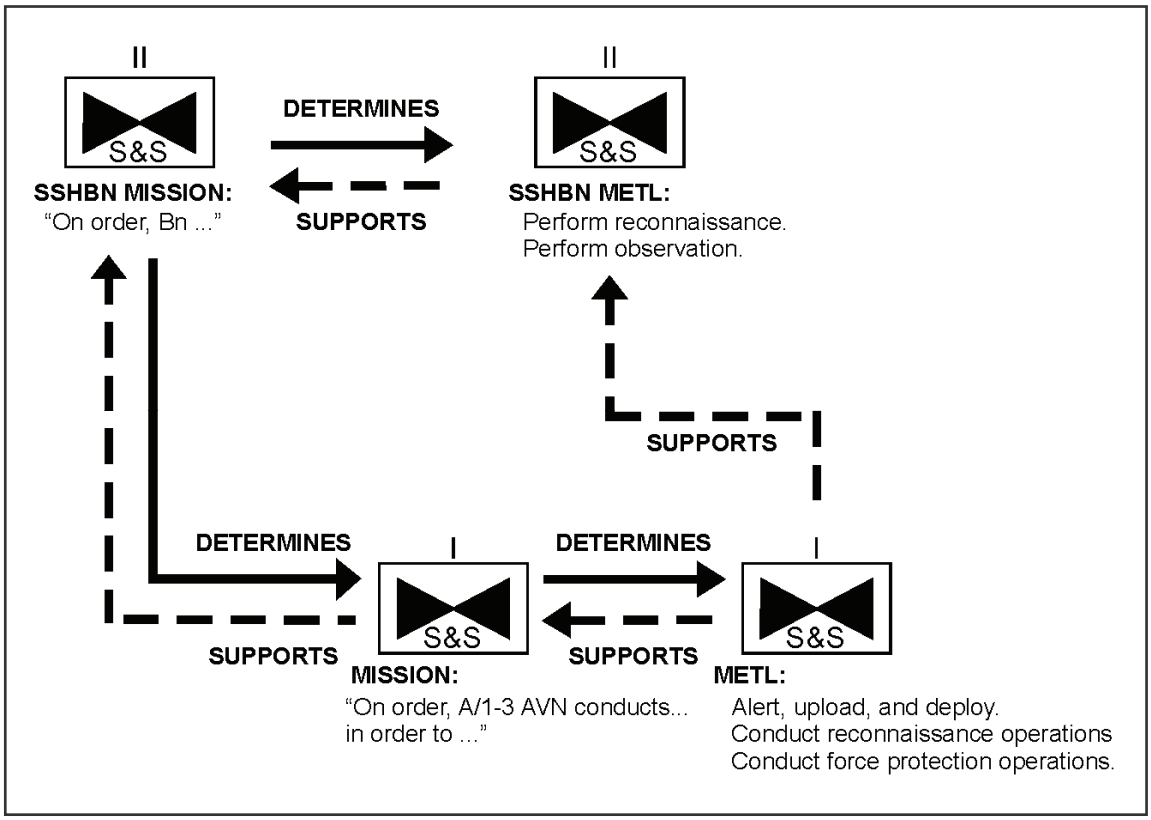


Figure E-3. Security and support mission essential task list development

PLATOON CRITICAL TASK LIST DEVELOPMENT

E-39. Once the company commander has cross-walked the company mission and METL with the battalion mission and METL, platoon and below must perform the critical tasks essential to company METL accomplishment. The development of platoon critical tasks requires discussion between the company commander and platoon leaders. This discussion includes the—

- Company commander, SP, and 1SG discussing company mission and METL with the platoon leader, platoon IPs, and PSG. The platoon leader back-briefs the company commander on the platoon mission.
- Platoon leader, with platoon IPs and PSG and using appropriated UTL, selecting platoon critical tasks supporting company METL and platoon missions.
- Platoon leader discussing proposed platoon critical tasks list with the company commander. The company commander provides feedback on selected platoon critical tasks list and approves (modifies as necessary) platoon critical task list.

E-40. Figure E-4, page E-9, illustrates the relationship of the S&S platoon mission and critical tasks to the company mission and METL.

