ATP 3-21.9

STRYKER INFANTRY RIFLE PLATOON AND SQUAD

JUNE 2025

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STRYKER INFANTRY RIFLE PLATOON AND SQUAD

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Preface

ATP 3-21.9 provides doctrine for the Stryker Infantry rifle platoon and squad of the Stryker brigade combat team Infantry rifle company against a peer threat. This publication describes relationships, organizational roles and functions, capabilities and limitations, and responsibilities within the Infantry rifle platoon and squad. Techniques, non-prescriptive ways, or methods used to perform missions, functions, or tasks (see CJCSM 5120.01C), are discussed in this publication and are intended to be used as a guide. This publication supersedes the techniques and employment principles of the Stryker Infantry rifle platoon and squad in ATP 3-21.8.

To comprehend the doctrine contained in this publication, readers must understand the tactics in FM 3-90 and FM 3-96. To comprehend how the Stryker Infantry rifle platoon organizes and is doctrinally employed, the reader must understand ATP 3-21.11 and ATP 3-21.21.

The principal audience for ATP 3-21.9 is the commanders, staff, officers, noncommissioned officers, and Soldiers within the Stryker Infantry battalion. The audience includes the United States Army Training and Doctrine Command institutions and components. This publication serves as an authoritative reference for personnel developing doctrine, materiel and force structure, institutional and unit training, and standard operating procedures for the Infantry rifle platoon and squad.

Commanders, staffs, and subordinates ensure that their decisions and actions comply with applicable United States, international, and in some cases host-nation laws and regulations. Commanders at all levels will ensure that their Soldiers operate in accordance with the law of armed conflict and the rules of engagement. (See FM 6-27 for legal compliance.)

The use of a trade or brand name does not constitute endorsement of any specific commercial product, commodity, service, or enterprise by the United States Army.

ATP 3-21.9 uses joint terms where applicable. Selected joint and Army terms and definitions appear in both the glossary and the text. When first defining terms in the text, the term is italicized with the proponent publication designator and number at the end of the definition. The use of a trade or brand name does not constitute endorsement of any specific commercial product, commodity, service, or enterprise by the United States Army.

ATP 3-21.9 applies to the Active Army, the Army National Guard/the Army National Guard of the United States, and the United States Army Reserve unless otherwise stated.

The proponent of ATP 3-21.9 is the United States Army Maneuver Center of Excellence. The preparing agency is the Department of Tactics, Training, and Doctrine, United States Army Maneuver Center of Excellence. Send comments and recommendations on DA Form 2028, (*Recommended Changes to Publications and Blank Forms*) to Commander, United States Maneuver Center of Excellence and Fort Benning, ATZK-TDD (ATP 3-21.9), 1 Karker Street, Fort Benning, GA 31905-5410; by email to usarmy.benning.mcoe.mbx.doctrine@army.mil; or submit an electronic DA Form 2028.

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Introduction

ATP 3-21.9 addresses the tactical application of techniques associated with the offense, defense, and enabling tasks for the Stryker Infantry rifle platoon and squad. ATP 3-21.9 does not discuss defense support of civil authorities (see ADP 3-28 and ATP 3-28.1) and the element of stability within decisive action (see ATP 3-21.11 chapter 4). Employing the techniques addressed in ATP 3-21.9 requires using and integrating the techniques found in ATP 3-21.11 and ATP 3-21.21 and the tactics and procedures found in FM 3-96, *tactics* are the employment, ordered arrangement, and directed actions of forces in relation to each other (ADP 3-90). Procedures are standard, detailed steps that prescribe how to perform specific tasks (see CJCSM 5120.01C).

The techniques addressed in ATP 3-21.9 include the movement and maneuver of units in relation to each other, the terrain, and the enemy. Techniques vary with terrain and other circumstances; they change frequently as the enemy reacts and friendly forces explore new approaches. Applying techniques usually entails acting under time constraints with incomplete information. Techniques always require judgment in application; they are always descriptive, not prescriptive.

The discussions used throughout this publication illustrate different ways a Stryker Infantry rifle platoon and squad can accomplish its mission regardless of which inherent element (offense or defense) of conventional warfare that it currently dominates. Conventional warfare is a violent struggle for domination between nation states or coalitions of nation-states (see FM 3-0). Discussions will focus on potential challenges confronting the platoon leader and platoon subordinate leaders in accomplishing their mission but are not intended to be prescriptive of how the Stryker Infantry rifle platoon performs any particular operation.

Note. These discussions drive the techniques used to develop ATP 3-21.11 and ATP 3-21.21, and focus on the techniques used to perform missions, functions, or tasks in support of the Stryker Infantry rifle company.

ATP 3-21.9 incorporates the significant changes in Army doctrinal terminology, concepts, constructs, and proven tactics developed during recent operations. It also incorporates changes based on newly published Army capstone doctrine and operational concept.

Note. The Army's operational concept is multidomain operations. Multidomain operations are the combined arms employment of joint and Army capabilities to create and exploit relative advantages that achieve objectives, defeat enemy forces, and consolidate gains on behalf of joint force commanders (see FM 3-0). Employing Army and joint capabilities makes use of all available combat power from each domain (air, land, maritime, space, and cyberspace) to accomplish missions. Due to the Army's capabilities that span the competition continuum, the Army contributes significantly in a joint environment to multidomain operations. (See FM 3-0 for a detailed discussion.)

The following is a brief introduction and summary of changes by chapter:

Chapter 1–Organization

Chapter 1 focuses on the Stryker Infantry rifle platoon and squads' role and organization, as well as the platoon's mission, capabilities, and limitations. It provides a discussion on the duties and responsibilities within the platoon and squads.

Chapter 2–Planning and Preparing for Operations

Chapter 2 provides small-unit leaders with a framework (troop leading procedures) to analyze a mission, develop a plan, and prepare for an operation. In addition, chapter 2—

- Discusses parallel planning.
- Addresses the intelligence preparation of the operational environment.
- Describes mission command as the Army's approach to command and control.
- Provides a detailed discussion of the mission variables of mission, enemy, terrain and weather, troops and support available, time available, civil considerations, and informational considerations.
- Discusses mission orders and disciplined initiative.

Chapter 3–Offense

Chapter 3 discusses considerations for tactical movement and maneuver. In addition, chapter 3 discusses mounted movement formations, mounted movement techniques, and other mounted techniques such as dismount and remount points.

Chapter 3 discusses offensive actions to breach, destroy, seize, or suppress the enemy. The chapter addresses the characteristics of the offense and describes the four offensive operations (discussion mainly focuses on actions on contact, movement to contact, and attack). Chapter 3 also discusses—

- Common offensive planning considerations and offensive control measures.
- Forms of maneuver.
- Operations during limited visibility.

Chapter 4–Defense

Chapter 4 discusses defensive actions to defeat enemy attacks, gain time, control key terrain, protect critical infrastructure, secure the population, and economize forces. The chapter addresses defense characteristics and describes the three defensive operations (discussion mainly focuses on area defense and retrograde). Chapter 4 also discusses—

- Common defensive planning considerations and defensive control measures.
- Forms of the defense and forms of defensive maneuver.

- Engagement area development.
- Fighting position construction.

Chapter 5–Tactical Enabling Operations and Activities

Chapter 5 discusses tactical enabling operations and activities in support of offensive and defensive operations. These operations and activities include breaching, relief in place, passage of lines, linkup, and security.

Chapter 6–Sustainment

Chapter 6 discusses the process that the platoon leader and platoon sergeant use to anticipate the needs of the Infantry rifle platoon. In addition, chapter 6 addresses—

- Planning and responsibilities.
- Casualty response.
- Load considerations.
- Maintenance.

Appendices

Four appendixes complement the body of this publication. They include the following:

- Appendix A–Direct Fire Planning and Control.
- Appendix B–Fire Support Planning.
- Appendix C–Battle and Crew Drills.
- Appendix D–Vehicle, Weapon, and Equipment Capabilities.

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Chapter 1
Organization

The primary mission of the Stryker Infantry platoon and squad is to close with the enemy by means of fire and movement to destroy, capture, or repel an assault by fire, close combat, and counterattack. Stryker Infantry rifle platoons and squads are aggressive, physically fit, disciplined, and well trained. The Stryker platoon and squads' effectiveness is achieved by its ability to mass its infantryman while being supported by the mobility of the Stryker thereby employing a mix of mounted and dismounted movement and maneuver. The inherent strategic mobility dictates a need to be prepared for rapid deployment and capable of immediate employment upon arrival in all types of operational environments. This chapter focuses on the Stryker Infantry platoon and squads' role, organization, duties, and responsibilities within the Infantry platoon and squad.

SECTION I – ROLE OF THE STRYKER BRIGADE COMBAT TEAM INFANTRY RIFLE PLATOON AND SQUAD

1-1. Stryker Infantry platoon and squads are a versatile force that can fight purely dismounted or dismounted while being supported by Strykers. The Stryker is a highly mobile vehicle that enables the Stryker Infantry to close with and destroy dismounted, unarmored, and lightly armored enemy with the Common Remotely Operated Weapon Station (CROWS), Common Remotely Operated Weapon Station-Javelin (CROWS-J) (if equipped), Medium Caliber Weapon System (if equipped), and Remote Weapon Station (RWS) weapon system while the dismounted Infantrymen, supported by the Stryker, destroy enemy in close combat.

Note. The Stryker is not a fighting vehicle. The Stryker is a lightly armored combat vehicle which makes it vulnerable to enemy antiarmor and unsuitable for direct engagement with armored vehicles. Centered on the Infantry rifle squad, the Stryker is a platform designed to transport Infantrymen to a dismount point (DP) behind the suspected line of contact (LC).

MISSION

1-2. The primary mission of the Stryker brigade combat team (SBCT) Infantry rifle company is to close with the enemy by means of maneuver to destroy or capture them, or to repel the assault by fire, close combat, and counterattack (see ATP 3-21.11). Stryker Infantry rifle platoons and squads achieve this by using inherent tactical mobility and firepower to reach positions of relative advantage from which to decisively defeat enemy forces. The Stryker Infantry rifle platoon is a versatile force that can fight in unison with a mounted force supporting a dismounted force or as a purely dismounted force. The Stryker is a platform that provides protection, mobility, and firepower by

carrying the Infantry squad to the point of deployment. It facilitates the Infantry to seize the initiative by deploying to positions that facilitate the platoon leader's plan.

Note. ATP 3-21.9 does not address defense support of civil authorities. (See ADP 3-28 and ATP 3-28.1 for information.) It does not address stability operations tasks. (See ATP 3-21.11 and ATP 3-21.21 for information.)

MULTIDOMAIN OPERATIONS

1-3. Platoon leaders should understand how higher headquarters analyze different domains in the operating environment and understand how leaders define large scale combat operations.

1-4. *Multidomain operations* are the combined arms employment of joint and Army capabilities to create and exploit relative advantages to achieve objectives, defeat enemy forces, and consolidate gains on behalf of joint force commanders (FM 3-0). Due to the Army's capabilities that span the competition continuum, the Army contributes significantly in a joint environment to multidomain operations. During conflict, the Army forces close with and destroy the enemy, defeat enemy formations, seize critical terrain, and control populations and resources to deliver sustainable political outcomes. All operations are multidomain operations; however, the maneuver force's role in multidomain operations is to conduct combined arms maneuver. *Combined arms* are the synchronized and simultaneous application of arms to achieve an effect greater than if each element was used separately or sequentially (ADP 3-0).

DOMAINS

1-5. A *domain* is a physically defined portion of an operational environment requiring a unique set of warfighting capabilities and skills (FM 3-0). Land operations require mastery of terrain and ground maneuver. Cyberspace operations require mastery of digital information systems and computer code. Space, air, and maritime operations likewise require specific capabilities and skills. The five domains in multidomain operations are land, maritime, air, space, cyberspace. (See FM 3-0 for more information.) Stryker Infantry rifle platoons will not plan for space and cyber capabilities, but they can assume that they will be operating in an environment where those domains will be contested.

LARGE SCALE COMBAT OPERATIONS

1-6. *Large scale combat operations* are extensive joint combat operations in terms of scope and size of forces committed, conducted as a campaign aimed at achieving operational and strategic objectives (ADP 3-0). During large-scale combat operations, the platoon conducts offensive, defensive, stability, and enabling operations to defeat enemy forces. (See ATP 3-21.11 for more information.)

1-7. An *offensive operation* is an operation to defeat or destroy enemy forces and gain control of terrain, resources, and population centers (ADP 3-0). These types of operations impose the commander's will on the enemy. When conducting defensive operations, retaining the initiative requires executing offensive operations at some point. (See ATP 3-21.11 for more information.)

1-8. A *defensive operation* is an operation to defeat an enemy attack, gain time, economize forces, and develop conditions favorable for offensive or stability operations (ADP 3-0). Successful defenses rely on a complete understanding of terrain to determine likely threat course of action (COA) to best position assets to counter the threat. A *threat* is any combination of actors, entities, or forces that have the capability and intent to harm United States forces, United States national interests, or the homeland (ADP 3-0). Commanders use all available means to defeat and disrupt enemy forces. (See ATP 3-21.11 for more information.)

1-9. A *stability operation* is an operation conducted outside the United States in coordination with other instruments of national power to establish or maintain a secure environment and provide essential governmental services, emergency infrastructure reconstruction, and humanitarian relief (ADP 3-0). Commanders are legally required to perform minimum-essential stability operations tasks when controlling a populated area of operations in an area considered under military occupation as defined in the law of armed conflict. These include security, food, water, shelter, and medical treatment. (See ADP 3-07 for a more detailed discussion on stability.)

1-10. An *enabling operation* is an operation that sets the friendly conditions required for mission accomplishment (FM 3-90). Enabling operations, by themselves, do not directly accomplish the end state, but are required to successfully conduct offensive, defensive, and stability operations.

ORGANIZATION

1-11. The Stryker Infantry rifle platoon consists of four Strykers (variants will differ depending on unit), a platoon headquarters, three Infantry squads, a weapons squad, and a mounted element (see figure 1-1 on page 4). The typical platoon organization has an Infantry squad assigned to each vehicle with the weapons squad being assigned to the platoon leaders Stryker (see figure 1-2 on page 5). Squads, individual Soldiers, and enablers are assigned to vehicles based on mission variables. Examples of this are when the weapons squad is assigned to the platoon sergeant's vehicle or split between the platoon sergeant and platoon leaders' vehicles. The Stryker Infantry rifle platoon has many flexible employment options, and its squads can be task organized alone or as part of a combined arms force. The platoon can fight in multiple mutually supporting maneuver elements to include the following:

- Squad leader controls two dismounted teams and a mounted Stryker vehicle.
- The dismounted squads and mounted Stryker vehicles can be employed on separate and distinct missions. For example:
  - The squads conduct security patrols while two Stryker vehicles establish blocking positions.
  - The other two Stryker vehicles provide security for the assembly area (AA).

- The platoon fights as mounted and dismounted elements supporting one another.
- The platoon fights as two separate and distinct maneuver elements, one mounted and one dismounted.

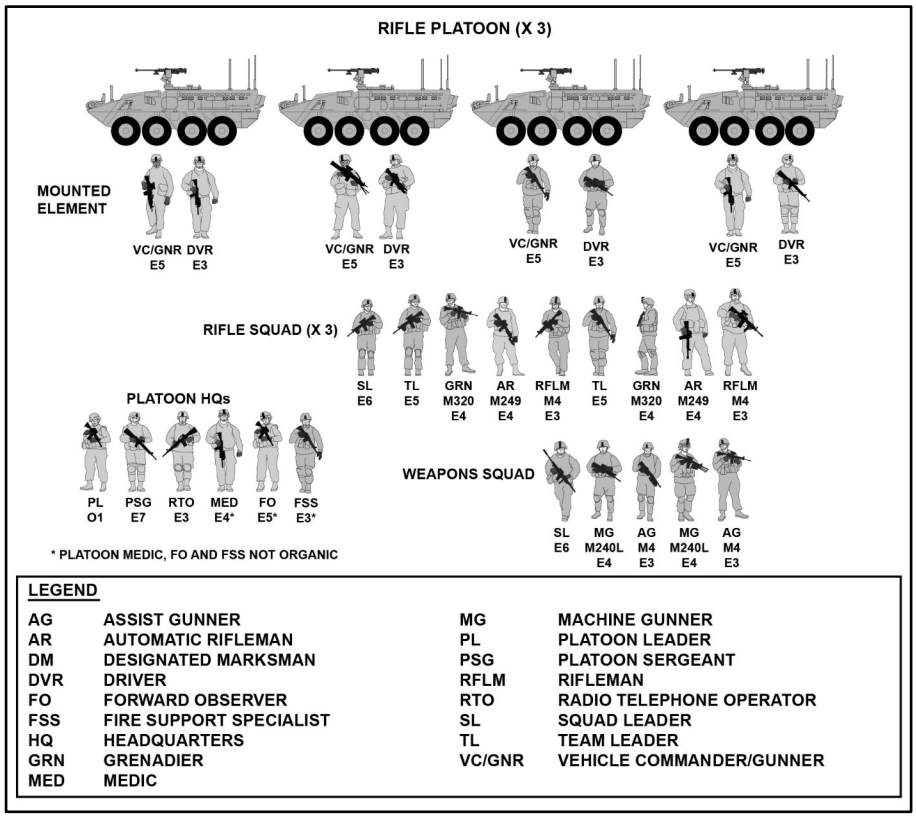


Figure 1-1. Stryker platoon organization

RIFLE SQUAD

1-12. Stryker Infantry rifle squads are organized the same and have the same functions as those in Infantry brigade combat teams (BCTs) with the addition of a Stryker vehicle, a vehicle commander (VC), and a vehicle driver (see figure 1-2). The squad consists of a squad leader, two fire teams, and the mounted element. The fire team is designed to fight as an organic self-contained team consisting of a team leader, automatic rifleman, grenadier, and rifleman. The rifleman may be assigned the added duty of being either the squad's antitank (AT) specialist or designated marksman.

1-13. Squads can move independently with one team providing a base of fire while the other team moves to a position of advantage or onto the objective. The fire team leader is a fighting leader and leads their team by example. The fire team leader controls the movement of their team and the placement of fires against the enemy and assists the squad leader as required.

1-14. The VC is responsible for the overall employment of the Stryker when the squad leader is not mounted and operates the Stryker's weapons systems. The vehicle driver is responsible for the maintenance of the vehicle and operates the vehicle during all conditions. At the VC's direction, the driver negotiates the vehicle through all terrain and obstacles to safely deliver the Infantry rifle squad to the point of employment on the battlefield.

WEAPONS SQUAD

1-15. The Stryker Infantry weapons squad consists of a Stryker, squad leader, two medium machine gun teams, and a mounted element. The medium machine gun teams consist of a machine gunner, assistant machine gunner, and a mounted element consisting of a VC and driver. Each machine gun team is equipped with a M240L 7.62-millimeter (mm) medium machine gun with an effective range of 800 meters. The weapons squad provides the primary base of fire for the maneuver of the platoon's rifle squads with accurate fires against enemy personnel and equipment. The platoon leader may provide additional security to the weapons squad when additional firepower and protection is required. The vehicle element organization is the same as figure 1-1 on page 4.

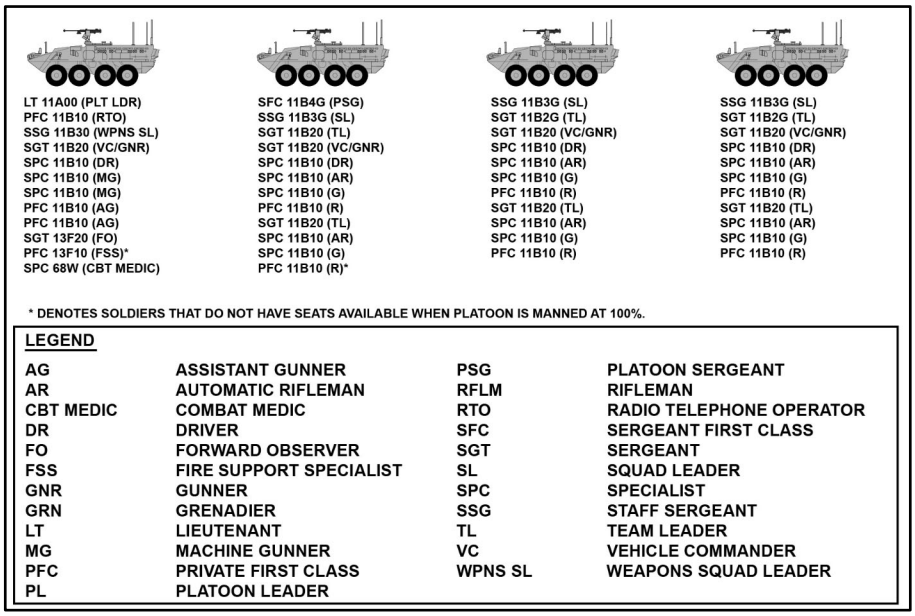


Figure 1-2. Stryker platoon organization, example

TASK ORGANIZATION

1-16. The assets available to Stryker Infantry rifle platoon leaders provide more options when deciding how to organize to accomplish a given mission than any other Infantry platoon. Assets, enablers, and teams can transition between subordinate units before, during, or after a mission. Leaders must clearly articulate the new command relationships following these transitions to minimize confusion and ensure capabilities

are being employed to their maximum potential. Leaders should avoid having a critical capability unused because no one was sure who had control over it.

SECTION II – COMMAND AND CONTROL

1-17. The Stryker Infantry rifle platoon and squad within the Stryker Infantry rifle company can deploy rapidly and can be sustained by an austere support structure. It conducts operations against conventional and unconventional enemy forces in all types of terrain and climate conditions. The platoon's composition and training uniquely equip it to conduct its mission. In addition to its primary warfighting missions, the rifle platoon and squad may be tasked to perform other types of operations semi-independently or as an integral part of a larger force. This section addresses the exercise of command and control (C2), specifically the duties and responsibilities, and habitual attachments of the Stryker Infantry rifle platoon and squad.

DUTIES AND RESPONSIBILITIES

1-18. The duties and responsibilities of the Soldiers and leaders within the Stryker Infantry rifle platoon enable the exercise of C2 throughout the conduct of operations. *Command and control* is the exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission (JP 1, Vol 2).

1-19. The platoon leader should designate a mounted leader who will exercise C2 of the Strykers when the Infantry platoon dismounts. The designated mounted leader could be the platoon sergeant, weapons squad leader, squad leader, or senior VC. The designated mounted leader(s) exercise C2 of the Stryker(s) at any time the platoon's leaders dismount from the vehicle and command of the platoon shifts to the dismounted leaders. In the offense, that is typically from the DP, through the objective and into the final platoon battle position (BP) to conduct consolidation and reorganization. In the defense, the Strykers may be under the control of the designated mounted leader and integrated into the platoon's defenses or positioned proximate to the defense to enable timely mounted displacement to alternate, supplementary or subsequent BPs.

1-20. The designated mounted leader is responsible for the maneuver and direct fire weapon systems of the platoon's Strykers. When the Infantry platoon remounts the Strykers, the C2 transitions back to the platoon leader. The designated mounted leader should be able to:

- Direct and control the maneuver of the mounted element in support of dismounted operations.
- Focus, shift, or distribute the direct fires of single or multiple Strykers in support of platoon maneuver.
- Develop an engagement area (EA).
- Occupy a BP and establish support by fire (SBF) position.
- Provide overwatch.
- Provide casualty evacuation (CASEVAC).
- Call for fire.
- Employ C2 and communications relay.
- Employ Strykers as a platoon mounted reserve.

1-21. In planning, the platoon leader will identify a designated mounted leader to C2 the Strykers. The platoon leader will send the identification and callsign of the designated mounted leader to the company headquarters. In execution, the platoon leader and platoon sergeant exercise C2 of the mounted element from AA to DP. If contact is made prior to the DP, the platoon leader will perform actions on contact while mounted and as planned, control of the mounted element will transition to the designated mounted leader. If contact is not made, the designated mounted leader will control the mounted elements from the DP, through the objective, to hasty platoon BPs in preparation for follow-on operations.

Note. This publication uses the term designated mounted leader(s) in lieu of section leader(s) in alignment with the modified tables of organization and equipment of the Stryker Infantry rifle platoon and squad. The unique nature of the organization necessitates the rapid transition of C2 for the Strykers dependent whether mounted or dismounted.

LEADERSHIP

1-22. Leadership is an essential dynamic of combat power. *Combat power* is the total means of destructive and disruptive force that a military unit/formation can apply against an enemy at a given time (JP 3-0). *Leadership* is the activity of influencing people by providing purpose, direction, and motivation to accomplish the mission and improve the organization (ADP 6-22). Leadership is the unifying and multiplying element of combat power, and no amount of technology can take the place of competent leadership. The leaders within the platoon and squad lead through a combination of personal example, persuasion, and compulsion. Leadership is a critical component that allows unit leaders to carry out their duties and responsibilities.

1-23. The inclusion of an organic mounted element imposes additional duties and responsibilities on leaders and Soldiers. The increased complexity of the Stryker-equipped Infantry platoon requires highly trained Soldiers and leaders. The increase of equipment in the platoon requires more cross-training to ensure Soldiers can fill vacancies when required. The following paragraphs address the duties and responsibilities of the key personnel common to the Stryker Infantry rifle platoon and squad.

PLATOON HEADQUARTERS

1-24. Organic to the platoon headquarters are the platoon leader, platoon sergeant, and radiotelephone operator (RTO). There are some habitual attachments which will be discussed later. The platoon headquarters provides C2 to the platoon and serves as the link between the platoon and company leaders.

Platoon Leader

1-25. The platoon leader leads Soldiers by personal example and is responsible for accountability of platoon members, all the platoon does or fails to do, and having complete authority over subordinates. The platoon leader must be prepared to exercise initiative within the company commander’s intent and without specific guidance for

every situation. The platoon leader knows the Soldiers of the platoon, how to employ the platoon, its weapons, and its systems. Relying on the expertise of the platoon sergeant, the platoon leader regularly consults with the platoon sergeant on all platoon matters. During operations, the platoon leader—

- Understands the mission and commander's intent two levels up (company and battalion).
- Leads the platoon in supporting the higher headquarters' missions.
- Bases the platoon's actions on the assigned mission, intent, and concept of the higher commanders(s).
- Conducts troop leading procedures (TLP).
- Issues warning order (WARNORD) and operation orders (OPORDs) and fragmentary orders (FRAGORDs), as necessary to accomplish the mission.
- Positions where best to control and accomplish the mission.
- Maneuvers squads and fighting elements; knows weapons effects, surface danger zones (SDZs), and risk estimate distances for munitions used by and in support of the company.
- Synchronizes the efforts of squads and mounted elements.
- Integrates the combined maneuver of mounted and dismounted elements.
- Requests, controls, and synchronizes supporting assets.
- Assigns clear tasks and purposes to subordinate elements.
- Plans and controls employment of direct and indirect fires.
- Coordinates and assists in the development of the obstacle plan.
- Plans the emplacement and employment of key weapon systems and ensures they are integrated to support the platoon's maneuver.
- Positions leaders where best to control and accomplish the mission.
- Analyzes tactical situations, disseminates and filters information, and employs C2 systems available (digital or analog) to accomplish the mission.
- Confirms that subordinate elements are maintaining coverage of assigned primary and secondary sectors of fire in three dimensions.
- Confirms the emplacement and employment of the platoon's key weapons.
- Receives status reports from the platoon sergeant and squad leaders.
- Ensures reports are accurate and sent to higher headquarters in a timely manner.
- Plans and assists the platoon sergeant in planning and coordinating sustainment for the platoon.
- Oversees and is responsible for property management.
- Establishes and monitors execution of designated priorities of work.
- Designates rehearsal priorities.
- Designates priorities for precombat inspections (PCIs).
- Directs implementation of protection and local security requirements including listening post, observation post (OP), or both, and implementation also includes:
  - Chemical, biological, radiological, and nuclear (CBRN) protection.
  - Air guards.
  - Local security patrols.
  - Other requirements.
- Works to develop and maintain situational awareness, and to the degree possible, situational understanding through four elements:

- Attempts to know what is happening in present terms of friendly, enemy, neutral, and terrain situations.
- Knows the end state representing mission accomplishment.
- Determines the critical actions and events occurring to move the unit from the present to the end state.
- Assesses the risk throughout the operation.

Platoon Sergeant

1-26. The platoon sergeant is the platoon's most experienced noncommissioned officer and leads the platoon in the platoon leader's absence. The platoon sergeant is accountable to the platoon leader for leadership, discipline, accountability of assigned equipment, training, and welfare of the platoon's Soldiers. The platoon sergeant sets the example in everything and assists the platoon leader by upholding standards and platoon discipline. The platoon sergeant's expertise includes tactical maneuver, employment of weapons and systems, sustainment, administration, security, accountability, protection, and Soldier care. As the second-in-charge, the platoon sergeant assumes no formal duties except those prescribed by the platoon leader. However, the platoon sergeant traditionally—

- Ensures the platoon is prepared to accomplish its mission, which includes supervising precombat checks (PCCs), PCIs, and rehearsals.
- Updates platoon leader on appropriate reports and forwards reports needed by higher headquarters.
- Prepares to assume the role and responsibilities of the platoon leader.
- Takes charge of task-organized elements in the platoon during tactical operations, which may include but is not limited to, quartering parties, special purpose teams, and security patrols.
- Monitors the morale, discipline, and health of the platoon.
- Positions where best needed to facilitate the engagement.
- Receives administrative, logistical, and maintenance reports.
- Monitors consumption of critical supplies; designates priorities of support within the platoon.
- Requests logistical support from the higher headquarters, and usually coordinates with the company's first sergeant (1SG) or executive officer (XO).
- Ensures Soldiers maintain all equipment.
- Ensures ammunition and supplies are properly and evenly distributed after the platoon consolidates on the objective and while the platoon reorganizes.
- Manages the unit's combat load prior to operations and monitors logistical status during operations.
- Establishes and operates the unit's casualty collection point (CCP), which includes directing the platoon combat medic and aid/litter teams in moving casualties, maintaining platoon strength level information, consolidating and forwarding the platoon's casualty reports.
- Receives and orients replacement Soldiers.
- Employs the digital C2 systems available to the squads and platoon.
- Ensures Soldiers distribute supplies according to the platoon leader's guidance and direction.

- Accounts for Soldiers, equipment, and supplies.
- Coaches, counsels, and mentors squad leaders and team leaders.
- Upholds standards and platoon discipline.
- Understands the mission and commander's intent two levels up (company and battalion).
- Assists with preparing the OPORD (for example, determining Soldier load, echeloning loads, load determination, and load tailoring [see ATP 3-21.18]).
- Assists with preparation for rehearsals and priorities of work.
- Supervises execution of AA procedures, priorities of work, logistics package (LOGPAC) and other routine functions.
- Prepares and submits a platoon sector sketch.
- Supervises execution of directed protection requirements.
- Plans and integrates supporting unmanned aircraft system (UAS) unmanned ground vehicle, and Soldier borne sensors into reconnaissance or security requirements.

Platoon Radiotelephone Operator

1-27. The RTO primarily is responsible for communication with its controlling headquarters (usually the company). During operations, the RTO—

- Establishes and maintains platoon communications with higher headquarters and subordinate elements:
  - Conducts regular radio checks.
  - Immediately informs platoon leader about any change in communications status.
  - Conducts radio checks with higher headquarters according to unit standard operating procedures (SOPs) and if radio contact cannot be made as required, the RTO informs the platoon sergeant or platoon leader.
- Serves as an expert in radio procedures and report formats such as:
  - Close air support (CAS).
  - Call for mortar and artillery fire.
  - Medical evacuation (MEDEVAC).
  - CASEVAC.
- Serves as an expert in different types of field expedient antennas.
- Maintains the frequencies and call signs on self in a location known to all Soldiers in the platoon.
- Assists the platoon leader with information management.
- Serves as the platoon's subject matter expert on all C2 systems; facilitates training and troubleshoots system problems.
- Facilitates loading of critical data and software, including encryption, frequencies, and time on platoon communications equipment.
- Determines combat load prior to operations and manages battery utilization during operations.
- Assists with preparing the OPORD (for example, developing the primary, alternate, contingency, and emergency [PACE]) communications plan.

- Assists with preparation for rehearsals (for example, building the platoon sand table).
- Maintains physical security of communications security devices.
- Tracks completion of assigned tasks and submits routine information to higher headquarters, including task completion.

RIFLE SQUAD

1-28. The squad leader and two team leaders provide the squad with C2. Additionally, the squad has two rifleman, two automatic rifleman, and two grenadiers.

Squad Leader

1-29. The squad leader directs team leaders and leads by personal example. The squad leader is responsible for the accountability of squad members, has authority over subordinates, and overall responsibility of those subordinates' actions. Centralized authority enables the squad leader to act decisively while maintaining troop discipline and unity. Under the fluid conditions of close combat, the squad leader accomplishes assigned missions without constant guidance from higher headquarters.

1-30. The squad leader is the senior Infantry Soldier in the squad and is responsible for everything the squad does or fails to do. The squad leader is responsible for the care of the squad's Soldiers, weapons, discipline, and equipment, and leads the squad through two team leaders. During operations, the squad leader—

- Serves as the subject matter expert on all squad-level battle drills and individual Soldier tasks.
- Serves as the subject matter expert for the squad's organic weapons employment and employment of supporting assets.
- Knows weapon effects, SDZs, and risk estimate distances for munitions used by and with the squad.
- Uses control measures for direct fire, indirect fire, and tactical movement effectively.
- Controls the movement of the squad and its rate and distribution of direct fires.
- Controls for the employment of indirect fires within the squad (including call for and adjust fire).
- Fights the close fight by fire and movement with two fire teams and available supporting weapons.
- Selects the fire team's general location and initial sector of fires.
- Communicates timely and accurate situation report (SITREPs) and status reports including—
  - Size, activity, location, unit, time, and equipment spot reports.
  - Status to the platoon leader (including squad location and progress, enemy situation, enemy killed in action, and security posture).
  - Status of ammunition, casualties, and equipment to the platoon sergeant.
- Employs digital C2 systems available to the squad and platoon.
- Ensures Soldiers maintain and account for all equipment and supplies.
- Operates in all environments.
- Conducts TLP.
- Coaches, counsels, and mentors team leaders.

- Assumes duties as the platoon sergeant or platoon leader as required.
- Understands the mission and commander's intent two levels up (platoon and company).
- Responsible for the administrative requirements of squad members and mounted element.
- Supervises Stryker maintenance and ensures basic issue items (BII) are accounted for and operational.
- Supervises the performance of the VC, and takes appropriate action to prevent, resolve, or mitigate problems as applicable.

Team Leader

1-31. The team leader leads the rifle team members by personal example. The team leader, who has authority over subordinates, is responsible for accountability of team members and overall responsibility of their actions. Centralized authority enables the team leader to maintain discipline and unity and to act decisively. Under the fluid conditions of close combat, the team leader accomplishes assigned missions using initiative without needing constant guidance from higher headquarters.

1-32. The team leader's position on the battlefield requires immediacy and accuracy in all performed actions and is a fighting leader who leads by example. The team leader is overall responsible for the discipline, assigned weapons, and equipment of all team personnel. During operations, the team leader—

- Serves as a subject matter expert for:
  - All the team's weapons and duty positions.
  - All squad battle drills and individual Soldier tasks.
- Leads the team in fire and movement.
- Controls the movement of the team and its rate and distribution of fire.
- Employs digital C2 systems available to the squad and platoon.
- Ensures the security of the team's assigned area.
- Assists the squad leader as required.
- Prepares to assume the duties of squad leader and platoon sergeant.
- Enforces field discipline and preventive medicine measures.
- Manages the team's combat load and its available classes of supply as required (see table 6-2 on page 292 for all classes of supplies).
- Understands the mission two levels up (squad and platoon).
- Provides local security and maintenance support to the mounted element, as required.

Note. In some cases, the team leader will assume the primary weapon system and responsibilities of the grenadier to mitigate a missing team member or create an extra rifleman to assume additional duties within the squad.

Grenadier

1-33. The grenadier is equipped with a 40-mm grenade launcher. The grenadier provides the fire team with a high trajectory and a high explosive (HE) capability. Grenadier fires enable the fire team to achieve complementary effects with high trajectory, HE

munitions, and flat trajectory ball ammunition from the team's weapons. The grenade launcher allows the grenadier to produce three effects: suppress and destroy enemy Infantry and lightly armored vehicles with HE or HE dual-purpose; provide obscurants to screen and cover the squad's fire and movement; and employ illumination rounds to increase the squad's visibility and mark enemy positions. The grenadier—

- Performs all tasks of the rifleman and grenadier.
- Engages point and area targets with the appropriate type of rounds during both day and night.
- Covers dead space and denies dead space to the enemy.
- Identifies 40-mm rounds by shape and color and knows how to employ each type of round and its minimum safety constraints.
- Knows the maximum ranges for each type of target of the grenade launcher.
- Knows the leaf sight increments without seeing the markings and can adjust fire on target.
- Knows how to make an adjustment from the first round fired so a second-round hit can be attained.
- Prepares to employ digital C2 systems and radios available to the squad.
- Prepares to assume the duties of the automatic rifleman and team leader.
- Understands the mission two levels up (squad and platoon).
- Provides local security and maintenance support to the mounted element.

Automatic Rifleman

1-34. The automatic rifleman's primary weapon is the squad automatic weapon. The automatic rifleman provides the unit with a high volume of sustained suppressive direct fires of area targets. The automatic rifleman employs the weapon system to suppress enemy Infantry and bunkers, destroy enemy automatic rifle and AT teams, and enable the movement of other teams and squads. The automatic rifleman is normally the senior Soldier of the fire team and must—

- Be able to accomplish all tasks of the rifleman and grenadier.
- Be prepared to assume the duties of team leader and squad leader.
- Be able to engage groups of enemy personnel, thin-skinned vehicles, bunker doors or apertures, and suspected enemy locations with automatic fire.
- Be able to provide suppressive fire on targets so other team members can close with and destroy the enemy.
- Be familiar with field expedient firing aids to enhance the effectiveness of assigned weapon (an example is aiming stakes).
- Be able to engage targets from the prone, kneeling, and standing positions with and without night observation devices.
- Understand the mission two levels up (squad and platoon).
- Provide local security and maintenance support to the mounted element.

Rifleman

1-35. The rifleman provides the baseline standard for all Infantry Soldiers and is an integral part of the fire team. The rifleman is an expert in handling and employing the weapon and placing well-aimed fire on the enemy. Additionally, the rifleman must—

- Be an expert on assigned weapon system, its optics, and its laser-aiming device, and be effective with this weapon system day or night.
- Be capable of engaging all targets with well-aimed shots (specifically through correct positioning on the battlefield and marksmanship proficiency).
- Employ all weapons of the squad, as well as common munitions.
- Construct and occupy a hasty firing position and know how to fire from it.
  - Know how to occupy covered and concealed positions in all environments.
  - Know what protection the positions provide from direct fire weapons.
  - Be competent in the performance of these tasks while using night vision devices.
- Fight as part of the team, which includes proficiency in individual tasks and drills.
- Know the duties of team members and be prepared to fill in with their weapons, if needed (for example, assume the duties of the automatic rifleman and team leader).
- Contribute as a member of special teams, including detainee search, aid/litter, and demolitions and wire/mine breach teams.
- Inform team leader of everything heard and seen when in a tactical situation.
- Perform individual preventive medical measures.
- Administer buddy aid as required.
- Manage supplied food, water, and ammunition during operations.
- Understand the mission two levels up (squad and platoon).
- Provide local security and maintenance support for the Stryker.

Note. The riflemen may be given the added duties of being the squad's AT specialist. As the AT specialist, the rifleman will be responsible for the deployment of either the Javelin close combat missile system (CCMS) or M3 multi-role, antiarmor, antipersonnel weapon system (MAAWS).

WEAPONS SQUAD

1-36. The weapons squad leader provides the squad with C2. The squad has two machine gunners and two assistant machine gunners. The weapons squad provides the platoon with responsive crew served weapons capability under the platoon leader's direct control.

Weapons Squad Leader

1-37. The weapons squad leader leads the squad's teams by personal example. The weapons squad leader is responsible for the accountability of squad members and has complete authority over squad subordinates and overall responsibility for those subordinates' actions. This centralized authority enables the weapons squad leader to act decisively while maintaining troop discipline and unity.

1-38. The weapons squad leader is usually the senior squad leader, second only to the platoon sergeant, and performs all the duties of the rifle squad leader. In addition, the weapons squad leader—

- Leads the squad in supporting the higher headquarters' missions and bases the squad's actions on the assigned mission, intent, and operations concept.
- Serves as the subject matter expert on all squad battle drills, crew drills, and individual Soldier tasks.
- Serves as the subject matter expert for the squad's organic weapons employment and employment of supporting assets.
- Knows weapon effects, SDZs, and risk estimate distances for munitions used by and with the squad.
- Controls fires and establishes fire control measures.
- Monitors ammunition expenditures and reallocates ammunition as required to meet mission requirements.
- Recommends medium machine gun employment to the platoon leader in various situations, such as:
  - Coordinating directly and planning accordingly with the platoon leader in placement of the medium machine gun to best cover (base-of-fire effect) the final protective line (FPL) in the defense.
  - Conducting overwatch, which is a task that positions an element to support the movement of another element with immediate fire during movement techniques, and SBF positions in the offense.
- Employing C2 systems available to the squad and platoon.
- Employing and controlling indirect fire rate and distribution of fire including, call for and adjust fire.
- Issuing accurate and timely reports to the platoon headquarters including squad status reports and SITREPs.
- Performing duties of the platoon sergeant for the dismounted element if the platoon sergeant remains with the vehicles.
- Conducting TLP.
- Supervising Stryker maintenance and ensuring BII are accounted for and operational.
- Overseeing the performance of the VC, and taking appropriate action to prevent, resolve, or mitigate problems as applicable.
- Counseling and evaluating machine gunners and VC.
- Understanding the mission and commander's intent two levels up (platoon and company).

Machine Gunner

1-39. The machine gunner is normally the senior member of the medium machine gun team. During operations, the machine gunner—

- Is responsible for the assistant machine gunner and all the gun equipment.
- Employs medium machine gun in and out of action.
- Acts as the subject matter expert for information contained in TC 3-22.240, specifically information about:
  - The weapon.
  - Aiming devices.
  - Attachments.
  - Employment/engagement.

- Is the subject matter expert for employment of the medium machine gun when attached to a rifle squad, advising the rifle squad leader of the best way to employ the medium machine gun.
- Enforces field discipline while the gun team is employed tactically.
- Knows the ballistic effects of the machine gun and the SDZs of the weapon system on all types of targets.
- Assists the weapons squad leader and is prepared to assume the responsibilities.
- Understands the mission two levels up (squad and platoon).

Assistant Machine Gunner

1-40. The assistant machine gunner is the second member of the gun team. The assistant machine gunner is prepared to assume the machine gunner's role in any situation. During operations, the assistant machine gunner—

- Provides a supply of ammunition to the gun when employed.
- Spots rounds and reports recommended corrections to the gunner.
- Constantly updates the weapons squad leader on the round count and serviceability of the medium machine gun.
- Monitors locations of friendly Soldiers to ensure they remain outside the SDZ of the medium machine gun.
- Secures flanks and rear of firing position.
- Obtains ammunition from other Soldiers who are carrying 7.62-mm machine gun ammunition.
- Immediately assumes the role of machine gunner if the machine gunner is unable to continue duties.
- Understands the mission two levels up (squad and platoon).