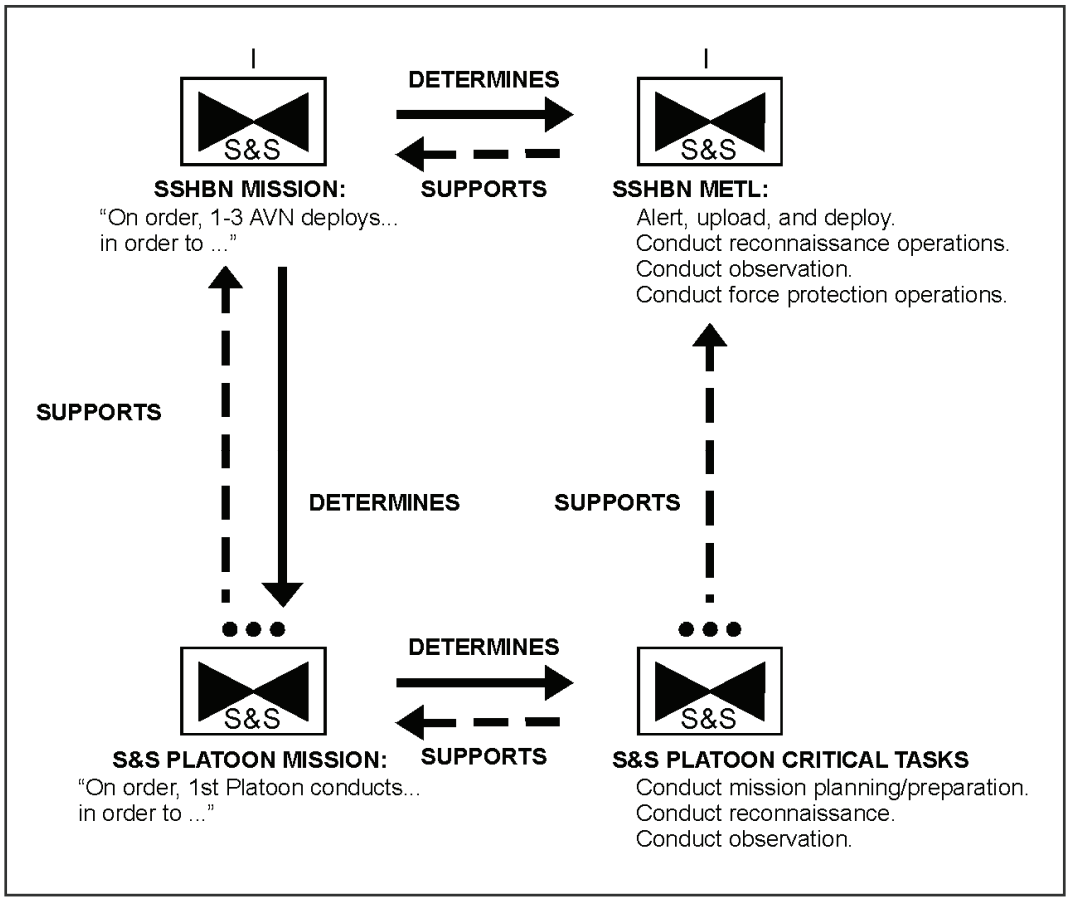


Figure E-4. Security and support platoon critical task list development

CREW/INDIVIDUAL CRITICAL TASK LIST DEVELOPMENT

E-41. The development of the crew/individual critical task list occurs between platoon leader, platoon IPs, and PSG. As with company and platoon tasks lists, the platoon identifies those critical crew and individual supporting tasks required for platoon critical task accomplishment. This process includes—

- The platoon leader briefing platoon IPs and the PSG on platoon mission and critical tasks.
- Platoon IPs, using appropriate UTL, discussing and selecting crew tasks supporting platoon critical tasks list.
- The PSG, based on platoon leader guidance and using appropriate UTL and STPs, selecting individual Soldier tasks that support platoon critical tasks.
- The platoon leader approving supporting crew and individual Soldier tasks selected by platoon IPs and the PSG.
- The PSG briefing the company 1SG on the platoon leader's approved supporting individual Soldier tasks.

E-42. Figure E-5, page E-10 shows crew and individual task proficiency providing the basic building block of collective task proficiency for an S&S platoon. Platoon leaders use the company commander-approved platoon critical task list as a start point.

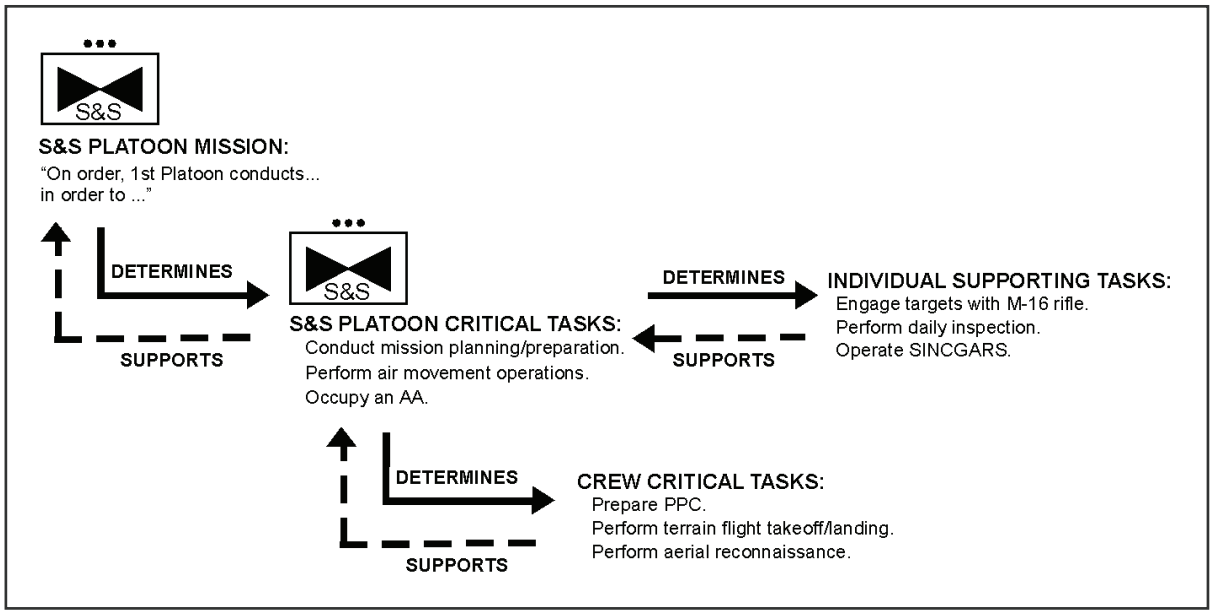


Figure E-5. Crew and individual supporting task list development

SECTION III – COMPANY TRAINING PLANNING PROCESS

E-43. Figure E-6 illustrates how companies plan training by linking the company METL with the execution of battle-focused training. Platoons must have the freedom to develop their training programs in concert with company METL and approved critical tasks. Company and platoon training meetings and schedules must be "locked-in" if excellence in training is to be attained.

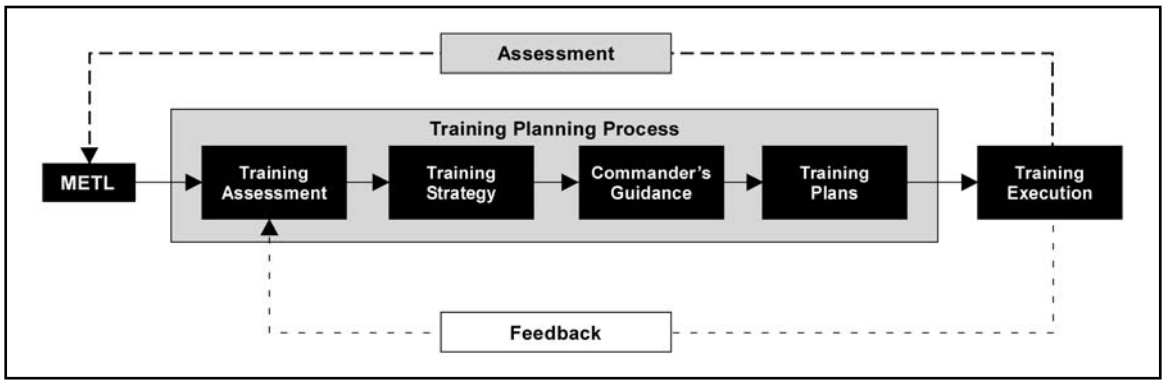


Figure E-6. Training planning process

E-44. Long-range, short-range, and near-term training planning use the same training process. Commanders assess training, provide guidance, and publish training plans. Companies achieve warfighting readiness when training is executed under realistic conditions. Maintaining warfighting readiness requires subordinate leaders have adequate time to plan, prepare, and execute training.

E-45. Company commanders integrate the risk management process with the training planning process. Commanders identify training proficiency shortfalls that create risk and other safety hazards and establish controls mitigating those hazards. Risk management is as integral to the operations process as it is to the training planning process. During operations, commanders identify threat capabilities and hazards that prevent successful mission completion and actions that reduce or mitigate those capabilities and hazards. In training and operations, risk management is a continuous process.

TRAINING ASSESSMENT

E-46. Training assessment begins the training planning process. Company commanders assess their company's ability to execute mission essential tasks based on—

- Personal observation.
- Platoon leader evaluations of the platoon's current proficiency on supporting critical collective tasks.
- Maintenance officer evaluations of company maintenance procedures and training.
- 1SG, PSG, SP, TACOPS officer, platoon IP, and other key NCO evaluations of current proficiency on supporting critical crew and individual Soldier tasks.
- Training evaluation results including external evaluations (EXEVALs), Combat Training Center (CTC) take-home packages, operational and readiness deployment exercise AARs, results and trends from the battalion organization inspection program (OIP), and other reports such as the monthly unit status report.
- Subordinate leader and SO reports on risk management principles and potential training hazards.

E-47. For critical tasks that support the METL, commanders collect performance assessments from subordinates and NCO leaders. Results of the commander's assessment outline tasks that need improvement and sustainment. This evaluation leads to planning for upcoming training. The company develops a strategy to improve proficiency on specific weaknesses and plans sustainment training on demonstrated strengths. Risk assessment parallels training assessment. Hazard controls in the form of education and training, physical safety measures, and avoidance are established to enhance safety and promote realism.

E-48. The company commander's training assessment is required for each company METL task. The assessment is based on objective (ARTEP) and subjective measurable standards. Refer to table E-2 for task proficiency ratings.

Table E-2. Task proficiency ratings

Rating	*Stands for*	*Definition*
T	Trained	Company is trained and has demonstrated proficiency in accomplishing task to Army standard. The commander judges task performance to be free of significant shortcomings. Training on "T" tasks is designed to sustain proficiency on that task.
P	Needs practice	Company can perform the task with some shortcomings. Performance has demonstrated the company does not achieve the standard without some difficulty or failed to perform some task steps to standard. Shortcomings are not severe enough to require complete retraining; only refresher training is required.
U	Untrained	Company cannot demonstrate an ability to achieve wartime proficiency. The commander prepares a comprehensive plan to train all supporting tasks not executed to standard. Unless the task is a new METL task, a rating of "U" indicates a serious training deficiency and reflects on the company's wartime readiness posture.

TRAINING STRATEGY

E-49. The company commander uses the training strategy to describe the ends, ways, and means to achieve and sustain training proficiency on METL tasks (figure E-7, page E-12). Comprehensive training assessments provide the company commander a logical start point, while input and relevant, timely feedback from company leaders assist in outlining training strategy ends. An effective training strategy—

- Provides clear, simple, meaningful guidance logically linking objectives, events, and resources with METL training proficiency.
- Achieves and sustains METL proficiency.

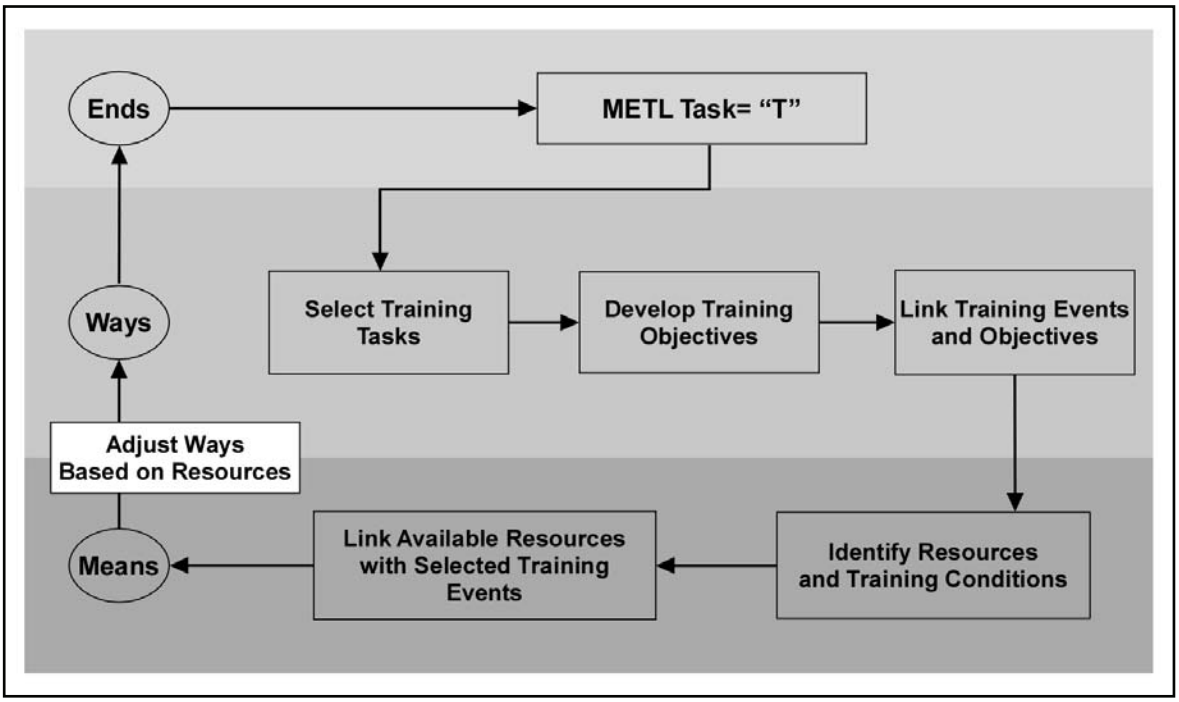


Figure E-7. Training strategy

ENDS

E-50. Training strategy ends are fixed, unwavering, and used to achieve and sustain METL proficiency. Company commanders define training strategy ends in terms of specific METL tasks and training proficiency levels.