VEHICLE COMMANDER

1-41. Stryker VCs direct the actions of the vehicle driver and operate primary weapon systems. VCs—

- Conduct TLP.
- Are responsible for employment, maintenance, and security of Stryker.
- Navigate, assist in selecting routes, and direct the driver while maintaining position within the platoon movement formation.
- Acquire targets, issue fire commands, operate weapon systems, and control fires.
- Maintain weapons and communications systems.
- Manage Stryker load plans, ensuring:
  - Compliance with unit SOP.
  - Compliance with mission load plan.
  - All items are strapped down.
- Recommend Stryker employment to the squad leader or mounted element leader, if applicable.
- Operate C2 systems.
- Communicate timely and accurate situation and status reports to leaders within the platoon and act as a relay to send platoon reports to company leaders, as required.

- Are responsible for the training and welfare of the driver.
- In the case of senior VCs, who are responsible for the deployment of the mounted element, VCs—
  - Populate the common operational picture with the movement of the dismounted element to identify their location to higher headquarters and other units.
  - Maintain situational awareness and update the platoon leader on the company actions.
  - Act as a radio relay if the platoon leader loses direct communications with the company commander.
  - In the offense, maneuver the mounted element to a base of fire position to support the dismounted element's maneuver.
  - In the defense, position the Strykers in accordance with operations plan or where best to support the platoon.
  - Are responsible for the movement, operation, and sustainment of the Strykers in the absence of the platoon leader, platoon sergeant or squad leaders.
- Understand the mission two levels up (squad and platoon).

Note. When the platoon leader and platoon sergeant dismount the vehicle, if the platoon leader does not assign a designated mounted leader, the senior VC is responsible for the deployment of the platoon mounted element.

VEHICLE DRIVER

1-42. Vehicle drivers operate the Stryker under the VC's control. Vehicle drivers—

- Are responsible for the maintenance of the Stryker hull systems.
- Follow all operator maintenance outlined in appropriate equipment technical manuals.
- Perform operator equipment inspections: before, during, and after checks.
- Assist in recovery of inoperative Strykers.
- Are responsible for the cleanliness and serviceability of vehicle, BII, and other assigned equipment.
- Load Stryker in accordance with mission load plan and ensure all equipment will remain secure in the event of a vehicle rollover.
- Identify and select cover, concealment, and hull-down positions.
- Assist in navigation by monitoring odometer readings and observing terrain.
- Aid in detecting targets and observing rounds fired.

ADDITIONAL DUTIES

1-43. The platoon leader assigns additional duties within the platoon based on mission requirements. Not all missions will require all additional duties. Additional duties assigned within the platoon normally include the assignment of squad-designated marksmen, AT team, UAS operator, and combat lifesaver (CLS) with aid bag. These additional duties and the numbers required are dependent on the mission variables of METT-TC (I), which stands for mission, enemy, terrain and weather, troops and support available, time available, civil considerations, and informational considerations.

Squad-Designated Marksman

1-44. The squad-designated marksman (SDM) employs an optically enhanced specialized weapon. The SDM receives training available within the unit's resources to improve the squad's precision engagement capabilities at short and medium ranges.

1-45. The SDM is chosen for the rifleman's demonstrated shooting ability, maturity, reliability, good judgment, and experience. The SDM must be able to execute the entire range of individual and collective rifleman tasks within the squad.

1-46. The SDM is not the squad sniper, though the SDM is a fully integrated member of the rifle squad and provides an improved capability for the rifle squad. The SDM does not operate as a semi-autonomous element on the battlefield as a sniper, nor does the SDM routinely engage targets at the extreme ranges common to snipers.

Antitank Team

1-47. The AT team consists of an AT specialist and AT ammunition handler. The AT specialist is normally a rifleman and assigned the Javelin CCMS or M3 MAAWS. An ammunition handler is also normally a rifleman and the second member of the team. During operations, the AT specialist—

- Is responsible for all the Javelin CCMS and M3 MAAWS equipment.
- Is responsible for putting the Javelin CCMS (or M3 MAAWS) in and out of action.
- Acts as the subject matter expert for information contained in TC 3-22.37, specifically information about:
  - The missile.
  - Launch tube assembly.
  - Battery coolant unit.
  - Command launch unit.
  - Employment/engagement (see TC 3-22.84 for information on the M3 MAAWS).
- Is the subject matter expert for employment of the Javelin CCMS (or M3 MAAWS) and advises the rifle squad leader of the best way to employ the missile.
- Enforces field discipline while the Javelin CCMS (or M3 MAAWS) team is employed tactically.
- Knows the ballistic effects of the missile on all types of targets.

1-48. The ammunition handler is prepared to assume the gunner's role in any situation. During operations, the ammunition handler—

- Provides a supply of missile and rounds to the gun when employed.
- Spots rounds and reports recommended corrections to the gunner.
- Constantly updates the squad leader on the round count and serviceability of the Javelin CCMS (or M3 MAAWS).
- Watches for Soldiers to the flanks of the target area or between the Javelin CCMS (or M3 MAAWS) and target.
- Obtains ammunition (when carried) from other Soldiers within the platoon.
- Immediately assumes the role of gunner if the gunner is unable to continue duties.

Unmanned Aircraft System Operator

1-49. The platoon is equipped with Class-1 UAS that provides real-time reconnaissance, surveillance, and target acquisition capability. When employed by the operator, the UAS system provides detection capability at the lowest echelon to enhance situational awareness for leaders.

1-50. The platoon seeks to gain contact with the smallest element possible and may choose to perform reconnaissance with a UAS to provide sensor feed intelligence prior to movement. This intelligence will be used by the platoon leader to identify threats. The UAS sensor feed can reduce vulnerability threats such as, ambushes, improvised explosive devices, and urban environments when the enemy hides on rooftops, around corners and walls.

1-51. The UAS operator can use various techniques of employment to provide information that can become a tactical advantage to the platoon and higher headquarters. The UAS operator—

- Updates routes, navigation and digital datalinks with the Global Positioning System (GPS).
- Sets waypoints, as required.
- Transfers transmitted data.
- Maintains UAS and its components.

Combat Lifesaver

1-52. The *combat lifesaver* is a nonmedical Soldier trained to provide enhanced first aid as a secondary mission (FM 4-02). The CLS provides appropriate tactical combat casualty care (TCCC) skills beyond the level of self-aid or buddy aid. The CLS is not intended to take the place of medical personnel. Using specialized training, the CLS can slow deterioration of a wounded Soldier's condition until treatment by medical personnel is possible. Each certified CLS is issued a CLS aid bag and should have a laminated quick reference MEDEVAC Request Card (see GTA 08-01-004). Whenever possible, the platoon leader ensures each fire team includes at least one CLS. (See chapter 6 section II for additional information on CLSs.) The CLS—

- Ensures that the squad CLS bags and litters are properly packed and stored.
- Identifies Class VIII (see table 6-2 on page 292 for all classes of supplies) shortages to the platoon medic.
- Applies appropriate TCCC skills for injuries and participates in all manual and litter-carry drills.
- Uses appropriate TCCC skills in the field until casualties can be evacuated or medical personnel take over.
- Assists medical personnel in providing TCCC and preparing patients for evacuation.
- Knows the location of the CCP and the unit's tactical SOP for establishing it.
- Initiates DD Form 1380 (*Tactical Combat Casualty Care [TCCC] Card*), when required.
- Ensures that medical supplies are present on the Stryker, stored in accordance with the load plan, and secure.

Note. Leaders within the platoon should make the CLS program a training priority.

HABITUAL ATTACHMENTS

1-53. Habitual attachments for the Infantry rifle platoon normally include a platoon forward observer (FO) team and a platoon combat medic. These habitual attachments are normally attached whenever the platoon deploys to training exercises and combat operations.

Fire Support Team

1-54. The fire support team consists of an FO and a fire support specialist. The fire support specialist serves as the fire support team RTO. The FO is the subject matter expert on indirect fires planning and execution. The FO advises the platoon leader and subordinate leaders on the employment and execution for all fire support assets (if assigned), including company mortars, battalion mortars, field artillery (FA), and other allocated fire support assets. The FO is responsible for locating targets and calling for and adjusting indirect fires. The platoon fire support team knows the mission and concept of operations, specifically the platoon's scheme of maneuver and concept of fires. The fire support team works directly for the platoon leader and interacts with the company fire support team. The fire support team must also—

- Inform the company fire support team of the platoon's situation, location, and indirect fire support requirements.
- Prepare and uses maps, overlays, and terrain sketches.
- Call for and adjusts indirect fires.
- Select targets to support the platoon's mission.
- Select OPs and movement routes to and from selected targets.
- Operate digital message devices and maintains communication with the company and battalion fire support officers (FSOs).
- Maintain grid coordinates of current location.
- Prepare to employ Army aviation attack and reconnaissance, and joint and multinational CAS assets.
- Back up the platoon leader on the higher headquarters radio net, if needed.
- Prepare to back up the platoon leader's radio on the higher headquarters net if needed.

Combat Medic

1-55. Combat medics are attached to Stryker Infantry rifle companies based on one combat medic per platoon, and one senior combat medic per company. The platoon combat medic or the company senior combat medic goes to the casualty's location, or the casualty is brought to the combat medic at the CCP. The CCP combat medic makes an assessment, administers initial medical care, initiates a DD Form 1380 (see paragraph 6-35), then requests evacuation or returns the individual to duty.

1-56. When mounted. the Stryker Infantry platoon combat medic usually rides in the same vehicle as the platoon sergeant. When the platoon dismounts, the combat medic

positions themselves near the platoon sergeant. TCCC and emergency medical treatment procedures performed by the combat medic may include opening an airway, starting intravenous fluids, controlling hemorrhage, preventing, or treating for shock, splinting fractures, or suspected fractures, and providing relief for pain.

1-57. The Stryker Infantry platoon combat medic is trained under the supervision of the battalion surgeon or physician's assistant on medical tasks and the medical platoon leader and platoon sergeant on tactical tasks. The platoon combat medic is under the direct supervision of the company senior combat medic when attached to the company. The platoon combat medic—

- Triages injured, wounded, or ill friendly and enemy personnel for priority of treatment.
- Conducts sick call screening.
- Assists in the evacuation of ill, injured, or wounded personnel under the direction of the platoon sergeant.
- Assists in the training of the platoon's CLSs in enhanced first-aid procedures.
- Requisitions Class VIII supplies from the battalion aid station (BAS) for the platoon (individual first aid kit, CLS, aid bag) according to the tactical SOP.
- Recommends locations for platoon CCP, when established.
- Provides guidance to the platoon's CLSs as required.

SECTION III – SBCT INFANTRY RIFLE COMPANY

1-58. The SBCT Infantry rifle company within the SBCT Infantry battalions can deploy rapidly and be sustained by a minimal support structure. The company's composition and training uniquely equip it to conduct its mission against conventional and unconventional enemy forces in all types of terrain and weather conditions. The company can support offensive, defensive, and stability tasks semi-independently or as a part of a larger force. It can be task-organized as part of an Infantry battalion, combined arms battalion, an Infantry BCT, Armored BCT, or a support battalion or brigade.

1-59. The SBCT Infantry rifle company is the SBCT's main effort when conducting combined arms maneuver. Employed correctly and in synchronization with other maneuver units they close with and finish the enemy force, seize, and occupy key terrain, or repel an enemy assault. In operations, the SBCT Infantry rifle company assignment is ultimately determined by the SBCT commander's orders. Missions assigned by the SBCT are—

- Movement to contact.
- Attack.
- Area defense.
- Area security.

1-60. The SBCT combines the capability of a full Infantry rifle company with tactical mobility aspect that can exploit where the Infantry fight occurs. The following list highlights the capabilities and limitations of the SBCT Infantry rifle company capabilities:

- Firepower from mounted and dismounted weapon systems with various ballistic capabilities.
- Increased tactical mobility for Infantry.
- Assortment of weapons that are carried to and employed into the fight with a mobile arms room concept.
- Organic 120-mm and 60-mm mortars.
- Self-sustainment for 72 hours or mission dependent fuel consumption rates.
- Capable of conducting offensive, defensive, and stability tasks in all types of environments.
- Ability to:
  - Seize, secure, occupy, and retain terrain.
  - Destroy, neutralize, suppress, interdict, disrupt, block, canalize, and fix enemy forces.
  - Breach enemy obstacles.
  - Can conduct feints and demonstrations to deceive the enemy.
  - Reconnoiter, deny, bypass, clear, contain, and isolate; tasks that might be oriented on both terrain and enemy.

1-61. The SBCT Infantry rifle company's combat power resides mostly in its three rifle platoons—each have three Infantry rifle squads, a weapons squad, and four Strykers. SBCT Infantry rifle companies deploy worldwide to support large scale combat operations. The SBCT Infantry rifle company (see figure 1-3) can operate pure or as a task organized combined arms force based upon mission variables. Effective application of the SBCT Infantry rifle company as a combined arms force can capitalize on the strengths of the company's elements while minimizing their respective limitations.

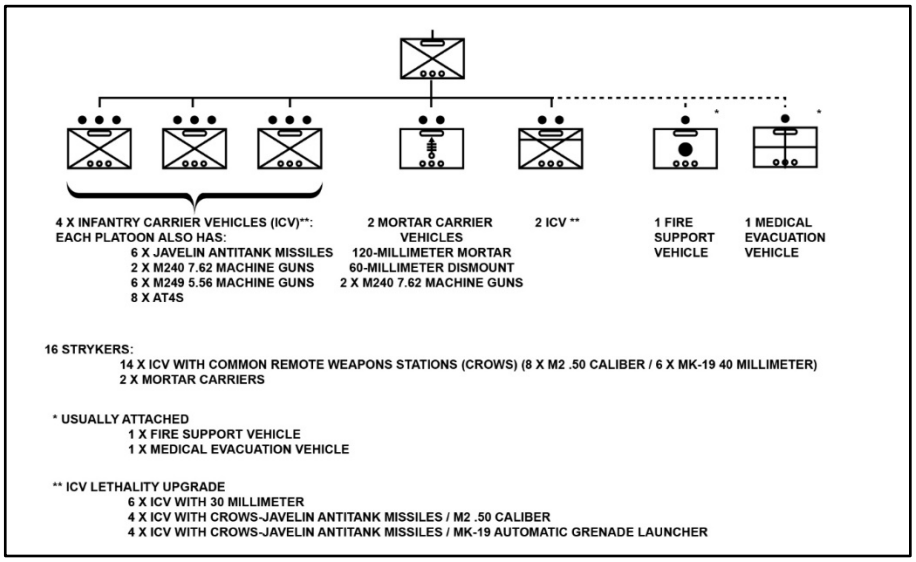


Figure 1-3. Stryker brigade combat team Infantry rifle company

SECTION IV – SBCT INFANTRY RIFLE BATTALION

1-62. The SBCT Infantry battalion is comprised of three Infantry rifle companies, and headquarters company, and normally has a forward support company (FSC) attached from the brigade support battalion (see figure 1-4 on page 24). Its combat power resides mostly with its three rifle companies—each with three rifle platoons and a mortar section. The battalion supports its combat power with its Scout platoon as the primary reconnaissance and security element, its mortar platoon to provide indirect fire support, its sniper squad, its communications sections, and it can be augmented with a FSC from the brigade support battalion to conduct sustainment.

1-63. The SBCT Infantry battalion has the ability to task-organize within itself to meet specific missions based on METT-TC (I). It can attach platoons to different companies to support main efforts, split its battalion mortar platoon into two sections, and attach the sniper squad to a subordinate company are some examples.

1-64. The SBCT combines the mobility aspect of mechanized units while emphasizing and exploiting where the Infantry fight occurs. The following list highlights the capabilities of the SBCT Infantry battalion. SBCT Infantry battalion capabilities, which include the following:

- Conducts offensive, defensive, and stability tasks in all types of environments.
- Capitalizes on the mobility of the Stryker vehicles to facilitate the engaging in close combat with the enemy (Infantry).
- Seizes, secures, occupies, and retains terrain.
- Destroys, defeats, neutralizes, suppresses, interdicts, disrupts, blocks, canalizes, and fixes enemy forces.

- Breaches enemy obstacles as a combined arms team.
- Feints and demonstrations to deceive the enemy.
- Reconnoiters, denies, bypasses, clears, contains, and isolates (these tasks might be oriented on both terrain and enemy).
- Quickly accesses SBCT and higher intelligence databases while on the move.
- Maintains a clear picture of friendly force locations.
- Communicates over distance via line of site and no line-of-sight systems.
- Quickly communicates orders without the need for face-to-face coordination.
- Conducts initial entry by ground.

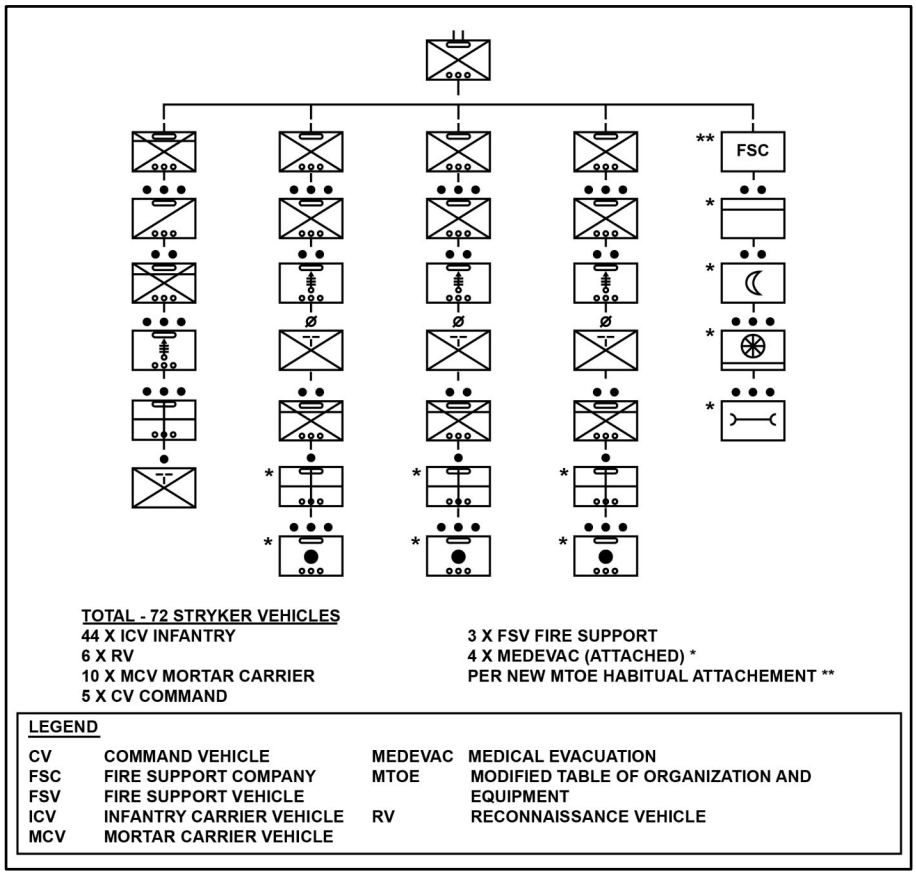


Figure 1-4. Stryker brigade combat team Infantry battalion

Chapter 2

Planning and Preparing for Operations

The platoon leader is the primary planner that receives the WARNORD, OPORD, and FRAGORD from the company and develops the platoon plan to support the company's mission. The platoon sergeant, squad leaders, FO, RTO and other personnel may assist the platoon leader. The platoon leader employs TLP to develop the plan and prepare for the mission. (See ATP 3-21.11 for additional information.)

SECTION I – PLANNING CONSIDERATIONS

2-1. TLP provide small unit leaders a framework for planning and preparing for operations. Stryker Infantry small-unit leaders use TLP when working alone or with a small group to solve tactical problems. For example, a Stryker Infantry rifle platoon leader may use the platoon sergeant, squad leaders, RTO, and the FO to assist during TLP. The type, amount, and timeliness of information passed from higher to lower directly impact the lower unit leader's TLP.

OPERATIONS PROCESS

2-2. TLP begin when the small-unit leader receives the first indication (for example, a WARNORD or FRAGORD) of an upcoming mission and continues throughout the *operations process*—the major C2 activities performed during operations: planning, preparing, executing, and continuously assessing the operation (ADP 5-0). During the operations process, TLP are not a hard-and-fast set of rules. Some actions may be performed simultaneously or in an order different from shown in the example outline in figure 2-1 on page 26. The outline is a guide to apply consistent with the situation and experience of the platoon leader and platoon subordinate leaders. The tasks involved in some actions (such as initiate movement, issue the WARNORD, and conduct reconnaissance) may recur several times during the process. (See ATP 3-21.11 for additional information on the operations process.)

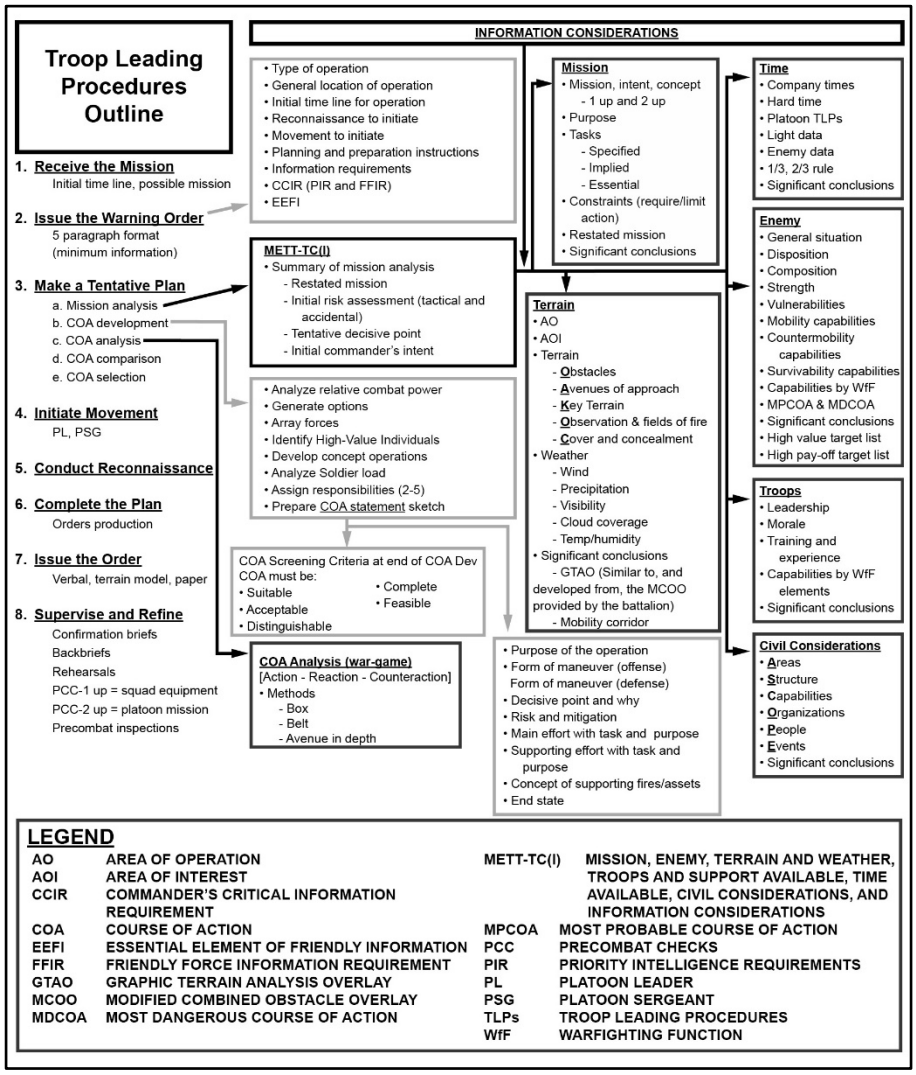


Figure 2-1. Troop leading procedures outline

2-3. In addition to the major activities of the operations process, the small-unit leader uses several integrating processes to synchronize specific functions throughout the operations process. Specifically, they include—

- Intelligence preparation of the operational environment (IPOE) process.
- Targeting (see appendix B).
- Information collection (specifically reconnaissance and surveillance).
- Risk management (RM).

Note. *Reconnaissance* is a mission undertaken to obtain information about the activities and resources of an enemy or adversary, or to secure data concerning the meteorological, hydrographic, geographic, or other characteristics of a particular area, by visual observation or other detection methods (JP 2-0). Reconnaissance is one part of information collection; the other three parts that comprise information collection are security, intelligence operations, and surveillance. *Surveillance* is the systematic observation of aerospace, cyberspace, surface, or subsurface areas, places, persons, or things by visual, aural, electronic, photographic, or other means (JP 3-0). Although there are similarities between reconnaissance and surveillance to facilitate information collection, reconnaissance collection uses multiple means, including surveillance, to find information by systematically checking multiple locations in a designated assigned area.

2-4. IPOE is the systematic process of analyzing the mission variables of enemy, terrain, weather, and civil considerations in an area of interest to determine their effect on operations (see ATP 2-01.3). An *area of interest* is that area of concern to the commander, including the area of influence, areas adjacent to it, and extending into enemy territory (JP 3-0). Although there are four steps to the IPOE process, it is important to note that IPOE is a continuous process, and one required by the small-unit leader for use during TLP. Continuous analysis and assessment (specifically informal assessments by the small-unit leader) are necessary to maintain situational understanding of an *operational environment*—the aggregate of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander (JP 3-0), which is in constant flux. The ranges of a small unit's tactical movement and maneuver capabilities typically define its area of influence—an area inclusive of and extending beyond an operational area wherein a commander is capable of direct influence by maneuver, fire support, and information normally under the commander's command or control (see JP 3-0); however, leaders consider all forms of contact they can make with enemy forces when visualizing their area of influence. The four steps of the IPOE process are—

- Define the operational environment.
- Describe environmental effects on operations.
- Evaluate the threat.
- Determine threat courses of action (most likely, least likely, and most dangerous).

2-5. The platoon leader performs steps in the IPOE process in preparation of analysis and orders but does not generally prepare individual products for subordinates. The platoon leader must be able to use the products of the battalion's IPOE effectively during

mission analysis and be able to inform subordinates based on the compilation of platoon and higher IPOE products.

2-6. The intelligence staff at the battalion intelligence cell develops and provides the IPOE products required by the small-unit leader for use during TLP. Small-unit leaders should not need to do any other refinement of these products. The following includes standard IPOE products provided by the battalion to assist the small-unit leader in during TLP:

- Threat situation templates (SITEMPs) and COA statements.
- Terrain and weather products.
- Tactical decision aids (such as modified combined obstacle overlays [MCOOs] and terrain effects evaluations, weather forecast charts, weather effects matrices, and light and illumination data tables).
- Civil considerations tools and products.

Note. Company commanders coordinate (and provide to their platoon leaders as required) with the battalion intelligence cell for any IPOE products or tools they may need.

2-7. Due to the lack of a staff and resources, as well as time constraints, the small-unit leader depends on the timely delivery of IPOE products developed by higher headquarters tailored to support small-unit planning. Specifically, the components of IPOE inform TLP steps 2 through 6 and actions (for example, information collection) within the TLP.

2-8. The last action (activities associated with supervising and refining the plan) occurs continuously throughout TLP and execution of the mission. The information in chapter 2, section II concerning TLP assumes the small-unit leader will plan in a time-constrained environment. All steps should be done, even if in abbreviated fashion. As such, the suggested techniques are oriented to help a leader quickly develop and issue a mission order.

Note. *Mission command* is the Army's approach to command and control that empowers subordinate decision making and decentralized execution appropriate to the situation (ADP 6-0). Leaders use mission command, with its emphasis on seizing, retaining, and exploiting operational initiative, through mission orders. *Mission orders* are directives that emphasize to subordinates the results to be attained, not how they are to achieve them (ADP 6-0). As it relates to mission command, disciplined initiative is characterized by individual initiative. Mission command requires the company commander to convey a clear commander's intent and concept of operations to subordinates leaders. *Concept of operations* is a statement that directs the manner in which subordinate units cooperate to accomplish the mission and establishes the sequence of actions the force will use to achieve the end state (ADP 5-0). Often, subordinates acting on the higher commander's intent develop the situation in ways that exploit unforeseen opportunities. (See ATP 3-21.11 for additional information.)

PROCESS COMPARISONS AND INITIAL CONSIDERATIONS

2-9. Leaders start the operations process by identifying their unit's *mission*—the essential task or tasks, together with the purpose, that clearly indicates the action to be taken and the reason for the action (JP 3-0). Throughout the process leaders remain flexible. They adapt TLP to fit the situation rather than try to alter the situation to fit a preconceived idea of how events should flow. At all levels, developing and describing the vision of leaders requires time, explanation, and ongoing clarification.

PARALLEL PLANNING

2-10. All leaders understand that their next higher commander's concept of operations continues to mature, and continue parallel planning as it does so, up until execution. Parallel planning occurs when two or more echelons plan the same operation at about the same time. Parallel planning is easiest when the higher headquarters continuously shares information on future operations with subordinate units. For example, rather than waiting until the platoon leader finishes planning, the squad leader starts to develop the squad's mission as information is received and fleshes out the mission as more information becomes available. Figure 2-2 illustrates the parallel sequences of the TLP of the company with the TLP of its platoons and the TLP of the platoon with the TLP of its squads.

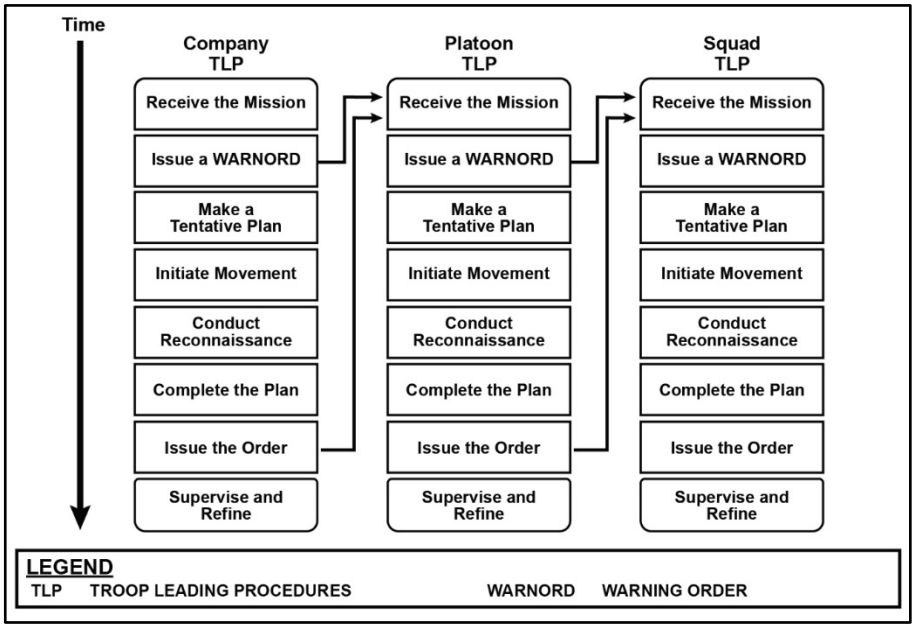


Figure 2-2. Parallel planning

SEQUENCING OF STEPS

2-11. Normally, the first three steps (receive the mission, issue a WARNORD, and make a tentative plan) of TLP (see paragraph 2-15) occur in order. However, the sequence of

subsequent steps is based on the situation. The tasks involved in some steps for example, initiate movement and conduct reconnaissance may occur several times. The last step, supervise and refine, occurs throughout.

2-12. A tension exists between executing current operations and planning for future operations. Small-unit leaders must balance both. If engaged in a current operation, there is less time for TLP. If in a lull, transition, or an AA, leaders have more time to use TLP thoroughly. In some situations, time constraints or other factors may prevent leaders from performing each step of TLP as thoroughly as they would like. A *constraint* is a restriction placed on the command by a higher command (FM 5-0). For example, during Step 3–Make a Tentative Plan, small-unit leaders often develop only one acceptable COA versus multiple COAs. If time permits, leaders may develop, compare, and analyze several COAs before arriving at a decision on which one to execute.

INITIAL WARNING ORDER OR NEW MISSION

2-13. Small-unit leaders begin TLP once the initial WARNORD or a new mission is received. As each subsequent order arrives, the leader modifies assessments, updates tentative plans, and continues to supervise and assess preparations. In most situations, leaders will not receive or issue more than one WARNORD; security considerations, tempo, or both security considerations and tempo make it impractical to do so. Leaders carefully consider decisions to eliminate WARNORDs. Subordinates always need to have enough information to plan and prepare for their mission. In other cases, TLP are started before receiving a WARNORD based on existing plans and orders (contingency plans or be-prepared missions) and on subordinate leaders' understanding of the situation.

Note. Leaders filter relevant information into the categories of the mission variables of METT-TC (I). METT-TC (I) represents the variables leaders use to analyze and understand a situation in relationship to the unit's mission. The first six variables are not new. However, the increased use of information (both military and civilian) to generate cognitive effects requires leaders to assess the informational aspects and impacts on operations continuously. Because of this, informational considerations, represented with (I) has been added to the familiar METT-TC mnemonic. Informational considerations is expressed as a parenthetical variable in that it is not an independent variable, but an important component of each variable of METT-TC that leaders pay particular attention to when developing understanding of a situation. (See paragraph 2-85 for additional information.)

2-14. Parallel planning hinges on distributing information as it is received or developed. Subordinate leaders cannot complete their plans until they receive their unit mission. If each successive WARNORD contains enough information, the higher command's final order should confirm what subordinate leaders have already analyzed and put into their tentative plans. In other cases, the higher command's order may cause subordinates to conduct additional planning.

SECTION II – TROOP LEADING PROCEDURES

2-15. *Troop leading procedures* are a dynamic process used by small-unit leaders to analyze a mission, develop a plan, and prepare for an operation (ADP 5-0). TLP comprise a sequence of actions helping the leader use available time effectively and efficiently to issue orders and execute an assigned mission. (See GTA 07-10-003 for a detailed discussion.) TLP eight steps are as follows:

- Step 1. Receive the mission.
- Step 2. Issue a WARNORD.
- Step 3. Make a tentative plan.
- Step 4. Initiate movement.
- Step 5. Conduct reconnaissance.
- Step 6. Complete the plan.
- Step 7. Issue the order.
- Step 8. Supervise and refine.

STEP 1–RECEIVE THE MISSION

2-16. Leaders may receive one or more WARNORDs prior to receipt of the company OPORD. In a time-constrained environment, they may not receive their mission until receipt of the company OPORD. In the worst case, units may receive a change of mission while in execution, or even realize themselves the requirement for a new mission to achieve a higher commander's intent. When units conduct parallel planning, subordinate leaders will have a greater understanding of future missions, whether an order is issued or not.

2-17. Upon receipt of the order, leaders conduct an initial analysis of the mission variables of METT-TC (I) to understand their likely mission, the threat, and other details necessary to start preparations for combat. Critical to success is the platoon leader's time analysis. The leader's primary objective is to maximize the time available to the unit to prepare the upcoming mission through effective time management.

Note. The HOPE-LW mnemonic (higher, operational, planning, enemy, light/weather) is an effective tool leaders use to analyze time variables impacting their operation.

2-18. Using the variables mentioned in paragraph 2-17, the leader develops a timeline to manage the platoon's planning and preparation for operations. While this timeline will be updated with the plan, it is essential to time management that the leader identify necessary tasks and starts movement on them in accordance with the timeline. The leader should—

- Analyze the time the unit has available, accounting for hours of darkness.
- Apply one third of available time to planning, leaving two thirds for preparation.
- Identify externally-imposed times (for example, rehearsals, orders, and so forth).

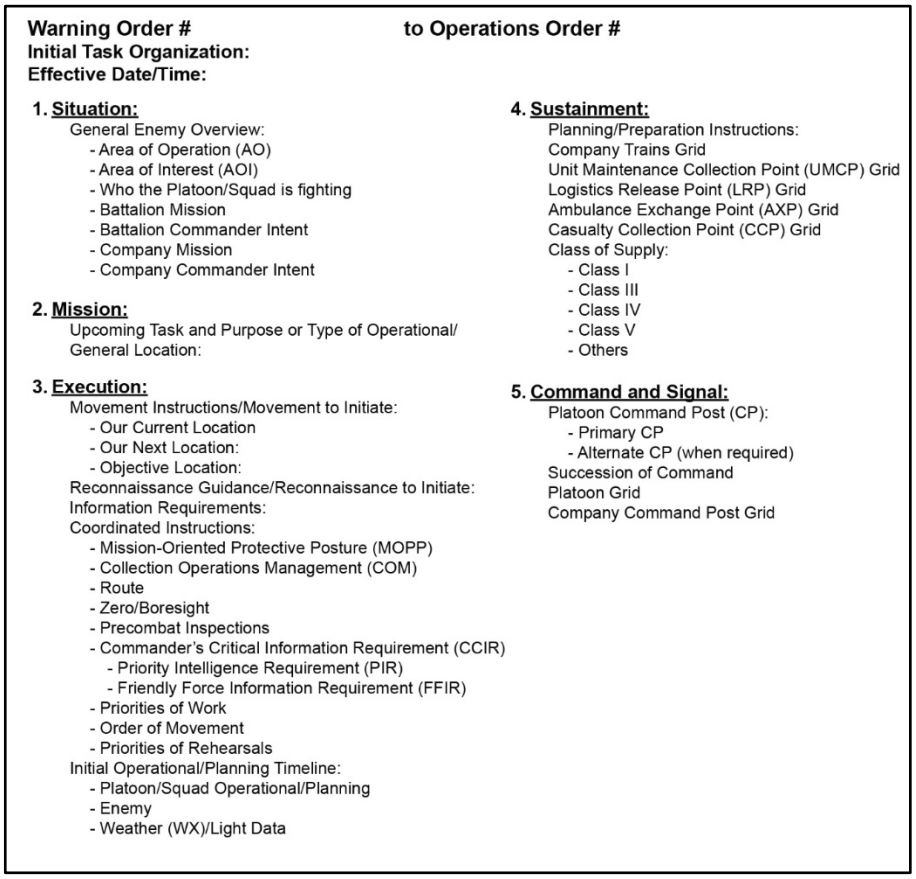
- Identify required movements (for example, reposition, reconnaissance, and so forth).
- Prepare an initial timeline for planning, preparation, and execution of the mission.

Note. The WARNORD is the leader's best tool to manage time. Even when the company does not issue a WARNORD, the platoon leader can and should issue a WARNORD providing any known information.

STEP 2–ISSUE WARNING ORDER

2-19. A WARNORD is a preliminary notice of an order or action to follow. Though less detailed than a complete OPORD, a WARNORD aids in parallel planning. After the leaders receive new missions and assess the time available for planning, preparing, and executing the mission, they immediately issue a WARNORD to their subordinates. By issuing the initial WARNORDs as quickly as possible, they enable subordinates to begin their own planning and preparation (parallel planning) while they begin to develop the OPORDs. When they obtain more information, they issue updated WARNORDs, giving subordinates as much as they know.

2-20. Leaders can issue WARNORDs to their subordinates right after they receive higher command's initial WARNORDs. In their own initial WARNORDs, they include the same elements given in their higher headquarters' initial WARNORDs. If practical, leaders brief their subordinate leaders face-to-face, on the ground. Otherwise, they use a terrain model, sketch, or map. (See figure 2-3 for an example of a WARNORD format.)



Warning Order # **to Operations Order #**
Initial Task Organization:
Effective Date/Time:

1. Situation:
General Enemy Overview:
- Area of Operation (AO)
- Area of Interest (AOI)
- Who the Platoon/Squad is fighting
- Battalion Mission
- Battalion Commander Intent
- Company Mission
- Company Commander Intent

2. Mission:
Upcoming Task and Purpose or Type of Operational/ General Location:

3. Execution:
Movement Instructions/Movement to Initiate:
- Our Current Location
- Our Next Location:
- Objective Location:

Reconnaissance Guidance/Reconnaissance to Initiate:
Information Requirements:
Coordinated Instructions:
- Mission-Oriented Protective Posture (MOPP)
- Collection Operations Management (COM)
- Route
- Zero/Boresight
- Precombat Inspections
- Commander's Critical Information Requirement (CCIR)
  - Priority Intelligence Requirement (PIR)
  - Friendly Force Information Requirement (FFIR)
- Priorities of Work
- Order of Movement
- Priorities of Rehearsals

Initial Operational/Planning Timeline:
- Platoon/Squad Operational/Planning
- Enemy
- Weather (WX)/Light Data

4. Sustainment:
Planning/Preparation Instructions:
Company Trains Grid
Unit Maintenance Collection Point (UMCP) Grid
Logistics Release Point (LRP) Grid
Ambulance Exchange Point (AXP) Grid
Casualty Collection Point (CCP) Grid
Class of Supply:
- Class I
- Class III
- Class IV
- Class V
- Others

5. Command and Signal:
Platoon Command Post (CP):
- Primary CP
- Alternate CP (when required)

Succession of Command
Platoon Grid
Company Command Post Grid

Figure 2-3. Warning order format

2-21. The WARNORD follows the five-paragraph OPORD format and normally contains minimal information. The WARNORD generally alerts the leader that a new mission is pending. (See FM 5-0 for information on when the higher headquarters issues the full sequence of WARNORDs, specifically WARNORD two and three and the information contained in each.) The WARNORD to the platoon generally contains the following information:

- Type of operation.
- General location of the operation.
- Initial operational timeline (planning, preparation, and execution).
- Any movements necessary to initiate.
- Any collaborative planning sessions directed by the commander.
- Planning and preparation instructions (PCCs, PCIs, and rehearsal guidance).

- Initial information requirements or commander's critical information requirements (priority intelligence requirement [PIR] and friendly force information requirement).
- Initial information collection tasks (reconnaissance and surveillance to initiate).

STEP 3–MAKE A TENTATIVE PLAN

2-22. The platoon leader begins TLP step 3 after having issued the WARNORD, or at any point after having enough information to proceed. The platoon leader need not wait for a complete OPORD before developing a tentative plan. Key steps include mission analysis, COA development, COA analysis, COA comparison, and COA selection.

RISK MANAGEMENT

2-23. *Risk management* is the process to identify, assess, and mitigate risks and make decisions that balance risk cost with mission benefits (JP 3-0). RM is an ongoing and iterative process that is integral to planning and preparation during TLP. WARNORDs are important to RM since it is the leader's first opportunity to identify and address the risks that may be associated with the operation. RM continues from the receipt of an initial WARNORD to the receipt of the OPORD. For the small-unit leader, information and assessments are continually revised and updated to reflect the current situation. The process of receiving, distributing, revising, and updating the hazards, risks, and controls for threat-based and accident-based hazards continue simultaneously until the order is issued. Leaders at the platoon and squad level must ensure they identify the RM information they receive to enable their planning and preparation for the mission. To be effective, small-unit leaders must remain especially alert for those controls that require coordination with adjacent and supporting units (for example, fire control measures).

2-24. The RM principles and five-step process help leaders identify hazards, assess risk, and make sound risk decisions—the determination to accept or not accept the risk(s) associated with an action the leader will take or will direct others to take.

2-25. The principles of RM are—

- Integrate RM into all phases of missions and operations.
- Make risk decisions at the appropriate level.
- Accept no unnecessary risk.
- Apply RM cyclically and continuously.

2-26. The five steps of RM are—

- Step 1–Identify the hazards.
- Step 2–Assess the hazards.
- Step 3–Develop controls and make risk decisions.
- Step 4–Implement controls.
- Step 5–Supervise and evaluate.

2-27. Steps 1 and 2 of RM are assessment steps. Risk assessment is the identification and assessment of hazards. Steps 3 through 5 of RM are management steps that allow a leader to implement measures to control hazards. The mission variables of METT-TC (I) serve as a standard format for identifying hazards (see ATP 5-19). Mission variables used primarily as part of TLP for planning and preparing for operations provide a pattern

for addressing threat-based and accident-based hazards and associated risk for any activity. Leaders assess risk to protect the force and aid in mission accomplishment.

2-28. During mission analysis, the platoon leader uses informational and intelligence tools (for example, the IPOE and other intelligence products [see paragraphs 2-10 to 2-13]) to help develop a picture of enemy capabilities and vulnerabilities. During analysis the leader looks for enemy presence or capabilities that pose hazards and risks to an operation and evaluates what the enemy or outside influences could do to defeat or spoil an operation. Informational and intelligence tools support threat-based risk assessments by identifying opportunities and any constraints the operational environment offers to both enemy and friendly forces.

2-29. Threat-based (tactical) risk is associated with hazards existing due to the enemy's presence. The consequences of tactical risk take two major forms:

- Enemy action, where the leader has accepted risk such as an enemy attack where the friendly leader has chosen to conduct an economy of force.
- Lost opportunity, such as a decision to traverse across severely restricted terrain that would restrict the unit's ability to quickly mass the effects of combat power once contact with the enemy is made.

2-30. Accident-based risks include all operational risks other than tactical risk and can include hazards concerning friendly personnel, equipment readiness, and environment. Once the platoon leader identifies an accidental risk based on the results of mission analysis, the risk is reduced through controls. For example, fratricide is a hazard categorized as an accident risk; SDZs and risk estimate distance are used to identify the controls, such as target reference points (TRPs), restricted fire lines, and phase lines, to reduce this accidental risk. When the leader decides what risk to accept, the leader also must decide in the COA how to reduce risk to an acceptable level. (See ATP 3-21.11 and ATP 5-19 for additional information.)

Note. Each commander must ensure a thorough understanding of the mission, including the senior commander's intent and the risk tolerance, while not overly restricting subordinate initiative or ability to turn potential risk into opportunity. An unnecessary risk is any risk that, if taken, will not contribute meaningfully to mission accomplishment or will needlessly endanger lives or resources. Army leaders accept only a level of risk in which the potential benefit outweighs the potential loss. The process of weighing risks against opportunities and benefits helps to maximize unit capability, save lives, and preserve resources. The appropriate level of command makes risk acceptance decisions after applying RM and weighing potential gain against potential loss. Commanders need not be risk averse. Forces may undertake even high-risk endeavors when commanders determine that the sum of the benefits exceeds the sum of the costs. Commanders establish the basis for risk acceptance decisions through RM. (See ATP 5-19 for additional information.)

MISSION ANALYSIS

2-31. Mission analysis is the process by which a platoon leader gains a full understanding of what the platoon has been tasked to accomplish, and an understanding of the commander's intent, both of which inform mission planning. A *task* is a clearly defined action or activity specifically assigned by an appropriate authority to an individual or organization, or derived during mission analysis, that must be accomplished (JP 1, Vol 1). Mission analysis is the most important part of making a tentative plan. There is no specific timeline allocated for mission analysis, but leaders should always adhere to the one-third/two-thirds rule, allocating roughly one-third of available planning and preparation time to themselves, and allowing their subordinates the remaining two-thirds.

2-32. The platoon leader uses the mission variables of METT-TC (I) to conduct mission analysis. This form of mission analysis is a continuation of the initial assessment performed in TLP step 1. The potential informational considerations are embedded within each of the other variables. At the conclusion, the platoon leader will understand—

- Commander's intent at company and battalion.
- Factors of the mission variables as they relate to what the platoon must achieve.
- Tentative decisive point(s) essential to mission success.
- Tentative communications and electromagnetic warfare (EW) activities.
- Type, nature, and probable location of enemy contact throughout the depth of the operation.
- Threat-based and accident-based risks hazards to platoon operations.
- Platoon's mission statement, nested with higher mission and intent.

Communications

2-33. The ability to communicate during operations is essential. Initially the platoon establishes radio nets to link the platoon leader with higher headquarters and subordinate leaders. During operations, subordinate elements may have their own control net with the platoon leader or primary command post. Other communications activities such as signals are established and rehearsed. The platoon must be prepared to operate with digital networks or during periods of degraded communications. Messengers and visual signals are excellent means of communication during movement or when in static positions. The platoon may move under radio silence, or may use radios only in emergencies, or when it can use no other means of communication.

2-34. In an environment where every transmission is potentially targeted, the PACE plan enables both mission success and survivability. The PACE (see figure 2-4) plan designates the order in which an element will move through available communications systems until contact can be established with the desired distant element. To be effective, the PACE plan must be understood and rehearsed by every participant. The PACE plan is a communication plan that exists for a specific mission or task, not a specific unit, as the plan considers both intra- and inter unit sharing of information. The platoon leader's ability to exercise C2 during an operation can suffer due to communication systems not working properly or otherwise unavailable.

COMMUNICATIONS MEANS	COMMAND AND CONTROL	INTELLIGENCE	FIRES	SUSTAINMENT
PRIMARY	VHF (CMD Net)	VHF (O&I)	AFATDS	VHF (A&L)
ALTERNATE	TASCAT	JBCP	VHF (DIGITAL)	JBCP
CONTINGENCY	JBCP	TASCAT (VOICE)	HF	TASCAT (VOICE)
EMERGENCY	HF (CHAT)	TIGR	JBCP	HF (CHAT)

LEGEND

AFATDS	ADVANCED FIELD ARTILLERY TACTICAL DATA SYSTEM		
A&L	ADMINISTRATIVE AND LOGISTICS	NET	NETWORK
CMD	COMMAND	O&I	OPERATIONS AND INTELLIGENCE
FM	FREQUENCY MODULATED	TASCAT	TACTICAL SATELLITE
HF	HIGH FREQUENCY	TIGR	TACTICAL GROUND REPORTING
JBCP	JOINT BATTLE COMMAND PLATFORM	VHF	VERY HIGH FREQUENCY

Figure 2-4. Primary, alternate, contingency, and emergency plan example

2-35. When the platoon does not have four viable methods of communications, it is appropriate to issue a PACE plan that may only have two or three systems listed. If the platoon cannot execute the full PACE plan to the company, the platoon leader must inform the company commander with an assessment of shortfalls, gaps, and possible mitigations as part of the mission analysis process during the TLP. During COA development, the platoon leader nest the platoon's plan with the company's plan (in turn the company's plan nest with the battalion's plan) whenever practical. This aids in maintaining continuity of effort. (See ATP 3-21.11 for additional information.)

2-36. During TLP units must prepare for denied, degraded, and disrupted C2 systems and reduced access to cyberspace and space operations capabilities. Key indicators that C2 systems are being degraded include—

- Degraded voice communications.
- Increased latency for data transmissions.
- Frequent and accurate targeting by threat for both lethal and nonlethal effects.
- Increased pings/network intrusions.
- Inconsistent digital common operational picture, such as spoofing.
- Inaccurate GPS data/no satellite lock and inconsistency between inertial navigation aids and GPS enabled systems.
- Uncharacteristically few voice or digital transmissions.

2-37. Efforts to increase survivability and prevent degraded C2 systems include the need to—

- Reduce radio power settings.
- Use messengers and hand and arm signals.
- Minimize length of frequency modulation transmissions.
- Use terrain to mask transmission signatures.
- Employ directional antennas.
- Use remote antennas/carry spare antennas.
- Require physical presence of leaders at briefings, including distributing information via analog means or in person.
- Use camouflage and deception in all environments.
- Dig in command post.

- Use communications windows to reduce transmissions.
- Employ encryption/cypher techniques.

2-38. Efforts that counter the effects of degraded C2 systems include—

- Training to recognize indicators.
- Development and rehearsal of contingency plans during the planning process and preparations.
- Maintenance of analog common operational pictures at all echelons.
- Training to operate from the commander's intent.
- Training for analog graphics and synchronization matrixes.
- Keeping plans as simple as possible so they are less susceptible to friction.

Decisive Point

2-39. A *decisive point* is key terrain, key event, critical factor, or function that, when acted upon, enables commanders to gain a marked advantage over an enemy or contribute materially to achieving success (JP 5-0). Identifying a tentative decisive point(s) during mission analysis and verifying it during COA development is the most important aspect of the TLP. Visualizing a valid decisive point is how leaders determine how to achieve success and accomplish their purpose. Leaders develop their entire COA from a decisive point. Without determining a valid decisive point, leaders cannot begin to develop a valid or tactically sound COA. Leaders, based on their initial analysis of METT-TC (I), situational awareness, vision, and insight into how such factors can affect the unit's mission, should visualize where, when, and how their unit's ability to apply combat power (for example, firepower, protection, maneuver, leadership, and information) achieves their assigned task(s). A decisive point might orient on terrain, enemy, time, or a combination of these. A decisive point might be where or how, or from where, the unit will combine the effects of combat power against the enemy. A decisive point might be the event or action (with respect to terrain, enemy, or time, and generation of combat power) which will ultimately and irreversibly lead to the unit achieving its purpose.

2-40. A decisive point(s) does not simply restate the unit's essential task or purpose; it defines how, where, or when the unit will accomplish its purpose. The unit's designated main effort always focuses on a decisive point(s), and always accomplishes the unit's purpose. Designating a decisive point(s) is critical to the leader's vision of how to use combat power to achieve the purpose, how to task-organize units, how to shape operations to support the main effort, and how the main effort will accomplish the unit's purpose. This tentative decisive point(s) forms the basis of the leader's planning and COA development. Leaders should clearly explain what the decisive point(s) is to subordinate leaders and why it is decisive; this summary, in conjunction with the commander's intent, facilitates subordinate initiative. A valid decisive point enables the leader to clearly and logically link how the application of combat power with respect to terrain, enemy, and time allows the unit to accomplish its purpose. If the leader determines the tentative decisive point(s) is not valid during COA development or analysis, then the leader must determine another decisive point(s) and restart COA development.

Mission Variables of METT-TC (I)

2-41. Analyzing the mission variables of METT-TC (I) is a continuous process. Leaders constantly receive information from the time they begin planning through execution. During execution, their continuous analysis enables them to issue well-developed FRAGORDs. They must assess if the new information affects their missions and plans. If so, then they must decide how to adjust their plans to meet these new situations. They need not analyze METT-TC (I) in a particular order. How and when they do so depend on when they receive information as well as on their experience and preferences. One technique is to parallel the TLP based on the products received from higher. Using this technique, they would, but need not, analyze mission first; followed by terrain and weather; enemy; troops and support available; time available; and civil considerations, and integrated into these variables, informational considerations.

Analysis of Mission

2-42. A mission is a task and purpose clearly indicating the action to be taken and reason for the action. In common usage, especially when applied to lower military units, a mission is a duty or task assigned to an individual or unit. The mission is always the first factor leaders consider, and they start by asking themselves what they have been told to do and why.

2-43. Leaders at every echelon must understand the mission, intent, task, purpose, location, and concept of operation one and two levels higher. This understanding makes it possible to exercise disciplined initiative. Leaders capture their understanding of what their units are to accomplish in their revised mission statement. A *mission statement* is a short sentence or paragraph that describes the organization's essential task(s), purpose, and action containing the elements of who, what, when, where, and why (JP 5-0). Leaders consider the following elements when analyzing the mission:

- Higher headquarters' (two levels up) mission, commander's intent, and concept of operations.
- Immediate higher headquarters' (one level up) mission, commander's intent, concept of operations, available assets, and timeline.
- Unit's assigned area, task, and purpose.
- Mission of adjacent, supporting, and supported units and their relationships to the higher headquarters' plan.
- Assumptions and constraints.
- Specified, implied, and essential tasks.
- Restated mission.

2-44. Specific to platoon and squad mission, leaders must identify and understand tasks required to accomplish a given mission. The three types of tasks are specified, implied, and essential.

2-45. A *specified task* is a task specifically assigned to a unit by its higher headquarters (FM 5-0). Specified tasks are found throughout the OPORD. Specified tasks also may be found in annexes and overlays; for example, Seize Objective Fox, Reconnoiter Route Blue, Assist the Forward Passage of 1st Platoon, B Company, or Send Two Soldiers to Assist in the Loading of Ammunition.

2-46. An *implied task* is a task that must be performed to accomplish a specified task or mission but is not stated in the higher headquarters' order (FM 5-0). Implied tasks derive from a detailed analysis of higher up orders, from the enemy situation and COA, from the terrain, and from knowledge of doctrine and history. Analyzing the unit's current location in relation to the future assigned area as well as the doctrinal requirements for each specified task might reveal the implied tasks. For example, if the specified task is Seize Objective Fox, and an updated intelligence assessment determines that Objective Fox is surrounded by reinforcing obstacles, this intelligence assessment would drive the implied task of Breach Reinforcing Obstacles Vicinity Objective Fox.

2-47. The *essential task* is a specified or implied task that must be executed to accomplish the mission (FM 5-0). The essential task is also the mission task—it accomplishes the assigned purpose. It, along with the platoon's purpose, is usually assigned by the higher headquarters' OPORD in concept of operations or tasks to maneuver units. For main efforts, since the purposes are the same (nested concept), the essential task also accomplishes the higher headquarters' purpose. For supporting efforts, it accomplishes the assigned purpose, which supports the main effort.

2-48. Leaders conclude their analysis of the mission by restating their mission in terms of the platoon's (or squad's) mission statement. To do this, they answer the five Ws:

- Who (the unit).
- What (the unit's essential task and type of operation).
- When (this is the time given in the company OPORD).
- Where (the objective or location stated in company OPORD).
- Why (the unit's purpose, taken from the company's concept of operations).

2-49. An example platoon mission statement in the defense is, 1st Platoon/B Company/1-31 Infantry Defends to Retain No Later Than 281700 Zulu time December 2022 from GL 375652 to GL 394660 to GL 394660 to GL 373665 to Prevent the Envelopment of A Company, the Battalion Main Effort.

Analysis of Terrain and Weather

2-50. Leaders consider the cumulative effects of the natural terrain, man-made features (including obstacles), climate, and weather on both friendly and enemy operations. In general, terrain, climate, and weather do not favor one side over the other unless one is better prepared to operate in the environment or is more familiar with it. The terrain, however, may favor defending or attacking. The following should be considered during analysis:

- Analysis of terrain answers the question: What is the terrain's effect on the operation?
- Leaders analyze terrain using the categories of observation and fields of fire, avenues of approach, key terrain, obstacles, and cover and concealment (OAKOC).

Note. See ATP 3-21.11 for a detailed discussion on analyzing the terrain using the categories of OAKOC.

2-51. The *modified combined obstacle overlay* is a joint intelligence preparation of the operational environment product used to portray the militarily significant aspects of the operational environment, such as obstacles restricting military movement, key geography, and military objectives (JP 2-0). The MCOO shows the critical military aspects of terrain. It not only facilitates planning, but also aids in briefing subordinates. Specific questions on the aspects of the MCOO include but are not limited to avenues of approach, key terrain, mobility corridors, natural and man-made obstacles, and terrain mobility classifications. The information within the MCOO depicts the terrain according to the mobility classification. These classifications are severely restricted, restricted, and unrestricted.

2-52. Severely restricted terrain severely hinders or slows movement in combat formations unless some effort is made to enhance mobility, such as committing engineer assets to improving mobility or deviating to different movement formations. Severely restricted terrain for Stryker forces is typically characterized by steep slopes and large or dense obstacle compositions with few bypasses.

2-53. Restricted terrain hinders movement to some degree. Little effort is needed to enhance mobility, but units may have difficulty maintaining preferred speeds, moving in combat formations, or transitioning from one formation to another. Restricted terrain slows movement by requiring zigzagging or frequent detours. Restricted terrain for Stryker forces typically consists of moderate-to-steep slopes or moderate-to-dense obstacle compositions, such as restrictive slopes or curves. Swamps or rugged terrain are examples of restricted terrain for dismounted Infantry forces.

2-54. Unrestricted terrain is free from any restriction to movement. Nothing is required to enhance mobility. Unrestricted terrain for Stryker forces is typically flat to moderately sloping terrain with few obstacles such as limiting slopes or curves.

Note. At company level and below, the commander and subordinate leaders develop a graphic terrain analysis overlay. This product is similar to the MCOO in that it shows the critical military aspects of terrain. Not only does it facilitate planning, but it also aids in briefing subordinates.

2-55. From the MCOO developed by higher headquarters (generally the battalion intelligence staff officer [S-2]), leaders can understand the general nature of the ground and effects of weather. However, at company level and below, they must conduct their own detailed analyses to determine how terrain and weather uniquely affects their units' missions and the enemy. They must go beyond merely passing along the MCOO to their subordinate leaders and making general observations of the terrain such as how high the ground is or the identification of a stream.

2-56. During the development of the graphic terrain analysis overlay, they determine how the terrain and weather will affect the enemy and their units. Additionally, they apply these conclusions when they develop COA for both enemy forces and their units. (See ATP 3-21.11 and ATP 2-01.3 for additional information.)

2-57. Terrain analysis should produce several specific conclusions, such as—

- Battle, SBF, and/or attack by fire (ABF) positions.
- EAs and ambush sites.

- Immediate and intermediate objectives.
- Asset locations such as enemy command posts or ammunition caches.
- AAs, attack positions, assault positions, objective rally points, or CCPs.
- OPs.
- Artillery firing positions.
- Air defense artillery system positions.
- Reconnaissance, surveillance, and target-acquisition positions.
- Forward area arming and refueling points.
- Ford site (wet/dry) (*gap*–is a ravine, mountain pass, river, or other terrain feature that presents an obstacle that may be bridged [ATP 3-90.4]).
- Landing and drop zones.
- Breach locations.
- Infiltration lanes.

2-58. The five military aspects of weather are visibility; winds; precipitation; cloud cover; and temperature and humidity. Consideration of the weather's effects is an essential part of the leader's mission analysis. Leaders go past observing to application. They determine how the weather will affect the visibility, mobility, and survivability of the unit and that of the enemy. Leaders review their commander's conclusions and identifies their own. They apply the results to the friendly and enemy COA they develop. (See ATP 3-21.11 for a detailed discussion.)

Analysis of Enemy

2-59. Leaders analyze the enemy's general situation, dispositions, compositions, strengths, doctrine, equipment, and capabilities by warfighting function, vulnerabilities, and probable COA. Analyzing the enemy answers the following questions:

- What is the enemy doing and why?
- What is the composition and strength of the enemy force?
- What are the capabilities of the weapons? Other systems?
- What is the location of current and probable enemy positions?
- What is the enemy's most likely COA (additionally most dangerous)?
- What is the enemy's most probable COA (defend, reinforce, attack, withdraw, or delay)?

2-60. Platoon leaders must understand the assumptions their company commander, in coordination with the battalion S-2, used to portray the enemy's COA. Their own assumptions about the enemy should be consistent with those of their commander. When not, their assumptions must be known by the commander.

2-61. Leaders continually improve their situational understanding of the enemy and update their enemy SITEMP as new information or trends become available. *Situational understanding* is the product of applying analysis and judgment to relevant information to determine the relationships among the operational and mission variables (ADP 6-0). Deviations or significant conclusions reached during their enemy analysis that could positively or negatively affect the battalion's and company's plan should be shared immediately with the battalion, company commander, and S-2.

2-62. In analyzing the enemy, platoon leaders must understand the IPOE (see paragraphs 2-4 to 2-7). Although platoon leaders usually do not prepare IPOE products for their subordinates, platoon leaders must be able to use the products of the higher headquarters' IPOE.

2-63. Leaders must know more than just the number and types of vehicles, Soldiers, and weapons the enemy has. The leaders must thoroughly understand when, where, and how the enemy prefers or tends to use their assets. A SITEMP is a visual illustration of how the enemy force might look and act without the effects of weather and terrain. Leaders look at specific enemy actions during a given operation and use the appropriate SITEMP to gain insights into how the enemy may fight. Likewise, leaders must understand enemy doctrinal objectives. In doctrinal terms, leaders ask the following:

- Is the enemy oriented on terrain objectives, friendly force objectives, civilian objective, or some combination?
- What effect will this have on the way the enemy fights?

2-64. Depending on the situation, some threat forces may lack structured doctrine. In such a situation, a leader must rely on information provided by battalion or higher echelon reconnaissance and surveillance assets and, most importantly, the leader and the leader's higher headquarters' pattern analysis and deductions about the enemy in their assigned area. The leader also may make sound assumptions about the enemy, human nature, and local culture. Questions to determine the enemy's general situation include—

- Who are they?
- What are they doing?
- When did they get there?
- Where are they generally located?
- Why are they there?
- What is the nature of the threat they pose?

2-65. Gaining complete understanding of the enemy's intentions can be difficult when the enemy SITEMPs, composition, and disposition are unclear. In all cases, the enemy's recent activities must be understood, because they can provide insight into the enemy's future activities and intentions. If time permits, a leader might be able to conduct a pattern analysis of the enemy's actions to predict future actions. In the operational environment, this might be the most important analysis the leader conducts and is likely to yield the most useful information to the leader.

2-66. Leaders develop their enemy SITEMP after terrain and weather analysis so they better understand how the enemy will fight in a specific scenario. The leader includes in this SITEMP the likely sectors of fire of the enemy weapons and tactical and protective obstacles, either identified or merely template, which support defensive operations. Table 2-1 on page 44 shows recommended SITEMP items. (See ATP 3-21.11 and ATP 2-01.3 for a detailed discussion.)

Table 2-1. Recommended enemy situation template items

Defensive and Offensive	
Primary, alternate, subsequent positions	Attack formations and axes of advance
Engagement area	Battle positions, trenches, and area of operations
Individual vehicles	Coordinated fire line and restrictive firing lines
Crew-served weapons	Objective(s), phase lines, and support (attack) by fire position(s)
Tactical (directed, situational, and reserved) obstacles (for example, persistent and nonpersistent minefields)	Maximum engagement line
	Planned indirect-fire targets
Planned indirect-fire targets	
Observation posts	Reconnaissance/security objectives
Command and control positions	Reconnaissance force routes
Final protective fires and final protective line	Fires (indirect fires and manned and unmanned aircraft systems)
Locations of reserves	Fires (indirect fires and manned and unmanned)
Routes for reserve commitment	CBRN threats and hazards
Travel time for reserve commitment	Protective obstacle locations
Reserve force commitment triggers	Enemy scheme of maneuver
Sectors of fire	

Legend: CBRN—chemical, biological, radiological, and nuclear

Analysis of Troops and Support Available

2-67. Leaders study their task organization to determine the number, type, capabilities, and condition of available friendly troops and other support. Analysis of troops follows the same logic as analyzing the enemy by identifying capabilities, vulnerabilities, and strengths. Leaders should know the disposition, composition, strength, and capabilities of their forces one and two levels down. This information can be maintained in a checkbook-style matrix for use during COA development (specifically array forces). They maintain understanding of subordinates' readiness, including maintenance, training, strengths and weaknesses, leaders, and logistics status. Analysis of troops and support furnish information about what assets are available to accomplish the mission and answer these questions:

- What are the strengths and weaknesses of subordinate leaders?
- What is the supply status of ammunition, water, fuel (if required), and other necessary items?
- What is the present physical condition of Soldiers (morale, sleep)?
- What is the condition of equipment?
- What is the unit's training status and experience relative to the mission?

- What additional Soldiers or units will accompany?
- What additional assets are required to accomplish the mission?
- What are the command and support relationships for all supporting or attached forces?

2-68. Perhaps the most critical aspect of mission analysis is determining the combat potential of one's own force. Leaders must realistically and unemotionally determine all available resources and new limitations based on level of training or recent fighting. This includes troops who are attached either to or in direct support of the unit. It also includes understanding the full array of assets in support of the unit. Leaders must know what fires are available (and when) by type, quantity, and priority of fires. *Fires* are the use of weapon systems or other actions to create specific lethal or nonlethal effects on a target (JP 3-09).

2-69. Throughout planning and preparation for an operation, leaders continually assess their unit's combat effectiveness—the ability of a unit to perform its mission. Information factors such as ammunition, personnel, fuel status, and weapon systems are evaluated and rated. (See FM 1-02.2.) The ratings used are—

- Fully operational—green (85 percent or greater).
- Substantially operational—amber (70 to 84 percent).
- Marginally operational—red (50 to 69 percent).
- Not operational—black (less than 50 percent).
- Unknown

2-70. Because of the uncertainty always present in operations at the small-unit level, leaders cannot be expected to think of everything during their analysis. This fact forces leaders to determine how to get assistance when the situation exceeds their capabilities. Therefore, a secondary product of analysis of troops and support available should be an answer to the question, how do I get help?

Analysis of Time Available

2-71. The fifth mission variable of METT-TC (I) is time available. Time refers to many factors during the operations process (plan, prepare, execute, and assess). The five categories that leaders consider include:

- (Next) higher echelon's timeline.
- Operational.
- Planning and preparation.
- Enemy timeline.
- Light and weather.

2-72. During all phases, leaders consider critical times, unusable time, the time it takes to accomplish activities, the time it takes to move, priorities of work, and tempo of operations. Other critical conditions to consider include visibility and weather data, and events such as higher headquarters tasks and required rehearsals. Implied in the analysis of time is leader prioritization of events and sequencing of activities.

2-73. As addressed in step 1 of the TLP, time analysis is a critical aspect to planning, preparation, and execution. Time analysis is often the first thing a leader does. The leader must not only appreciate how much time is available, but also must be able to appreciate

the time and space aspects of preparing, moving, fighting, and sustaining. The leader must be able to see the leader's own tasks and enemy actions in relation to time. Most importantly, as events occur and more information is available, the leader must adjust the time available and assess its impact on what the leader wants to accomplish. Finally, the leader must update previous timelines for subordinates, listing all events affecting the platoon and its subordinate elements.

2-74. As an example, leaders estimate the time available to plan and prepare for the mission. Leaders begin by identifying the times they must complete major planning and preparation events, including rehearsals. Reverse planning assists in this process. Leaders identify critical times specified by higher headquarters and work backwards, estimating how much time each event will consume. Critical times might include times to load aircraft, cross the line of departure (LD), or the reach the start point for movement.

Analysis of Civil Considerations

2-75. Civil considerations include the influences of man-made infrastructure, civilian institutions, and attitudes, activities of civilian leaders, populations, and organizations within an assigned area, with regard to the conduct of military operations. Civil considerations generally focus on the immediate impact of civilians on operations in progress. Civil considerations of the environment can either help or hinder friendly or enemy forces; the difference lies in which leader has the information needed and taken the time to learn the situation and its possible effects on the operation. Analysis of civil considerations answers critical questions:

- How do civilian considerations affect the operation?
- How does the operation affect the civilians?
- What operations security measure can be implemented to protect U.S. Forces' critical information?
- When is support from headquarters available?

2-76. The battalion, through the company commander, provides the platoon leader with civil considerations affecting the mission within the platoon's assigned area. Areas, structures, capabilities, organizations, people, and events are used to analyze and describe these civil considerations.

2-77. The line between enemy combatants and civilian noncombatants is sometimes unclear. This requires the leader to understand the laws of war, the rules of engagement (ROE), and local situation. (See ATP 3-21.11 for a detailed discussion.)

Informational Considerations

2-78. *Informational considerations* are those aspects of the human, information, and physical dimensions that affect how humans and automated systems derive meaning from, use, act upon, and are impacted by information (FM 3-0). Understanding the physical, information, and human dimensions of each domain helps the leader assess and anticipate the impacts of their operations. Their definitions follow:

- *Physical dimension* is the material characteristics and capabilities, both natural and manufactured, within an operational environment (FM 3-0).
- *Information dimension* is the content and data that individuals, groups, and information systems communicate and exchange, as well as the analytics and technical processes used to exchange information within an operational environment (FM 3-0).
- *Human dimension* encompasses people and the interaction between individuals and groups, how they understand information and events, make decisions, generate will, and act within an operational environment (FM 3-0).

Note. Within the context of an operational environment, a domain (land, maritime, air, space, and cyberspace) is a physically defined portion of an operational environment requiring a unique set of warfighting capabilities and skills. Each military Service and branch trains and educates its leaders to be experts about operations in a primary domain, although each Service has some capability in each of the domains, and each develops shared understanding of how to integrate capabilities from different domains. (See FM 3-0 for additional information.)

2-79. Operations reflect the reality that war is an act of force (in the physical dimension) to compel (in the information dimension) the decision making and behavior of enemy forces (in the human dimension). Actions in one dimension influence factors in the other dimensions. Understanding the interrelationship enables decision making about how to create and exploit advantages in one dimension and achieve objectives in the others without causing undesirable consequences.

2-80. The platoon leader integrates information into all operations and activities to create favorable support and circumstances for friendly action, limit enemy or adversary action, and minimize unintended consequences. Informational considerations are the relevant friendly, threat, and neutral (both military and civilian) individuals, organizations, and systems capable of generating cognitive effects and influencing behavior. Informational considerations and example information related questions within each mission variable are addressed in paragraphs 2-42 to 2-77. These considerations and example questions are not intended to be an all-inclusive, but they can help guide the platoon leader to integrate informational considerations into the analysis of the mission variables. (See FM 5-0 and FM 3-13 for additional information.)

Specific Operational Environments

2-81. Specific operational environments include urban, mountain (includes cold weather regions), jungle, and desert. Subsurface areas are conditions found in all operational environments. Offensive, defensive, and stability operations tasks in these environments follow the same planning process as operations in any other environment, but they do impose specific techniques and methods for success. The uniqueness of each environment may affect more than their physical aspects but also their informational systems, flow of information, and decision-making. As such, mission analysis must account for the information environment, space operations, and cyberspace within each

specific operational environment. Each specific operational environment has a specific manual because of their individual characteristics. They include—

- Urban terrain—see ATP 3-06.11 and ATP 3-06 for additional information.
- Mountainous terrain and cold weather environments (see ATP 3-90.97, ATP 3-21.50, and ATP 3-21.18 for additional information).
- Jungle terrain—see ATP 3-90.98 for additional information.
- Desert terrain—see ATP 3-90.99 for additional information.
- Subsurface areas:
  - See ATP 3-21.51 for information on threat and hazardous subterranean structures existing or operating in concealment or hidden or when utilized in secret by an enemy or adversary.
  - See ATP 3-06.11, ATP 3-06.1, ATP 3-21.50, ATP 3-06, and ATP 3-34.81 for additional information on subsurface areas.

Note. Subsurface areas are below the surface level (ground level) that may consist of underground facilities, passages, subway lines, utility corridors or tunnels, sewers and storm drains, caves, or other subterranean spaces. This dimension includes areas both below the ground and below water. In older cities, subsurface areas can include preindustrial age hand-dug tunnels and catacombs.

COURSE OF ACTION DEVELOPMENT

2-82. The purpose of COA development is to determine one or more ways to accomplish the mission consistent with the immediate higher commander's intent. A COA describes how the unit might generate the effects of overwhelming combat power against the enemy at the decisive point(s) with the least friendly casualties. Each COA the leader develops must be detailed enough to describe clearly how the leader envisions using all the assets and combat multipliers to achieve the unit's mission-essential task and purpose.

Note. Decisive points are not centers of gravity; they are keys to attacking or protecting them. A center of gravity is the source of power that provides moral or physical strength, freedom of action, or will to act. (See FM 5-0 for additional information.)

2-83. To develop a COA, leaders focus on the actions the unit must take at the decisive point(s) and works backward to the start point. For example, leaders ensure sufficient combat power is available to enable the required actions against anticipated enemy contact(s) during movement. Leaders focus their efforts to develop at least one well synchronized COA; if time permits, leaders should develop several. The result of the COA development process is paragraph 3 of the OPORD. A COA should position the unit for future operations and provide flexibility to meet unforeseen events during execution. It also should give subordinates the maximum latitude for initiative.

Screening Criteria

2-84. Leaders use screening criteria to ensure solutions they consider can solve the tactical problem. Screening criteria defines the limits of an acceptable solution. They are tools to establish the baseline products for analysis. Leaders may reject a solution based solely on the application of screening criteria. (See ATP 3-21.11 for a detailed discussion.) Leaders apply five categories of screening criteria to test a possible solution:

- Feasible—fits within available resources.
- Acceptable—worth the cost or risk.
- Suitable—solves the problem and is legal and ethical.
- Distinguishable—differs significantly from other solutions.
- Complete—contains the critical aspects of solving the problem from start to finish.

Actions (Generate Possible Solutions)

2-85. After gathering information relevant to the tactical problem and developing criteria, the platoon leader formulates possible solutions to accomplish the mission. The leader carefully considers the guidance provided by the commander or their superiors and develop several alternatives to solve the tactical problem. Too many possible solutions may result in time wasted on similar options. Experience and time available determine how many solutions the leader considers. The leader should consider at least two solutions. Limiting solutions enables the problem solver to use both analysis and comparison as problem-solving tools. Developing only one solution to "save time" may produce a faster solution but risks creating more problems from factors not considered. The leader analyzes relative combat power, generates options, arrays forces, develops a concept of operations, analyzes Soldier load, assigns responsibility, and prepares a COA statement and sketch for each COA. (See ATP 3-21.11 for more information.)

COURSE OF ACTION ANALYSIS

2-86. COA analysis begins with both friendly and enemy COA and, using a method of action-reaction-counteraction war game, results in a synchronized friendly plan, identified strengths and weaknesses, and updated risk assessment. After developing the COA, leaders analyze it to determine its strengths and weaknesses, visualize the flow of the battle, identify the conditions or requirements necessary to enhance synchronization, and gain insights into actions at the decisive point(s) of the mission. If leaders developed more than one COA, they apply this same analysis to each COA developed.

2-87. Leaders do this analysis through war gaming or "fighting" the COA against at least one enemy COA. Leaders at the platoon level generally war-game intuitively rather than use the structured process discussed in FM 5-0, chapter 4 as part of the military decision-making process. For each COA, leaders think through the operation from start to finish. Leaders compare their COA with the enemy's most probable COA. During the war game, leaders visualize a set of enemy and friendly actions and reactions. War gaming is the process of determining what-if factors of the overall operations. The object is to determine what can go wrong and what decision leaders will likely have to make as a result. COA analysis allows leaders to synchronize their assets, identify potential hazards, and develop a better understanding of the upcoming mission.

2-88. The best way for the platoon leader to war game is to start at the platoon's current location and go through the mission from start to finish or start at a critical point such as the objective or EA. Using the action-reaction method, the platoon leader can think through the engagement beforehand. As war gaming proceeds, the leader can either record observations into a matrix or keep notes in a notebook. The most important aspect of this process is not the method but the output, meaning a more in depth understanding of the operation. Depending on the time available and the platoon leader's personal preference, the leader may use the box, belt, and avenue in depth war gaming techniques. (See ATP 3-21.11 for a discussion of each technique.)

COURSE OF ACTION COMPARISON AND SELECTION

2-89. If leaders developed more than one COA, they must compare them by weighing the specific advantages, disadvantages, strengths, and weaknesses of each as noted during the war game. These attributes may pertain to the accomplishment of the unit purpose, the use of terrain, the destruction of the enemy or other aspect of the operation they believe is important. Leaders make the final selection of a COA based on their own judgment, the start time of the operation, the assigned area, the scheme of maneuver, and subordinate unit tasks and purposes.

STEP 4–INITIATE MOVEMENT

2-90. Leaders initiate movements necessary to continue mission preparation or to posture the unit for starting the mission. This step can be executed anytime throughout the sequence of the TLP. It can include movement to an AA, BP, attack position, or new assigned area, or the movement of guides or quartering parties.

STEP 5–CONDUCT RECONNAISSANCE

2-91. To exploit the principles of speed and surprise, leaders should weigh the advantages of reconnoitering personally against just using the supplied information from higher echelon information systems. They realistically consider the dangers of reconnoitering personally, and time required to conduct them. Leaders might be able to plan their operations using combat information provided by higher echelon information collection assets. Combat information is the unevaluated data, gathered by or provided directly to the tactical commander which, due to its highly perishable nature or the criticality of the situation, cannot be processed into tactical intelligence in time to satisfy the user's tactical intelligence requirements. It can be extremely important in a time constrained environment. However, if time permits, leaders should verify higher headquarters' intelligence requirement by reconnoitering visually. They should seek to confirm the PIR supporting their tentative plans. These PIRs usually consists of assumptions or critical facts about the enemy. This can include strength and location, especially at templated positions. It also can include information about the terrain. For example, verification that a tentative *support by fire position*—the general position from which a unit performs the tactical mission task of support by fire (ADP 3-90)—can suppress the enemy, or an avenue of approach is useable.

2-92. If possible, leaders should include their subordinate leaders in their reconnaissance efforts. This allows the subordinates to see as much of the terrain and enemy as possible. The reconnaissance also helps subordinate leaders gain insight into the leaders' visions of the operation.

2-93. The leaders' reconnaissance might include moving to or beyond the LD, reconnaissance and surveillance of an assigned area, or walking from the forward edge of the battle area back to and through the platoon sector or BP along likely enemy avenues of approach. If possible, leaders should select vantage points with the best possible view of the decisive point(s). In addition to the leaders' reconnaissance efforts, units can conduct additional reconnaissance operations. Examples include surveillance of an area by subordinate elements, patrols to determine enemy locations, and establishment of OPs or combat outposts to gain additional information. Leaders also can incorporate Javelin command launch unit, unmanned ground vehicles, Soldier-borne sensors, and small unmanned aircraft systems (sUASs) as surveillance tools (day or night), based on an analysis of METT-TC (I).

2-94. The nature of the reconnaissance and surveillance, including what it covers and how long it lasts, depends on the tactical situation and time available. Leaders should use the results of the COA development process to identify information and security requirements of the unit's reconnaissance and surveillance mission.

2-95. Leaders must include disseminating results and conclusions arrived from reconnaissance and surveillance into their time analysis. They also must consider how to communicate changes in the COA to their subordinates and how these changes affect their plans, actions of the subordinates, and other supporting elements.

STEP 6–COMPLETE THE PLAN

2-96. During this step, leaders expand their selected (or refined) COA into a complete OPORD. The COA is finalized, maturing into a mission statement and intent, describing the decisive point, the concept of operations, and the detailed scheme of maneuver. They prepare overlays, refine the indirect fire list, complete sustainment and C2 requirements and, of course, update the tentative plan based on the latest reconnaissance or information. They prepare briefing sites and other briefing materials they might need to present the OPORD directly to their subordinates.

2-97. Using the five-paragraph OPORD format helps them to explain all aspects of the operation: terrain, enemy, higher and adjacent friendly units, unit mission, execution, support, and C2. The format also serves as a checklist to ensure they cover all relevant details of the operation. It also gives subordinates a smooth flow of information from beginning to end.

STEP 7–ISSUE OPERATION ORDER

Note. The platoon leader focuses the OPORD on the purpose of the operation through mission orders. Mission orders allow the leader's subordinates the greatest possible flexibility to accomplish assigned tasks.

2-98. The OPORD precisely and concisely explains both the leader's intent and concept of how the leader envisions the unit accomplishing the mission. The order does not contain unnecessary information. The OPORD is delivered quickly and in a manner allowing subordinates to concentrate on understanding the leader's vision and not just copying what the leader says verbatim. Leaders must prepare adequately and deliver the OPORD confidently and quickly to build and sustain confidence in their subordinates.

2-99. When issuing the OPORD, leaders must ensure their subordinates understand and share their vision of what must be done and when and how it must be done. Subordinates must understand how all platoon elements work together to accomplish the mission. They also must understand how the platoon mission supports the intentions of the immediate higher commander and how the platoon interacts with adjacent units. When a leader has finished issuing the order, subordinate leaders should leave with a clear understanding of what the leader expects their elements to do. Leaders are responsible for ensuring their subordinates understand.

2-100. Leaders must issue the order in a manner instilling subordinates with confidence in the plan and a commitment to do their best to achieve the plan. Whenever possible, leaders must issue the order in person either on a terrain model or the actual terrain on which the operation will occur. Leaders look into the eyes of their subordinate leaders to ensure each one understands the mission and what the element must achieve.

2-101. Complete the order with a confirmation brief. A *confirmation brief* is a brief subordinate leaders give to the higher commander immediately after the operation order is given to confirm understanding (ADP 5-0). At a minimum, subordinate leaders should be able to brief the unit mission and intent, the immediate higher commander's intent, their own tasks and purpose, and time they will issue their unit's OPORD. Subordinate leaders should confirm they understand the commander's vision and how the mission is accomplished with respect to the decisive point(s). This confirmation brief provides an opportunity to highlight issues or concerns.

2-102. The five-paragraph OPORD format (see figure 2-5) help leaders paint a picture of all aspects of the operation, from the terrain to the enemy, and finally to the unit's own actions from higher to lower. The format helps them decide what relevant details they must include and in providing subordinates with a smooth flow of information from beginning to end. At the same time, leaders must ensure the order is not only clear and complete but also as brief as possible. If leaders have already addressed an item adequately in a previous WARNORD, they can simply state "no change," or provide necessary updates. Leaders are free to brief the OPORD in the most effective manner to convey information to their subordinates.