WAYS

E-51. The ways of any strategy are specific training objectives linked with specific sequenced training events to achieve stated training strategy ends. Company commanders outline ways of training strategy by—

- Identifying specific training tasks that achieve and sustain METL proficiency.
- Identifying training audience for each specific training task.
- Developing training objectives for each specific training task.
- Identifying and selecting training event(s) for the designated audience.
- Linking and sequencing training events and objectives with the crawl-walk-run process to achieve proficiency specified in strategy ends.
- Specifying frequencies for executing specific training task events and exercises.
- Planning for retraining tasks not performed to standard.

MEANS

E-52. Company commanders develop the means of training strategy by identifying and requesting resources needed to execute the ways from battalion. Company commanders identify the required means based on the training event and task conditions needed to achieve and sustain task proficiency. Training strategy incorporates the identification, request, and allocation of resources such as time, flight hours, training areas, simulators, OPFORs, and OCs to support training event/exercises; ranges and ammunition

for live fire exercises and weapons qualification; and virtual simulators that support various leader, crew, and individual training exercises.

E-53. The means do not specify how to train. Platoon leaders, IPs, and NCOs must decide how to execute training strategy. Company commanders prepare to adjust strategy when available resources cannot support planned training. In these cases, company commanders revise the strategy by—

- Prioritizing tasks and objectives.
- Modifying objectives.
- Combining, resourcing, or modifying training events.
- Reallocating available resources.

COMMAND TRAINING GUIDANCE

E-54. The battalion commander publishes commander's training guidance (CTG) to document the battalion long-range training plan. CTG is used by the company as a ready reference when planning, preparing, executing, and evaluating training throughout the long-range planning period. The commander, platoon leaders, 1SG, and SP must examine and understand the CTG.

TRAINING PLANS

E-55. Planning for training is a continuous, integrated process conducted in parallel at all levels from company, platoon, section, crew, and individual. Training plans result from the training process and form the framework for company training. Training plans fall into three categories—long-range (1 year), short-range (three to six months), and near-term (6 to 8 weeks).

LONG-RANGE PLANNING

E-56. The company uses battalion CTG to develop its long-range training plan by forecasting training events for a period of 1 year. The company commander must publish long-range plans four months prior to the start of the fiscal year, typically done through the training calendar. The company must prioritize training requirements and deconflict training with the higher commander. The company uses a four-step process found in table E-3 to generate the long-range training calendar.

Table E-3. Long-range training process

Step 1. Post Required Training Events on the Calendar
These requirements are directed by the battalion CTG. Examples include— Scheduled operational deployments. CTC training rotations. Battalion external evaluations and exercises (map exercise, training exercise without troops [TEWT], command post exercise [CPX], and FTX).
Step 2. Identify and Schedule Other Requirements that Impact Training
Requirements can be battalion/company level events directed by higher command such as inspections (OIP, Directorate of Evaluation and Standardization [DES], Aviation Resource Management Survey [ARMS]), new equipment fielding, and community and installation support (static displays, change of commands, and support taskings).
Step 3. Identify and Schedule Company-Controlled Exercises and Other Training
Company commanders schedule events based on training strategy to improve or sustain company METL proficiency and support battalion-directed training requirements. Examples may include— Company STX/FTX. Annual proficiency and readiness tests (APARTs). PR and survival.

Table E-3. Long-range training process

Administrative training requirements (equal opportunity, consideration of others).
Common task training (CTT).
Driver's training.
Inventories.
Special events (counseling, organizational days, fund raisers).
Soldier schools and professional development events (pilot briefs, terrain walks, combined arms exchange program).
Step 4. Post the Time Management System
This step highlights prime training periods available. Exercise planning takes advantage of prime training time and looks for opportunities for unit/crew and individual training during support periods. Time management systems identify, focus, and protect training periods so the company can concentrate on mission essential training. The most common system is the three cycle system (Green-Amber-Red).

Training Calendar

E-57. The company training calendar graphically depicts the schedule of events described in the battalion CTG and as determined by company leadership. The calendar provides direction and a point of common reference throughout the year for coordinating training resources.

SHORT-RANGE PLANNING

E-58. Short-range planning refines the long-range training calendar. It defines in greater detail the broad guidance on training events and other activities outlined in battalion CTG and battalion long-range training calendar. The battalion commander publishes his or her quarterly training guidance (QTG) for short-range planning from three to six months. Short-range planning concludes with training briefings in which the battalion and brigade commanders review and approve company training plans for that period. The most notable product of short-range planning is the quarterly training brief (QTB).

Quarterly Training Brief

E-59. The QTB is a conference conducted by senior commanders to review and approve subordinate units training plans. QTBs are conducted before the time period addressed in the QTG, which is 6 to 8 weeks prior to beginning of the quarter.

E-60. The brigade commander and CSM receive the QTB from subordinate battalions and all companies in the brigade. The battalion commander and CSM personally present the overview of the battalion training plan. Company commanders and 1SGs present detailed briefings of their training plans. Table E-4 lists the minimum briefing topics a company commander and 1SG can expect to present.

Table E-4. Quarterly training brief company topics

Company Commander Topics
Training planned and briefed at previous QTB/yearly training brief but not conducted and why.
Organization METL and assessment of proficiency levels.
Unit training focus and objectives for upcoming training period.
Organization's short-term planning calendar.
Upcoming training events.
Officer/leader development programs with emphasis on warfighting skill development.
Self development.
Risk management.

Table E-4. Quarterly training brief company topics

Plans for training evaluators and trainers.
Force integration plans for upcoming period.
Resource allocation.
Company 1SG Topics
Individual training proficiency feedback concerning previous short-range planning period.
Assessment of organization's current individual training proficiency.
Individual training event planning during upcoming short-range planning period and strategy used to prepare Soldiers for evaluations.
Description of METL-derived individual tasks integrated with upcoming collective mission essential tasks.
Marksmanship and physical fitness programs.
NCO leadership development program with emphasis on warfighting skill development.
Self development.
NCO/enlisted schools.

E-61. As a result, the brigade commander agrees to provide resources, including time, and protect companies from nonprogrammed taskings. The company commander agrees to execute the approved training plan and conduct training to standard. This shared responsibility helps maintain priorities, achieve unity of effort, and synchronize actions to achieve quality training and efficient resourcing.

E-62. The brigade commander determines the format and content of the briefing allowing flexibility for the company commander and 1SG to highlight strengths, weaknesses, initiatives, and priorities.