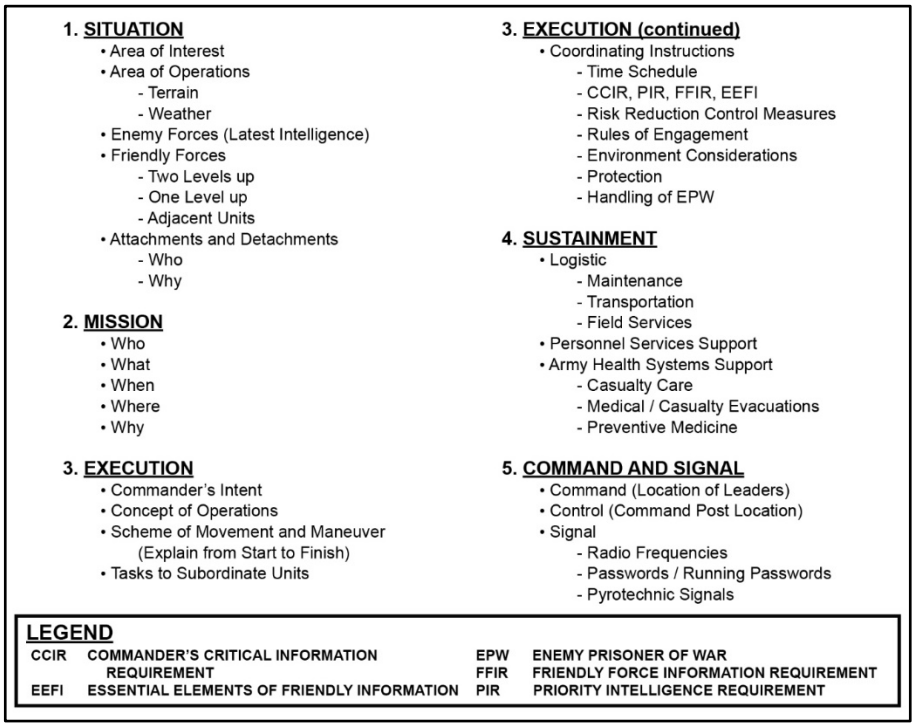


Figure 2-5. Operation order format

STEP 8–SUPERVISE AND REFINE

2-103. This final step of the TLP is crucial. After issuing the OPORD, leaders and subordinate leaders must ensure the required activities and tasks are completed in a timely manner prior to mission execution. Supervision is the primary responsibility of all leaders. Both officers and noncommissioned officers must check everything important for mission accomplishment. These checks include, but are not limited to—

- Conducting numerous backbriefs on all aspects of the platoon and subordinate unit operations.
- Ensuring the second in command in each element is prepared to execute in the leaders' absence.
- Listening to subordinates' OPORDs.
- Observing rehearsals of subordinate units.
- Checking load plans to ensure units are carrying only what is necessary for the mission or what the OPORD specified.
- Checking the status and serviceability of weapons.
- Checking on maintenance activities of subordinates.
- Ensuring local security is maintained.

SECTION III – ORDERS

2-104. Orders are how the platoon leader receives and transmits information, from the earliest notification that an operation will occur through the final steps of execution. WARNORDs, OPORDs, and FRAGORDs are critical to mission success. In a tactical situation, the platoon leader and subordinate leaders work with orders daily, and they must have precise knowledge of the correct format for each type of order. Orders at the platoon and squad level are preferably given orally. The platoon leader develops orders with input from their platoon sergeant and squad leaders. Orders can be given as a preformatted message or as a free text message using mission command systems. They follow the five-paragraph field order format:

- Situation.
- Mission.
- Execution.
- Sustainment.
- Command and Signal.

WARNING ORDER

2-105. A *warning order* is a preliminary notice of an order or action that is to follow (JP 5-0). Platoon leaders alert their platoons by using a WARNORD during the planning of an operation and issue additional WARNORDs as additional information and guidance becomes available. The WARNORD follows the five-paragraph field order format, but the amount of detail it includes depends on the information and time available when the order is issued, and the information subordinate leaders need for proper planning and preparation. A WARNORD clearly informs the recipient of what tasks they must do now as well as possible future tasks. A WARNORD does not authorize execution other than planning unless specifically stated. The WARNORD—

- Allows subordinates to begin planning for the mission.
- Provides a planning timeline.
- Provides an initial task organization.
- Provides priorities for rehearsals.

OPERATION ORDER

2-106. An *operation order* is a directive issued by a commander to subordinate commanders for the purpose of effecting the coordinated execution of an operation (JP 5-0). The five-paragraph operation format is used to organize the information, to ensure completeness, and to help subordinate leaders understand and follow the order. The platoon and squad leaders normally give the OPORD orally. Whenever possible, the leader gives the order while observing the objective or uses a terrain model or sketch along with a map to explain the order. (See FM 5-0 for more information on the OPORD development and format.) When giving the OPORD, the platoon leader should consider—

- The time available.
- Whether to give the order to their squad leaders or to the whole platoon.

FRAGMENTARY ORDER

2-107. The *fragmentary order* is an abbreviated operation order issued as needed to change or modify an order or to execute a branch or sequel (JP 5-0). A FRAGORD provides timely changes of existing orders to subordinates while providing notification to higher and adjacent commands. At the platoon and squad level, a FRAGORD is usually an oral brief or written order that addresses only those parts of the original OPORD that have changed. The OPORD format and all the five-paragraph headings are used. After each heading, state either "no change" or the new information. This ensures that recipients know they have received the entire FRAGORD. A FRAGORD may—

- Communicate changes in the enemy or friendly situation.
- Change tasks of subordinate elements based on changes in the situation.
- Implement timely changes to existing orders.
- Provide pertinent extracts from more detailed orders.
- Provide interim instructions until the leader can develop a detailed order.

SECTION IV – REHEARSALS

2-108. A *rehearsal* is a session in which the commander and staff or unit practices expected actions to improve performance during execution (ADP 5-0). They are essential in ensuring thorough preparation, coordination, and understanding of the commander's plan and intent. Leaders should never underestimate the value of rehearsals. Effective rehearsals imprint a mental picture of the sequence of the operation's key actions and improve mutual understanding among subordinates, supporting elements, and leaders.

2-109. Rehearsals require leaders and, when time permits, other platoon Soldiers to perform required tasks, ideally under conditions as close as possible to those expected for the actual operation. At their best, rehearsals are interactive, while verbalizing their elements' actions. During every rehearsal, the focus is on subordinate elements practicing key actions in their individual schemes of maneuver.

Note. During rehearsals leaders can test subordinates understanding of the plan and push the rehearsal forward rather than wait to dictate each step of the operation.

2-110. Leaders use well-planned, efficiently run rehearsals to accomplish the following:

- Reinforce training and increase proficiency in critical tasks.
- Reveal weaknesses or problems in the plan, leading to more refinement of the plan or development of additional branch plans.
- Integrate the actions of subordinate elements.
- Confirm coordination requirements within the platoon and between the platoon and adjacent units.
- Improve each Soldier's understanding of the following:
  - Concept of operations.
  - Direct fire plan.
  - Contingencies.

  - Possible actions and reactions for various situations that may arise during the operation.
- Ensure seconds-in-command are prepared to execute in their leaders' absence.
- Foster confidence among Soldiers.

TYPES OF REHEARSALS

2-111. Each rehearsal type achieves different results and has a specific place in the timeline. (See ATP 3-21.11 and FM 6-0 for more information.) The four types of rehearsals are—

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

BACKBRIEF

2-112. A *backbrief* is a briefing by subordinates to the commander to review how subordinates intend to accomplish their mission (FM 6-0). A backbrief is a briefing by subordinates to the commander to review how subordinates intend to accomplish their mission. Normally, subordinates perform backbriefs throughout preparation. These briefs allow commanders to clarify the commander's intent early in subordinate planning. Commanders use the backbrief to identify problems in the concept of the operation.

Note. The backbrief must not be confused with a confirmation brief. A confirmation brief is an opportunity for subordinate leaders to verify receipt and understanding of the commander's intent and specified tasks, immediately following the issuance of the order.

COMBINED ARMS REHEARSAL

2-113. A combined arms rehearsal is a rehearsal in which subordinate units synchronize their plans with each other. A maneuver unit headquarters normally executes a combined arms rehearsal after subordinate units issue their OPORD. This rehearsal type helps ensure subordinate commanders' plans achieve the higher commander's intent.

2-114. A combined arms rehearsal is intended to be an opportunity to synchronize actions, identify conflicts, and solve problems through the FRAGORD process. It should not be a rigidly scripted event and should have time allocated for discussion. A combined arms rehearsal may be the final opportunity for problem identification and conflict resolution prior to execution, as the entire staff and unit is exposed to the overall scheme of events.

SUPPORT REHEARSAL

2-115. A support rehearsal is an event focused on synchronizing each warfighting function with the overall operation. Throughout preparation, units conduct support rehearsals within the framework of a single or limited number of warfighting functions that can involve coordination and procedure drills for aviation, fires, engineer support,

or CASEVAC (mounted and dismounted). Support rehearsals and combined arms rehearsals complement preparations for an operation. Units may conduct support rehearsals separately and then combine them into full-dress rehearsals. Although these rehearsals differ slightly by warfighting function, they achieve the same result.

BATTLE DRILL OR STANDARD OPERATING PROCEDURE REHEARSAL

2-116. A battle drill is an action that units collectively and rapidly execute without applying a deliberate decision-making process. A *standard operating procedure* is a set of instructions applicable to those features of operations that lend themselves to a definite or standardized procedure without loss of effectiveness (JP 3-31). A battle drill or SOP rehearsal ensures that all participants understand a technique or a specific set of procedures. Throughout preparation, units and staffs rehearse battle drills and SOPs. These rehearsals do not need a completed order from higher headquarters. Leaders place priority on those drills or actions they anticipate occurring during the operation. All echelons use these rehearsal types; however, they are most common for platoons and squads. They are conducted throughout preparation and are not limited to published battle drills.

REHEARSAL TECHNIQUES

2-117. Rehearsals should follow the crawl-walk-run training methodology whenever possible. This prepares the platoons and subordinate elements for increasingly difficult conditions. (See ATP 3-21.11 and FM 6-0 for more information.) Units may conduct these rehearsals techniques dependent on the situation and as time permits:

- Full dress rehearsal.
- Key-leader rehearsal.
- Terrain-model rehearsal.
- Digital-terrain-model rehearsal.
- Sketch-map rehearsal.
- Map rehearsal.
- Network rehearsal.

Note. As a technique, leaders can direct certain rehearsals (for example, special teams, breach, battle drills) to occur by way of the WARNORD.

SECTION V – PRECOMBAT CHECKS AND INSPECTIONS

2-118. PCCs and PCIs are critical to the success of missions. These checks and inspections are leader tasks and cannot be delegated below the team-leader level. Leaders are responsible for checking and inspecting mission essential equipment and supplies to ensure they are present and operational. At the platoon echelon, the platoon sergeant and squad leaders spot check throughout the unit's preparation for combat. The platoon leader and platoon sergeant will then conduct a final inspection prior to mission execution. For the squad echelon, team leaders spot check throughout preparation, and the squad leader makes a final inspection. They ensure the Soldier is prepared to execute the required individual and collective tasks supporting the mission. Checks and

inspections are part of TLP protecting against shortfalls endangering Soldiers' lives and jeopardize the execution of a mission.

2-119. PCCs and PCIs must be tailored to the specific unit and mission requirements. Each mission may require a separate set of checklists. Rifle squads and mounted element will have their own established set of PCCs and PCIs, but each like element across the formation should have identical checklists. For example, weapons squads will have a different checklist than rifle squads, but each weapons squad within a company should be the same.

2-120. One of the best ways to ensure PCCs and PCIs are complete and thorough is with full-dress rehearsals. These rehearsals, run at combat speed with communication and full-battle equipment, allowing the leader to envision minute details as they will occur in the assigned area. If the operation is to be conducted at night, Soldiers should conduct full-dress rehearsals at night as well. PCCs and PCIs should include backbriefs on the mission, the task and purpose of the mission, and how the Soldiers' role fits into the scheme of maneuver. The Soldiers should be familiar with the latest intelligence assessments, ROE, and be versed in CASEVAC and MEDEVAC procedures and sustainment requirements.

2-121. Table 2-2 lists sensitive items, high dollar value items, pieces of equipment, and supplies that a unit may be equipped with during a particular mission. A unit's SOP generally addresses the PCC and PCI specific to an individual unit. Table 2-2 is only provided for discussion purposes and is not all inclusive for every mission.

Table 2-2. Precombat checks and precombat inspection checklist, example

Sensitive Items, High-Dollar Value Items, Pieces of Equipment, and Supplies, Example		
–Identification card/identification tags –Canteens/hydration bladder –Protective mask –All clothing items in packing list –Poncho –Improved rain suit top and bottom –Earplugs –Camouflage stick –Ammunition/magazines –Individual weapons –Bayonet and scabbard –Weapons cleaning kit –Weapon tie downs –Pocket mirror –Water purification tablets –Watch –Lip balm and sunscreen –Advanced combat helmet –Combat boots –Entrenching tool –Flexi cuffs	–Litter –Protractor/map –Lensatic compass —-Notebook/pen/pencil Traversing and elevating mechanisms —-Spare barrels –Spare barrel bags –Extraction tools –Asbestos gloves –Barrel changing handles –Tripods –Pintles –Counterradio/electro-magnetic warfare device –Vehicle tools (if applicable) –Binoculars –Meals and food –Visual/language translator card –Concertina wire gloves –Equipment packed according to standard operating procedure –Call for fire procedures	–9-line medical evacuation procedures –Grappling hook –Sling sets –Flashlights –VS-17 panel –Pick-up zone marking kit –Radios and backup communications –Global Positioning System/laser range finder –Handheld microphones –Night vision devices –Night vision goggles mounting plate –Batteries and spare batteries –Improved outer tactical vest –Ruck/assault pack systems –Knee and elbow pads –Ballistic spectacles –Insect repellent –Infrared strobe –Chemical lights –Combat lifesaver bags

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Chapter 3
Offense

Platoon leaders and squad leaders must understand the principles and tactics, techniques, and procedures associated with the offense. They must comprehend their role when operating within a larger organization's operations, and when operating independently. Leaders must recognize the complementary and reinforcing effects of other maneuver elements and supporting elements with their own capabilities and understand the impact of open or restrictive terrain on their operations. The Stryker Infantry rifle platoon conducts the offense to decisively defeat, destroy, or neutralize the enemy force, or to seize key terrain. The Stryker Infantry rifle platoon has great flexibility due to its organic mobility and robust Infantry organization. Success for the Stryker Infantry rifle platoon depends on its ability to maximize its organic assets to mass combat power at key times and places. This chapter covers the basic components during the conduct of the offense, common offensive planning considerations, actions on contact, movement to contact, attack, and operations during limited visibility.

SECTION I – CONDUCT OF THE OFFENSE

3-1. Offensive operations are decisive. During offensive operations, the platoon closes with the enemy by means of movement and maneuver to seize, retain, and exploit the initiative to defeat the enemy and render them incapable of achieving their objectives. While tactical considerations may call for the platoon to execute defensive operations, taking the initiative and defeat of the enemy requires a shift to offensive operations that are force or terrain oriented. A sound doctrinal foundation during offensive planning assists the platoon leader in capitalizing on the tactical flexibility of the Stryker Infantry rifle platoon.

3-2. Offensive fundamentals are similar for both Stryker and Infantry small units. Stryker units can move quickly when not in enemy contact to gain a position of advantage before dismounting. (See ATP 3-21.8 for more information on Infantry small unit offensive fundamentals.)

CHARACTERISTICS OF THE OFFENSE

3-3. The offense is characterized by audacity, concentration, surprise, and tempo. The ability to gain and maintain the initiative to defeat an enemy greatly depends upon the proper application of the characteristics of the offense. (See FM 3-96 for more information.)

AUDACITY

3-4. Audacity is a willingness to take bold risks. The bold execution of plans increases the chance for surprise and enables leaders to control the tempo. This depends upon the

leader's ability to see opportunities for action and accept prudent risks commensurate with the value of their objectives to take advantage of those opportunities. Leaders dispel uncertainty by acting decisively and inspire Soldiers to overcome adversity and danger. They compensate for a lack of information by developing the situation aggressively and seizing the initiative. The platoon and squad demonstrate audacity through—

- Building flexible plans that allow leaders to adapt to changing circumstances.
- Maintaining situational awareness to identify and take advantage of opportunities or respond to emerging threats.
- Understanding the true value of an objective to the larger operation and the risks involved in achieving it.
- Maintaining continuous communications to ensure others are aware of changes to the plan.
- A willingness to use both mounted and dismounted elements of the platoon to achieve the mission.
- Requesting additional support as required to mitigate unnecessary risks.

CONCENTRATION

3-5. Concentration is massing the effects of combat power in time and space at the decisive point(s) to achieve a single purpose. This requires coordination and an awareness of the environment to position forces in ways that enable concentration without losing surprise, sacrificing tempo, or creating lucrative targets for the enemy. The platoon and squad achieve concentration through—

- Understanding the higher commander's intended decisive point, and the effects the platoon is tasked to achieve at that point.
- Understanding the required force ratio at the decisive point and analyzing the platoon's ability to achieve that ratio.
- Careful planning and coordination to synchronize efforts based on a thorough terrain and enemy analysis and accurate reconnaissance and surveillance.
- Designating a main effort and allocating resources to support it.
- Integrating effects from higher-level assets, including indirect fires, Army and joint and multinational aviation assets, and EW with maneuver.
- Maintaining continuous information flow to keep operations synchronized.
- Planning appropriate direct fire, and fire support coordination measures to maximize effects at designated times and places.

SURPRISE

3-6. Surprise is an effect achieved by attacking the enemy at a time or place they do not expect or in a manner for which they are unprepared. Surprise delays enemy reactions, overloads and confuses enemy C2 systems, induces psychological shock in enemy soldiers and leaders, and reduces the coherence of defensive missions. The platoon and squad achieve surprise by—

- Conducting thorough reconnaissance and surveillance to confirm enemy disposition, determining what actions they are prepared for, and identifying opportunities to exploit in unexpected ways.
- Changing the tempo of operations or accepting risk in a way the enemy was unable to anticipate.

- Conducting counterreconnaissance, employing stealth, and disrupting communications to deny enemy situational understanding.
- Striking the enemy from an unexpected direction, at an unexpected time, and with a combination of capabilities that they are unable to defeat.

TEMPO

3-7. *Tempo* is the relative speed and rhythm of military operations over time with respect to the enemy (ADP 3-0). Tempo is not simply moving fast, but the idea that the cumulative effects of offense operations place enemy forces under continuous pressure. Even if portions of friendly forces are in a tactical pause, someone is always applying pressure, resulting in an enemy force that is reactive. Controlling or altering tempo is necessary to retain the initiative. A faster tempo allows attackers to quickly penetrate barriers and defenses and destroy enemy forces in-depth before they can react. They ensure synchronization and proper coordination, but not at the expense of losing opportunities to defeat the enemy. Rapid tempo denies the enemy the chance to rest while continually creating offensive opportunities that demand quick decisions, placing ever increasing strain on Soldiers, equipment, and systems. The platoon and squad control the tempo by—

- Streamlining planning, preparation, and recovery activities to start movement more quickly than expected from a previous action.
- Ensuring detailed enemy and terrain analysis informs leaders when to employ dismounted Infantry.
- Moving more quickly than expected, especially across restrictive terrain.
- Engaging the enemy at multiple locations within a short time or simultaneously.
- Moving more quickly than expected, especially across restrictive terrain.
- Maintaining situational awareness and audaciously exploiting opportunities as they appear.
- Using covered and concealed routes instead of maintaining precise formations and predetermined speeds.
- Employing separate elements of the platoon sequentially to apply continuous pressure to enemy forces while others take a tactical pause to reset or set tactical conditions.

TYPES OF OFFENSIVE OPERATIONS

3-8. Offensive operations impose the leader's will on an enemy. The offense is the most direct means of seizing, retaining, and exploiting the initiative to gain a physical and psychological advantage. In the offense, the platoon's main effort is a sudden action directed toward enemy weaknesses and capitalizing on speed, surprise, and shock. If that effort fails to destroy an enemy, operations continue until enemy forces are defeated. The four types of offensive operations are movement to contact, attack, exploitation, and pursuit.

MOVEMENT TO CONTACT

3-9. *Movement to contact* is a type of offensive operation designed to establish or regain contact to develop the situation (FM 3-90). When conducting a movement to contact, the platoon should follow the guiding principle of making contact with the smallest

friendly force feasible. This guiding principle is consistent with protecting the force while retaining enough combat power to develop the situation and mitigate the associated risk. The unit conducts a movement to contact when the enemy situation is vague or not specific enough to conduct an attack. A movement to contact creates favorable conditions for subsequent tactical actions. Once the platoon makes contact with the enemy force, the leader has five options: attack (platoon assault), defend, bypass, delay, or withdraw. Subordinate variations of a movement to contact include search and attack, and cordon and search operations. (See ATP 3-21.8 for information on movement to contact variations.)

ATTACK

3-10. An *attack* is a type of offensive operation that defeats enemy forces, seizes terrain, or secures terrain (FM 3-90). An attack differs from a movement to contact because enemy main body dispositions are at least partially known, allowing the leader to achieve greater synchronization. This enables more effective massing of an attacking forces' combat power than in a movement to contact. The attack can be hasty or deliberate depending upon the time available for assessing the situation, planning, and preparing. (See section IV of this chapter for a detailed discussion.)

3-11. Variations of the attack are ambush, counterattack, raid, and spoiling attack. (See ATP 3-21.8 for more information on the variations of an attack.) The platoon leader's understanding of the commander's intent and the mission variables guide which of these variations of attack to employ. Units conduct each of these variations, except for a raid, as either a hasty or a deliberate operation.

EXPLOITATION

3-12. An *exploitation* is a type of offensive operation following a successful attack to disorganize the enemy in depth (FM 3-90). Exploitations seek to disintegrate enemy forces to the point where they have no alternative but surrender or take flight. Exploitations take advantage of tactical opportunities, foreseen or unforeseen. While Stryker Infantry platoons and squads might be part of a higher echelon exploitation as a fixing or striking force, they will not plan or execute one on their own. (See ATP 3-21.21 for additional information.)

PURSUIT

3-13. A *pursuit* is a type of offensive operation to catch or cut off a disorganized hostile force attempting to escape, with the aim of destroying it (FM 3-90). There are two variations of the pursuit: frontal and combination. A pursuit normally follows a successful exploitation but can follow any type of offensive operation if the enemy resistance breaks down and they begin fleeing the battlefield. Pursuits entail rapid movement and decentralized control. Stryker Infantry platoons and squads do not plan pursuits at their level but are likely to participate in a higher echelon pursuit due to their mobility. (See ATP 3-21.21 for additional information.)

TACTICAL MISSION TASKS

3-14. A tactical mission task is the specific activity a unit performs while executing a tactical operation or form of maneuver (see FM 3-90). Tactical mission tasks are used as components (purpose) of a mission statement or given as tasks to subordinate units.

The mission statement provides the task and purpose. The task is the what and the purpose is the why of a mission statement. The "why" provides the reason the unit is to execute the task and the method the unit contributes to the higher echelon's headquarters. All tactical mission tasks are defined and most have a symbol. Tactical mission tasks describe the results or effects the commander want to achieve.

3-15. Successful offensive operations require units to seize, retain, and exploit the initiative to defeat and render a force incapable of achieving its objectives (see ADP 3-0). Force-oriented tasks focus on the enemy while terrain-oriented tasks focus on seizing, retaining, and controlling terrain and facilities. The tactical mission tasks, seize, retain, and control are defined as follows:

- Seize is a tactical mission task in which a unit takes possession of a designated area by using overwhelming force (see FM 3-90).
- *Retain* is a tactical mission task in which a unit prevents enemy occupation or use of terrain (FM 3-90).
- *Control* is a tactical mission task in which a unit maintains physical influence over an assigned area (FM 3-90).

3-16. Breaching, destroying, seizing, suppressing, and SBF are some tactical mission tasks that a Stryker Infantry rifle platoon may receive that are typically associated with offensive operations. (See FM 3-90 for a complete list of tactical mission tasks.)

Note. The situations used in this section are examples only. They are not applicable in every tactical operation, nor are they intended to prescribe any specific method for achieving the purpose of the operation.

BREACH

3-17. *Breach* is a tactical mission task in which a unit breaks through or establishes a passage through an enemy obstacle (FM 3-90). A Stryker Infantry rifle platoon may be required to breach, break through, or secure a passage through enemy tactical obstacles, protective obstacles, or buildings. The platoon may encounter different obstacle types that include anti-vehicle barriers, anti-vehicle ditches, wire, and minefields. Obstacles may be employed singularly or in a complex fashion. A platoon can participate in a hasty breach or as part of a larger unit during the conduct of a deliberate breach.

DESTROY

3-18. *Destroy* is a tactical mission task that physically renders an enemy force combat-ineffective until reconstituted (FM 3-90). A combat system is destroyed when it is damaged to the point where it cannot perform any function or be restored to a usable condition without being entirely rebuilt. The amount of damage needed to render an enemy unit combat ineffective depends on the unit's type, discipline, and morale. The indicators of enemy destruction are—

- Destruction of most mounted platforms in a mechanized or heavy armored force.
- Destruction of a certain percentage of anticipated threat forces in the area such as a company sized element on the objective.
- Evidence the enemy force is operating without C2.

3-19. A well-trained and equipped enemy is difficult to destroy. A platoon destroys an enemy force by—

- Executing an ambush where the entire enemy element is in the kill zone.
- Using surprise direct and indirect fires in an EA.
- Coordinating direct and indirect fires onto an objective.
- Massing indirect fires onto an unprepared enemy.

SEIZE

3-20. *Seize* is a tactical mission task in which a unit takes possession of a designated area by using overwhelming force (FM 3-90). A platoon may seize during either offensive or defensive operations. Examples include a platoon seizing—

- The far side of an obstacle as part of a company breach.
- A portion of an enemy defense as part of a company deliberate attack.
- Key terrain to prevent its use by the enemy.

SUPPRESS

3-21. *Suppress* is a tactical mission task in which a unit temporarily degrades a force or weapon system from accomplishing its mission (FM 3-90). A platoon has suppressed the enemy when the enemy cannot prevent friendly forces from accomplishing their mission. Suppressing the enemy is a temporary measure. Units in SBF and ABF positions often use suppressive fires to accomplish their mission. Platoons often use suppressive fires to—

- Allow further movement of friendly forces.
- Isolate an objective by suppressing enemy units in mutually supporting positions.
- Cover the dismounted assault element from the probable line of deployment (PLD) to the objective.

SUPPORT BY FIRE

3-22. For the purposes of this publication, SBF is a tactical mission task in which a unit engages the enemy by direct fire in support of another maneuvering force. The primary objective of the support force is normally to fix and suppress enemy forces so that they cannot effectively fire on the maneuvering force. The secondary objective is to destroy enemy forces if they try to reposition. The commander specifies the desired effect on enemy forces when assigning this task. Once a commander gives an element the task of SBF, it should occupy SBF positions that have cover and concealment, good observation, and clear fields of fire. Elements occupying SBF positions should—

- Check the security of the position.
- Search for targets.
- Orient weapons on likely or suspected enemy positions.
- Occupy fighting positions providing some degree of protection.
- Occupy hull-down firing positions, while Infantry squads use trees, natural berms, and similar existing terrain features.
- Assign observation sectors to each Soldier or weapon system in the SBF element.

- Use available thermal sights to locate heat sources not visible to the naked eye, such as vehicles concealed in tree lines or other wooded areas or personnel serving at OPs.

3-23. SBF closely resembles the task of ABF. The difference is that SBF supports another force so that it can maneuver against enemy forces, while an ABF does not support the maneuver of another friendly force.

COMMON OFFENSIVE CONTROL MEASURES

3-24. The higher commander defines the leader's intent and establishes control measures allowing for decentralized execution and leader initiative. Common means of control measures for the offense are establishing the—

- Assault position, assault time, and AA.
- Start point.
- Limit of advance (LOA) and LD.
- Rally point and release point.
- Objective and objective rally point.
- Phase line.
- ABF position, attack position, and axis of advance.
- Checkpoint.
- Direction of attack.
- Lane.
- Passage line, passage point, and point of departure.
- Point of breach.
- Point of penetration.
- PLD.
- Route.
- SBF position.
- Final coordination line and forward line of own troops.
- Battle handover line (BHL).
- Time of attack.
- Zone.

3-25. An assigned zone defines the location where subordinate units conduct their offensive actions. One technique breaks the battalion and company assigned areas into many-named smaller assigned zones and sectors. Units remain in designated zones or sectors as they conduct their missions. The use of TRPs facilitates the responsiveness of fixing and finishing elements once a reconnaissance element detects the enemy. Objectives and checkpoints guide the movement of subordinates and help leaders control their organizations. Contact points help coordination among the unit operating in adjacent areas. (See ATP 3-21.8 for more information on control measures.)

TACTICAL FRAMEWORK OF THE OFFENSE

3-26. Offensive operations are typically executed in a four-step tactical framework. The tactical framework helps visualize operations and to organize their force. These steps overlap during the conduct of the offense. Normally the first two steps are supporting

efforts, while the finish step is the main effort. The execution of offensive operations for movement to contact and attack use the following framework:

- Find the enemy—intelligence drives fires and maneuver, which allows for gaining and maintaining contact.
- Fix the enemy—prevent repositioning or reinforcement making them easier to destroy.
- Finish the enemy—mass available combat power to accomplish the mission.
- Follow through—defeat in detail, consolidate, reorganize, and transition.

SECTION II – COMMON OFFENSIVE PLANNING CONSIDERATIONS

3-27. Platoon leaders begin with a designated assigned area, identified mission, and assigned forces. After the receipt of the WARNORD, the platoon leader begins to develop the platoon plan by employing TLP. During TLP, the platoon leader will use METT-TC (I) to conduct mission analysis. During mission analysis the platoon leader will identify capabilities available to the platoon. Warfighting functions provide an intellectual organization for capabilities that might be available to the platoon. These warfighting functions are a group of tasks and systems united by a common purpose that the platoon leader uses to accomplish missions. The following paragraphs in this section discuss activities, functions, and specific operational environments as the framework for discussing offensive planning considerations.

Note. A warfighting function is a group of tasks and systems united by a common purpose that commanders use to accomplish missions and training objectives (see ADP 3-0). The six warfighting functions are C2, movement and maneuver, intelligence, fires, sustainment, and protection. (See FM 3-96 for additional information.)

COMMAND AND CONTROL

3-28. The Stryker Infantry rifle platoon leader is responsible for providing C2 to the platoon using the platoon's established leadership structure and mission command systems on board the vehicles. C2 provides freedom of action to subordinates and facilitates their abilities to develop the situation, adapt, and act decisively through disciplined initiative within the platoon leader's intent. The platoons assigned mission and commanders intent drive the scheme of maneuver and allocation of available resources. *Commander's intent* is a clear and concise expression of the purpose of an operation and the desired objectives and military end state (JP 3-0). All planning for offensive operations accounts for the mission variables of METT-TC (I). C2 conveys the leader's intent with special emphasis on—

- Mission objectives—courses of action including task and purpose—for each subordinate element shared understanding.
- The scheme of maneuver, with associated tasks and purposes
- Leaders positioning that allows for timely decisions, succession of command, and the application of judgement.
- Direct fire planning.

- Suspected enemy positions, strengths, and capabilities.
- Understanding, disseminating, and taking planned actions to achieve the company commanders' intent.
- Establishing a common operational picture using available C2 systems, ideally both digitally and analog.
- Provide each subordinate element with graphic control measures.
- Develop complete operational timeline.
- PACE plan.
- Establish emission control (EMCON) procedures.
- Reporting requirements and bypass criteria.
- Risk acceptance.
- Priorities of fire.
- COAs
- Track and assess through mission execution.

MOVEMENT AND MANEUVER

3-29. *Movement* is the positioning of combat power to establish the conditions for maneuver (ADP 3-90). *Maneuver* is movement in conjunction with fires (ADP 3-0). Maneuver happens once a unit has made contact with the enemy and combines movement with fires to gain a position of advantage over the enemy. Leaders use their understanding of the enemy situation to identify where and when to deliberately transition from movement to maneuver before making contact with the enemy.

3-30. The platoon conducts tactical movement when contact with the enemy is possible or anticipated. The platoon maintains integrity throughout the movement and plans for enemy interference en route to or shortly after arrival at its destination. During tactical movements, the platoon leader must be prepared to maneuver against an enemy force. Once deployed in its assigned area, the platoon moves using proper techniques for assigned missions. The platoon typically conducts movement within the rear area and up to a point short of the LD, where it transitions to tactical movement as it crosses the LD and advances in zone, transitioning to maneuver when necessary. When contact is made, the platoon maneuvers through fire and movement.

3-31. The platoon leader's mission analysis helps to facilitate the decision on how to move most effectively. When planning platoon movements, the platoon leader ensures the unit is moving in a way that supports a rapid transition to maneuver. Platoon movement should be as rapid as the terrain, mobility of the force, and enemy situation permit while ensuring Soldiers arrive in a condition to accomplish their mission. The ability to gain and maintain the initiative often depends on movement being undetected by the enemy. The platoon depends heavily upon the terrain for protection from enemy fire. Once contact with the enemy is made, squads and platoons execute the appropriate actions on contact (see chapter 2), and leaders begin to maneuver their units.

3-32. The platoon conducts movement and maneuver to avoid enemy strengths and create opportunities that increase the effects of combat power. Surprise is achieved by making unexpected maneuvers, rapidly changing the tempo of ongoing operations, avoiding observation, and using deceptive techniques and procedures. The platoon seeks to overwhelm the enemy with one or more unexpected actions before it has time to react

in an organized fashion. This occurs when the attacking force can engage the defending enemy force from positions of advantage with respect to the enemy, such as engaging from a flank position.

Note. Whether doing movement or maneuver, leaders should anticipate and routinely account for time spent in tactical pauses, whether to set conditions for continued movement, or for other formations to do so.

TACTICAL MOVEMENT

3-33. Platoon leaders use tactical movement for several purposes: to conduct movement, to relate one squad to another on the ground; to position firepower such as the Stryker to support the direct-fire plan; to establish responsibilities for security among squads; and to aid in the execution of battle drills. Just as leaders do with maneuver, leaders plan tactical movements based on where they expect enemy contact, and how they are to react to contact (see chapter 2). Platoon leaders evaluate the situation and decide what type of tactical movement best suits the situation and mission. The platoon operates with and without Stryker support, so they must understand how to move and maneuver in either tactical situation. Movement during dismounted operations is similar to mounted movement but requires more C2 due to its decentralized nature. During approach marches, units use movement formations and movement techniques to balance security and speed throughout the operation. (See chapter 6 for additional information on tactical and nontactical movement.)

Note. Tactical movement involves movement of a unit assigned a mission under combat conditions when not in direct ground contact with the enemy. Tactical movement is based on the anticipation of early ground contact with the enemy, either en route or shortly after arrival at the destination. Tactical movement ends when ground contact is made, or the unit reaches its destination. Tactical movement is not maneuver.

MOVEMENT FORMATIONS

3-34. A *movement formation* is an ordered arrangement of forces for a specific purpose and describes the general configuration of a unit on the ground (ADP 3-90). Movement formations are composed of two variables: lateral frontage, represented by the line formation; and depth, represented by the column formation. Leaders combine the elements of lateral frontage and depth to determine the best formation for their situation. In addition to the line and column or file, the other types of formations are, echelon (left or right), vee, and wedge-combine these elements to varying degrees depending on mission variables.

3-35. The enemy's anticipated disposition, combined with effects of terrain, are the primary considerations in selecting a movement formation. The effects of micro-terrain and visibility determine the actual arrangement and location of the unit's personnel and vehicles within a given formation. The platoon's selected movement formation describes the relationship between subordinate squads and mounted elements to each other on the ground. Each formation has its advantages and disadvantages

(see table 3-1). Unless directed by the company commander, platoons will choose their own formations within the company formation such as company column, platoon wedge. (See ATP 3-21.8 for Infantry squad and fire team movement formations.)

Table 3-1. Movement formation selection

Movement Formation	*Movement Characteristics*			
	Security	*Direct Fires*	*Control*	*Speed*
Column	Good dispersion and all-around security.	Good to the front and rear. Excellent to the flanks.	Flexible and easy to control.	Fast.
Line	Excellent to the front. Poor to flank and rear.	Excellent to the front. Poor to the flank and rear.	Inflexible. Difficult to control.	Slow.
Wedge	Good all-around security.	Good to front and flanks, only.	Flexible; less difficult than the line formation to control.	Faster than the line formation.
Echelon	Good to the echeloned front and flank.	Good to the echeloned front and flank.	Difficult to control.	Slow.
Vee	Good to the front and flank.	Good to the front and flank.	Very difficult to control.	Slow.

MOVEMENT CONSIDERATIONS

3-36. Movement formations do not demand parade-ground precision. Platoons and squads must retain the flexibility needed to vary their formations to the situation. Using formations allows Soldiers to execute battle drills quickly and provide 360-degree security which allows the unit to direct most of their firepower to the flanks or front in anticipation of enemy contact.

3-37. Movement formations can be grouped into two categories: formations with one lead element, and formations with more than one lead element. The formations with more than one lead element, as a general rule, are better for achieving fire superiority—the dominating fires of one force over another force that permits that force to maneuver at a given time and place without prohibitive interference by the other (see FM 3-90)—to the front but are more difficult to control. When the enemy situation is clear, the movement formation should lead with more than one lead element. When the enemy situation is unclear, the movement formation should lead with only one element. Conversely, the formations with only one lead element are easier to control but are not as useful for achieving fire superiority to the front. Formations with one lead element also typically have more uncommitted combat power with which to develop the situation when they make contact and are more difficult for the enemy to fix.

3-38. Leaders attempt to maintain flexibility in their formations. Doing so enables them to react when unexpected enemy actions occur. The line, echelon, and column formations are the least flexible of the seven formations. The line formation masses fires to the front but has vulnerable flanks. The echelon is optimized for a flank threat, something units want to avoid. The column has difficulty reinforcing an element in contact. Leaders using these formations should consider ways to reduce the risks associated with their general lack of flexibility. For example, by expanding or contracting the formation depending on the terrain.

3-39. Leaders control their units using mounted and dismounted hand and arm signals and other means of communication. (See ATP 3-21.8, TC 3-21.60, and ATP 6-02.53 for more information on dismounted hand and arm signals.) Movement formation considerations are addressed and illustrated, respectively in figure 3-1 on page 74 through figure 3-8 on page 81.

Note. The formations shown in the illustrations in this chapter are examples only. Generally, they are depicted without METT-TC (I) considerations, which are the most crucial element in the selection and execution of a formation. Leaders must be prepared to adapt their choice of formation to the specific situation.

SECURITY

3-40. Information on friendly locations, the tactical situation, and the enemy is available to the leader via digital communications. However, nothing replaces personal observation (scanning the terrain and looking for the enemy). (See ATP 3-21.8 for details on security during movement.) The platoon leader also considers the—

- Effects of terrain on security.
- Most recent situational update and the level of C2 needed.

Effects of Terrain on Security

3-41. The platoon leader considers the results of reconnaissance, UAS overflights, map reconnaissance, and other means to analyze the terrain and to find the best covered and concealed route for their mission.

Situational Update and Level of Command and Control

3-42. The platoon leaders consider the most recent situational update and the level of C2 needed for the mission when selecting formations and movement techniques. They choose the option that provides the greatest security while accomplishing the mission.

MOUNTED MOVEMENT FORMATIONS

3-43. Platoon leaders plan formations based on where they expect enemy contact and on the higher commander's plans to react to contact. Spacing requirements, as well as other METT-TC (I) variables will require the platoon to change their formations. Leaders must stay ready to adjust the distance of individual Strykers based on terrain, visibility, and mission requirements. When mounted, the platoon uses the following formations, based on METT-TC (I) variables.

Column

3-44. The *column formation* is a movement formation with elements arranged one behind another (FM 3-90). The platoon uses the column (see figure 3-1 on page 74) when moving fast, when moving through restricted terrain on a specific route, or when it does not expect enemy contact. Each vehicle normally follows directly behind the vehicle in front of it. To increase security, vehicles can disperse laterally. This is often referred to as a staggered column (see figure 3-2 on page 75). The staggered column provides greater firepower and security to the front. Vehicles can also close into a file while moving through restricted terrain such as a defile, and then spread out once clear. The column formation—

- Is easy to control.
- Provides excellent control and fires to the flanks.
- Provides limited fires to the front and rear.
- Provides limited overall security.
- Is normally used for traveling only.

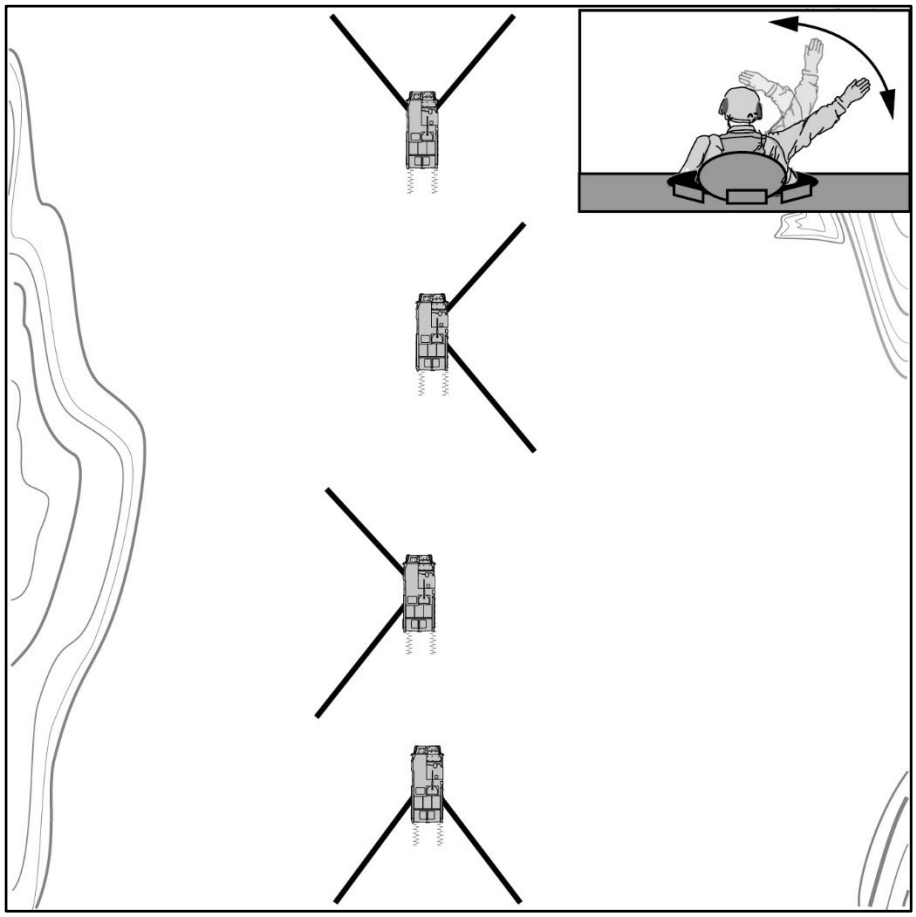


Figure 3-1. Column formation

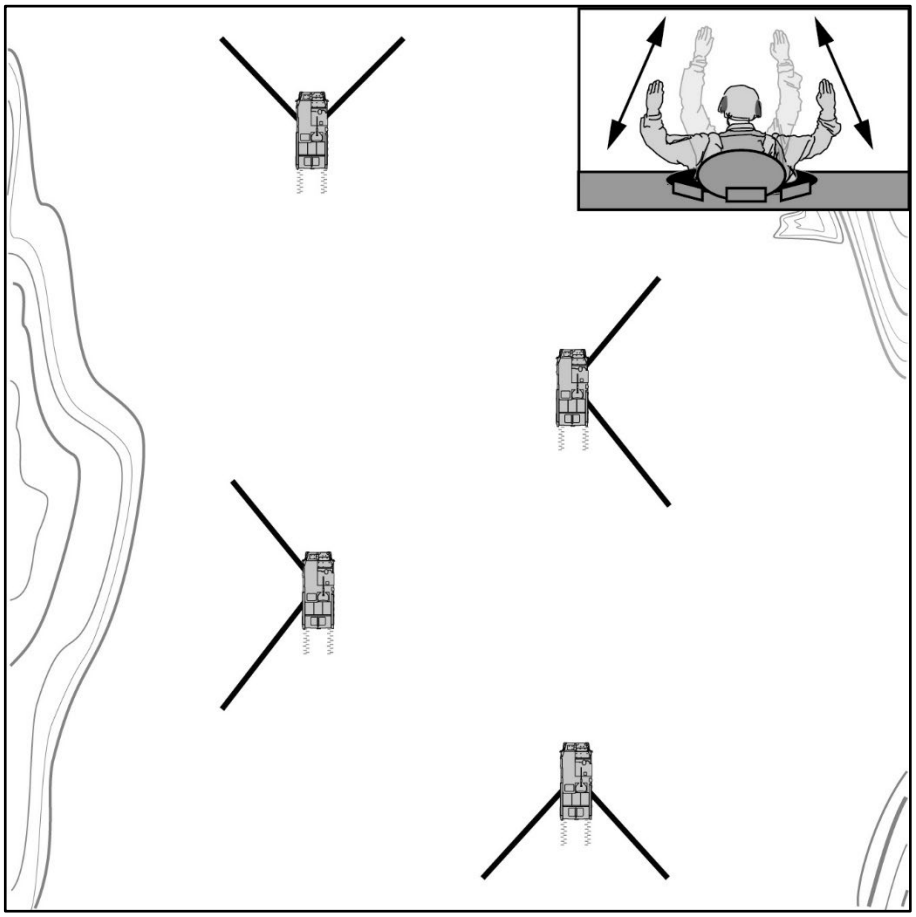


Figure 3-2. Staggered column formation

Line

3-45. A *line formation* is a movement formation in which elements move abreast of each other (FM 3-90). When assaulting a weakly defended objective, crossing open areas, or occupying an SBF position, the platoon mainly uses the line formation (see figure 3-3 on page 76). The platoon can use the line formation to maximize the platoon's firepower and shock effect. The platoon normally uses the line formation when no terrain remains between it and the enemy, when the platoon has already suppressed the enemy's AT weapons, or when the platoon is vulnerable to artillery fire and must move fast. Platoons typically only use the line formation when overwatched by another element. The line formation—

- Is more difficult to control.
- Permits maximum fires to the front or rear and minimum fires to the flanks.
- Is less secure than other formations because of the lack of depth.
- Can be slower to transition to other formations, depending on terrain.

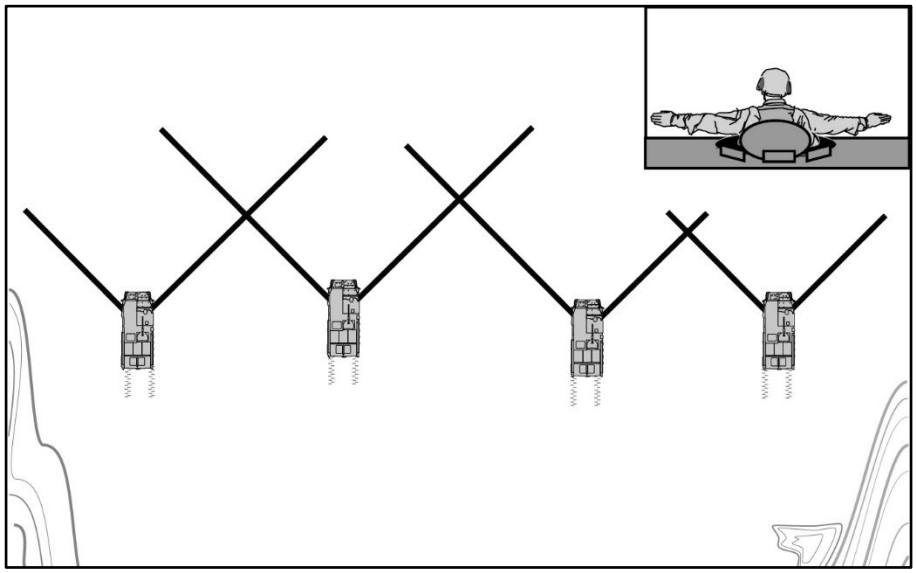


Figure 3-3. Line formation

Wedge

3-46. The *wedge formation* is a movement formation with one lead element and the trail elements are paired off abreast of each other on the flanks (FM 3-90). The platoon uses the wedge formation when the enemy situation is unclear or contact is possible, or the enemy situation is unclear. In this formation, the platoon leader and the platoon sergeant are in the center of the formation, with the remaining Strykers located to the rear of and outside of them. The wedge formation is a good formation for maintaining all-around observation and security. The wedge formation can be heavy left or heavy right (see figure 3-4), the platoon leader determines the formation based on likely enemy contact and terrain. The wedge formation—

- Permits excellent fires to the front and good fires to the flanks.
- Is easy to control.
- Provides good security to the flanks.
- Can be used with the traveling and traveling overwatch techniques.
- Allows rapid transition to bounding overwatch.

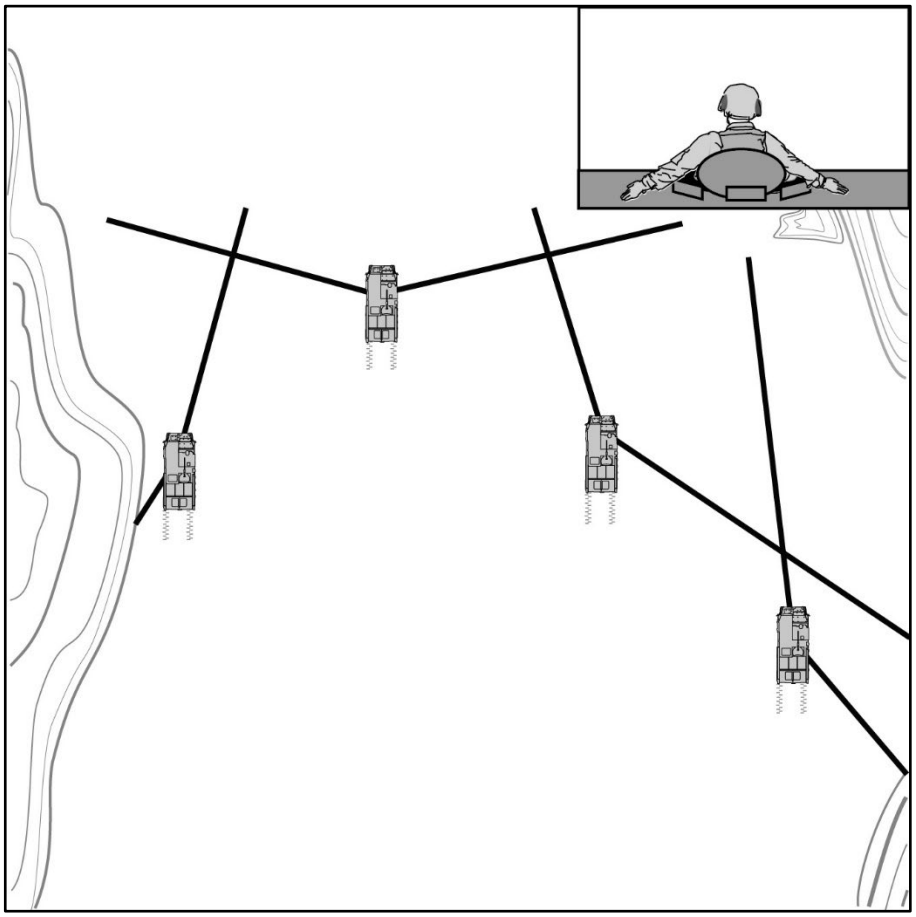


Figure 3-4 Wedge formation.

Echelon

3-47. An *echelon formation* is a movement formation with elements arranged on an angle to the left or to the right of the direction of attack (echelon left, echelon right) (FM 3-90). When the company wants to maintain security or observation of one flank, and when the platoon does not expect enemy contact, the platoon uses the echelon formation (see figure 3-5 on page 78). The echelon formation is used to maximize fires in one direction, towards a flank. Typically used to cover an exposed flank of a larger force and when the platoon leader wants to maintain a high volume of fires without masking other elements. Unless there is another formation opposite the echelon, there is a risk of an exposed flank. The echelon formation—

- Is difficult to control.
- Affords excellent security for the higher formation in the direction of the echelon.
- Facilitates deployment to the echelon flank.

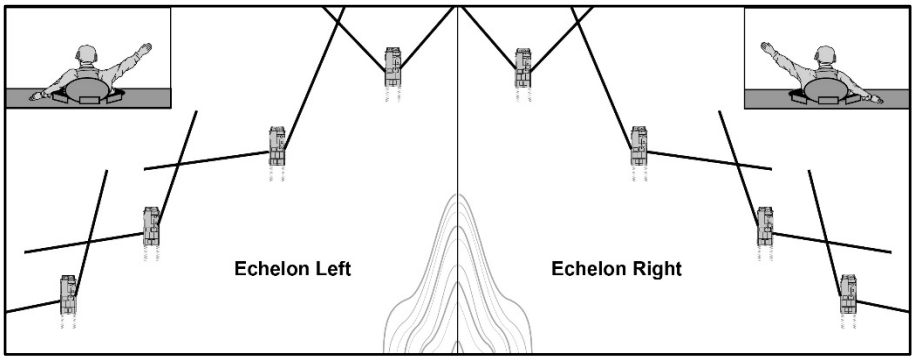


Figure 3-5. Echelon formation

Vee

3-48. A *vee formation* is a movement formation with two elements abreast and one or more elements trailing (FM 3-90). If there are more elements after the trail element in the vee formation, the trail elements can be in front or behind the main body. This arrangement is suited for an advance against a known threat to the front. The vee formation (see figure 3-6) is used when they know the enemy force's location and disposition and expect enemy contact. The vee provides maximum firepower forward and good firepower to the flanks, but the firepower on the flanks is less than that provided by the wedge. The vee formation also allows a platoon to change quickly to a line, wedge, or column formation. The vee formation—

- Is very effective at transitioning into traveling overwatch or bounding overwatch.
- Is difficult to control in restricted terrain and under limited-visibility conditions.
- Is more difficult to reorient the direction of movement.
- Lead element may mask the fires of the trail element.

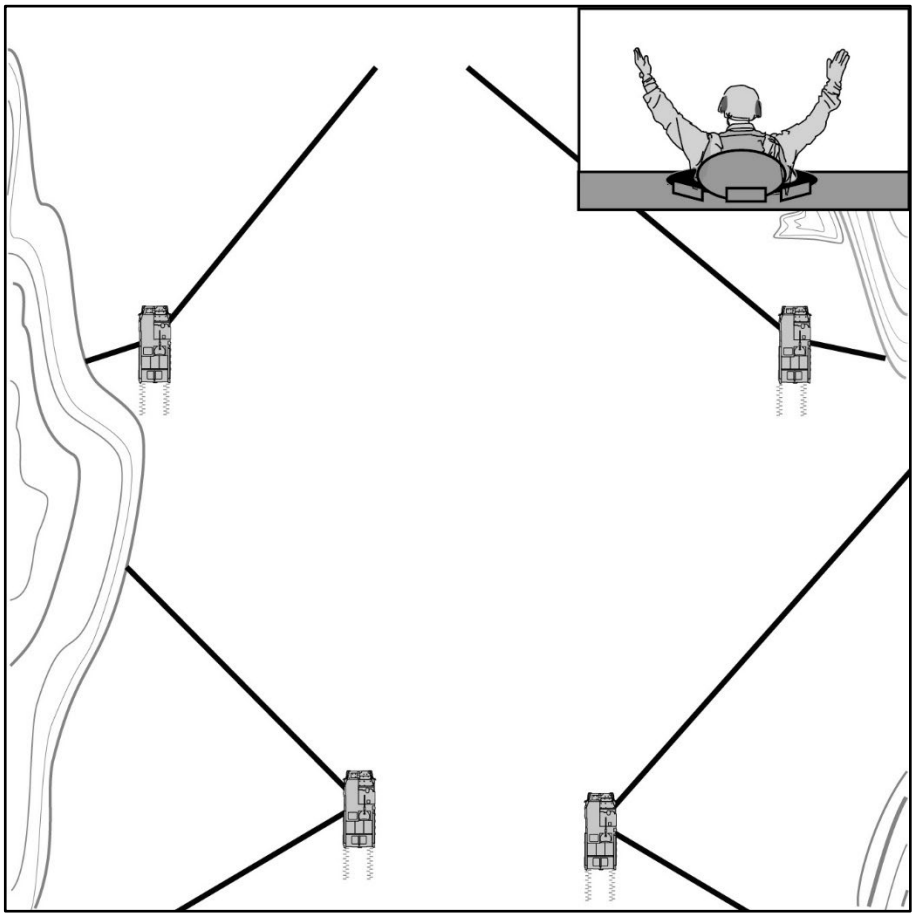


Figure 3-6. Vee formation

Coil and Herringbone

3-49. The coil and herringbone are platoon-level formations employed when stationary and must maintain 360-degree security. The platoon may execute a coil or herringbone alone or as part of a company. Typically, per SOP, if a platoon stops in a security formation for more than a directed amount of time, it should start increasing security posture, such as CBRN monitoring, camouflage, sector sketches, and so on. Platoons should consider using Infantry to clear the area prior to moving vehicles off a road or trail. Platoons should always be aware of mines, improvised explosive devices, and other explosive hazards during movement.

Coil

3-50. The coil (see figure 3-7 on page 80) provides all-round security and observation when the platoon is stationary. It is useful for tactical refueling, resupply, and issuing platoon orders. Security is posted to include air guards and dismounted fire teams. The

vehicle weapons systems are manned. The platoon should be able to transition from any formation into a coil. The coil may transition to a tactical AA.

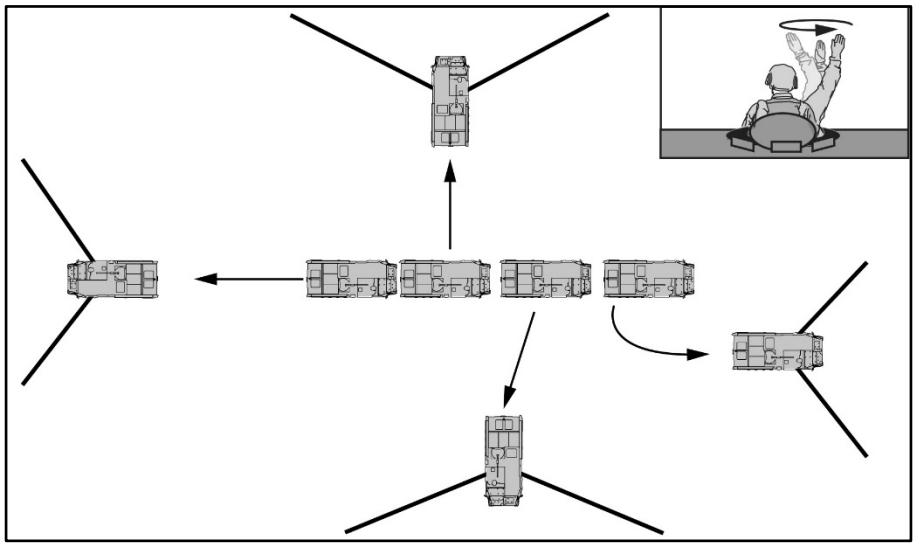


Figure 3-7. Coil formation

Herringbone

3-51. The platoon uses the herringbone to disperse when traveling in column formation (see figure 3-8). The platoon can use it during air attacks or when they must temporarily stop during movement. The Strykers should move to covered, concealed, or both covered and concealed positions off a road or from an open area and set up all-round security without detailed instructions. The platoon repositions the vehicles as needed to take advantage of the best cover, concealment, and fields of fire. Fire team members dismount and establish security. A herringbone can be used for a short halt simply to let other vehicles pass through, or it can be a longer halt for defensive purposes.

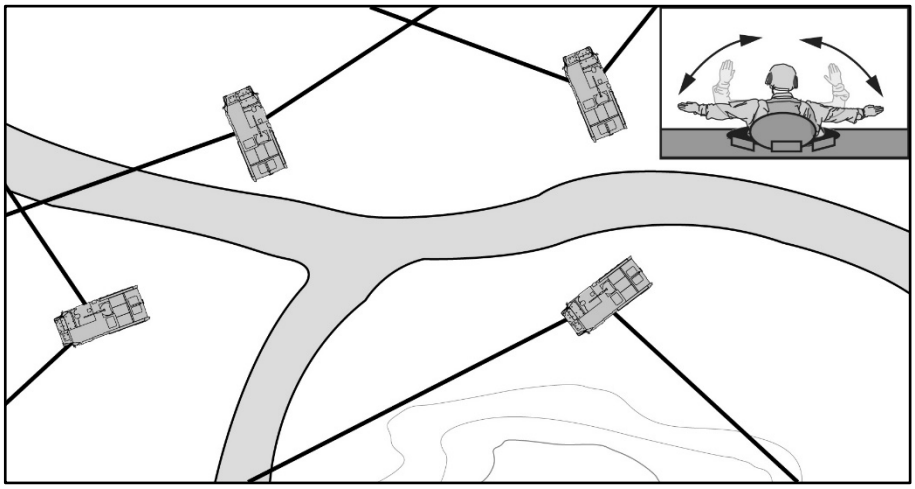


Figure 3-8. Herringbone formation

FORMATION SELECTION

3-52. The platoon leader selects the formation that provides the proper security, direct fires, control, and speed for the operation. The platoon leader's use of planned and rehearsed movement formations allows the platoon to rapidly shift from one formation to another, giving additional flexibility when adjusting to changes in mission variables. Rifle squads will operate with or without Stryker support while clearing terrain during movement. Stryker elements will provide overwatch while rifle squads clear terrain. The company commander may dictate platoon movement formations as part of the company movement. To ensure the effectiveness of the movement, platoon leaders must rehearse so that they can change formations using standard responses to changing situations. By designating the movement formation planned for use, the platoon leader—

- Establishes the known relationship between units.
- Indicates probable reactions once the formation makes contact with the enemy.
- Indicates the level of security desired.
- Establishes the orientation of platoon weapon systems.
- Postures friendly forces for the attack.

3-53. During rehearsals of movement formations, the platoon leaders should train Stryker elements to change formations on command, either by vehicle radio or using hand and arm signals. Stryker elements should be trained on each position in the selected formation, understanding weapons orientation and sectors of fire while moving. Platoon leaders and VCs must rehearse changing formations and fully understand their Stryker's purpose in each type of formation. Moving from wedge to column or column to line is a difficult task and only happens if Stryker elements are trained and proficient in each type of movement formation.

MOVEMENT TECHNIQUES

3-54. Movement techniques limit the unit's exposure to enemy fire and posture the unit to react to enemy contact. The platoon leader selects the appropriate movement

technique based on the chance of enemy contact. Essential to the platoon selection of a movement technique is, first, understanding the company's movement technique and movement formation, and second, understanding what element is in overwatch of the platoon. When contact is likely, but there is no external overwatch, the platoon leader must ensure there is overwatch within the platoon. While moving, individual Soldiers and mounted elements use the terrain to protect themselves when enemy contact is possible or expected. They use natural cover and concealment to avoid enemy fires. Soldiers and mounted elements—

- Take active countermeasures, such as using obscuration, direct and indirect fire, to suppress or obscure suspected enemy positions.
- Cross open areas quickly and avoid large open areas, especially areas surrounded by high ground or terrain that can cover and conceal enemy forces.
- Avoid possible kill zones because it is easier to cross difficult terrain than to fight enemy forces on unfavorable ground.
- Do not silhouette themselves against the skyline.
- Do not move directly forward from a concealed firing position.
- Ensure the lead element clears terrain past the intervisibility line, so the main body does not become decisively engaged.

3-55. Movement techniques are not fixed formations. They refer to the distances between Soldiers, teams, and squads, mounted elements, and vary based on mission, enemy, terrain, visibility, and other factors affecting control (see table 3-2). The platoon leader uses the movement formations in conjunction with movement techniques. There are three movement techniques: traveling, traveling overwatch, and bounding overwatch. An *overwatch* is a task that positions an element to support the movement of another element with immediate fire (ATP 3-21.10). The platoon leader selects from these movement techniques based on—

- The likelihood of enemy contact.
- The type of contact expected.
- The availability of an overwatch element.
- The level of security required during movement.
- The timeline of higher headquarters.

3-56. The selection of a movement technique is based on the likelihood of enemy contact and need for speed. Factors to consider for each technique are control, dispersion, speed, and security.

Table 3-2. Movement techniques and characteristics

Movement Technique	***When Normally Used***	***Characteristics***			
		Control	***Dispersion***	***Speed***	***Security***
Traveling	Contact not likely	More	Less	Fastest	Least
Traveling overwatch	Contact possible	Lesser	More	Slower	More
Bounding overwatch	Contact expected	Most	Most	Slowest	Most

DISMOUNTED MOVEMENT TECHNIQUES

3-57. Stryker Infantry rifle platoons and squads normally move mounted until the situation requires them to dismount. Once dismounted, fire teams usually move in wedge formations, and the platoon or squad uses one of the three movement techniques based on the likelihood of enemy contact. (See ATP 3-21.8 for more information on dismounted movement techniques.)

MOUNTED MOVEMENT TECHNIQUES

3-58. The Stryker platoon leader bases their decision on which movement technique to use based on the enemy situation. As the probability of enemy contact increases, the platoon leader adjusts the movement technique to provide greater security. Digitized and limited-visibility equipment provide the leader with a clearer update of the situation. Based on the most recent update, the leader executes either the traveling, traveling overwatch, or bounding movement technique. For example, if the platoon leader receives an enemy update from higher headquarters showing the enemy much closer to the platoon than originally anticipated, they immediately switch from the traveling to the bounding technique.

3-59. The platoon leader selects from the three movement techniques (see figure 3-9) based on several factors:

- Likelihood of enemy contact.
- Type of contact expected.
- Availability of an overwatch element.
- Level of security required during movement.
- Timeline of higher headquarters.

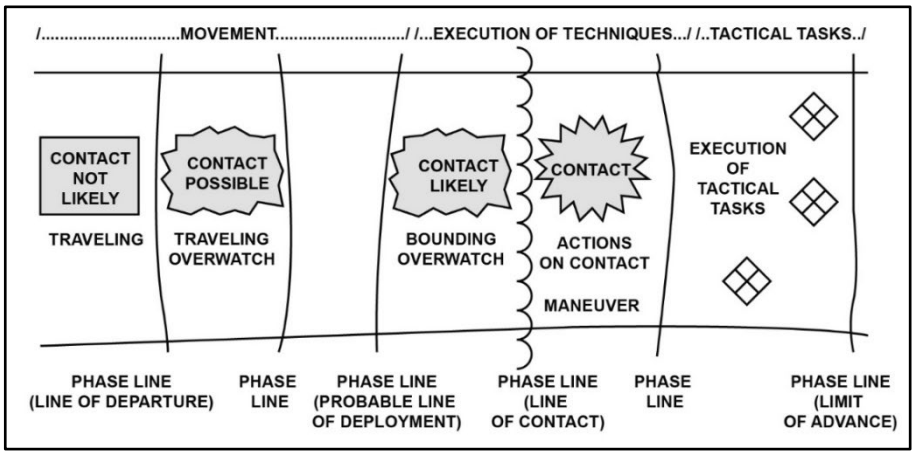


Figure 3-9. Transition from movement techniques to maneuver

Traveling

3-60. *Traveling* is a movement technique used when speed is necessary and contact with enemy forces is not likely (FM 3-90). The platoon leader is located where they can best control the situation. All elements of the unit move simultaneously. Trailing elements

may move in parallel columns to shorten the column and reaction time. Strykers move fast when traveling, so mounted leaders must be aware of the increased potential for breaks in contact. Figure 3-10 depicts the traveling movement technique.

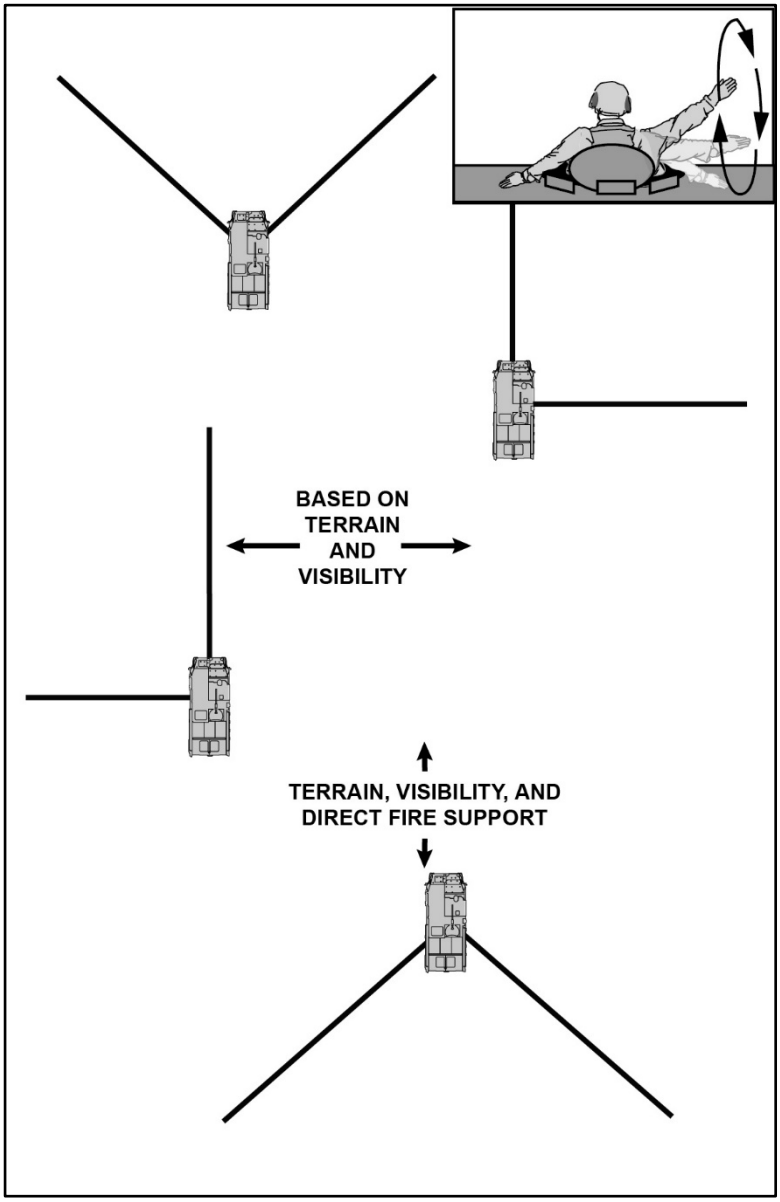


Figure 3-10. Traveling

Traveling Overwatch

3-61. *Traveling overwatch* is a movement technique used when contact with enemy forces is possible (FM 3-90). Traveling overwatch is an extended form of traveling that provides additional security when speed is desirable, but contact is likely (see figure 3-11 on page 86). The vee formation lends itself very well to traveling overwatch. The leader of the formation designates one of their subordinate elements to provide security forward of the main body. The security element may increase its distances from the main body because of improved enemy and friendly situational information. The trailing element moves at variable speeds and may pause for short periods to overwatch the lead element. The trailing element controls its movement based on the terrain and position of lead element. The rear element overwatches at such a distance that if enemy forces engage the lead element, it will not prevent the rear element from firing or moving to support the lead element. Leaders track the movement of and use position updates to ensure the forward security element is on azimuth and does not exceed the range of supporting direct fires. Likewise, the security element leader confirms their location and direction using navigation systems. Should a break in contact occur, the—

- Leader or detached element uses navigations aids to reestablish contact with the main body.
- Platoon's main body uses an infrared (IR) or thermal source to regain visual contact with the element and link it back up with the main body.

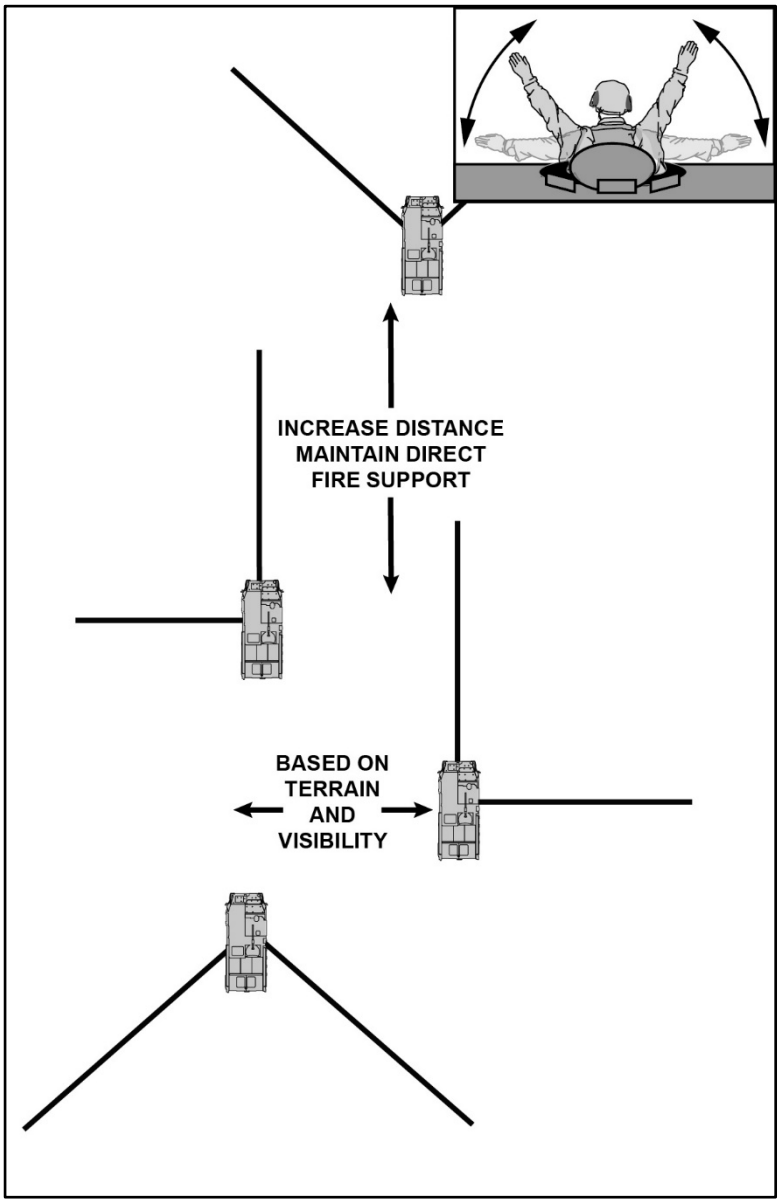


Figure 3-11. Traveling overwatch

Bounding Overwatch

3-62. *Bounding overwatch* is a movement technique used when contact with enemy forces is expected (FM 3-90). The leader initiates bounding overwatch based on planning information received earlier from the enemy situation and SITREPs received during movement. When contact is expected, the platoon dismounts the Infantry squads. DPs should be pre-planned based on the enemy situation.

Combined Mounted and Dismounted

3-63. The mounted element moves by bounds in support of the dismounted Infantry. Depending on the terrain (visibility), a mounted element may overwatch one or two squads as they bound forward while the other mounted element(s) overwatch the remaining squad(s) (see figure 3-12). The dismounted Infantry will move forward or to the flanks of the mounted element(s). The mounted element halts and occupies overwatch positions to enable the dismounted Infantry freedom of maneuver. The mounted element maintains continuous visual contact with the bounding Infantry. If visual contact is lost, the mounted element should maneuver to re-establish visual contact as soon as possible. While IR and digital technology enable the platoon leader observation and control beyond organic direct fire weapon range, the bounding dismounted Infantry should not exceed the supporting mounted element's weapons planning range. The overwatching mounted element continuously re-positions itself to support the moving dismounted element by fire and maneuver. Dismounted Infantry continue to clear the terrain while the mounted elements enable freedom of maneuver by providing SBF. The mounted element(s) bounds forward at the pace of the dismounted Infantry, while maintaining visual contact. As a technique, the mounted element may be ordered to bound past the dismounted Infantry to provide direct fires in support of the dismounted Infantry, but caution should be taken as the mounted element is susceptible to enemy antiarmor.

Note. The designated mounted leader will direct and control the maneuver of the mounted element in support of dismounted operations, provide overwatch, call for fire, and serve as a communications relay.

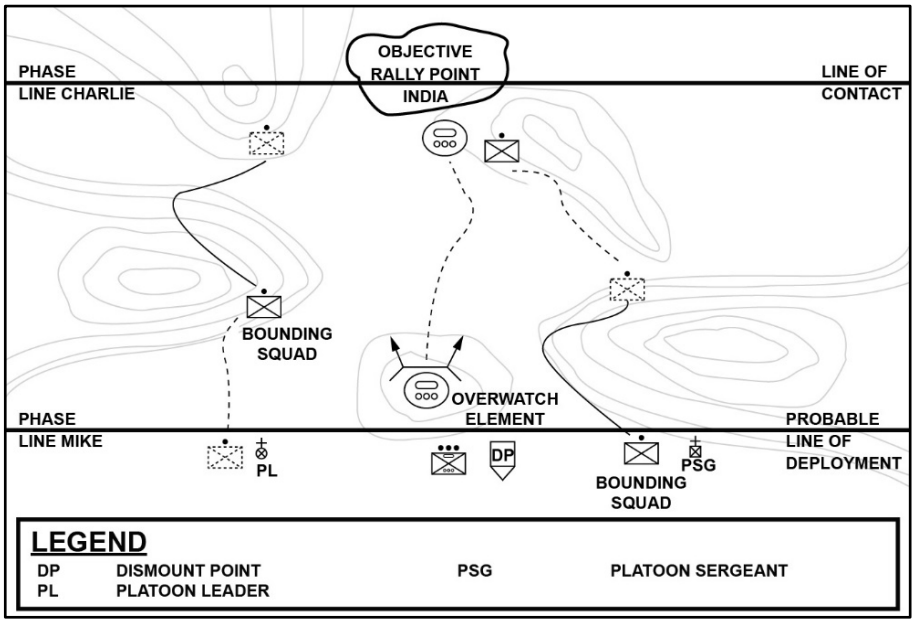


Figure 3-12. Bounding overwatch, combined

Mounted

3-64. The mounted element moves by bounds. One element always halts in position to overwatch another element while it moves. If the bounding element is out of visual contact after reaching the overwatch position, it signals that it is ready to overwatch using voice communications or a visual signal. The overwatching element positions itself to support the moving element by fire and maneuver. The platoon leader must not allow the bounding element to exceed the weapons range of the supporting element even though IR and digital technology allows the leader to observe and control movement beyond the range of their organic direct fire weapons. (See figure 3-13.)

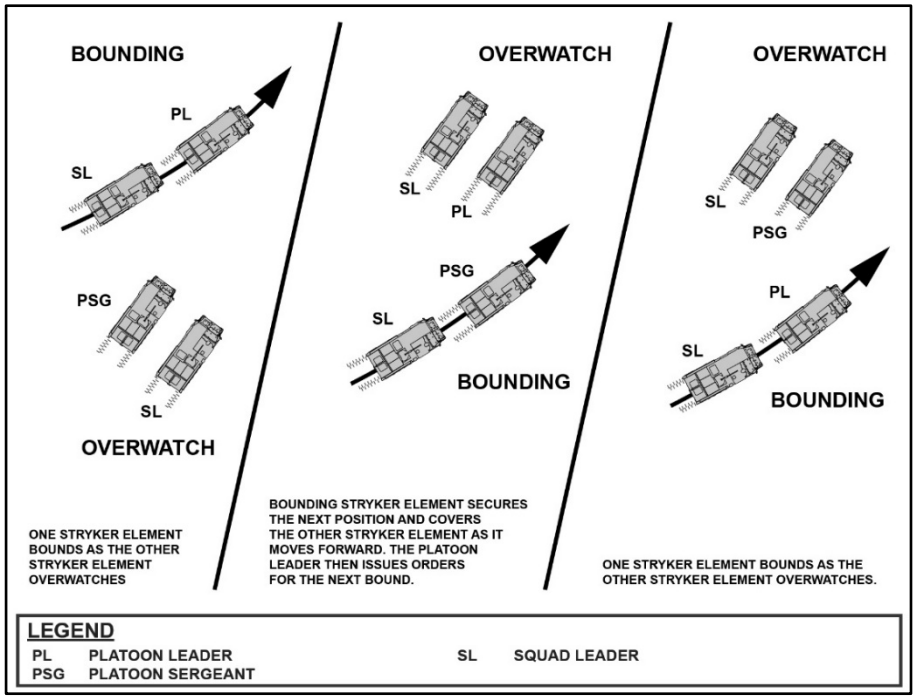


Figure 3-13. Bounding overwatch, mounted

3-65. There are two variations of the bounding overwatch technique: alternating bounds and successive bounds. In both cases, the overwatch element is assigned sectors to scan while the bounding element uses terrain to achieve cover and concealment. Infantry squads should clear intervisibility lines and defiles prior to the Strykers occupying overwatch positions. The overwatching mounted element can immediately support the bounding elements, both mounted and Infantry squads, with fire or maneuver against the enemy if the bounding elements makes contact. Unless they make contact en route, the bounding elements move via covered and concealed routes into the next set of SBF positions. The platoon leader uses the terrain, available cover, and the available supporting range of overwatching weapons to determine the length of bounds. The platoon leader can use the uncommitted part of their forces whenever needed as part of an immediate and controlled reaction to any threat to the bounding force. In the absence

of suitable positions from which to overwatch, the platoon should move in traveling overwatch.

Alternating Bounds

3-66. If the platoon uses alternating bounds (see figure 3-14 on page 90), the bounding element moves forward, halts, and occupies an SBF position. The stationary element always covers the bounding element's movement, halt, and occupation of the bounding element's SBF position. The bounding element advances past the stationary element, takes an overwatch position, and becomes the new forward element. The former stationary element now becomes the bounding element, advances past the stationary element, and occupies a new SBF position. This method is usually more rapid than successive bounds.

Successive Bounds

3-67. As depicted in figure 3-14 on page 90, if the unit uses successive bounds, the lead element, covered by the trail element, advances, and occupies an SBF position. The rear element advances to an SBF position abreast of the lead element and halts. The lead element moves to the next position and the move continues. Only one element moves at a time, and the rear element avoids advancing beyond the lead element. Successive bounds are an effective technique that deconflicts movement with direct fires. For instance, leading with the left-side Stryker element allows clear fires to the front and front-right.

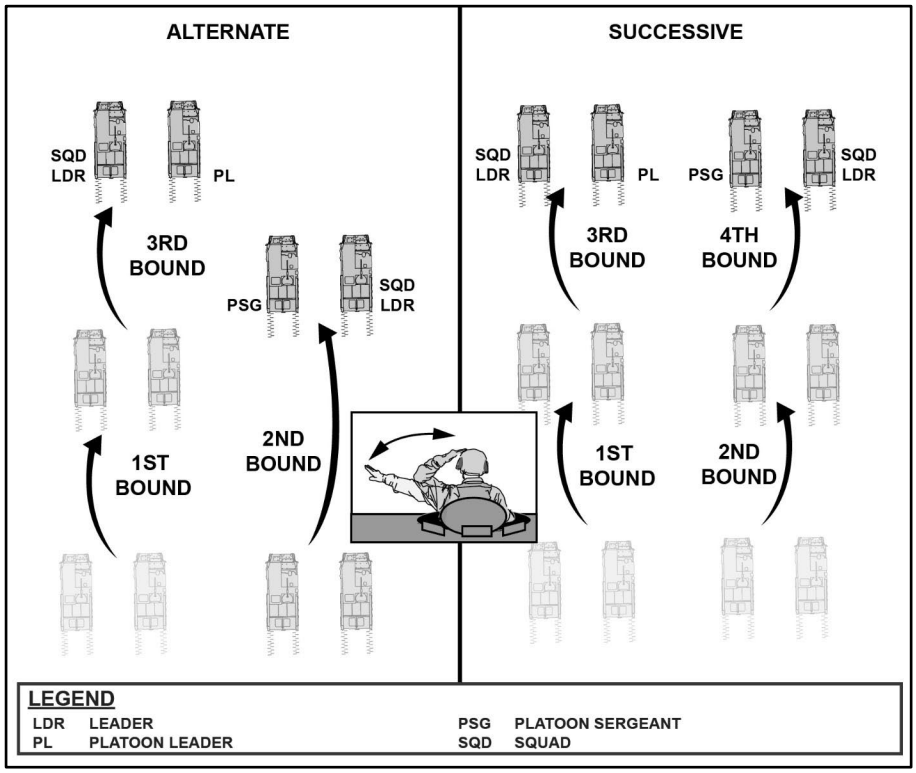


Figure 3-14. Variants of bounding overwatch, mounted

Clearing Defiles

3-68. In geography, a defile is a narrow pass or gorge between mountains or hills which could force vehicles to move in a column with a narrow front. Using dismounted Infantry is integral to providing security while clearing a defile and transition from movement to maneuver. Dismounting the Infantry may slow down the tempo, but it is necessary to survive first contact. Critical to establishing tempo, platoon leaders ensure the dismounted and mounted forces synchronize their movements to be mutually supporting. One technique for accomplishing synchronization is for the platoon to rehearse bounding overwatch dismounted, mounted, and combined. Clearing a defile can be understood as a deliberate and planned variation of the bounding overwatch movement technique. When conducted correctly, the dismounted Infantry move ahead or to the flanks of the mounted elements and clear defile locations.

3-69. Platoons must plan for and allow time and space for dismounted Infantry to approach and clear terrain. Platoons can use obscuration fires or terrain to deny the enemy observation and dismount the Infantry closer to defiles. *Deny* is a task to hinder or prevent the enemy from using terrain, space, personnel, supplies, or facilities (ATP 3-21.20). The platoon leader may use UASs to conduct initial reconnaissance of known defiles. When the dismounted Infantry approach the defile, mounted elements overwatch their movement and provide direct-fire support from Strykers. The mortar

section can also provide indirect-fire support. Depending on the depth of the defile, the rifle squads may clear portions of the defile and call the Strykers forward to an intermediate position to continue to provide overwatch. The platoon leader considers the effectiveness of clearing a defile from within the low ground versus clearing one or both sides of the high ground that forms the defile.

3-70. Once a defile has been cleared or seized, the dismounted Infantry can secure the terrain while the mounted elements bound forward. Once the mounted elements are set, the dismounted Infantry can once again push forward to clear the next defile. Clearing a defile is slow and deliberate, sacrificing speed. However, the clearance operation can maintain tempo with the goal of conserving combat power while achieving the mission.

DISMOUNT POINTS

3-71. The platoon leader will determine where the squads will dismount based on mission and terrain analysis and guidance from the company OPORD. DPs are typically behind the probable LC. DPs should be depicted on the graphical overlay and map. These DPs can be short of the objective, on the objective, or beyond the objective. Examples of dismount rehearsals include the following:

- Stryker vehicles occupy covered and concealed positions.
- Stryker VCs provide obscuration at the DP.
- Stryker VCs relay tactical situation to dismounted Infantry leaders.
- Stryker VCs provide orientation to the dismounting Infantry.
- Rifle squad dismounts and clears forward or rearward of the Stryker.
- Rifle squad deploys into team or squad formations to right or left side of the Stryker.
- Platoon leader establishes C2 on the ground once dismounted.
- Senior VC or other designated leader establishes C2 of the mounted element.