E-63. Company commanders use QTB as a training review process. Expected benefits include—

- Reviewing training strategy, events, and strengths and weaknesses.
- Discussing previously coordinated training events.
- Explaining how the company training program supports the battalion's goals and objectives.
- Highlighting problem areas for discussion.
- Clarifying command responsibilities concerning training resource allocation (senior commander recommends more efficient ways to use available resources).
- Eliminating training distracters.

NEAR-TERM PLANNING

E-64. Near-term planning schedules and executes training specified in the short-range training plan, provides guidance to trainers, and produces detailed training schedules. Near-term planning covers the 6- to 8-week period prior to execution of training events. Key points regarding near-term planning are—

- Schedule and execute training objectives specified in the short-range training plan.
- Provide trainers specific guidance.
- Make final coordination for allocation of resources used in training.
- Complete final coordination with other participating units as part of task organizations.
- Prepare detailed training schedules.

Training Meetings

E-65. Training meetings are key to successful near-term training and create a bottom-up flow of information regarding training proficiency needs of platoons, crews, and individual Soldiers. Meetings are planned weekly at company/platoon level and appear on company training schedules. The purpose is to—

- Identify leader and unit training tasks.

- Review and validate preparation for upcoming training to include—
  - Leader and unit preparatory training.
  - Rehearsals for trainers and evaluators.
  - Training site preparation.
- Identify and plan necessary retraining.
- Provide a forum for leaders, trainers, and evaluators to give feedback on training executed during the past week.
- Provide company commanders with a continuous source of "bottom-up" input for periodic training assessments.

E-66. Training meetings provide guidance ensuring quality training. Well-structured, organized, and recurring meetings impact directly on company mission. Meetings should last no more than 1 hour with discussion on training and not on administrative operations and activities. Training meetings exist to provide a forum to plan and coordinate mission-focused and demanding training.

Feedback is used to refine the training plan. It takes many forms including personal observations, AARs, and formal/informal evaluations.

E-67. Leader participation is essential for a successful training meeting. Participants include—

- Company commander.
- Company 1SG.
- Platoon leaders.
- PSGs.
- TACOPS officer.
- Company SP.
- Company SO.
- Company training officer.
- Maintenance officer(s).
- Supply sergeant.
- CBRN NCO.
- Others as required.

Conduct of Training Meeting

E-68. The company training meeting occurs no later than two days following the battalion training meeting. It is scheduled on the same day and time each week. The agenda is standard (table E-5).

Table E-5. Agenda for training meeting

Roll call
Review completed training
Platoon leader/SP assessment (individual flight training, collective flight training [impact on platoon critical task list], OPD); pilot briefing; scheduled and opportunity training; and scheduled training not completed, its impact, and rescheduling plan.
1SG and PSG assessment (sergeant's time training; NCOPD; scheduled and opportunity training; scheduled training not completed, its impact, and rescheduling plan).
Training and SO assessment (individual statistics update, range update, school requirements and completions, and safety issues).
Commander's assessment (impact of completed training on METL and strategy to sustain or improve training).
Near-term training

Table E-5. Agenda for training meeting

Training/flight schedule changes.
Training resources confirmed.
Transportation coordinated.
Risk assessment completed.
Short-range training
Plan for future unscheduled training.
Support for training assessments.
Equipment and resources identified.
Effective use of training time.
Risk management.
Miscellaneous
Feedback

E-69. On completion of the training meeting, numerous products are developed to include assessment methods for training events, schedules for training, flight, aircraft maintenance, motor stables, SGT's time (topics, trainers, timeline, and evaluation method), and pilot's brief training (topics, trainers, and location).

Training Schedules

E-70. Training schedules are primary company management tools ensuring training is conducted by qualified trainers in a timely manner with necessary resources to Army standard. The company commander receives input from all platoons and the 1SG before formulating draft training schedules. Training schedules, at a minimum, should—

- Specify when training starts and where it takes place.
- Allocate adequate time for scheduled training and retraining as required to correct anticipated deficiencies.
- Specify individual, leader, and collective tasks to be trained.
- Provide concurrent training topics efficiently using available training time.
- Specify who conducts and evaluates training.
- Provide for administrative concerns such as uniforms, weapons, equipment, references, and safety precautions.

E-71. Draft training schedules and pre-execution checks must be initiated at least 6 to 8 weeks prior to training. This ensures resources are coordinated and external support is requested. Training schedules are published 4 to 6 weeks prior to execution.

E-72. The company commander signs the training schedule identifying specific, planned unit training needs. It is forwarded to the battalion commander for final approval. The battalion commander's signature finalizes the training contract and verifies necessary resources will be provided. This locks in the training schedule and constitutes an official order. Only the approving authority (such as the battalion commander) can authorize changes to the training schedule.

SECTION IV – ASSESSING COMPANY TRAINING

E-73. Assessment is essential at both the beginning and end of the training management cycle. It is the commander's judgment of the company's ability to accomplish its wartime mission. Assessment is a continual process and includes evaluating training and preparing a training assessment. The company commander uses experience, feedback from training evaluations, other evaluations and reports, and personal observations to arrive at the training assessment.

TRAINING ASSESSMENT

E-74. To identify company training needs, the commander assesses the ability of the company to perform METL tasks prior to planning training events—whether for long-range, short-range, or near-term training plans. To assess whether the company can perform a METL task to Army standard, the commander considers all sources of information to include recent evaluations of performance during training, personal observations of training, and assessments of supporting battle tasks by subordinates. Company commanders cannot personally observe all training in the company; therefore, they gather feedback from their platoon leaders, IPs, and senior NCOs. Based on available information, the commander rates each METL task as either T, P, or U.

E-75. Training and evaluation outlines (T&EOs) are the foundation of the UTL and collective training of units; they have multiple uses. T&EOs are training objectives (task, conditions, and standards) for collective tasks that support critical wartime operations. T&EOs may be trained separately or during a STX/FTX. The S&S unit may use them as a reference on how to perform a task or identify subordinate unit supporting tasks. Observers or evaluators can use T&EOs to record and document the specified element's task performance.

TRAINING EVALUATION

E-76. Training evaluation is a critical component of the commander's assessment. It is continuous and must be planned for all training. Integral to standards-based training, training evaluation is conducted by leaders at every level. The analysis of information collected during the training evaluation is key to the commander's assessment. To evaluate training proficiency, commanders—

- Select the type of evaluation.
- Develop an evaluation plan.
- Conduct an evaluation of training.
- Conduct an AAR.
- Provide feedback throughout the chain of command.

E-77. The evaluation can be as fundamental as an informal, internal evaluation performed by the leader or IP conducting the training, or as complex as an EXEVAL conducted by battalion or brigade staff. In either case, evaluation is conducted to enable the company or individual undergoing the training to know whether the standard has been achieved. Company commanders establish a climate encouraging candid and accurate feedback for the purpose of developing leaders and training units.

E-78. Evaluation of training is not a test. Evaluations serve to tell the commander or Soldier whether the Army standard has been achieved, and therefore assist in determining overall effectiveness of training plans or execution. The evaluation process produces disciplined Soldiers, leaders, and units. Training without evaluation is a misuse of time and resources.

E-79. Each training event is evaluated during training execution. Adequate resources (leader time, preparation, evaluators, and equipment) must be available to facilitate evaluation. Evaluations serve as an opportunity for leaders to coach and mentor subordinates and provide immediate positive feedback. This is a tested and proven path of developing competent, confident, and adaptive leaders. Training evaluations are also used to—

- Determine METL task proficiency.
- Develop lessons learned for distribution throughout the chain of command.
- Shape future training plans.
- Enhance leader development.

Evaluation Ratings versus Leader Assessment Ratings

Evaluation ratings are assigned by evaluators and should not be confused with leader assessment ratings. Evaluation ratings are assigned directly to demonstrated task proficiency. Evaluators observe designated training tasks and grade performance as Go or No Go defined as—

- **Go:** The task or performance step of a task was performed to standard. A rating of Go is normally awarded if all steps in the task are passed.
- **No Go:** The task or any performance step in the task was not performed to standard.

E-80. Completed evaluations (with appropriate written comments), formal and informal AAR comments, coaching, and mentoring provide participating leaders and Soldiers with both immediate and documented feedback on demonstrated performance. Company commanders later use evaluator ratings as one source of input when making their training assessment ratings of T, P, or U for each METL task.

TYPES OF EVALUATIONS

E-81. The four types of evaluations are informal, formal, internal and external. They can be combined to meet the particular needs of units or Soldiers being evaluated. Table E-5 shows application of each combination. Regardless of the type of evaluation, leaders must be present at all training to supervise and evaluate the training personally.

E-82. Evaluation of individual and small-unit training normally includes every Soldier and leader involved in training. For large-scale training events, evaluators sample a number of individuals and subordinate organizations to determine the likelihood of the entire organization performing specific mission essential tasks to standard. Examples of this type of external evaluation include DES and ARMS visits.

Informal

E-83. Informal evaluations take place whenever a leader conducts training with the unit (for example, when an IP conducts an instrument training flight with a pilot or a leader visits ongoing training, such as a company commander observing platoon training). This type of evaluation provides real-time feedback on the training environment and proficiency that result.

Formal

E-84. Formal evaluations are resourced with dedicated evaluators generally scheduled on long-range or short-range calendars, and highlighted during short-range training briefings. To the maximum extent possible, headquarters two levels higher conduct formal external evaluations (for example, brigade commanders evaluate companies, battalion commanders evaluate platoons).

E-85. During and after formal evaluations, evaluators prepare their findings and recommendations. Evaluators provide these reports to the evaluated unit and higher commanders as required by the headquarters directing the evaluation.

Internal

E-86. Internal evaluations are planned, resourced, and conducted by the unit undergoing evaluation. The company commander utilizes all company assets to conduct evaluations of platoon, crew, and Soldier training. These evaluations include STXs or lane training events. Internal evaluation assets are the—

- **1SG.** 1SGs use CTT and STXs to evaluate section and Soldier training.

- **IP.** Company IPs evaluate crew and individual aviator training. Because of limited resources (time, aircraft availability, and number of aviators assigned to the company), IPs use input from PCs and STX assessments to assist in the evaluation process.

External

E-87. External evaluations are planned, resourced, and conducted by a headquarters higher in the chain of command than the organization undergoing the evaluation or a headquarters outside the chain of command (table E-6).

Table E-6. Types of evaluation

Informal	*Formal*
Internal	**Internal**
A function of unit leadership whenever training is conducted. For example, squad leader checks vehicle PMCS.	An evaluation of squad and below proficiency. For example, squad leaders evaluate squad individual and collective tasks.
External	**External**
Conducted by leaders during visits to training of subordinate units. For example, CSM checks soldier range cards.	An evaluation of battalion/company/platoon proficiency. For example, battalion evaluates platoon UTL training events.

PLANNING FOR EVALUATIONS

E-88. The evaluation of collective training is critical to assessing the company's capability of performing its METL tasks. For evaluation to be effective, it must be thoroughly planned and rigorously executed. Leaders must plan and prepare to ensure an accurate evaluation. Whether a unit is performing formal or informal evaluations, commanders must ensure evaluators/subordinate leaders are trained and prepared to conduct evaluations.

E-89. The following information is required to facilitate long-range evaluation planning:

- Type of exercise (company and/or platoon STX/FTX).
- Date(s) of exercise.
- Type of evaluation (formal, informal, internal, external, or combination).
- Support requirements (internal and external).
- Coordination for EXEVAL support.

E-90. To enhance effective short-range evaluation planning, the commander develops and provides the following information:

- Company commander's intent and focus for the exercise.
- Pre-execution checklist.
- Level of evaluation (for example, down to platoon level).
- Dates for training/certification of evaluators.
- Exercise scenario.
- Resource guidance.
- Required coordination.
- Discussion of evaluator's role in safety.
- ROE/ROI.
- Exercise operating procedures.
- References (soldier's manuals, FMs, UTLs, and SOPs).
- Evaluation checklists.
- Guidance on conduct of AARs.

EVALUATORS

E-91. Whether a unit leader or IP is conducting an internal, informal evaluation or an external evaluator is conducting a formal evaluation, evaluators must be properly trained and qualified to provide valid, credible observations to the unit/individual being evaluated. Evaluators should be equal or senior in rank to the leader of the evaluated unit. Ideally, evaluators should have held the position themselves lending credibility to their role. Aviation is the exception with the IP who must also be trained on proper roles of evaluation. Evaluators must plan, prepare, and conduct AARs that elicit participation from those being trained.