Short of the Objective

3-72. Dismounting squads prior to the probable LC has advantages. The advantages of dismounting the squads before reaching the objective are the protection of the Infantrymen during the dismount process, control at the DP, and the ability to continue suppression of the enemy by supporting indirect fires during the dismount.

3-73. Dismounting prior to the objective allows the squads to clear antiarmor positions which will make conditions more favorable for the Strykers to maneuver onto the objective. The Infantrymen can also conduct dismount breaches while the Strykers overwatch in their SBF positions, enabling the Infantry squads to assault the objective. A disadvantage is the exposure of the squads to indirect and small-arms fires as they maneuver to the objective area and the possibility that suitable DPs will be targeted for enemy indirect fires.

On the Objective

3-74. Normally, Strykers will not dismount Infantry on the objective, unless the threat of enemy antiarmor has been eliminated. The primary advantages of dismounting on the objective are greater speed and enhanced protection of the squads as the platoon maneuvers to the objective area. There are some disadvantages to dismounting on the

objective such as the difficulty in orienting the Infantry onto a specific location and the protection vulnerability of the Stryker (with and without security).

Beyond the Objective

3-75. Dismounting beyond the objective has several potential advantages such as effective controls at the DP, greater ease in orienting the dismounted elements to the terrain and the objectives of the assault, and possible disorientation of the enemy when they are forced to fight in an unexpected direction. At the same time, there are some significant disadvantages, such as the added complexity of attacking an enemy objective in-depth, Stryker vehicle vulnerability to short-range antiarmor systems, and increased risk of fratricide.

REMOUNT POINTS

3-76. The platoon leader identifies remount points for dismounted Infantry squads. The platoon leader will analyze the terrain and mission to determine the most suitable location for the dismounted Infantry squads to remount. Remount points are planned according to mission variables; however, dismounted Infantry may have to remount under fire. If necessary, they also may have to remount in the first available vehicle and then gain accountability prior to movement. Rehearsals of loading while under fire will reduce the risk of Soldiers not knowing what to do when approaching a Stryker with no room to remount.

3-77. The platoon leader selects a remount point that permits the rapid loading of the dismounted element into the Strykers while minimizing both the dismounted Soldier's and Stryker's exposure to enemy fire (see figure 3-15). The platoon leader tries to locate the remount point as close as possible to the dismounted element. Squad leaders ensure that their Soldiers know the remount point location. When moving to the Strykers, the dismounted element ensures that they do not mask the Stryker's fields of fire.

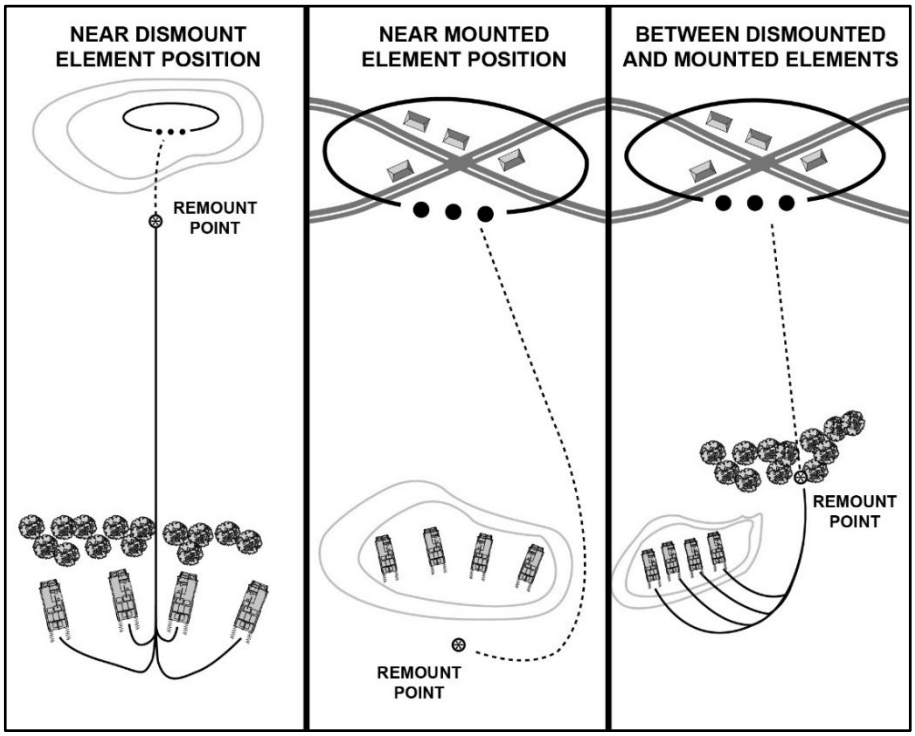


Figure 3-15. Platoon remount points

FORMS OF MANEUVER

3-78. The platoon leader conducts maneuver through the synchronization of fire and movement. The platoon leader references the company OPORD for any dictated forms of maneuver and within the commander's intent, the platoon leader selects a form of maneuver based on their analysis of the mission variables, METT-TC (I). The platoon leader achieves surprise by making unexpected maneuvers, rapidly changing tempo, avoiding observation, and using deceptive techniques and procedures. An operation may contain several forms of maneuver. The forms of maneuver are as follows:

- Frontal attack.
- Penetration
- Envelopment.
- Turning movement.
- Infiltration.

Note. The Stryker is a support platform that provides mobility and firepower by when transporting the Infantry squad to a DP and then provides overwatch during movement. The Stryker is not a fighting vehicle.

Frontal Attack

3-79. *Frontal attack* is a form of maneuver in which an attacking force seeks to destroy a weaker enemy force or fix a larger enemy force in place over a broad front (FM 3-90). The frontal attack is the least advantageous to the platoon because it exposes the Stryker vehicle and dismounted Infantry to the concentrated fires of the enemy. The platoon normally conducts a frontal attack as part of a larger operation against a stationary or moving enemy force (see figure 3-16).

3-80. Frontal attacks are executed with overwhelming and well-synchronized speed and strength against a weaker enemy. The platoon can execute a frontal attack when the enemy is at a clear and distinct disadvantage. The platoon leader should use supporting fires from the Stryker's heavy weapons systems while doing so from a covered and concealed position well-short of the objective.

3-81. Platoon leaders use graphical control measures to aid in briefing the platoon the plan. The platoon leader follows the graphical control measures received from the company OPORD and may not need to add more. The platoon leader can also use any other control measure necessary to control the front attack, including—

- Attack positions.
- LDs.
- Phase lines.
- Assault positions.
- LOAs.
- Directions of attack or axes of advance for every maneuver element.
- SBF or ABF positions.
- Direct fire control measures.

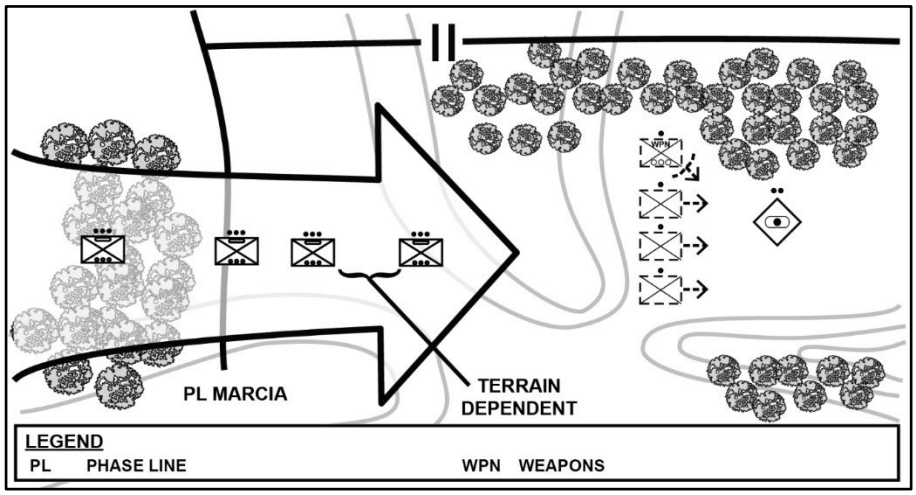


Figure 3-16. Frontal attack

Penetration

3-82. A *penetration* is a form of maneuver in which a force attacks on a narrow front (FM 3-90). Penetrations are conducted when the enemy has no assailable flanks, enemy positions are overextended and weak spots are detected in the enemy defense, or time does not permit an envelopment. Penetrations are normally conducted at the battalion echelon and above. The Stryker Infantry rifle platoon may be utilized as a component of the assault, support, or might be part of a breach force in support of the penetration. Successful penetration depends on the attacking force's ability to suppress enemy weapons systems, to concentrate forces to overwhelm the enemy defender at the point of penetration, and to pass sufficient forces through the point of breach (POB) to defeat the enemy quickly. (See FM 3-90 for more information.)

Envelopment

3-83. *Envelopment* is a form of maneuver in which an attacking force avoids an enemy's principal defense by attacking along an assailable flank (FM 3-90). At the tactical level, envelopments focus on seizing terrain, destroying specific enemy forces, and interdicting enemy withdrawal routes, but are also prepared to engage enemy forces repositioning within the objective, or enemy reserves or counterattacking forces (see figure 3-17). Generally, an envelopment is the preferred form of maneuver instead of a penetration or frontal attack because the attacking force tends to suffer fewer casualties while having the most opportunities to destroy the enemy.

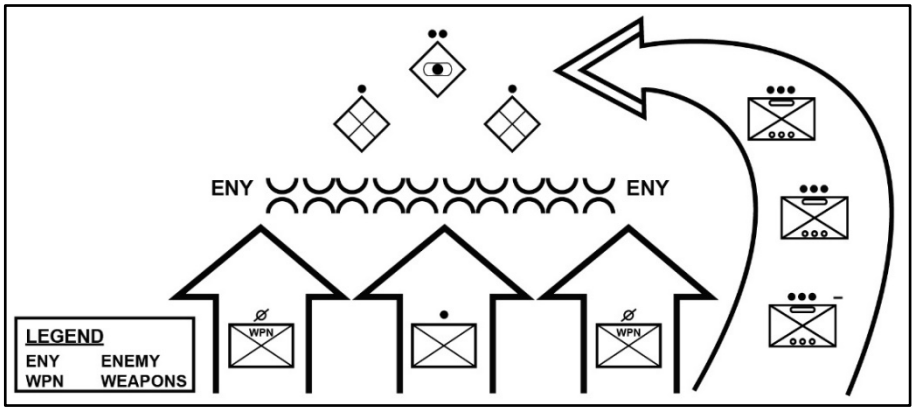


Figure 3-17. Envelopment

Turning Movement

3-84. A *turning movement* is a form of maneuver in which the attacking force seeks to avoid the enemy's principal defensive positions by attacking to the rear of their current positions forcing them to move or divert forces to meet the threat (FM 3-90). The objective of the turning movement is to make contact with the enemy, but at a location advantageous to the commander conducting the turning movement and out of the enemy's established EA.

3-85. A turning movement differs from envelopment because the force conducting a turning movement seeks to make the enemy forces displace from their current locations,

whereas an enveloping force seeks to engage the enemy forces in their current locations from an unexpected direction. The platoon and company normally conduct a turning movement as part of a larger force, combined arms operation.

Infiltration

3-86. An *infiltration* is a form of maneuver in which an attacking force conducts undetected movement through or into an area occupied by enemy forces (FM 3-90). Infiltration occurs by land, water, air, or a combination of means. Moving and assembling forces covertly through enemy positions is time consuming. To infiltrate successfully, the force avoids detection and engagement. Since this requirement limits the size and strength of the infiltrating force, the platoon leader is typically limited to the dismounted Infantry to conduct this form of maneuver. The platoon leader considers separate infiltration routes for the Strykers to control the noise and light discipline of the platoon. Infiltrated forces alone can rarely defeat an enemy. Infiltration is normally used in conjunction with other forms of maneuver. (See ATP 3-21.8 for more information.)

INTELLIGENCE

3-87. The platoon leader uses threat event templates, the SITEMP, the likely threat COA, the most dangerous threat COA, civil consideration products, terrain analysis, weather, and other intelligence products and assessments. The platoon leader can obtain this information from the battalion intelligence officer's analysis and the company OPORD; however, the platoon leader must do the top-down analysis of higher products to understand elements unique to the platoon's mission or assigned area. During offensive operations, platoon leaders should analyze terrain for impassable and slow go terrain. The evaluation of avenues of approach leads to a recommendation of the best avenues of approach to a command's objective and to the identification of avenues of approach available to the threat for counterattack, withdrawal, or the movement of reinforcements or reserves. The leader also tries to determine the most advantageous area the enemy's main defense might occupy, routes the enemy may use to conduct counterattacks, and other factors such as OAKOC. The attacking platoon continuously conducts information collection during the battle because it is unlikely the platoon leader has complete knowledge of the enemy's intentions and actual actions.

FIRES

3-88. The platoon leader conducts fire support planning concurrently with the Stryker Infantry rifle company and Stryker Infantry battalion. The SBCT and Stryker Infantry battalion typically use top-down fire support planning, with bottom-up refinement of plans. As part of the top-down fire planning system, the company commander refines the fire support plan from higher headquarters to meet mission requirements, ensuring these refinements are incorporated into the higher headquarters' plan.

3-89. A clearly defined concept of fires enables the platoon leader and FO to articulate precisely how they want indirect fires to affect the enemy during the different phases of the operation. In turn, this allows the company FSO to facilitate the development of fires supporting accomplishment of the company's mission down to the squad level. The commander will align enabler fires and dictate the type of fires to certain platoons. (See appendix B for more information.)

3-90. Prior to movement, the platoon leader plans for fires throughout the depth of the operation, specifically along the route to cover anticipated places of enemy contact, during actions on the objective, and during consolidate and reorganization activities. These planned targets are a product of the platoon leader's analysis of the mission variables of METT-TC (I) and must be incorporated into the company's fire support plan.

SUSTAINMENT

3-91. The objective of sustainment in offensive operations is to ensure the platoon maintains momentum. The platoon leader wants to take advantage of windows of opportunity and launch offensive operations with minimum advance warning time. The platoon sergeant and squad leaders must anticipate these events and maintain flexibility to support the offensive plan accordingly.

3-92. *Sustainment* is the provision of logistics, financial management, personnel services, and health service support necessary to maintain operations until successful mission completion (ADP 4-0). The platoon leader ensures they understand the company sustainment plan to facilitate the platoon's sustainment during the operation. The platoon leader and platoon sergeant submit accurate quantities of their supply on hand to the company XO through the logistical status report. Higher headquarters determines when the logistics status is due and then the XO collects and submits platoon leader's reports based on the assigned times.

3-93. The platoon must be ready to refuel and rearm at any opportunity. Platoon sergeants must report consumption of Class III and Class V (see table 6-2 on page 292 for all classes of supplies) to the company during execution of the mission. The platoon is largely responsible for its own CASEVAC from the point of injury to the platoon and company CCP. CASEVAC can be either mounted (Stryker) or dismounted (litter carry), depending on the distance from the point of injury to the CCP.

3-94. An important aspect of sustainment in a Stryker Infantry rifle platoon is executed by the field maintenance team (FMT). The platoon leader ensures their platoon conducts the proper preventive maintenance checks and services (PMCS) throughout an operation. Thorough PMCS by the operators allows the FMT to order the correct parts to ensure the Strykers maintain a fully mission-capable status. (See ATP 3-21.11 for more information on sustainment.)

PROTECTION

3-95. The rapid tempo and changing nature of the offense presents challenges to the protection of friendly assets. *Protection* is the preservation of the effectiveness and survivability of mission-related military and nonmilitary personnel, equipment, facilities, information, and infrastructure deployed or located within or outside the boundaries of a given operational area (JP 3-0). The platoon leader will extract the information needed on protection from the company and battalion OPORDs. If applicable the platoon leader coordinates with their higher headquarters for additional protection resources needed to achieve mission success.

3-96. Denying the enemy, a chance to plan, prepare, and execute a response to the friendly offense by maintaining a high operational tempo is a vital means the leader

employs to ensure the survivability of the platoon. The forward movement of subordinate units is critical if the leader is to maintain the initiative necessary for offensive operations. Using multiple routes, wise use of terrain, dispersion, scheduled rotations, and relief of forces before they culminate are techniques for maintaining a high tempo of offense.

3-97. Obscuration reduces the enemy's visibility and enhances protection. Obscurants reduce the ability of the enemy to deliver effective fires, to hamper hostile operations, and to deny the enemy information on friendly positions and maneuvers. As an example, leaders integrate and synchronize the use of obscurations to support critical actions such during breaching or assaults. The mission variables of METT-TC (I) determine the exact techniques employed in a specific situation.

3-98. Depending on the threat, primary protection concerns of the platoon leader may be enemy air threats, to include hostile sUASs. (See drill 07-PLT-D8015, appendix C.) If these threats exist, the leader prepares the unit and adjusts the scheme of maneuver accordingly. In the face of an enemy air threat, the platoon usually has minimal active and passive (with its organic weapons) air defenses. Air defense units are usually not assigned below SBCT level. However, air defense assets may be located near the platoon and may provide coverage. If air defense elements are assigned, the platoon leader with the advisement of the air defense element leader determines likely enemy air avenues of approach and plans movement routes accordingly. The platoon leader establishes priorities for protection during movement and during actions on the objective. (See ATP 3-01.81 for more information on counter-unmanned aircraft system [C-UAS] techniques.)

3-99. Planning for air defense and implementing all forms of active and passive air defense measures are imperative to minimize the vulnerability to enemy air attack. The platoon leader integrates the fire support plan with any attached or supporting air defense assets. Should hostile aircraft attack during movement, the subordinate unit under attack moves off the road into a defensive posture and immediately engages the aircraft with all available automatic weapons. The rest of the platoon moves to covered and concealed areas until the engagement ends. Air defense units, when available, may move with the platoon. In this case, the air defense unit leader ensures both the current and projected weapons control status (WCS) and air defense warning are known. (See ATP 3-01.8 for additional information.)

3-100. In the offense, *survivability operations*, those military activities that alter the physical environment to provide or improve cover, camouflage, and concealment (ATP 3-37.34), enhance the ability to avoid or withstand hostile actions by altering the physical environment. *Survivability* is the quality or capability of military forces which permits them to avoid or withstand hostile actions or environmental conditions while retaining the ability to fulfill their primary mission (ATP 3-37.34). Protective hasty fighting positions or indirect fire survivability positions may be required in the offense. When dig assets are unavailable, the platoon still uses the micro-terrain to achieve protection effects, and exclusively so during the offense. Camouflage and concealment typically play a greater role in survivability during offensive operations. The platoon can avoid being targeted by UAS and loitering munitions by moving through the tree lines, maintaining dispersion, and reducing their thermal signature. The use of terrain provides a measure of protection during halts in the advance, but the platoon should

develop as many protective measures as necessary for key weapons systems, command posts, and critical supplies. Some examples are the following:

- Reduce personnel, vehicle, thermal, and electronic signatures using camouflage.
- Use dispersion in movement formations.
- Conduct electromagnetic protection.
- Emplace air guards.
- Plan and execute survivability-moves.
- Train and rehearse battle drills for all forms of contact, to include CBRN.

3-101. The platoon leader integrates considerations for operating in CBRN environments into offensive planning depending on the CBRN threat. CBRN considerations include the following:

- Understand enemy CBRN threat capabilities.
- Employ organic CBRN capabilities to maximize protection across the platoon.
- Understand the conditions to recognize and react to a CBRN incident.
- Disseminate information regarding observed CBRN threats or hazards to the platoon immediately, send report to higher.
- Understand duration of protection gear effectiveness.
- Ensure Soldiers have necessary medical countermeasures (such as antidote treatment nerve agent auto-injector) and decontamination kits.
- Develop decontamination plans based on the platoon leader's priorities and vulnerability assessment.
- Disseminate information regarding planned and active decontamination sites.
- Prepare to conduct CBRN reconnaissance and surveillance (normally conducted by the scout platoon) to protect the force and enable freedom of maneuver.

3-102. The personal protective equipment posture provides a threat-based framework for commanders and subordinate leaders to determine the optimal level of body armor and personal protective equipment Soldiers need to wear while conducting an operation. The mission-oriented protective posture (MOPP) levels range from MOPP 0 to MOPP 4 based on the operation and assessed CBRN threats on the battlefield. (See ATP 3-21.18 for a detailed discussion.)

3-103. The most basic protection from enemy EW is radio discipline. This can take the form of limiting transmissions, antenna masking, and use of low power. Limiting the number of overall transmissions and transmission time when a radio microphone is keyed makes enemy EW operators' targeting of friendly forces for geolocation and jamming more difficult.

3-104. Detainees and captured enemy equipment or materiel often provide excellent combat information. This information is of tactical value only if the platoon processes and evacuates detainees and materiel to the rear quickly. In all tactical situations, the platoon will have specific procedures and guidelines for processing detainees and captured materiel.

3-105. As a matter of policy, all detainees are treated as enemy prisoners of war until their appropriate legal status is determined by a competent authority according to the criteria enumerated in the Geneva Convention Relatives to the Treatment of Prisoners

of War. However, as a practical matter, when a platoon captures enemy personnel, they must provide the initial processing and holding for detainees. Detainee processing is a resource-intensive and politically sensitive operation requiring detailed training, guidance, and supervision.

3-106. All detainees immediately shall be given humanitarian care and treatment. U.S. Armed Forces never will torture, maltreat, or purposely place detained persons in positions of danger. There is never a military necessity exception to violate these principles.

3-107. Soldiers must process detainees using the "search, silence, segregate, speed, safeguard, and tag" (5 Ss and T) technique. The steps are noted in paragraphs 3-108 through 3-116.

SEARCH

3-108. To perform the search, neutralize a detainee and confiscate weapons, personal items, and items of potential intelligence or evidentiary value.

SILENCE

3-109. Prevent detainees from communicating with one another or making audible clamor. Silence uncooperative detainees by muffling them with a soft, clean cloth tied around their mouths and fastened at the backs of their heads. Neither use duct tape or other adhesives, nor place a cloth or objects inside the mouth, nor apply physical force to silence detainees.

SEGREGATE

3-110. Segregate detainees according to policy and SOPs. (Segregation requirements differ from operation to operation.) The ability to segregate detainees may be limited by the availability of manpower and resources at the point of contact. At a minimum, try to segregate detainees by grade, gender, age (keeping adults from juveniles and small children with mothers), and security risk. Military intelligence and military police personnel can provide additional guidance and support in determining the appropriate segregation criteria.

SAFEGUARD

3-111. Protect detainees and ensure the custody and integrity of all confiscated items. Soldiers must safeguard detainees from combat risk, harm caused by other detainees, and improper treatment or care. Report all injuries. Correct and report violations of U.S. military policy that occur while safeguarding detainees. Acts, omissions, or both that constitute inhumane treatment are violations of the law of armed conflict and, as such, must be corrected immediately. Simply reporting violations is insufficient. If a violation is ongoing, a Soldier has an obligation to stop the violation and report it.

SPEED TO A SAFE AREA/REAR

3-112. Quickly move detainees from the continuing risks associated with other combatants or sympathizers who still may be in the area of capture. If there are more detainees than the Soldiers can control, call for additional support, search the detainees, and hold them in place until reinforcements arrive. Evacuate detainees from the

battlefield to a holding area or facility as soon as possible. Transfer captured documents and other property to the forces assuming responsibility of the detainees.

TAG

3-113. Ensure that each detainee is tagged using DD Form 2745 (*Enemy Prisoner of War [EPW] Capture Tag*). Confiscated equipment, personal items, and evidence will be linked to the detainee using the DD Form 2745 number. When a DA Form 4137 (*Evidence/Property Custody Document*) is used to document confiscated items, it will be linked to the detainee by annotating the DD Form 2745 control number on the form or by field expedient means. Field expedient means should include tagging with date and time of capture, location of capture, capturing unit, and circumstances of capture. There are three parts to this form. DD Form 2745, Unit Record Card, Part B, is the unit record copy. DD Form 2745, Document/Special Equipment Weapons Card, Part C, is for detainee confiscated property. Tagging is critical. If it does not happen, the ability of higher headquarters to obtain pertinent tactical information quickly is reduced greatly.

3-114. Soldiers capturing equipment, documents, and detainees should tag them (using the DD Form 2745, Part A), take digital pictures, and report the capture immediately. Detainees are allowed to keep individual protective equipment such as a protective mask. (See FM 3-63 for additional information.)

3-115. Detainees should be evacuated as soon as is practical to the higher echelon detainee collection point. Military police teams, when attached, can assist in the rapid evacuation of detainees to these collection points. Tactical questioning of detainees is allowed relative to collection of commander's critical information requirements. However, detainees must always be treated in accordance with Department of Defense (DOD) programs and policies that ensure compliance with the laws of the United States; the law of armed conflict, including the Geneva Conventions, and humane treatment during all intelligence interrogations, detainee debriefings, or tactical questioning. (See DOD Directive 2310.01E, DOD Directive 3115.09, and DOD Directive 2311.01.)

3-116. The platoon leader protects subordinate elements to deny the enemy the capability to interfere with their ongoing operations. Protection also meets the leader's legal and moral obligations to the organization's Soldiers. Additional protection tasks conducted by the platoon in the offense may include:

- Employing safety techniques (including avoiding *fratricide*—the unintentional killing or wounding of friendly or neutral personnel by friendly firepower [ADP 3-37]).
- Implementing *operations security*—an activity that identifies and controls critical information and indicators of friendly force actions (JP 3-55).
- Implementing *physical security*—that part of security concerned with physical measures designed to safeguard personnel; to prevent unauthorized access to equipment, installations, material, and documents; and to safeguard them against espionage, sabotage, damage, and theft (JP 3-0).

SECTION III – ACTIONS ON CONTACT

3-117. *Actions on contact* is a process to help leaders understand what is happening and to take action (FM 3-90). Actions on contact-is a process to help leaders understand what is happening and to take action. Leaders analyze the enemy throughout TLP to identify all likely contact situations that may occur during an operation and consider their initial actions. Analysis of the enemy will identify many areas where enemy contact is likely, however it will not identify all of them. The framework for taking actions on contact should guide all enemy contact, whether anticipated or not. Actions on contact does not replace the use of battle drills; instead, battle drills may be elements of the broader process of taking actions on contact. Battle drills are the actions of individual Soldiers and small units when they meet the enemy (see appendix C for battle drills).

3-118. Typically, a unit's SOP dictates specific actions, to include battle drills and reports, depending on the type of contact. Additionally, the mission variables, commander's intent and guidance, and scheme of maneuver guide the actions individual units take when they make enemy contact.

3-119. During movement, once the lead element of a force (for example, during the conduct of a movement to contact) encounters an enemy, they conduct actions on contact. Obstacles encountered during movement are treated like enemy contact, in that, the unit assumes the obstacles are covered by fire. Once contact with the enemy is made, squads and platoons execute the appropriate actions on contact, and leaders begin to maneuver their units. The unit's security force will then seek to gain a tactical advantage over an enemy by using tempo and initiative to conduct these actions, allowing it to gain and maintain contact without becoming decisively engaged, a fully committed force or unit that cannot maneuver or extricate itself (see FM 3-90). How quickly the unit develops the situation is directly related to its security, and the tempo is directly related to the unit's use of well-rehearsed tactical SOP and battle drills. The platoon's proficiency with both their tactical SOP and battle drills will allow them to survive contact by executing at a high tempo, allowing them to dominate a situation and regain the initiative.

FOUR STEPS OF ACTIONS ON CONTACT

3-120. The steps of actions on contact are not intended to generate a rigid, lockstep response to the enemy. Rather, the goal is to provide an orderly framework that gives leaders and soldiers a process to survive the initial contact and organize their subsequent actions. When applied, many of the actions may happen simultaneously. Unit leaders must apply timely actions and sound decision making when applying the steps. Actions on contact are applicable to all types of operations. They are just as applicable to a squad coming into direct fire contact with an enemy during a movement to contact, an armor company observing enemy in the defense, a signal element ambushed by the enemy, or a division in the attack. This framework is a way for leaders to quickly determine if things are going according to plan and what actions they need to take to either stay on plan or adjust to the new situation. (See FM 3-90 for more information.)

3-121. Stryker Infantry platoons and squads execute actions on contact using a logical, well-organized process of decision making and action entailing these four steps:

- React.
- Develop the situation.
- Choose an action.
- Execute and report.

REACT

3-122. If the enemy initiates the contact, the element in contact conducts the react to contact battle drill. This immediate action deploys the platoon into a new formation or takes other necessary actions to survive contact or posture the platoon to develop the situation. Two fundamental considerations related to survivability are the platoon's actions and the platoon leaders' decisions during every reaction to contact. First, does the platoon stay mounted or (remount); or do squads dismount or stay dismounted. Second, does the platoon stay in place or does it displace or otherwise break contact?

3-123. Any unengaged element monitors the situation and prepares to either support the portion of the platoon in contact or continue the mission. Simultaneously, the platoon, mounted element, or squad in contact reports the contact to their higher headquarters which helps them to develop the situation. This also alerts the higher echelon and allows the initiation of necessary actions. Higher headquarters will monitor and provide support through resources or maneuver to assist in the development of the situation.

3-124. If friendly forces make contact first without the enemy being aware, they determine if they have been detected, if not they move to a location where they will not be observed and continue the actions on contact process. The Stryker Infantry rifle platoon should attempt to make contact with the smallest element possible—even an unmanned system. This element is the one that reacts to contact, while the rest of the force begins conducting actions on contact at different tempos.

DEVELOP THE SITUATION

3-125. After initial actions to survive contact, the leader develops the situation to define the threat. This includes all necessary steps to better understand the strength (superior or inferior), nature, location and disposition, and capabilities of threat forces in contact. The leader may employ both direct and indirect fires while maneuvering the platoon to gain understanding. While developing the situation, it is critical the platoon is not fixed by enemy fires to retain freedom of maneuver and provide flexibility in maneuver options for the platoon leader or company commander. The platoon leader's goals in developing the situation are first survival, then depending on the nature of contact, to deliver an overwhelming response, then to regain the initiative. The platoon leader considers whether the type and nature of contact will require the platoon to deviate from the current plan. While formulating possible courses of action, the platoon leader considers risk to force, risk to mission, and whether there are emerging opportunities.

3-126. The unit in contact develops the situation to define the threat being faced. This helps to develop the situation across the front of the unit and ultimately provides more maneuver space to execute further actions. The unit in contact initiates direct and indirect fires to develop the situation, gain initiative and compare courses of action. As the situation develops and the enemy force's dispositions, strength, and intentions

become clearer, the unit in contact submits additional reports. Typical things to consider include, but are not limited to—

- Size, activity, location, composition, and orientation of the enemy force.
- Understanding of enemy capabilities with respect to friendly forces (superior or inferior enemy force)
- Identification of enemy flanks and whether they are assailable.
- Impact of obstacles and terrain.
- Enemy capabilities.
- Probable enemy intentions.
- Potential methods of gaining positional advantage over the enemy.
- Friendly situation (location, strength, and capabilities).
- Possible friendly actions to achieve the specified end state.
- Means of presenting the enemy with multiple dilemmas.

3-127. For lower echelons with a small frontage such as platoons and below, it will not take long to develop the situation. Additional considerations should include views from UASs, employment of mortars and artillery, and recon by fire.

CHOOSE AN ACTION

3-128. After the platoon makes contact, the platoon leader gathers information to make an assessment based on their understanding of the enemy and friendly forces' composition and disposition and chooses an action consistent with the higher echelon commander's intent and within the unit's capabilities. These actions typically are—

- Attack.
- Bypass.
- Defend.
- Delay.
- Withdrawal.
- Establish ABF or SBF in support of company maneuver.
- Additional considerations are breach and break contact.

3-129. Some actions require the company commanders' approval prior to execution. Reasons for needing a higher commander's approval could include the following:

- Action requires additional resources.
- Action consumes scarce, limited, or otherwise mission-essential resources, such as breaching assets.
- Action is not within the commander's intent.
- Action sets conditions for the higher echelon to continue.
- Action commits the company commander to a changed scheme of maneuver.

EXECUTE AND REPORT

3-130. With the action selected and, if needed, approved by their higher echelon, the unit in contact takes the appropriate actions. If the action is to attack, the unit in contact immediately attacks if it has sufficient, immediately available combat power to overwhelm the enemy force. If the action is to defend or withdraw, to disengage from an enemy force and move in a direction away from the enemy (see ADP 3-90), the unit in contact does so while maintaining contact and continuing to gain as much information

as possible about the enemy forces disposition and positions. If the action is to bypass the enemy, the unit in contact maintains contact and continues their mission. Unless specifically told by their higher headquarters to break contact, the unit in contact will maintain contact no matter which action is chosen. Regardless of the chosen action, reporting to the next higher echelon is required to ensure the unit is staying within the commander's intent. If maneuvering as part of the company, the platoon will often be directed to establish an ABF or SBF position to enable the company to maneuver.

FORMS OF CONTACT

3-131. In offensive and defensive operations, contact occurs when the Stryker Infantry rifle platoon encounters a situation requiring a lethal or nonlethal response to the enemy. (See FM 3-90 for more information.) Such forms of contact may entail one or more of the following types of interactions described in paragraphs 3-132 through 3-140.

DIRECT

3-132. Direct forms of contact include interactions from ground-based, line-of-sight weapons systems (small arms, tank main guns, and AT missiles).

INDIRECT

3-133. Indirect forms of contact are interactions from no line-of-sight weapons systems (including cannon artillery, mortars, and rockets).

NONHOSTILE

3-134. Nonhostile contact includes neutral interactions that may degrade military operations (including civilians on the battlefield, nongovernmental organizations, or neutral forces).

OBSTACLES

3-135. Obstacles include interactions from natural and manmade obstacles (including rivers and minefields).

CHEMICAL, BIOLOGICAL, RADIOLOGICAL, AND NUCLEAR

3-136. CBRN includes interactions from friendly, enemy, and civilian CBRN effects (including chemical attacks, nuclear attacks, industrial accidents, and toxic or hazardous materiel).

AERIAL

3-137. Aerial forms of contact include interactions from air-based combat platforms (including attack helicopters, armed or unarmed UAS, and fixed-wing aircraft).

VISUAL

3-138. Visual contact includes interactions from acquisition via the human eye, optical, or electro-optical systems (including ground reconnaissance, telescopic, thermal, and IR sights on weapons and sensor platforms such as UAS and satellites).

ELECTROMAGNETIC

3-139. Electromagnetic forms of contact include interactions via systems used to acquire, degrade, or destroy using select portions of the electromagnetic spectrum (including radar systems, jamming, cyberspace, and electromagnetic pulse).

INFLUENCE

3-140. Influence includes interactions through the information dimension intended to shape the perceptions, behaviors, and decision making of people relative to a policy or military objective (including through social media, telecommunications, human interaction, and other forms of communication and contact).

SECTION IV – MOVEMENT TO CONTACT

3-141. *Movement to contact* is a type of offensive operation designed to establish or gain contact to develop the situation (FM 3-90). It ends when enemy contact is made or upon arrival at a designated march objective or other control measure such as a phase line or LOA. The platoon usually conducts movement to contact as part of an Infantry rifle company or larger element. Based upon the mission variables of METT-TC (I), the platoon may conduct the operation independently. Search and attack, and cordon and search are variations of a movement to contact.

Note. In an environment focused on low-intensity conflict or stability operations, the platoon typically operates under more restrictive ROE and will typically conduct either a cordon and search or search and attack when conducting a movement to contact. *Cordon and search* is a variation of movement to contact where a friendly force isolates and searches a target area (FM 3-90). *Search and attack* is variation of a movement to contact where a friendly force conducts coordinated attacks to defeat a distributed enemy force (FM 3-90). (See ATP 3-21.11 and ATP 3-21.21 for a detailed discussion of each subordinate variation.)

3-142. The platoon may participate in a movement to contact in a variety of circumstances when the enemy situation is not clear. The platoon may participate in a movement to contact when—

- Attacking to straighten the front-line trace.
- Conducting operations within the enemy's security zone.
- Following an enemy force that has rapidly displaced.
- Restrictive terrain allows considerable concealment to threat forces.
- Occupying security positions such as a screen line or counterreconnaissance positions.

CONDUCT OF MOVEMENT TO CONTACT

3-143. Purposeful and aggressive movement, decentralized control, and hasty deployment of formations from the march to conduct offensive operations characterize the movement to contact. The fundamentals of movement to contact are—

- Focusing all efforts on finding the enemy.

- Making initial contact with the smallest force possible, consistent with protecting the force.
- Making initial contact with small, mobile, self-contained forces, including unmanned systems.
  - Such contact avoids decisive engagement of the main body on ground chosen by the enemy.
  - This allows the leader maximum flexibility to develop the situation.
- Task-organizing the force and uses movement formations to deploy and attack rapidly in all directions.
- Keeping subordinate forces within supporting distances to facilitate a flexible response.
- Maintaining contact regardless of the COA adopted once contact is made.

ORGANIZATION OF FORCES

3-144. The Stryker Infantry rifle platoon normally conducts movement to contact as part of a company within the battalion; however, based on the mission variables of METT-TC (I) it can conduct the operation independently. The platoon leader analyzes the situation and selects the proper movement formation and movement technique to conduct the mission. The leader reports all information rapidly and accurately and strives to gain and maintain contact with the enemy. The platoon leader retains freedom of maneuver by moving the platoon in a manner that—

- Employs a movement formation and technique that keeps the bulk of the platoon out of contact and able to maneuver when making contact.
- Rapidly develops the situation to gain understanding of the disposition of threat forces.
- Ensures continuous, effective overwatch of moving elements.
- Ensures the platoon's elements are not fixed in position by enemy fires.
- Gains fire superiority when in contact to suppress enemy forces.

3-145. Movement to contact is organized as a minimum with a forward security force, (either a covering force or an advance guard), and a main body. The reserve, fires, engineer, and sustainment assets if available are included in the main body. Based on METT-TC (I), the leader may increase the unit's security by resourcing an offensive covering force and an advance guard for each column, as well as flank and rear security. This is normally a screen or guard. A *screen* is a type of security operation that primarily provides early warning to the protected force (ADP 3-90). A *guard* is a type of security operation done to protect the main body by fighting to gain time while preventing enemy ground observation of and direct fire against the main body (ADP 3-90). The platoon would be organized into one of the following forces when conducting a movement to contact as part of a larger force.

SECURITY FORCES

3-146. The primary purpose to this organization is the early and accurate reporting it provides on the enemy and terrain. Depth is essential for providing early warning and reaction time to leaders at the platoon, company, and battalion levels. It enables leaders to conduct actions on contact, preserving the parent unit's freedom of movement and maneuver.

ADVANCE GUARD

3-147. When the platoon serves as the advance guard, its purpose is to protect the main body from surprise attack and develop the situation to protect the deployment of the main body when it is committed to action. These responsibilities include the following:

- Providing security and early warning for the main body and facilitating its uninterrupted advance.
- Conducting reconnaissance to locate enemy forces within the command directed boundaries and along the platoons' axis of advance.
- Conducting actions on contact to retain freedom of maneuver for the unit.
- Calling for indirect fires to impede or harass the enemy.
- Destroying enemy reconnaissance elements.
- Finding, fixing, defeating, destroying, or containing enemy security forces to retain freedom of maneuver for the unit.
- Bypassing and reporting obstacles or acting as the support or breach force during breaching operations.

3-148. Composition of the advance guard depends upon METT-TC (I). In open terrain, it may move mounted but in restricted, close, complex, or urban terrain, dismounted movement with Strykers in the overwatch may be a better choice. Engineers and tanks may be attached to the advance guard. The mortar platoon or a mortar section may support the advance guard.

3-149. The advance guard is the commander's main effort and should be designated as the priority for fires, and all other forms of support. Once the main body is committed, priorities will shift to that element. In planning the movement to contact, each decision point should be based on the actions of the advance guard.

FLANK GUARD

3-150. The platoon can provide a moving flank screen under company control. This is done through formation selection. Normally, this element conducts a moving flank screen using alternating or successive bounds with squads and mounted elements. These elements remain at a distance from the main body, allowing the battalion time and space to maneuver to either flank. Flank security elements operate far enough out to prevent the enemy from surprising the main body with direct fires. Indirect fires are planned on major flank approaches to enhance security.

REAR GUARD

3-151. The platoon may provide rear security, but combat forces are not normally available to perform this mission. The battalion provides its own rear security, assisted by rapid forward movement, which gives the enemy less opportunity to react or reposition forces to attack. Upon switching from a movement to contact to an attack, the platoon normally conducts follow and support of the main body.

MAIN BODY

3-152. The *main body* is the principal part of a tactical command or formation. It does not include detached elements of the command, such as advance guards, flank guards, and covering forces (ADP 3-90). The combat elements of the main body are prepared to

deploy and maneuver rapidly to a decisive point on the battlefield to destroy the enemy. The main body bases its movement on the advance guard. The main body, remaining attuned to the advance guard's situation, provides responsive support when the advance guard makes contact. Tasks the platoon can perform within the main body include the following:

- Finding, fixing, defeating, destroying, or containing the enemy's fixing force followed by the enemy assault force or site exploitation force, to retain freedom of maneuver for the remainder of the company team.
- Maneuvering to develop the situation and gain understanding of enemy capabilities and disposition.
- Executing a COA to defeat or destroy a designated enemy main body element.
- Standard formations and battle drills that allow the commander to shift combat power rapidly.
- Based on their knowledge of commander's intent and their own situational awareness, platoon leaders anticipate the commander's decisions for commitment of the main body and plan accordingly.
- Reconstitute the battalion reserve force, when ready.

3-153. Standard formations and battle drills allows the commander to shift combat power rapidly. Platoons and squads employ the appropriate movement techniques within the company formation. Leaders, based on their knowledge of commander's intent and their own situational awareness, anticipate decisions for commitment of the main body and plan accordingly.

RESERVE

3-154. The Stryker Infantry rifle platoon may be identified as part of the battalion reserve. The platoon itself does not have a reserve. The mission variables determine the size of the reserve, and the more unknown the enemy situation, the larger the size of the reserve. On contact with enemy forces, a reserve provides flexibility to react to unforeseen circumstances and allows a unit to resume its movement.

CONTROL MEASURES

3-155. Execution of a movement to contact usually starts from an LD at the time specified in the OPORD. The unit's movement is controlled by phase lines, contact points, and checkpoints as required (see figure 3-18 on page 110). The depth of the movement to contact is usually controlled by a *limit of advance*—a phase line used to control forward progress of the attack (ADP 3-90) or a *forward boundary*—a boundary that delineates the forward edge of a unit's area of operation (FM 3-90). A *lateral boundary* is a boundary defining the left or right limit of a unit's assigned area (FM 3-90). One or more objectives are designated to limit the extent of the movement to contact and to orient the force. However, these are often terrain-oriented (commonly called march objectives) and used only to guide movement. Although movement to contact may result in taking a terrain objective, the primary focus should be on the enemy force. The leader can designate a series of phase lines successively becoming the new *rear boundary*—a boundary that delineates the rearward limits of a unit's assigned area (FM 3-90) of forward security elements as the force advances. Each rear boundary becomes the forward boundary of the main body and shifts as the security force moves

forward. The rear boundary of the main body designates the limit of responsibility of the rear security element. This line also shifts as the main body moves forward. The platoon leader should develop and nest their graphic control measures with their commander. When enough information is available to locate a significant enemy force(s), then another type of offensive operation (for example, an attack) should be conducted. (See FM 3-90 for a detailed discussion.)