E-92. External evaluators must be certified in tasks they evaluate and normally are not a participant in the training being conducted. For example, if the company SP is the evaluator for a platoon exercise with the commander, they will not also be used as a crewmember conducting the exercise as part of the platoon. Leaders, Soldiers, and units learn from the evaluator; evaluators learn by observing the unit. Unit leaders serving as internal evaluators must be certified in the tasks they evaluate. Basic evaluator guidelines are—

- Be trained (tactically and technically proficient) and rehearsed in the tasks to be evaluated.
- Know training area terrain to avoid interfering with the exercise.
- Know evaluation standards.
- Follow SOPs for the unit being evaluated.
- Apply relevant information about the evaluated unit.
- Identify strengths as well as weaknesses.
- Patiently observe all actions of the unit (do not jump to conclusions).
- Always use the chain of command (do not take command of the unit).
- Coach unit leaders.
- Assist the commander and leaders in training safely. Be aware of specific safety considerations applicable to training.
- Be flexible; base evaluation on the unit's reaction to the tactical situation, not on personal knowledge of preplanned scenarios.
- Do what the Soldiers do. Experience the same conditions as the evaluated unit/personnel.

AFTER-ACTION REVIEW

E-93. The AAR is a powerful tool making the U.S. Army unique with respect to all other armies. Effective, mission-focused, standards-based feedback to unit leadership through the AAR process should parallel the performance-oriented counseling and mentoring process commanders owe their subordinates as a cornerstone of the Army's commitment to leader development. The AAR provides feedback for all training as a structured review process allowing training participants to discover for themselves what happened, why it happened, and how it can be completed better. The AAR is a professional discussion requiring active participation of those being trained.

Glossary

SECTION I – ACRONYMS AND ABBREVIATIONS

1SG	first sergeant
A&L	administrative and logistics
AC2	airspace command and control
AA	assembly area
AAA	antiaircraft artillery
AAFES	Army and Air Force Exchange Service
AAGS	Army air-ground system
AAR	after action review
AASF	Army aviation support facility
ABCS	Army Battle Command System
ABTF	aviation battalion task force
AC	active component
ACO	airspace control order
ACP	air control point
AD	air defense
ADA	air defense artillery
ADAPCP	Alcohol and Drug Abuse Prevention and Control Program
ADIZ	air defense identification zone
AG	adjutant general
AGES	Air-Ground Engagement Simulation
AGL	above ground level
AGPU	aviation ground power unit
AGSE	aircraft ground support equipment
AIM	Aeronautical Information Manual
AIRAD	airman advisory
AIRF	aircrew information reading file
AKO	Army Knowledge Online
ALO	air liaison officer
ALSE	aviation life support equipment
ALSO	aviation life support officer
ALSS	aviation life support system
AM	amplitude modulation
AMB	air mission brief
AMC	air mission commander
AMCOM	Aviation and Missile Command
AMO	aviation materiel officer

AMPS	Aviation Mission Planning System
AMSS	Army Material Status System
ANCD	automated network control device
ANG	Air National Guard
AO	area of operations
AOR	area of responsibility
APART	annual proficiency and readiness test
APC	armored personnel carrier
APG	aviation planning guide
APOD	aerial port of debarkation
APOE	aerial port of embarkation
AR	Army regulation
ARMS	Aviation Resource Management Survey
ARNG	Army National Guard
ARP	aircraft repair platoon
ARTEP	Army Training and Evaluation Program
ASB	aviation support battalion
ASC	aviation support company
ASE	aircraft survivability equipment
ASL	authorized stockage list
AT	annual training
ATC	air traffic control
ATCCS	Army Tactical Command and Control System
ATHP	ammunition transfer holding point
ATM	aircrew training manual
ATO	air tasking order
ATP	aircrew training program
ATS	air traffic services
AUEL	automated unit equipment list
AV	aerial vehicle
AVCRAD	Aviation Classification Repair Activity Depot
AVN	aviation
AWACS	Airborne Warning and Control System
AWR	airworthiness release
BAE	brigade aviation element
BAS	battalion aid station
BCT	brigade combat team
BDA	battle damage assessment
BDAR	battle damage assessment and repair
BDE	brigade
BHO	battle handover

BSA	brigade support area
C2	command and control
CAB(E)	combat aviation brigade (expeditionary)
CAS	close air support
CASEVAC	casualty evacuation
CBO	Community-based organization
CBRN	chemical, biological, radiological, and nuclear
CCIR	commander's critical information requirements
CCP	casualty collection point
CD	counterdrug
CDC	counterdrug coordinator
CE	crew chief
CFR	Code of Federal Regulations
CH	cargo helicopter
CMD	command
COA	course of action
COMMEX	communications exercise
COMSEC	communications security
CONUS	continental United States
COP	common operational picture
CP	command post
CPX	command post exercise
CRP	component repair platoon
CSM	command sergeant major
CSR	controlled supply rate
CSSAMO	combat service support automation management office
CST	civil support team
CTA	common table of allowance
CTC	Combat Training Center
CTG	Commander’s training guidance
CTL	commander’s task list
CTT	common task training
CWO	chief warrant officer
DA	Department of the Army
DAAS	defense automatic addressing system
DAPP	downed aircrew pickup point
DART	downed aircraft recovery team
DC	District of Columbia
DEA	Drug Enforcement Administration
DES	Directorate of Evaluation and Standardization
DEW	directed-energy weapon

DHS	Department of Homeland Security
DISTRO	distribution
DIV	division
DOD	Department of Defense
DODD	Department of Defense Directive
DODI	Department of Defense Instruction
DOMS	Director of Military Support
DOS	day of supply
DOTD	Directorate of Training and Doctrine
DS	direct support
DSN	defense switched network
DTC	data transfer cartridge
DVFR	defense visual flight rule
EH	electronic warfare helicopter
EMAC	emergency management assistance compact
EMT	emergency medical treatment
EO	electro-optical
EOC	emergency operations center
EOM	emergency operations manager
EOP	emergency operations plan
EPA	Environmental Protection Agency
ERP	emergency response plan
EW	electronic warfare
EXEVAL	external evaluation
FA	field artillery
FAA	Federal Aviation Administration
FARP	forward arming and refueling point
FASCAM	family of scatterable mines
FBCB2	Force XXI Battle Command—Brigade and Below
FHP	force health protection
FLIP	Flight Information Publication
FM	field manual, frequency modulated
FMI	field manual interim
FOV	field of view
FRAGO	fragmentary order
FRIES	fast rope insertion/extraction system
FS	fire support
FSC	forward support company
FSS	flight service station