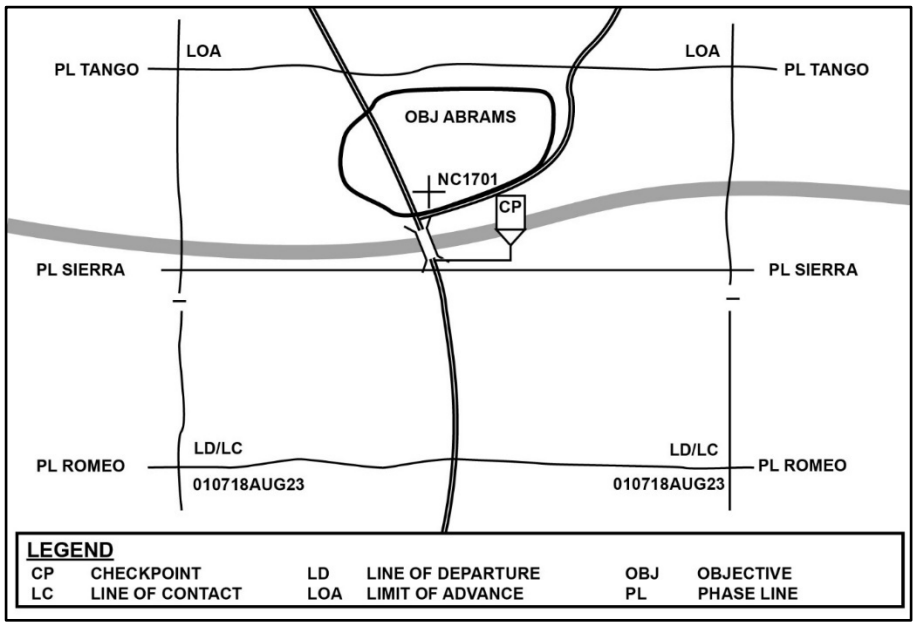


Figure 3-18. Movement to contact control measures example

PLAN

3-156. As in any type of operation, the platoon leader plans to focus operations on finding the enemy and then delaying, disrupting, and destroying each enemy force as much as possible before direct-fire range. In movement to contact, the goal is to prevent a meeting engagement with the enemy. A *meeting engagement* is a combat action that occurs when a moving force engages an enemy at an unexpected time and place (FM 3-90). Units plan and conduct movement to contact to gain or regain contact with the enemy. The movement to contact ends at a defined stopping point such as the LOA, march objective, or when they transition to a different operation, or when they make contact.

3-157. Planning begins by developing the concept of the operations with the focus on controlling the objective and conducting a reverse planning sequence from the objective to the LD. This is accomplished by understanding the commander's intent and developing a simple concept of operations. The platoon leader receives guidance from the commander on the PIRs and develops a plan to answer the commander's PIR. To plan the mission, the platoon leader must understand the breadth and depth of the axis of advance, whether there are any established bypass criteria, and the required effects to be achieved against all enemy forces in zone. *Bypass criteria* are the measures

established by higher echelon headquarters that specify the conditions and size under which enemy units and contact may be avoided (FM 3-90).

3-158. The platoon leader must have a good indirect fire plan for their route to cover anticipated places of contact. They work with the company FSO and FOs to develop the platoon's fire plan. These targets are a product of the platoon leader's analysis of the factors of METT-TC (I) and must incorporate the platoon's fire plan into the company indirect fire plan. The platoon leader, platoon sergeant, squad leaders, and mounted leaders may initiate the calls for fire.

3-159. When planning, the platoon leader identifies where the platoon will likely transition from movement to maneuver. This will allow the platoon leader to decide which movement formations will be most effective against suspected enemy forces. They plan to make enemy contact with the smallest friendly force possible, preferably an UAS or sensor. This allows the platoon leader sufficient time, space, and uncommitted combat power to maneuver and develop the situation for the company commander.

3-160. Leaders conduct information collection to determine the enemy's location and intent while conducting security operations to protect the main body. Information collection includes available manned and unmanned aircraft assets and Soldier-borne sensors, allowing the main body to focus on planning and preparation. Platoon leaders use all available information and intelligence to identify the probable locations for meeting engagements. The platoon should conduct rehearsals on hasty attack, bypass maneuvers, and hasty defenses. Platoon leaders also identify other forms of contact, by type and location, anticipates associated actions, and battle drills.

3-161. The platoon leader develops contingency plans in the case of meeting an unexpected enemy force or obstacle. They develop options during their planning. Contingency plans may consist of the following actions:

- What are platoon's actions if they make contact with a small enemy force?
- What are the platoon's actions if they make contact with a larger force beyond its capabilities to defeat?
- What are the platoon's actions if they make contact with an obstacle unidentified by higher?
- Action to report and bypass an enemy force.
- Maneuver options and transitions.

PREPARE

3-162. During preparation for the mission and prior to LD, the platoon receives intelligence updates and incorporates the intelligence into the plan. The platoon leader receives the intelligence updates from the commander and the battalion's intelligence section cell. The platoon leader should also request any updated imagery from higher headquarters to develop situational awareness and make any adjustments to the final plan. The platoon leader communicates any changes in enemy intelligence to their subordinates and receives a backbrief to confirm their understanding.

3-163. The platoon leader must ensure subordinates understand the company commander's intent and concept of operations and the platoon's concept of operations and platoon's intent, in addition to their individual missions even as new information

becomes available. The platoon leader uses confirmation briefs, backbriefs, and rehearsals to ensure missions are understood and all actions are integrated and synchronized. Simple plans that are flexible and rehearsed repetitively against various enemy conditions and that rely on established tactical SOPs are essential to success.

3-164. The platoon leader seeks to rehearse the operation from initiation to occupation of the final march objective or LOA. Rehearsals include decision points and actions taken upon each decision. Often, the platoon leader prioritizes maneuver options and enemy COAs to be rehearsed based on the time available. The rehearsal focuses on locating the enemy, developing the situation, executing transition to a maneuver option, exercising direct and indirect fire control measures, and exploiting success. The rehearsal must consider the potential of encountering stationary or moving enemy forces. (See chapter 2 for more information on preparation activities, specifically inspections.) Other actions to consider during rehearsals include the following:

- Uncoil from the AA and movement from current positions.
- Routes (passage points, contact points, checkpoints, and CCP).
- Forward passage of lines.
- Movement formations, movement techniques.
- Mounted sectors of fire, gun tube orientation and direct fire control measures.
- Dismount and remount rehearsals.
- CASEVAC (mounted and dismounted).
- Actions to cross danger areas.
- Lead element actions on contact.
- Main body (participating as or in advance guard), making contact with a small enemy force.
- Main body (participating as or in advance guard), making contact with a large force beyond its capabilities to defeat.
- Main body (participating as or in advance guard), making contact with an obstacle reconnaissance forces and surveillance assets did not identify and report.
- Flank/rear security force (participating in higher echelon movement to contact), making contact with a small force.
- Flank/rear security force (participating in higher echelon movement to contact), making contact with a large force beyond its capability to defeat.
- Actions to report and bypass, in which a unit deliberately avoids contact with an obstacle or enemy force, based on bypass criteria (see FM 3-90).
- Communications plan.
- Sustainment plan (priority [Class III (B), Class V]) and emergency resupply.
- Recovery plan.

3-165. Preparation actions are performed by the platoon to improve its ability to execute an operation. The platoon's success during missions depends as much on preparation as planning. Activities specific to preparation include—

- Revising and refining the plan.
- Necessary reconnaissance.
- Rehearsals.
- Sustainment preparations (Classes I, III, V) (see table 6-2 on page 292 for all classes of supplies).

- Equipment PMCS.
- Confirming zero test fire of weapons.
- Troop movements.
- PCCs and PCIs.
- Subordinate confirmation briefs and backbriefs.

EXECUTION

3-166. During execution, the platoon moves rapidly to maintain the advantage of a rapid tempo. However, the platoon leader must balance the need for speed with the requirement for security. The platoon leader bases the decision on the effectiveness of higher echelon reconnaissance and surveillance efforts, effects of terrain, and the enemy's capabilities. The platoon leader closely tracks the movement and location of subordinate squads, attachments, and adjacent units. This ensures that battalion, company, or both battalion and company security forces provide adequate security for the main body and that they remain within supporting range of the main body, mortars, and FA. The platoon synchronizes its actions with adjacent and supporting units, maintaining contact and coordination as prescribed in orders and unit SOP.

FIND THE ENEMY

3-167. Reconnaissance forces and surveillance assets focus on determining the enemy's dispositions, providing the platoon leader through the company with relevant combat information. This relevant information helps to ensure subordinate squads and attachments are committed under optimal conditions. The platoon leader uses all available sources of intelligence and combat information to find the enemy's location and dispositions. With this information, the platoon leader and squad leaders work to ensure that the platoon, as the lead element of the company, makes enemy contact with the smallest element possible to preserve combat power and conceal the size and capabilities of the company main body following the lead element. The platoon may receive sufficient threat reporting through sensors and manned or unmanned systems to gain understanding prior to making physical contact with the enemy. This allows the commander to develop the situation before committing the main body.

FIX THE ENEMY

3-168. *Fix* is a tactical mission task in which a unit prevents the enemy from moving from a specific location for a specific period (FM 3-90). Once contact is made, security forces and main body forces brings overwhelming fires onto the enemy to prevent the enemy, for example, from conducting a withdrawal, spoiling attack, or organizing a defense. Lead elements maneuver as quickly as possible to find a *gap*—an area free of obstacles that enables forces to maneuver in a tactical formation (FM 3-90) in the enemy's defense or where to focus an attack on an assailable flank of the enemy. While assessing the situation the platoon leader continues to gather as much information as possible about the enemy's dispositions, strengths, capabilities, and intentions. As more information becomes available, lead elements and the main body attack to destroy or disrupt enemy C2 centers, fire control nodes, and communication nets.

3-169. The security force leader, (for example, the platoon leader), initiates the platoon's maneuver at a tempo the enemy cannot match, since success in a meeting engagement

depends upon actions on contact. The security force, in this case the platoon, does not allow the enemy to maneuver against the protected main body of the company. The organization, size, and combat power of a security force are major factors determining the size of the enemy force it can defeat without deploying the main body. The techniques the security leader employs to fix the enemy when both forces are moving are different than those employed when the enemy force is stationary during the meeting engagement. In both situations, when the security force cannot overrun the enemy by conducting a hasty frontal attack, a portion of the main body is deployed. When this occurs, the unit is no longer conducting movement to contact but an attack. (See section V for a detailed discussion on hasty versus deliberate operations and the attack.)

FINISH THE ENEMY

3-170. If the security force, (for example, the platoon), cannot overrun the enemy with a frontal attack or by attacking an assailable flank of the enemy, the security force leader then fixes the enemy, if possible. The main body commander then quickly maneuvers units of the main body to conduct an attack (for example, an attack on an assailable flank) that overwhelms the enemy force before it can react or be reinforced. The main body commander attempts to defeat the enemy in detail while still maintaining the momentum of the advance. *Defeat in detail* is concentrating overwhelming combat power against separate parts of a force rather than defeating the entire force at once (ADP 3-90). Defeat in detail can occur sequentially or separately. It may finish during follow through. After an attack, the main body resumes the movement to contact and establishes another lead element (security force) moving ahead of the main body along the direction of attack or to the next march objective. If the enemy is not defeated in detail, the commander has two main options: bypass or transition to a more deliberate operation (for example, to attack or defend).

3-171. The platoon leader dismounts the Infantry squads as early as feasibly possible. The Strykers in overwatch will provide flexibility to the platoon leader as the Infantry squad's maneuver. The integration of the Infantry squads and mounted elements allow the platoon leader to mass overwhelming combat power onto enemy positions, until they are defeated, or forced to withdrawal. The platoon leader must identify a remount point to secure the Infantry squads following the defeat or withdrawal of the enemy (see ATP 3-21.11 for more information).

FOLLOW THROUGH

3-172. If the enemy is defeated, the unit transitions back into movement to contact and continues to advance. The movement to contact terminates when the unit reaches the final objective or LOA, or transitions to a more deliberate operation, attack, area defense, or retrograde.

3-173. It is possible that sufficient intelligence on enemy composition and disposition will emerge during a movement to contact that gives the commander the choice to continue or change the plan. The friendly force commander has the option to shift from a movement to contact to a hasty attack prior to making contact with the enemy. If so, the operation would still follow this framework.

3-174. The platoon should constantly assess the level and nature of threat forces. The platoon must also manage and track bypassed enemy elements, track what zones within

their assigned area have or have not been cleared of enemy forces, and estimate the likely enemy combat power remaining.

SECTION V – ATTACK

3-175. An attack destroys or defeats enemy forces, seizes and secures terrain, or both. The attack can be a hasty or deliberate operation depending upon the time available for assessing the situation, planning, and preparing. An attack incorporates coordinated movement supported by direct fires and fire support. An attack masses the effects of overwhelming combat power against selected portions of the enemy force with a tempo and intensity that cannot be matched by the enemy. Attackers seek decisions on the ground of their choosing through the deliberate synchronization and employment of the company. Variations of an attack are ambush, counterattack, demonstration, feint, raid, and spoiling attack.

3-176. Stryker Infantry rifle platoons and squads normally conduct an attack as part of a SBCT Infantry rifle company. A successful attack requires detailed planning, synchronization, and rehearsals. The company commander designates platoon objectives with a task and purpose for their assault, support, reserve, and if necessary, breach elements. To ensure synchronization, all leaders must know the location of their subordinates and adjacent units during the attack.

HASTY AND DELIBERATE OPERATIONS

3-177. Attacks are characterized as hasty or deliberate operation and with the primary difference between them being the extent of planning and preparation the attacking force conducts. A *deliberate operation* is an operation in which the tactical situation allows the development and coordination of detailed plans, including multiple branches and sequels (ADP 3-90). A *branch* is the contingency options built into the base plan used for changing the mission, orientation, or direction of movement of a force to aid success of the operation on anticipated events, opportunities, or disruptions caused by enemy actions and reactions (JP 5-0). A *sequel* is the subsequent operation or phase based on the possible outcomes of the current operation or phase (JP 5-0). A *hasty operation* is an operation in which a commander directs immediately available forces, using fragmentary orders, to perform tasks with minimal preparation, trading planning and preparation time for speed of execution (ADP 3-90).

3-178. A deliberate operation is normally conducted when enemy positions are too strong to be overcome by a hasty operation. It is a fully synchronized operation employing every available asset against the enemy defense and is characterized by a high volume of planned fires, use of major supporting attacks, forward positioning of the resources needed to maintain momentum, and operations throughout the depth of enemy positions. Deliberate operations follow a preparatory period that includes planning, reconnaissance and surveillance, coordination, positioning of follow-on forces and reserve, preparation of troops and equipment, rehearsals, and operational refinement. Stryker Infantry rifle platoons can conduct deliberate attacks dismounted throughout the operation or use Strykers to conduct movement to any point up to and including the assault position, and relay heavily on the mounted element's firepower to achieve assigned tasks. An *assault position* is a covered and concealed position short of

the objective from which final preparations are made to assault the objective (ADP 3-90). This decision is situation dependent. One technique is to designate the Stryker mounted element as a support element, a weapons squad as another support element, a dismounted Infantry squad as the breach element, and the other two squads as the assault element.

3-179. A hasty operation is conducted during movement to contact, as part of a defense, or when the enemy is in a vulnerable position and can be defeated quickly with available resources. Hasty attacks sacrifice planning time to achieve a higher tempo but can put the enemy under increased pressure. This type of operation may cause the attacking force to lose a degree of synchronization. To minimize this risk, the leader maximizes use of standard formations and well-rehearsed thoroughly understood battle drills and SOPs. A hasty operation is often the preferred option during continuous operations, enabling the leader to maintain momentum while denying the enemy time for defensive preparations.

ORGANIZATION OF FORCES

3-180. The Stryker Infantry rifle platoon normally conducts an attack as part of a company in an independent operation or as part of the company within a battalion operation. Once the scheme of maneuver is determined, the company commander (when the platoon operates within company) task-organizes the force to ensure platoons have enough combat power to accomplish their assign missions. The company commander normally organizes a main body and reserve (a security force, main body, and reserve is normally established during a battalion or higher echelon attack) for the attack, which are all supported by some type of sustainment organization (for example, company or field trains). The commander and subordinate platoon leaders should complete all changes in task organization on time to allow units to conduct rehearsals with their attached elements and to realign logistic considerations such as LOGPAC and headcount. Based upon METT-TC (I), the platoon may conduct the attack (platoon assault) independently. As an example, the platoon may conduct an attack to seize an assault objective, key terrain, or other enemy position dependent on the size of the enemy force and/or terrain. (See ATP 3-21.11 and ATP 3-21.21 for a detailed discussion of an attack at the company and battalion echelons.)

SECURITY FORCES

3-181. The Stryker Infantry rifle platoon leader, as well as the Stryker Infantry rifle company commander, do not generally designate dedicated security forces for independent operations conducting an attack. During a platoon's movement along its direction of attack, platoon leaders are responsible for 360-degree security, for ensuring each subordinate unit's sectors of fire are mutually supporting, and for being able to transition the platoon rapidly upon contact with the enemy. Platoon leaders exercise C2 primarily through their subordinate leaders and move in the formation where they can best achieve this.

3-182. When the platoon is designated as a security force (flank, rear, or both flank and rear) within the battalion's organization of forces, under normal circumstances, the commander resources dedicated security forces only if the attack uncovers one or more flanks, or the rear of the attacking force as it advances. In this case, the commander

designates a flank or rear security force and assigns it a guard or screen mission, depending on METT-TC (I).

Note. It is possible to attack directly from positions in contact with the enemy, which minimizes the need for security. The exception occurs when the attacking unit is transitioning from defense to offense and had previously established a security area as part of the defense.

MAIN BODY

3-183. During an attack, the platoon leader establishes a main effort and supporting effort within the platoon. The *main effort* is a designated subordinate unit whose mission at a given point in time is most critical to overall mission success (ADP 3-0). The platoon leader usually weights the main effort with the preponderance of platoon's combat power, or the operation is designed where the effort is singularly focused. Designating a main effort temporarily prioritizes resource allocation. The platoon leader may shift the main effort during execution. A *supporting effort* is a designated subordinate unit with a mission that supports the success of the main effort (ADP 3-0). The platoon leader resources the supporting effort(s) with the minimum assets necessary to accomplish the mission. The platoon often realizes success of the main effort through the success of the supporting effort(s).

3-184. During a deliberate operation, the platoon leader's main effort accomplishes the destruction of the enemy force, seizure of a terrain objective, or the defeat of the enemy's plan. The platoon's scheme of maneuver identifies the focus of the main effort. Because the potential for obstacles always exists, the platoon leader should designate an assault, breach, and support element within the platoon to conduct a breach during the attack.

3-185. During a hasty operation, the platoon leader retains flexibility by arranging forces in-depth and maintains more of a centralized control of subordinate elements, direct and indirect fires, and fire support systems. As soon as the tactical situation develops enough to allow the platoon leader to identify the decisive point(s), the platoon leader focuses available resources to support the designated main effort's achievement of its objective.

RESERVE

3-186. The reserve is used to exploit success, defeat enemy counterattacks, or restore momentum to a stalled attack. The Stryker Infantry rifle platoon leader does not generally designate a dedicated reserve for platoon missions, whether conducted independent of the company or not. For a company mission, the dedicated reserve (when designated) is usually a squad-size element. The platoon must be prepared to execute assigned tasks with a reduced platoon, after detaching a squad to the reserve. For a battalion mission, the dedicated reserve (when designated) is usually a platoon-size element. The reserve is not a committed force and is not used as a follow and support force, or a follow and assume force. *Follow and assume* is a tactical mission task in which a committed force follows and supports a lead force conducting an offensive operation and continues mission if lead force cannot continue (FM 3-90). *Follow and support* is a tactical mission task in which a committed force follows and supports a lead force conducting an offensive operation (FM 3-90). Once committed, the reserve's actions normally become or reinforce the echelon's main effort. Once the reserve is

committed, every effort is made to reconstitute another reserve from units made available by the revised situation. Often a commander's most difficult and important decision concerns the time, place, and circumstances for committing the reserve.

CONTROL MEASURES

3-187. A *control measure* is a means of regulating forces or warfighting functions (ADP 6-0). The commander assigns an area (zone) to units conducting an attack. Regardless of whether the attack takes place in a contiguous or noncontiguous assigned area, the owner of the assigned area normally designates control measures. The owner uses only the control measures necessary to control the attack.

3-188. If necessary, a commander can use an axis of advance, direction of attack, routes, or additional phase lines to further control maneuver forces. In the company OPORD platoons will be given general control measures necessary to control an attack. Short of the LD or LC, leaders may pre-designate AAs and attack positions where the platoon will prepare for offensive actions or wait for established required conditions to initiate the attack. An *attack position* is the last position an attacking force occupies or passes through before crossing the line of departure (ADP 3-90). En route to the LD, platoons may execute planned routes through start and release points and conduct a forward passage of lines along passage lanes. Beyond the LD, platoons may designate checkpoints, phase lines, PLDs, assault positions, direct fire control measures, and indirect fire support coordination measures. Units will orient their advance in zone by uses of axes of advance, directions of attack, or specific routes. Between the PLD and the objective, units can use a final coordination line, assault positions, SBF and ABF positions, a designated POB (if necessary), point of penetration, and a time of assault to further control the final stage of their attacks. Beyond the objective, commanders can impose a LOA if they do not want their units to conduct exploitation or a pursuit or template where they want their forces to position after the completion of the attack such as a BP or blocking position.

3-189. Units increase control over the movement of all attacking elements in attacks during limited visibility conditions. Typically, they impose additional control measures beyond those used in daylight attacks. These additional measures may include using a point of departure and a direction of attack.

ATTACK SEQUENCE

3-190. An attack at the platoon level is normally conducted as part of a larger force and is an offensive action characterized by close combat. *Close combat* is warfare carried out on land in a direct-fire fight, supported by direct and indirect fires and other assets (ADP 3-0). The following sequence of events is typical of an attack, regardless of echelon; however, specifics will vary due to the mission variables and the higher scheme of maneuver. Additionally, some elements may occur simultaneously. (See ATP 3-21.11 for additional information.) Events include—

- Uncoiling from AA and movement to attack positions.
- Final preparations in attack positions.
- Reconnaissance and surveillance.
- Moving to the LD and forward passage of lines.
- Moving to the PLD.

- Actions to set conditions (assault position, suppression, breach, and so on.)
- Actions on the objective (platoon assault).
- Follow through (consolidate, reorganization, and transition).

ASSEMBLY AREA

3-191. The platoon leader and subordinate leaders within the AA direct and supervise mission planning and preparation for the attack. Additional activities include coordination, PCCs and PCIs, rehearsals, and sustainment preparations for the mission and conclude with a final intelligence update.

RECONNAISSANCE AND SURVEILLANCE

3-192. Before conducting an attack, the platoon and company should gain as much information on the enemy as possible. This information can be gained by the platoon's own information-gathering activities (if it is in contact with the enemy) or from information gathered, collated, and analyzed by higher headquarters. Higher echelon reconnaissance and surveillance collection efforts provide combat information on the enemy situation and terrain in the platoon's assigned area. The collection effort may begin prior to occupying the AA and continues throughout the operation. The platoon may still receive current reports as it occupies the assault position. Reconnaissance and surveillance activities provide the platoon leader with the information needed to plan, prepare, execute, and assess the mission. The situation and available time may limit the ability to conduct reconnaissance and surveillance activities prior to crossing the LD. Leaders balance the benefits of reconnaissance forces and surveillance assets providing combat information with the level of risk involved with them compromising the operation.

ASSEMBLY AREA TO LINE OF DEPARTURE

3-193. When attacking from positions not in contact with the enemy, the platoon often stages in a rear AA or moves to an attack position behind friendly units in contact with the enemy, then conducts passage of lines to begin the attack. When attacking from a position in direct contact, the LD may also be the LC, a general trace delineating the locations where friendly and enemy forces are engaged (see ADP 3-90). In certain circumstances, there may not be an LD, for example, an operation in a noncontiguous assigned area. Additionally, commanders may designate points of departure for their attacking units instead of an LD for units attacking on foot using infiltration and stealth.

3-194. The LD is a graphical control measure that coordinates the departure of attack elements. It is where elements of the attacking force transition to an appropriate movement technique (traveling or bounding overwatch) in preparation for enemy contact. The platoon moves forward from the AA to the LD usually as part of a company formation, along a planned route. If the platoon is directed to cross a start point at a specified time, the platoon should cross it at march speed and march interval. Before leaving the AA, the platoon leader should receive a common operating picture update showing the location of forward and adjacent friendly elements. They should also receive updated enemy locations. If the platoon conducts a forward passage of lines, they will also coordinate for frequencies, weapon orientation, and near and far recognition. The platoon leader then disseminates these reports and digital overlays to each squad leader and Stryker VC.

3-195. The platoon leader should have reconnoitered the route to the LD and specifically to the crossing point. During the planning stage, the platoon may plot a waypoint on the LD at the point they intend to cross. The move from the AA to LD is timed during reconnaissance. The timing facilitates the lead Stryker element crossing the LD at a prescribed time. The platoon leader may plan to cross the LD with or without halting in the attack position. The platoon leader may designate that an attack position be used to complete final preparations prior to crossing the LD. If the attack position is used, the platoon leader must backwards plan by factoring in the time spent in the attack position, ensuring that the platoon crosses the LD at the prescribed time. In the attack position, the platoon should use a coil or herringbone formation, dismount Infantry, and takes care of any last-minute coordination. The Platoon may maneuver from the LD to designated SBF positions, assault positions, or breach or bypass sites.

Line of Departure to Assault Position

3-196. Upon clearing passage points or passage lanes at the LD, the platoon will be supported by the stationary unit until the platoon passes the BHL. The platoon's assault element moves in the designated formation from the LD to the assault position(s). Stryker elements and dismounted Infantry both assume coverage of the assigned sectors of fire and are prepared to orient on assigned direct fire control measures, as necessary. The platoon leader plots waypoints to coincide with checkpoints along the route. During movement, they ensure the platoon navigates from checkpoint to checkpoint (or phase line) by using basic land navigation skills supplemented by precision navigation. The platoon advances in zone, moving generally within an assigned axis of advance, or specifically following assigned routes or direction of attack.

3-197. The platoon leader ensures their platoon is employing the correct formation and technique for the movement. During movement, the platoon uses cover and concealment (when necessary) and, if detected, smoke and supporting fires. The platoon communicates primarily by frequency modulation (FM) radio but should limit their reliance on radios. Platoon leaders may communicate by using hand and arm signals, or flags. Platoon leaders should always be prepared to transition from movement to maneuver in the event of chance contact while moving to the assault position.

3-198. The platoon dismounts and orientates the squads to the direction of movement at the DP, which is usually the assault position. The platoon may or may not use an assault position for final preparations. The Strykers then move to a support position. The DP is an area that provides cover and concealment from enemy observation and direct fire.

3-199. During limited visibility, the platoon leader relies on the commander's tactical display position updates to keep track of their platoon vehicles. During movement, the platoon communicates primarily by radio and signals (embedded digital reports) because they are faster for the receiving station to understand and the sending station to prepare.

Assault Position to Probable Line of Deployment

3-200. During the attack, maintaining momentum is extremely important. Ideally, the platoon's assault element occupies the assault position without the enemy detecting any of the platoon's elements. The assault position is the last covered and concealed position before reaching the objective. Its selection is important. Leaders do not want to dismount their units too far away from the objective and be exposed to enemy fire too long.

Conversely, they do not want to dismount too close to the enemy position and be exposed to close and effective enemy fire.

3-201. The platoon may move through the assault position at a probable LD to begin the assault. The platoon leader may stop in the assault position and designate a probable LD between the assault position and the objective. The probable LD between the assault position and the objective is where the assault, support, and security elements move to their respective positions.

3-202. *Probable line of deployment* is a phase line that designates the location where the commander intends to deploy the unit into assault formation before beginning the assault (ADP 3-90). The attacking platoon splits into one or more assault (generally the main effort) and support forces (generally the supporting effort) as it reaches the PLD, if not already accomplished. All forces supporting the assault should be set in their SBF position, or other position, before the initiation of the attack by the assault force. The assault force maneuvers against or around the enemy to take advantage of the support force's efforts to suppress targeted enemy positions.

Note. As necessary, the platoon conducts a breach. The preferred method of fighting through a defended obstacle is to conduct an in-stride breach. However, the leader must be prepared to conduct a deliberate breach.

3-203. Between the PLD and the objective, an assault position(s) and a final coordination line may be established to control the final stages of the assault. Assaulting forces usually plan to pass through the assault position and deploy to their final assault formation at final coordination line. Stopping at the assault position may allow the enemy to react to the assault and may make it difficult for the assault force to regain the momentum of the assault once the force halts in a covered position. When used, the assault force pauses at the assault position only to—

- Make final equipment preparations, such as to make final preparations for demolitions.
- Ensure all assault forces are in their planned order.
- Wait for preparation fires to finish.
- Ensure conditions are set for the assault (for example, sufficient suppression, obscuration, or a necessary breach).

ISOLATE THE OBJECTIVE

3-204. The platoon uses direct and indirect fires to isolate the objective to set conditions for the assault. Isolating the objective prevents the enemy from reinforcing the objective and prevents enemy forces on the objective from leaving. It also suppresses the adjacent enemy positions and their ability to disrupt the assault. To isolate an objective, the platoon moves to and positions in SBF positions. The platoon may have to use multiple firing positions with lateral distribution to achieve effective fires throughout the breadth and depth of both the objective and surrounding terrain.

3-205. The platoon leader may designate the mounted element to isolate the objective because it has better optics, significant firepower, protection from small-arms fire, and can rapidly displace. Using the mounted element for this purpose allows the dismounted element to conduct the assault on the objective. Leaders should consider providing

security for the Strykers. The platoon leader can also use intelligence, surveillance, and reconnaissance as well as fires to aide in isolating the objective.

ACTIONS ON THE OBJECTIVE

3-206. The platoon may organize into multiple maneuver elements prior to conducting the assault. These elements will orient their maneuver on the point of penetration into the objective. If the platoon breaches, they will reorganize once the assault element establishes far side security in the breach area. Depending on the depth of the objective, the assault force will utilize a series of alternating or successive bounds, providing internal supporting fires while it assaults through the depth of the objective to a LOA. The platoon leader synchronizes the maneuver of the assault force with the overwatch and directs fires of the support force to limit the vulnerability of the forces occupying these positions. The platoon leader maximizes direct fires and fire support to destroy and to suppress the enemy, and to sustain the momentum of attack. During the assault, the platoon must be prepared to breach or bypass protective obstacles within the objective.

3-207. The platoon leader and company commander must decide whether the assault element will assault the objective mounted or dismounted. Most often, when the enemy is in restrictive terrain and poses a significant antiarmor threat, the platoon assaults the objective dismounted. However, when the objective is on unrestrictive terrain and no enemy antiarmor exists, then the assault element may assault mounted. Depending on terrain and the nature of the threat, the platoon may decide to destroy enemy forces in the objective exclusively through an ABF.

3-208. Depending on the nature of terrain and the type and disposition of enemy forces, the platoon leader may determine to ABF. This is accomplished from one or more ABF positions from which the platoon engages the enemy force with direct and indirect fires without using an assault element to (clear/seize) the objective. This is typically not viable when the enemy has access to positions in dead space, there is a significant dismounted threat, or direct fires or line of sight are broken by intervisibility lines.

Dismounted Assault

3-209. If the platoon leader decides to assault the objective dismounted, the platoon dismounts the Infantry squads to assault the objective and the Strykers move to SBF positions. If possible, dismount the platoon Infantry squads in an area that offers some cover and concealment from enemy observation and direct fire, which allows the squads to assemble and orient appropriately. The DP must be close enough to the objective that the Infantry squads do not become excessively fatigued while moving to the objective.

Mounted Assault

3-210. Strykers do not normally assault across the objective with Infantrymen mounted; however, if the platoon leader decides to assault mounted, the platoon will dismount the Infantry squads short of the objective in an area that offers cover from enemy direct fire. Strykers will provide local direct fire support as the dismounted Infantry squads assault across and clear the objective of enemy forces. Consideration should be made for providing local security for the mounted elements.

3-211. Platoon leaders initiate preparatory and supporting indirect fires to cover movement and maneuver from assault position to the objective.

3-212. Whether assaulting mounted or dismounted, the platoon leader or company team commander designates the DP based on the following factors:

- Short of the objective (near or at the assault position).
- On the objective.
- Beyond the objective.

3-213. The platoon leader must designate, and ensure common understanding of, direct fire control measures to support the integration of mounted and dismounted elements and enable the focus, distribution and shifting (or lifting) of fires by either element.

Support by Fire

3-214. Platoon support forces (supporting effort) occupy SBF positions that, ideally, afford unobstructed observation, clear fields of fire, and cover and concealment. Selection of SBF positions is based on a study of the terrain, knowledge of enemy locations, or likely enemy locations, and refined in execution through leader reconnaissance when possible. If the enemy situation is vague or unknown, positions are selected to place effective fire on terrain that dominates the area the assault force will traverse and seize. Once in position, support forces are responsible for both suppressing known enemy forces and for scanning assigned sectors of observation to identify previously unknown enemy elements to suppress them. The protection provided by support forces allow the assault force to continue movement and to retain the initiative even when under enemy observation or within range of enemy weapons. The support force must be prepared to provide effective suppression for a long time and must apply appropriate techniques to manage ammunition while distributing fires through a wide area.

Breach

3-215. If there is an obstacle to breach, the breach force seizes a foothold supported by the support force. The assault force passes through the breach force, exploits the breach, and continues on to seize the objective. Enemy positions are often covered by obstacles that must be breached prior to seizing the objective. (See chapter 6, section I of ATP 3-21.8 for more information on breaching.)

3-216. Prior to the assault, the platoon leader should receive information on the type and extent of any obstacles covering the objective. They plan their assault to avoid these obstacles, if possible, but prepare to breach them if they cannot. The platoon leader identifies the exact locations of the breach and the support forces and the conduct of the assault forces.

3-217. The support force supports the breach force's initial breach of the objective by placing suppressive fires on the most dangerous enemy positions. As the breach is being established, the support force shifts fires to allow the breach force to secure the POB. Visual observation is vital to maintain suppressive fires just forward of the breach and assault forces.

3-218. The support force and security elements monitor the forward progress of the assault force and keep shifting suppressive fires at a safe distance in front of them. The weapons squad positions itself to provide continual close-in suppressive fires to aid the actions of the assault force as it moves across the objective. The support force lifts and the security element lift and shift suppressive fires based on the weapons location relative to the assault force and its risk estimate distances.

3-219. If the obstacle has not been identified prior to the assault, the platoon leader moves forward and identifies the breach location. The FO calls in and adjusts smoke and HE fires to obscure and isolate the POB. The support force suppresses the enemy covering the obstacle and the POB. The breach force moves forward, and the squad leader establishes a base of fire with one team (security element) to further isolate the POB. The other fire team (reduction element) conducts the breach, and creates a lane by reducing, proofing, and marking. Then the security element passes through the breach to secure the far side of the obstacle.

Assault

3-220. Once the security element has seized the far side of the obstacle, the assault force may then move through the lane. At minimum, the assault force will secure the point of penetration onto the objective. If possible, the assault force will continue the assault through the objective to the LOA. An *assault* is a short and violent well-ordered attack against a local objective (FM 3-90). As this occurs, the platoon sergeant closely observes the progress of the breach and assault force to ensure that momentum is maintained, and that the assault force does not cross in front of supporting fires. The designated mounted leader will control the mounted element's fires.

3-221. The platoon leader retains the assault force in covered and concealed positions until the support force has set necessary conditions. The assault force must be prepared to deal with unanticipated protective obstacles in or around the objective area, particularly in buildings or fortified areas. Once committed, the platoon's assault is short, violent, and well ordered. The assault force seizes or secures a geographic objective, or destroys, defeats, or disrupts a designated enemy force. From the PLD, the assault force maneuvers against or around the enemy to take advantage of support fires. The assault force must closely follow these supporting fires to gain ground that offers a positional advantage. Depending on the size and preparation of enemy forces, it may be necessary to isolate and destroy portions of the enemy in sequence. It may also be necessary to reposition the support forces to continue to engage the depth of, or beyond, the objective area.

3-222. The objective for the assault force may vary from operation to operation. In every case, the assault force's actions on the objective are critical. Assault forces maneuver through fire and movement. Supporting fires must immediately gain fire superiority on the objective in coordination with indirect fires around and beyond the objective to disrupt enemy reinforcement. As the assault closes on the objective, fires shift just forward of the assault force as it moves across the objective or until ordered to stop or shift to other target beyond the assault force or LOA.

Note. The key is to minimize the time between the shifting of fires and the maneuver of the assault force on the objective. The enemy must be suppressed during this time when the assault force is most vulnerable.

Follow Through (Consolidate, Reorganize, and Transition)

3-223. Once enemy resistance on the objective has ceased, the platoon quickly consolidates to defend against a possible counterattack and prepares for follow-on missions. During consolidate and reorganization, the platoon may emplace protective obstacles to aid in flank security and to protect against enemy counterattacks. Additionally, echelons above the platoon may plan tactical obstacles to shape enemy routes of withdrawal and to cut off enemy reinforcements; however, the platoon may be tasked to emplace them.

3-224. Once the platoon takes an enemy position, it consolidates on that position if doing so is tactically necessary or advantageous. The enemy may have their positions pre-planned for indirect fires. To avoid the possible enemy artillery threat, it might be necessary for the platoon to immediately displace off the objective to establish a hasty defensive position. *Consolidate* is to organize and strengthen a captured position to use it against the enemy (FM 3-90). Normally, the attacking platoon tries to exploit its success; however, in some situations the platoon may have to pause to consolidate its gains. Consolidated may vary from a rapid repositioning of forces and security elements on the objective, to a reorganization of the attacking force, or to the organization and detailed improvement of the position for defense. Additional actions taken to consolidate include—

- Eliminating enemy pockets of resistance (on and off the objective) and securing enemy detainees.
- Searching and marking positions to indicate to other friendly forces that they have been cleared.
- Establishing security beyond the objective by securing areas that may be the source of enemy direct fires or enemy artillery observation.
- Designating squad and crew-served weapons defensive positions.
- Designating and cover dismounted avenues of approach with machine guns and mounted avenues of approach with shoulder fired munitions.
- Designating positions for Strykers.
- Establishing local security and hasty defensive fighting positions while utilizing existing obstacles.
- Using security patrols, OPs/combat outposts, and early warning devices to provide protection and situational awareness.
- Establishing indirect fire targets, final protective fire (FPF), and FPL.
- Establishing mutual support between individual fighting positions, adjacent squads/adjacent platoons.
- Establishing sectors of fire and other direct fire control measures for each subunit or Soldier).
- Identifying protection requirements such as defining type fighting position and building fighting positions.
- Securing detained personnel.

3-225. *Reorganization* is all measures taken by the commander to maintain unit combat effectiveness or return it to a specified level of combat capability (ATP 3-94.4). While combat effectiveness is the ability of a unit to perform its mission, factors such as ammunition, personnel, status of fuel, and weapon systems are assessed and rated. Reorganization actions can include cross-leveling ammunition and ensuring key weapon systems are manned and vital leadership positions are filled if the operator or crew became casualties. As with consolidation, platoon leaders must plan and prepare for reorganization as they conduct TLP. Additional actions include—

- Reestablishing the chain of command.
- Cross-leveling of personnel and adjust task organization when necessary.
- Conducting necessary maintenance and recovery.
- Manning key weapon systems.
- Maintaining communications and reports, to include:
  - Restoring communication with any unit temporarily out of communication.
  - Sending SITREPs (at a minimum, subordinates report status of mission accomplishment).
  - Identifying and requesting resupply of critical shortages.
- Conducting resupply and redistribution operations.
- Resupplying main effort before supporting effort, if not resupplied to 100 percent by higher headquarters.
- Performing special team actions such as—
  - Processing, and evacuating causalities, enemy prisoners of wars, enemy weapons, noncombatants/refugees, and damaged equipment (not necessarily in the same location).
  - Evacuating friendly killed in action.

3-226. The platoon executes follow-on orders/missions as directed by the company commander. For example, to reposition the force on the objective and establish security OPs forward of the objective to prepare for a counterattack, or to organize the force and conduct detailed improvement of fighting positions for defensive missions. Regardless of the situation, the platoon's posture is in preparation for continued offensive missions.

PLAN

3-227. The planning phase begins when the platoon receives the WARNORD or OPORD from the commander. During this phase, the platoon leader conducts TLP as outlined in chapter 2. After they issue the WARNORD, the platoon leader directs the preparation of mission-essential equipment and initiates rehearsals of tactical movement and battle drills. These rehearsals allow the platoon to begin preparing for the mission. Once the platoon leader completes their plan, rehearsals are matched to the actual terrain and anticipated actions on contact with the enemy. The platoon leader directs time, location, and areas of emphasis for PCIs and PCCs.

3-228. In the plan for an attack, the platoon leader seeks to surprise the enemy by choosing an unexpected direction, time, type, or strength for attacking. Surprise delays enemy reactions, overloads and confuses enemy mission command, and reduces the coherence of the enemy's defensive operations. The leader achieves tactical surprise by attacking in bad weather and over seemingly impassible terrain, conducting feints and

demonstrations. Platoons do this while maintaining a high tempo, destroying enemy forces.

3-229. During the planning process, the platoon leader integrates the scheme of fires with the scheme of maneuver. The *scheme of fires* is the detailed, logical sequence of targets and fire support events to find and engage targets to support the commander's objectives (JP 3-09). The leader identifies the desired effect of fires on enemy weapon systems, such as suppression or destruction, as part of developing the scheme of fires. The scheme of fires identifies critical times and places where the platoon leader needs the maximum effects from fire-support assets. Leaders combine movement with fires to mass effects, achieve surprise, destroy enemy forces, and obtain decisive results.

3-230. In attack planning the platoon leader must understand and plan how and where to mass the platoon's direct fire weapons systems. In developing this plan, the platoon leader should consider when and where dismounted systems are deployed, and where to employ Strykers, or fight the platoon to achieve massed fires on the enemy. The platoon should understand the principles of direct fire planning (see appendix A, direct fire planning) and the appropriate fire commands and direct fire control measures necessary to initiate, focus, distribute and shift the platoon's direct fires. The platoon leader should understand where planned fires will occur and where potential contact may occur, requiring action or contact drills or other means of directing the platoon's fires (see appendix C, battle drills). Critical to the plan is understanding how to integrate the fires of the Strykers with the maneuver of the dismounts. The platoon leader will generally develop the plan, while the platoon sergeant assists in the execution. Additional considerations are the following:

- Plan dismount and remount points.
- Direct fire control measures for the designated mounted leader when in control of the Strykers (when the platoon leader dismounts).
- Direct fire control measures for the Infantry squads.
- Indirect fire control measures and echeloning indirect fires.