FTCA	Federal Tort Claims Act
FTNG	full-time National Guard
FTX	field training exercise
FW	fixed-wing
GPS	global positioning system
HA	holding area
HAZMAT	hazardous material
HD	homeland defense
HF	high frequency
HHC	headquarters and headquarters company
HPIS	high-powered illumination system
HS	homeland security
HSC	headquarters and support company
HSS	health service support
IATF	individual aircrew training folder
IAW	in accordance with
ICM	improved conventional munitions
ICS	incident command system
IFF	Identification, friend or foe
IFR	instrument flight rules
IIMC	inadvertent instrument meteorological conditions
ILAP	Integrated Logistics Analysis Program
INTREP	intelligence report
IP	instructor pilot
IPB	intelligence preparation of the battlefield
IR	infrared
ISR	intelligence, surveillance, and reconnaissance
J-3	operations directorate of a joint staff
J-5	plans directorate of a joint staff
JFHQ	joint force headquarters
JOC	joint operations center
JP	joint publication
kg	kilogram
KIAS	knots indicated airspeed
KM	kilometers
kts	knots
LAN	local area network
lbs	pounds
LD	line of departure
LEA	law enforcement agency
LECMBR	law enforcement/civil compatible multiband radio

LNO	liaison officer
LOA	limit of advance
LOC	line of communications
LOGPAC	logistics package
LOGSA	Logistics Support Activity
LOS	line of sight
LRU	line replaceable unit
LSA	logistic support area
LUH	light utility helicopter
LZ	landing zone
m	meter
MAC	maintenance allocation chart
MACA	military assistance to civil authorities
MACDIS	military assistance for civil disturbances
MCO	major combat operation
MDMP	military decisionmaking process
MEDEVAC	medical evacuation
METL	mission essential task list
METT-TC	mission, enemy, terrain and weather, troops and support available, time available, and civil considerations
mm	millimeter
MMC	materiel management center
MOA	memorandum of agreement
MOPP	mission-oriented protective posture
MOU	memorandum of understanding
MSCA	military support to civil authorities
MSCLEA	military support to civilian law enforcement agencies
MST	maintenance support team
MTF	medical treatment facility
MTOE	modified table of organization and equipment
MTP	maintenance test pilot
NAEC-ENG	Naval Air Engineering Center-Engineering
NCO	noncommissioned officer
NCOIC	noncommissioned officer in charge
NCOPD	noncommissioned officer professional development
NG	National Guard
NGB	National Guard Bureau
NGB PAM	National Guard Bureau Pamphlet
NGO	nongovernment organization
NGR	National Guard regulation
NIMS	National Incident Management System

NLOS	non- line of sight
NMC	non mission capable
NOTAM	notice to airmen
NSC	network support company
NVD	night vision device
NVG	night vision goggle
O&I	operations and intelligence
OC	observer controller
OCONUS	outside the continental United States
OH	observation helicopter
OIC	officer in charge
OIP	organization inspection program
OP	observation post
OPCON	operational control
OPD	officer professional development
OPFOR	opposing force
OPLAN	operation plan
OPORD	operation order
OPSEC	operations security
P4T2	problem, people, parts, plan, tools, and time
PA	pressure altitude
PBUSE	Property Book Unit Supply Enhanced
PC	pilot in command
PCA	Posse Comitatus Act
PCC	precombat check
PCI	precombat inspection
PLL	prescribed load list
PMCS	preventive maintenance checks and services
POD	port of debarkation
POE	port of embarkation
POL	petroleum, oils, and lubricants
PP	passage point
PPC	performance planning card
PR	personnel recovery
PSG	platoon sergeant
PZ	pickup zone
QA	quality assurance
QRF	quick reaction force
QTB	quarterly training brief
QTG	quarterly training guidance
RC	reserve component

REDCON	readiness condition
RETRANS	retransmission
ROE	rules of engagement
ROI	rules of interaction
ROZ	restricted operations zone
RP	release point
RSR	required supply rate
RTO	Radio/telephone operator
RUF	rules for the use of force
S&S	security and support
S-1	personnel staff officer
S-2	intelligence staff officer
S-3	operations staff officer
S-4	logistics staff officer
S-6	command, control, communications, and computer operations (C4 Ops) staff officer
S-9	civil affairs staff officer
SA	situational awareness
SAAO	state Army aviation officer
SAD	state active duty
SAMS	Standard Army Maintenance System
SAMS-E	Standard Army Maintenance System-Enhanced
SAR	search and rescue
SARSS	Standard Army Retail Supply System
SARSS-O	Standard Army Retail Supply System-Objective
SATCOM	satellite communications
SCRA	Soldiers and Sailors Relief Act
SDDCTEA	Surface Deployment and Distribution Command Transportation Engineering Agency
SECDEF	Secretary of Defense
SINCGARS	single-channel ground and airborne radio system
SITREP	situation report
SKOT	sets, kits, outfits, and tools
SM	statute mile
SMCT	Soldier’s manual of common tasks
SO	safety officer
SOF	special operations forces
SOI	signal operating instructions
SOP	standing operating procedure
SP	standardization instructor pilot
SPBS-R	Standard Property Book System-Redesign

SPIES	special purpose infiltration/exfiltration system
SPINS	special instructions
SPOE	sea port of embarkation
SSA	supply support activity
S&S BN	security and support battalion
STAMIS	Standard Army Management Information System
STP	Soldier training publication
STX	situational training exercise
SU	situational understanding
T&EO	training and evaluation outline
TAC CP	tactical command post
TACOPS	tactical operations
TACSOP	tactical standing operating procedure
TADIL	tactical digital information link
TAG	State The Adjutant General
TC	training circular
TDH	time/distance/heading
TEWT	training exercise without troops
TF	task force
TFC	task force commander
TFR	temporary flight restriction
TIS	thermal imaging system
TLP	troop leading procedures
TM	technical manual
TTP	tactics, techniques, and procedures
U.S.	United States
UAS	unmanned aerial system
UBL	unit basic load
UH	utility helicopter
UHF	ultrahigh frequency
ULLS	Unit Level Logistics System
ULLS-A	Unit Level Logistics System-Aviation
ULLS-G	Unit Level Logistics System-Ground
ULLS-S4	Unit Level Logistics System-Supply
UMO	unit movement officer
UMT	unit ministry team
USAAWC	United States Army Aviation Warfighting Center
USC	United States Code
USCG	United States Coast Guard
USERRA	Uniformed Services Employment and Reemployment Rights Act
UTL	unit task list

VFR	visual flight rules
VHF	very high frequency
WARNO	warning order
WMD	weapons of mass destruction
XO	executive officer

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