3-231. In planning, the platoon leader and subordinate leaders focus on the routes, formations, and navigational aids they will use to traverse the ground from the LD or PLD to the objective. Some terrain locations may require the attacking platoon to change its movement formation, direction of movement, or movement technique when it reaches those locations. The platoon can post guides at these critical locations to ensure maintaining control over the movement.

3-232. To employ the proper capabilities and tactics, the platoon leader and subordinate leaders must have detailed knowledge of the enemy's organization, equipment, and tactics. They must understand enemy strengths and weaknesses. The platoon leader may need to request information to answer platoon information requirements.

3-233. The platoon leader and subordinate leaders must receive the most current information from organic and higher echelon information collection assets. The platoon leader must ensure subordinates understand the company commander's intent and concept of operations and the platoon's concept of operations and platoon's intent, in addition to their individual missions even as new information becomes available. The platoon leader uses confirmation briefs, backbriefs, and rehearsals to ensure missions are understood and all actions are integrated and synchronized. Simple plans that are

flexible and rehearsed repetitively against various enemy conditions and that rely on established tactical SOPs are essential to success.

3-234. Generally, if the platoon leader does not have timely, relevant, and accurate intelligence products and assessments, and does not know where the overwhelming majority of the enemy's units and systems are located, the leader cannot conduct a deliberate operation. The attacking unit must conduct a movement to contact, then conduct a hasty operation once contact is made, or collect more combat information.

3-235. Leaders within the platoon may find themselves as the observer (and executor) of company and battalion-level fires. Understanding the concept of echelon fires is critical for indirect fire planning to be synchronized with the maneuver plan. The purpose of echeloning fires (see appendix B) is to maintain constant fires on a target while using the optimum delivery system up to the point of its risk-estimate distance in combat operations or minimum safe distance in training. Echeloning fires provides protection for friendly forces as they move to and assault an objective, allowing them to close with minimal casualties. It prevents the enemy from observing and engaging the assault by forcing the enemy to take cover, allowing the friendly force to continue the advance unimpeded.

3-236. The platoon leader and subordinate leaders plan for sustainment to ensure the platoon's freedom of action and prolong endurance through unit trains (for example, company trains and battalion field trains). (See chapter 6 for more information on unit sustainment operations)

3-237. Protection increases a platoon's survivability and their ability to maintain combat power. Planning for protection involves identifying enemy capabilities (for example, fires, aviation, and CBRN) and the necessary actions to counter or mitigate those threats. Emphasis on protection increases during preparation and continues throughout execution. Protection is a continuing activity; it integrates all protection capabilities to protect the force before, during, and after the attack.

PREPARE

3-238. Unless already in an AA or patrol base, the attacking platoon moves into one to prepare for future operations. The unit moves with as much secrecy as possible, normally at night and along routes preventing or degrading the enemy's capabilities to visually observe or otherwise detect the movement. It avoids congesting its AA or patrol base and occupies it for the minimal possible time. While in the AA or patrol base, the platoon is responsible for its own protection activities, such as local security and electromagnetic emissions control and masking.

3-239. Preparation for an attack against a moving enemy force is limited because the opportunity to attack the enemy at the appropriate time and place depends on the enemy's movement. This forces the platoon to focus the preparation on executing fires and movement and maneuver actions regarding the enemy's location, or possible locations, and disposition when engaged. The platoon leader prioritizes each location to ensure the platoon prepares for the most likely engagements first. The platoon leader ensures all subordinate leaders understand their role at each location and the decision point for execution at each location. Leaders rehearse actions, as possible, in each location against various enemy conditions to promote flexibility and initiative consistent

with the commander's intent. Battle drills, SOPs, and rehearsals against likely enemy actions are essential for success in preparation for an attack. The platoon leader and subordinate leaders continue their TLP and priorities of work to the extent the situation and mission allow before moving towards their attack position(s), LD, both attack position(s) and LD, and if established, their LC. In preparation for the attack, leaders should rehearse necessary actions such as—

- Moving from the AA to the LD.
- Uncoiling from the AA.
- Maneuvering from the LD to the PLD.
- Occupying SBF positions.
- Conducting the breach.
- Assaulting the objective.
- Consolidating on the objective.
- Making contact with a small enemy force (main body as advance guard).
- Making contact with a large force beyond its capabilities to defeat (main body as advance guard).
- Making contact with an obstacle reconnaissance forces and surveillance assets did not identify and report (main body as advance guard).
- Making contact with a small force (flank/rear security force participating in higher echelon movement to contact).
- Making contact with a large force beyond its capability to defeat (flank/rear security force participating in higher echelon movement to contact).
- Avoiding contact with an obstacle of an enemy force or an enemy force, based on bypass criteria).
- Conducting maneuver options and transitions.
- Pursuing a withdrawing enemy.
- Actions of echelon reserves.
- Transition to a follow-on posture or subsequent mission.

3-240. In preparation for the attack, the platoon will oftentimes organize and coordinate in the AA. Leaders should continue TLP and priorities of work. These preparations include, but are not limited to—

- Protecting the force.
- Conducting AA procedures and priorities of work.
- Conducting TLP and sustainment activities.
- Conducting zero and test fire of all weapons systems.
- Rehearsing plan for detainees.
- Conducting PCCs and PCIs.
- Conducting Class I and rest plan, as necessary.

3-241. As part of TLP, a leader's reconnaissance of the actual terrain should be conducted with all key leaders when this will not compromise the attack or result in excessive risk to the leaders on the reconnaissance. Modern information systems can enable leaders to conduct a virtual reconnaissance when a physical reconnaissance is not practical. If a limited-visibility attack is planned, they should reconnoiter the terrain at night.

EXECUTE

3-242. During execution, the platoon leader maneuvers the platoon to close with and destroy or defeat enemy forces, seize, and secure terrain, or both. The following paragraphs discuss executing a company attack (specific to platoon scheme of maneuver) using the four-step tactical framework of the offense discussed earlier in this chapter.

Note. Regarding the enemy's plan, a defending enemy generally establishes a security zone around or forward of main enemy forces to make early contact with friendly attacking forces. This helps the enemy determine the attacking force's capabilities, intent, chosen COA, and delays their approach. The enemy leader uses the security zone to strip away friendly reconnaissance forces and hide the enemy's main body dispositions, capabilities, and intent. The goal is to compel the friendly attacking force to conduct movement to contact against the enemy defending force while knowing the exact location of attacking friendly forces.

3-243. The platoon conducts tactical movement as part of the company plan under supporting fires using a combination of traveling, traveling overwatch, and or bounding overwatch movement techniques. The platoon leader transitions the platoon from movement to maneuver at a point either identified by the company commander during their TLP, or when the platoon makes contact with the enemy, to reach its objective to support the company attack. During the movement or maneuver, the company commander may designate SBF positions to protect friendly forces with direct fires. As the platoon maneuvers, it employs both direct and indirect fires to destroy, suppress, neutralize, or obscure the enemy positions. If detected early, the platoon concentrates direct and indirect fires, establishing a base-of-fire, and maneuvers to develop the situation and regain the initiative. The Stryker Infantry rifle platoon conducts most movement while mounted to DP short of the objective (assault position).

3-244. Leaders must maintain a common operational picture between the mounted elements and the three Infantry squads when the Infantry squads are dismounted and moving separately from the Strykers. The platoon leader must consider the following when planning mounted and dismounted movement to the objective:

- AA to the attack position (if used) or LD.
- LD to the assault position.
- Assault position to the objective.

Find the Enemy

3-245. Intelligence drives fire and maneuver. Gaining and maintaining contact with the enemy (when the enemy is determined to hide, deny, or break contact) is vital to the success of an attack. As platoons moves from the LD and cross the PLD towards the objective, and as current intelligence is updated, the enemy situation generally becomes clearer. Platoon leaders and subordinate leaders, through actions on contact, rapidly develop the situation in accordance with the company commander's plan and intent for the attack. (See ATP 3-21.8 for an example discussion.)

Fix the Enemy

3-246. Prior to the attack, the platoon establishes SBF or ABF positions to fix enemy forces on or around the objective. During a company attack, other platoons may fix enemy forces to overwatch a platoon assault. Additional operations to fix and/or disrupt a tactical mission task in which a unit upsets an enemy's formation or tempo and causes the enemy force to attack prematurely or in a piecemeal fashion; include preparation fires and deception operations to deceive the enemy (see FM 3-90). Massing forces in one place by using economy of force measures in other areas allows the attacker to mass the effects of overwhelming combat power against a portion of the enemy. (See ATP 3-21.8 for an example on SBF during an attack.)

3-247. By fixing and/or disrupting the enemy, the objective of the attacker's main effort is isolated to prevent the enemy from maneuvering to reinforce the enemy targeted for destruction. The goal of isolation is to prevent the enemy from reinforcing the objective and to prevent enemy forces on the objective from leaving. Platoons isolate the objective area by using both indirect and direct fires to suppress enemy forces and enable friendly forces to close with and finish the enemy. The platoon leader and platoon sergeant develop a plan for time of suppression on the objective to conserve ammunition and ensure they are effectively isolate the objective. If the Stryker Infantry rifle platoon must isolate an objective, the platoon leader may use the mounted element to accomplish isolation. The mounted element is highly mobile and provides significant firepower and protection from small arms. Using the mounted element for this purpose allows the three Infantry squads to conduct actions on the objective.

Finish the Enemy

3-248. During the assault, the attacking force maneuvers to gain positional advantage to seize, retain, and exploit the initiative while avoiding the enemy's defensive strength. The attacker employs tactics defeating the enemy by attacking through a point of relative weakness, such as a flank or the rear—referred to as the point of penetration. The key for success is to strike hard and fast to overwhelm a portion of the enemy force, and achieve a foothold on the objective, from which the assault continues through the remainder of the objective, thus maintaining the momentum of attack without reducing the pressure.

Movement From the Line of Departure to the Probable Line of Deployment

3-249. The platoon conducts tactical movement once it crosses the LD. It moves aggressively and as quickly as the terrain and enemy situation allow. It moves forward using the appropriate movement formation and movement technique assisted by the fires (when required) of supporting units. Fire and movement are coordinated closely. Suppressive fires facilitate friendly movement, and friendly movement facilitates more fires. Whenever possible, the attacking platoon uses avenues of approach avoiding strong enemy defensive positions, takes advantage of all available cover and concealment, placing the unit on the flanks or rear of the defending enemy. Where cover and concealment are not available, the unit uses obscurants to conceal its movement while being careful not to inadvertently silhouette friendly forces passing through on the enemy of the obscurant.

Actions at the Probable Line of Deployment, Assault Position, or Final Coordination Line

3-250. The attacking platoon maintains the pace of its advance as it approaches its PLD. The attacking platoon splits into one or more assault and support forces once it reaches the PLD if not previously completed. All forces supporting the assault force should be set in their support and ABF positions before the assault force begins its assault. The platoon leader synchronizes the occupation of SBF positions with the maneuver of the supported attacking element to limit the vulnerability of forces occupying these positions. Leaders use unit tactical SOPs, battle drills, prearranged signals, EA, and TRPs to control direct and indirect fires from these supporting positions and normally employs restrictive fire lines (RFLs) between converging forces.

Conduct a Breach

3-251. To conduct a breach successfully, the platoon applies the breaching tenets of intelligence, breach fundamentals, breach organization, mass, and synchronization. The breach fundamentals are suppress, obscure, secure, reduce, and assault. The support force sets the conditions; the breach force reduces, proofs, and marks the required number of lanes through the enemy's tactical obstacles to support the maneuver of the assault force. To avoid confusion, the leader must clearly identify that the necessary conditions are set, which will then trigger the breach force to proceed.

3-252. When conducting the assault across the objective, one technique is to designate the Strykers, under the platoon sergeant's control, as the mounted support element and to designate the three Infantry squads as the breach and or the assault elements. Platoon internal support elements, employing the medium machine guns, should be considered.

3-253. As the Infantry squads move to the objective, Soldiers use individual movement techniques and fire teams retain their basic fire team wedge. The mounted support element begins placing suppressive fires on the objective and monitors the breach and assault elements' movement, and shifts, lifts, or ceases fire according to the plan and the situation. The support (or assault) force begins placing suppressive fires on the far side of the breach to support the breach force's initial breach of the objective.

3-254. If enemy forces appear in close proximity of the breach, Stryker elements close to dismounted Infantry should switch from their (30-mm cannon, .50 caliber, or MK19) to 7.62 mm coaxial machine. This will mitigate the risk of fratricide and allow the breach force to establish a foothold on the objective. The remaining mounted elements can continue to suppress with their (30-mm cannon, .50 caliber, or MK19). To prevent fratricide, supporting direct fire must continue to suppress the enemy, and the platoon leader or platoon sergeant must closely control it.

3-255. When conducting mounted and dismounted integration, platoons need to allow the closest possible integration of support weapons systems outside of the SDZ. This is achieved by using markings, established TRPs, signals, and cross talk. One technique is to mark, either with IR or other visual means, each Soldier or just the assault force on the flank nearest the support force. The assaulting Soldiers and the support force sustain a continuous rate of fire to suppress the enemy. When the assault force moves to the breach point, the base-of-fire leader (platoon sergeant) verifies that the assault force is at the right location. They must be able to identify the assault force while it moves to

and assaults through the objective. A mounted element or designated Stryker may shift their fires to another portion of the objective.

3-256. As the breach force is preparing to conduct the breach, the mounted SBF element monitors their progress. This helps the mounted element shift fires as needed. Visual observation is vital so they can maintain suppressive fires just forward of the breach and assault force.

3-257. Once the points of breach locations are isolated by assault force, the breach force will move forward to the obstacle. Infantry Squads establish local SBF positions to support the breach. Once the obstacle point of penetration is open, the breach force proofs and marks the lane. The assault squad then passes through the obstacle using the marked lane to establish a foothold on the far side of the breach. Once the foothold is established, fire teams employ local SBF positions to support platoons' assault through the breach and movement to the platoon's PLD for the assault onto the objective. (See chapter 5, section VI for more information on breaching.)

3-258. The mounted element monitors the forward progress of the assault force and keeps shifting suppressive fire at a safe distance in front of them. The breach force should bound forward to provide continual close-in suppressive fire to support the actions of the assault force as it moves across the objective. Once the assault force has seized the initial foothold on the objective, the breach force may then move to the objective to reinforce the assault force.

3-259. As this occurs, the platoon sergeant closely observes the progress of the breach and assault forces to ensure no loss in momentum and that assault and breach forces do not cross in front of the mounted SBF line. As the direct fires of the platoon's support force become masked, the platoon leader (or platoon sergeant) shifts, lifts or ceases fire, or they displace the mounted elements and or weapons to a position where they can continue to support the assault force.

3-260. All communications from the mounted support element to the breach and assault forces is by digital C2 systems or visual signals. If the mounted element leader observes problems, they report them to the platoon leader. The platoon leader uses this information in conjunction with what they see on the objective to control the assault.

Actions on the Objective

3-261. The effects of overwhelming and simultaneous application of fire, movement, and shock action characterize the final assault. This violent assault destroys or defeats and drives the enemy from the objective area. Small units conduct the final assault while operating under the control of the appropriate echelon command post.

3-262. Assaulting forces usually plan to pass through the assault position and deploy to their final assault formation at the final coordination line. The *final coordination line* is a phase line close to the enemy position used to coordinate the lifting or shifting of supporting fires with the final deployment of maneuver elements (ADP 3-90). Ideally when established and utilized, the platoon's assault element occupies the assault position without the enemy detecting the platoon's elements. Preparations in the assault position may include preparing Strykers by uploading ready ammo, reloading vehicle smoke grenades and machine guns; reloading magazines and fixing bayonets; preparing special

teams gear such as smoke pots, breaching tools, and Bangalore torpedoes; and then initiating, lifting or shifting of direct and indirect fires.

3-263. If the platoon is detected as it nears its assault position, indirect fire suppression is required on the objective and the support element increases its volume of fire. If the platoon needs to make last-minute preparations, then it occupies the assault position. If the platoon does not need to stop, it passes through the assault position, treating it as a PLD and assaults the objective. Sometimes, a platoon must halt to complete preparation and to ensure synchronization of friendly forces—particularly the timing of indirect fires. Once the assault element moves forward of the assault position, the assault continues. If the assault element stops or turns back, the element could sustain excessive casualties.

3-264. Infantry leaders employ all direct and indirect fire support means to destroy and suppress the enemy and sustain the momentum of attack. By carefully synchronizing the effects of indirect-fire systems and available CAS, leaders improve the likelihood of success. Fires are planned in series or groups to support maneuver against enemy forces on or near the geographical objective. As leaders shift artillery fires and obscurants from the objective to other targets, the assault element moves rapidly across the objective. The support element must not allow its suppressive fires to lapse. These fires isolate the objective and prevent the enemy from reinforcing or counterattacking. They also destroy escaping enemy forces and systems. The support element must avoid focusing exclusively on the objective. The support element must stay alert to threats moving into the vicinity of the objective.

Follow Through

3-265. Once an enemy is finished, actions by the platoon are not complete. Small remaining elements of the enemy may require the platoon to destroy them in detail. If all enemy forces are not neutralized, the platoon maintains constant pressure to keep them off balance while capitalizing on successful tactical actions. To *neutralize* is a tactical mission task in which a unit renders the enemy incapable of interfering with an operation (FM 3-90). Before starting to consolidate and reorganize platoons are vulnerable to enemy counterattack and indirect fire. The platoon should assault through and clear to an established LOA which is defensible and beyond the enemy's positions. Once there, the platoon must immediately establish a hasty defense and prepare for an enemy assault (counterattack).

3-266. Consolidate is the process of organizing and strengthening a newly captured position so it can be defended. Normally, the attacking unit tries to exploit its success regardless the type of assault. In some situations, however, the unit may have to consolidate its gains. Consolidate may vary from a rapid repositioning of forces and security elements on the objective, to a reorganization of the attacking force, to the organization and detailed improvement of positions for defensive missions.

3-267. Once enemy resistance on the objective has ceased, the platoon quickly consolidates to defend against a possible counterattack and prepares for follow-on missions. The platoon leader assesses and reports the status of their platoon in accordance with company SOP.

3-268. During consolidation, the platoon leader determines if their mounted elements and squads are positioned according to the original plan or to changes in the factors of METT-TC (I). Once the platoon is positioned to defend against an enemy counterattack, VCs and squad leaders create sector sketches and submit them to the platoon leader. This information allows the platoon leader to verify the location and orientation of elements when the situation does not allow them to walk the entire security perimeter. As a minimum, VCs and squad leaders provide the platoon leader with the location and sectors of their key weapons. The platoon leader must use the TLP to plan and prepare. They ensure the unit is ready to conduct the following actions that usually are part of consolidation and—

- Eliminate enemy resistance on the objective.
- Establish security beyond the objective by securing areas that may be the source of enemy direct fires or enemy artillery observation.
- Bring the Strykers forward into designated positions (which may require clearing wider breach lanes).
- Prepare for and assist the passage of follow-on forces (if required).
- Establish additional security measures, such as OPs and patrols.
- Continue to improve security by conducting other necessary defensive actions, which include EA development, direct fire planning, and BP preparation.
- Adjust FPFs and register targets along likely mounted and dismounted avenues of approach.
- Protect the obstacle reduction effort.
- Secure enemy detainees.
- Prepare for enemy counterattack.

3-269. Reorganization are all measures taken by the commander to maintain unit combat effectiveness or return it to a specified level of combat capability (see ATP 3-94.4), it is normally conducted concurrently with consolidation and comprises actions taken to prepare for follow-on operations.

3-270. During reorganization, leaders identify and report losses. VCs and squad leaders update their status reports. VCs provide information on their fuel status. The platoon sergeant consolidates the reports, updates all platoon status reports, and sends a consolidated platoon report to the company XO and 1SG and redistributes ammunition, equipment, and other mission-essential items. As with consolidation, the platoon leader must plan and prepare for reorganization as they conduct their TLP. Platoon leaders ensure the following actions are conducted:

- Reestablish chain of command.
- Provide essential medical treatment and evacuate casualties, as necessary.
- Treat and evacuate wounded detainees and process the remainder of detainees.
- Cross-level personnel and adjust task organization as required to support the next phase or mission.
- Conduct resupply operations, including rearming and refueling.
- Redistribute ammunition.
- Conduct required maintenance and recovery.
- Continue improvement of defensive positions, as necessary.
- Prepare for follow-on missions.

VARIATIONS OF THE ATTACK

3-271. Variations of the attack are ambush, counterattack, raid, and spoiling attack. (See ATP 3-21.8 and ATP 3-21.11 for more information.) The commander's intent and analysis of the mission variables of METT-TC (I) determines which variation of the attack to employ. Each variation of attack, except for a raid, can be conducted as either a hasty or a deliberate operation. As variations of an attack, they share many of the planning, preparation, and execution considerations of attack.

AMBUSH

3-272. An ambush is an ABF or other destructive means from concealed positions on a moving or temporarily halted enemy. An ambush stops, denies, or destroys enemy forces by maximizing the element of surprise. Ambushes can employ direct fire systems as well as other destructive means, such as command-detonated mines, indirect fires, and supporting nonlethal effects. They may include an assault to close with and destroy enemy forces. In an ambush, ground objectives do not have to be seized and held.

3-273. The three forms of ambush are point, area, and antiarmor ambush. In a point ambush, a unit deploys to attack a single kill zone. In an area ambush, a unit deploys into two or more related point ambushes. Units smaller than a platoon normally do not conduct an area ambush. In an antiarmor ambush, a unit focuses on moving or temporarily halted enemy armored vehicles.

COUNTERATTACK

3-274. A *counterattack* is a variation of attack by a defending force against an attacking enemy force (FM 3-90). The leader directs a counterattack to defeat or destroy enemy forces, exploit an enemy weakness such as an exposed flank, or to regain control of terrain and facilities after an enemy success. Units executing a counterattack can use all or part of the defending force, to include their reserve when given as a priority planning mission, against an enemy attacking force.

3-275. A unit conducts a counterattack to seize the initiative from the enemy through offensive action. A counterattacking force may maneuver to isolate and destroy a designated enemy force, or it can be an ABF into an EA to defeat or destroy an enemy force, restore the original position, or block an enemy penetration.

RAID

3-276. A raid is a limited-objective, deliberate operation entailing swift penetration of hostile terrain. A raid is not intended to hold territory; and it requires detailed intelligence, preparation, and planning. The Infantry platoon and squad conduct raids as part of a larger force to accomplish several missions, including the following:

- Capture prisoners, installations, or enemy materiel.
- Capture or destroy specific enemy C2 locations.
- Destroy enemy materiel or installations.
- Obtain information concerning enemy locations, dispositions, strength, intentions, or methods of operation.
- Confuse the enemy or disrupt the enemy's plans.
- Liberate friendly personnel.

SPOILING ATTACK

3-277. A *spoiling attack* is a variation of an attack employed against an enemy preparing for an attack (FM 3-90). The spoiling attack usually employs armored, attack helicopter, or fire support elements to attack enemy assembly positions in front of a friendly commander's main line of resistance or BPs.

3-278. The objective of a spoiling attack is to disrupt the enemy's offensive capabilities and timelines while destroying targeted enemy personnel and equipment, not to seize terrain and other physical objectives. Two conditions must be met to conduct a survivable spoiling attack:

- The spoiling attack's objective must be obtainable before the enemy is able to respond to the attack in a synchronized and coordinated manner.
- The force conducting the spoiling attack must be prevented from becoming overextended, fixed, or having insufficient mobility to break contact and/or withdraw.

SECTION VI – OPERATIONS DURING LIMITED VISIBILITY

3-279. Effective use of advanced optical sights and equipment during limited visibility attacks enhances the ability of squads and platoons to achieve surprise, hit targets, and cause panic in enemy formations. Advanced optics and equipment allow the Infantry Soldier to see farther and with greater clarity. Although advanced sights and night vision optics provide an advantage over most enemy formations, leaders should plan to encounter a peer or near peer force equipped with similar optics. Stryker Infantry rifle platoons and squads have—

- Night vision and thermal equipment mounted on the helmet of each Soldier.
- Weapon-mounted and handheld devices to identify and designate targets.
- Vision devices and thermal imagers on the Stryker for the driver and VC/gunner.

3-280. Night vision devices provide good visibility in all but pitch-black conditions but do somewhat limit the Soldier's field of view. Leaders must understand that night vision devices emit light at the eyecups, and many have an IR illuminator which can emit light that is visible to the enemy. Night vision devices are also visible to other night vision devices. Infantry platoons have night vision equipment mounted on the helmet of each Soldier and weapon-mounted and handheld devices to identify and designate targets.

3-281. With an experienced crew, the Stryker is as effective at night as during the day. It can be driven, and its weapon systems can be fired during limited visibility. The driver has an enhanced vision capability, and the VC has both an enhanced vision and thermal imaging capability. The Stryker is capable of accurately identifying its current location with the onboard GPS. The common operational picture allows leaders to always locate their subordinate units.

ADVANCED OPTICS AND EQUIPMENT

3-282. Stryker Infantry leaders and Soldiers have an increased ability to designate and control fires during limited visibility. There three types of advanced optics and

equipment for use in fire control are target designators, aiming lights, and target illuminators.

TARGET DESIGNATORS

3-283. Leaders can designate targets with greater precision using IR laser pointers to designate targets and sectors of fire and to concentrate fire. The leader lazes a target for Soldiers to place their fires. The Soldiers then use their weapon's aiming lights to engage the target.

AIMING LIGHTS

3-284. Soldiers with aiming lights have greater accuracy of fires during limited visibility. Each Soldier in the Infantry platoon is equipped with an aiming light for the individual weapon. Aiming lights work with the individual Soldier's helmet-mounted night vision goggles. It puts an IR light on the target at the point of aim.

TARGET ILLUMINATORS

3-285. Leaders should exercise caution when using illumination devices because enemy forces may be equipped with similar night vision devices. Leaders can designate larger targets using target illuminators. Target illuminators are essentially IR light sources that light the target, making it easier to acquire effectively. Leaders and Soldiers use the IR devices to identify enemy or friendly personnel and then engage targets using their aiming devices. Additional options are the use of IR illumination or tracer rounds.

ILLUMINATING ROUNDS

3-286. Illuminating rounds fired to burn on the ground can mark objectives. This helps the platoon orient on the objective but may adversely affect night vision devices. These rounds are typically delivered from the battalion mortar platoon.

3-287. Leaders plan but may not use illumination during limited visibility attacks. If the commander decides to use conventional illumination, they should not call for it until the assault is initiated or the attack is detected. It should be placed on several locations over a wide area to confuse the enemy as to the exact place of the attack. It should be placed beyond the objective to help assaulting Soldiers see and fire at withdrawing or counterattacking enemy soldiers.

3-288. The platoon leader, squad leaders, and VCs must develop SOPs and sound COAs to synchronize the employment of IR illumination devices, target designators, and aiming lights during their assault on the objective. These include using luminous tape or chemical lights to mark personnel and using weapons control restrictions. The platoon leader may use the following techniques to increase control during the assault:

- Use no flares, grenades, or smoke on the objective.
- Develop vehicle marking SOP.
- Use IR sources or reverse polarity thermal paper to mark front line trace of friendly forces.
- Use UASs.
- Use mortar or artillery rounds to orient attacking units.

- Use a base squad or fire team to pace and guide others.
- Reduce intervals between Soldiers and squads.

DIRECT AND INDIRECT FIRES

3-289. Like a daylight attack, indirect and direct fires are planned for a limited visibility attack but are not executed unless the platoon is detected or is ready to assault. Some weapons may fire before the attack and maintain a pattern to deceive the enemy or to help cover noise made by the platoon's movement. This is not done if it will disclose the attack.

SMOKE

3-290. Smoke further reduces the enemy's visibility; smoke is particularly effective at night when threat forces use their night vision devices. The FO fires smoke rounds close to or on enemy positions, so it does not restrict friendly movement or hinder the breaching of obstacles. Employing smoke on the objective during the assault may make it hard for assaulting Soldiers to find enemy fighting positions. If enough thermal sights are available, smoke on the objective may provide a decisive advantage for a well-trained platoon.

DELIBERATE BATTLEFIELD OBSCURATION

3-291. Battlefield obscuration missions can occur during both the offense and the defense and can be highly effective. Firing obscuration on enemy positions can degrade the vision of gunners and known or suspected OPs, preventing them from seeing or tracking targets and, thereby, reducing their effectiveness. When employed for its incendiary effect, white phosphorous (WP) can cause confusion and disorientation by degrading the enemy's C2 capabilities, while friendly units retain the ability to engage the enemy using thermal sights DA Form 5517 (*Standard Range Cards*). Enemy vehicles become silhouetted as they emerge from the obscuration. If obscuration employment is planned and executed correctly, this occurs as the enemy reaches the trigger line. (See ATP 3-11.50 for additional information.)

> ***Note.*** Phosphorous obscuration is used in instantaneous burst munitions (for example, artillery shells and mortar cartridges), with the showers of burning phosphorous particles being highly incendiary. The projectile has an incendiary producing effect and is ballistically similar to the high-explosive projectile. Normally, shell WP is employed for its incendiary effect. The projectile can also be used for screening, spotting, and signaling purposes.

PROJECTED OBSCURATION

3-292. Projected obscuration is an obscurant produced by artillery or mortar munitions, naval gunfire, helicopter-delivered rockets or, potentially, weapon grenade launchers. The advantage of using projected obscurant munitions is that they can place obscurants directly on the target without becoming decisively engaged. The disadvantage of projected obscuration is that most projected obscurant devices and munitions are lethal; they cannot be used on or near friendly forces. Ideal military applications for projected obscuration systems are to produce protection effects by obscuring enemy forces at

distant locations and to mark distant targets for destruction by lethal fire or protection obscuration to initiate protection screens forward of an attacking force.

3-293. Obscuration employed to screen friendly forces and their interests is delivered in areas between friendly and enemy forces or in a friendly assigned area to degrade enemy ground or aerial detection, observation, and engagement capabilities. Units use screening obscuration to attack enemy target acquisition and guidance systems by placing obscuration effects between the friendly unit and enemy sensors. There are three visibility categories for visual screening obscuration that the supported unit commander uses to establish the visibility requirement for an obscuration mission. The visibility categories include obscuration blanket, haze, and curtain. Smoke blankets, haze, and curtains may protect withdrawing columns, critical points, and routes. Commanders should take precautions to ensure that the smoke does not provide a screen for the enemy's advance.

Blanket

3-294. An obscuration blanket is a dense horizontal concentration of smoke covering an area of ground with visibility inside the concentration less than 50 meters. The blanket is established over and around friendly areas to protect them from air visual observation and visual precision bombing attacks. An obscuration blanket may hamper the operations of friendly forces by restricting movement and activity within the screen. It provides maximum concealment.

Obscuration Haze

3-295. An obscuration haze is obscuration placed over friendly areas to restrict adversary observation with fire, but not dense enough to disrupt friendly operations within the screen.

Obscuration Curtain

3-296. An obscuration curtain is a vertical development of smoke that reduces the enemy's ability to clearly identify what is occurring on the other side of the cloud. Visual recognition depends on the curtain width and obscurant density. It is placed between friendly and enemy positions to prevent or degrade enemy ground observation of friendly positions. Since the obscuration curtain is not placed directly on friendly troops, it will not hamper friendly operations.

Planning and Preparation Considerations

3-297. Obscuration missions are important functions for grenade launchers, M3 MAAWS, and mortars. Obscuration missions must be planned well and prepared for in advance so that the grenade launchers, M3 MAAWS or mortar carriers are loaded with enough obscuration rounds.

3-298. Atmospheric stability, wind velocity, and wind direction are the most important factors when planning target effects for obscuration and WP mortar rounds. The effects of atmospheric stability can determine whether projected obscuration is effective at all or, if effective, how much ammunition is needed. The considerations are:

- During unstable conditions, grenade, M3 MAAWS, and mortar obscuration rounds are almost ineffective, and the obscuration does not spread but often climbs straight up and quickly dissipates.
- Under stable conditions, grenade, M3 MAAWS, and mortar obscuration rounds are effective.
- The higher the humidity, the better the screening effects of obscuration rounds.

3-299. The terrain in the target area affects obscuration rounds. If the terrain in the target area is swampy, rain-soaked, or snow-covered, then burning obscuration rounds may not be effective. These rounds produce obscuration by ejecting felt wedges soaked in phosphorous. These wedges then burn on the ground, producing a dense, long-lasting cloud. If the wedges fall into mud, water, or snow, they can extinguish. Shallow water can reduce the obscuration produced by these rounds by as much as 50 percent.

3-300. The vehicle mounted grenade launchers can provide a short-term screening, incendiary, marking, and casualty producing effect. It produces a localized, instantaneous obscuration cloud by scattering burning WP particles. The 120-mm heavy mortar and 81-mm medium battalion mortar WP rounds produce a long lasting and wide area obscuration screen and can be used for incendiary effects, such as marking, obscuring, screening, and casualty producing. The 60-mm lightweight company mortar WP round can be used as a screening, signaling, and incendiary agent. All mortar obscuration rounds can be used as an aid in target location and navigation.

WARNING

Mortar smoke is produced from the chemical reaction of phosphorous, which burns at over 5,000 degrees Fahrenheit. Unless essential to mission success, dismounted Soldiers and vehicles should not move through the impact area until the smoke has dissipated, indicating the phosphorous has stopped burning. Exposure to phosphorous can cause casualties. WP sticks to and severely burns the skin. The smoke produced by phosphorous rounds can cause irritation to the eyes and the respiratory tract. Wheeled vehicle tires may melt and become inoperable

EMPLOYMENT CONSIDERATIONS

3-301. When used correctly, obscurants can significantly reduce the enemy's effectiveness both in daytime and at night. Use obscurants to reduce the ability of the enemy to deliver effective fires, to hamper hostile operations, and to deny the enemy information on friendly positions and maneuvers. Obscurant reduces the effectiveness of laser beams and inhibits electro-optical systems including some night vision devices. Obscuration can have a silhouetting effect. Attacking units should take precautions not to silhouette themselves when move through and near obscuration effects.

Obscuration

3-302. Obscurants can do the following:

- Defeat flash to bang ranging and restrict the enemy's counterfire program.
- Obscure adversary OPs and reduce their ability to provide accurate target location for enemy fire support assets.
- Obscure enemy direct fire weapons and lasers.
- Instill apprehension and increase enemy patrolling.
- Slow adversary vehicles to blackout speeds.
- Increase control problems by preventing effective visual signals and increasing radio traffic.
- Defeat night observation devices and reduce the capability of most IR devices.

Obscuration Curtain

3-303. Obscuration curtains can assist in many ways, including smoke in deceptive screens and flank screens, and in various scenarios, such as areas forward of the objective, gap crossings, and obstacle breaching.

Deceptive Screens

3-304. Smoke draws fire. Deceptive screens cause the enemy to disperse their fires and expend ammunition.

Flank Screen

3-305. Smoke may be used to screen exposed flanks.

Areas Forward of the Objective

3-306. Smoke helps the maneuver units consolidate on the objective unhindered by enemy ground observers.

Gap Crossing Operations

3-307. Screening the primary crossing site denies the enemy information. Deceptive screens deceive the enemy as to the exact location of the main crossing.

Obstacle Breaching

3-308. The enemy is denied the ability to observe breaching unit activities.

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Chapter 4
Defense

The Stryker Infantry rifle platoon conducts defensive operations to defeat enemy attacks, gain time, control key terrain, protect critical infrastructure, secure the population, and economize forces. Most importantly, the platoon sets conditions to transition to the offense. Defensive operations alone are not decisive unless combined with offensive operations to surprise the enemy, attack enemy weaknesses, and pursue or exploit enemy vulnerabilities. Even within the conduct of the Stryker Infantry rifle company defense, the Stryker Infantry rifle platoon exploits opportunities to conduct offensive actions within its assigned area to deprive the enemy of the initiative and create the conditions to assume the offense. Other reasons for conducting defensive operations include, retain decisive terrain, or deny a vital area to the enemy, attrition or fix the enemy as a prelude to the offense, counter surprise action by the enemy, or to increase the enemy's vulnerability by forcing the enemy commander to concentrate subordinate forces. This chapter covers the conduct of the defense, common defensive planning considerations, area defensive, retrograde, EA development, and fighting positions.

SECTION I – CONDUCT OF THE DEFENSE

4-1. The Stryker Infantry rifle platoon and squad occupy defensive positions. *Occupy* is a tactical mission task in which a unit moves into an area to control it without enemy opposition (FM 3-90). *Avenue of approach* is a path used by an attacking force leading to its objective or to key terrain. Avenues of approach exist in all domains (ADP 3-90). Mobility corridors are areas that are relatively free of obstacles where a force will be canalized due to terrain restrictions allowing military forces to capitalize on the principles of mass and speed. They are defined by the echelon they support, for instance, a company mobility corridor. While the offense is the most decisive type of combat operation, the defense is the stronger type. The inherent strength of the defense is the defender's ability to occupy positions before an attack and use the available time to improve those defenses.

4-2. To ensure the success of the defense, the platoon leader must understand the characteristics of the defense and apply TLP during planning, preparation, and execution of the operation. The following characteristics of the defense constitute the planning fundamentals for the Stryker Infantry rifle platoon.

CHARACTERISTICS OF THE DEFENSE

4-3. Successful defenses share the following characteristics: disruption, flexibility, maneuver, mass and concentration, operations in-depth, preparation, and security. Defenders use all available means to disrupt attacking enemy forces and isolate them

from mutual support to defeat them in detail. Defenders seek to increase their freedom of maneuver while denying it to attackers. As attacker losses increase, they falter, and the initiative shifts to the defenders. Defenders strike swiftly when the attackers reach their decisive point(s). Surprise and speed enable counterattacking forces to seize the initiative and overwhelm the attackers' concentration, flexibility, maneuver, and operations in-depth. (See FM 3-96 for additional information.)

DISRUPTION

4-4. The Stryker Infantry rifle platoon will disrupt the attackers' tempo and synchronization with actions designed to prevent them from massing combat power. Disruptive actions attempt to unhinge the enemy's preparations and, ultimately, their attacks. Methods include defeating or misdirecting enemy reconnaissance forces, breaking up their formations, isolating their units, and impeding an enemy force's ability to synchronize its forces. Disruption attacks the enemy's will to fight and their means of effective C2. The Stryker Infantry rifle platoon benefits by higher headquarters' efforts to achieve disruption in that they allow the platoon to defend against sequential enemy efforts rather than concentrated enemy forces.

FLEXIBILITY

4-5. The defense requires flexible plans. Planning focuses on preparation in-depth and ability to shift the main effort. Flexibility results from a detailed analysis of METT-TC (I), an understanding of the unit's purpose, and aggressive reconnaissance and surveillance. The platoon leader adds flexibility by designating multiple alternate and supplementary positions for both mounted and dismounted elements. The platoon leader must also design counterattack plans. Planned flexibility only works when leaders recognize and act on the emerging conditions that necessitate that planned flexibility. Defenders can have a flexible plan but if they do not act because they are wedded to the base plan, they still lose the opportunity to regain the offensive element of conventional warfare. Rehearsals are critical to an effective flexible defense.

MANEUVER

4-6. Successful defensive operations do not rely on fixed defensive positions, but maneuver within the assigned defensive sector Maneuver allows the Stryker Infantry rifle platoon to take full advantage of assigned sector and to mass and concentrate when desirable. Even in the defense there are elements of the offense. Maneuver, through movement in combination with fire, allows the defender to achieve a position of advantage over the enemy to accomplish the mission.

MASS AND CONCENTRATION

4-7. The platoon leader seeks to mass the effects of overwhelming combat power where they choose and shift it to support the main effort. To obtain an advantage at decisive points, defenders economize and accept risk in some areas; retain and, when necessary, reconstitute a reserve; and maneuver to gain local superiority at the point of decision. The platoon leader must remember that this concentration refers to combat power and its effects, not just to numbers of Soldiers and weapon systems. The commander accepts risk in some areas to mass effects elsewhere. Obstacles, security forces, and fires can assist in reducing risk.

OPERATIONS IN DEPTH

4-8. *Operations in depth* are the simultaneous application of combat power throughout an area of operations (ADP 3-90). Massing friendly fires at the leading edge of the enemy allows following enemy forces to adjust their positions or commit to the fight while out of contact. Instead, operations in depth improve the chances for success while minimizing friendly casualties. Quick, violent, and simultaneous action throughout the depth of the defender's sector can hurt, confuse, and even paralyze an enemy force just as it is most exposed and vulnerable. Such actions weaken the enemy's will and do not allow all early enemy successes to build the confidence of the enemy's Soldiers and leaders. In-depth planning prevents the enemy from gaining momentum in the attack. Synchronization of main and supporting efforts facilitate mission success. The platoon leader uses weapons ranges and the positioning of rifle squads and Strykers in primary, alternate, and subsequent BPs to create opportunities for depth. Adding indirect fire targets increases depth significantly.

PREPARATION

4-9. The defense has inherent strengths. The defender arrives in the assigned area (sector) before the attacker and uses the available time to prepare. These preparations multiply the defense's effectiveness. Preparations end only when the defenders retrograde or begin to fight. Until then, preparations are continuous. Preparations in-depth continues, even as the close fight begins.

4-10. During preparation the platoon leader studies the ground and selects positions that allow the massing of fires on likely avenues of approach. The platoon uses the available time to combine natural and man-made obstacles to canalize attacking forces into EAs. The platoon leader coordinates and rehearses actions on the ground, gaining intimate familiarity with the terrain, placement of security, OPs, and reconnaissance forces throughout the assigned area.

4-11. During the preparation of the defense, time management is critical. Actions the platoon leader can do to make effective use of the time available include the following:

- Start movement to designated hide positions or AAs.
- Refuel prior to movement into forward positions.
- Immediately prepare and issue WARNORDS upon receipt of higher WARNORD or OPORD.
- Issue early guidance for rehearsals and PCIs.
- Conduct leaders' reconnaissance of assigned positions prior to preparing the platoon OPORD.
- Understand and account for the nature of the terrain through deciding whether—
  - The defense will be centralized at the company or higher.
  - The defense is decentralized to individual platoon BPs or sectors.
- Start work immediately on known requirements such as battalion-directed obstacles.
- Understand and closely manage execution of allocated blade time for dig assets.
- Manage the rest plan to maximize usage of limited visibility hours.

- Issue clear guidance for priorities of work tied to the published timeline and ensure subordinate leaders execute them.
- Delegate requirements to subordinate leaders.
- Ensure continuous positional improvement is made for the duration of the defense.
- Ensure required maintenance is conducted.

SECURITY

4-12. Security operations prevent enemy intelligence, surveillance, and reconnaissance assets from determining the company locations, strengths, and weaknesses. These measures also provide early warning and continuously disrupt enemy attacks. The platoon leader leverages protection efforts to preserve combat power. These measures all contribute to the Stryker Infantry rifle platoon's security, and they can aid in inhibiting or defeating enemy reconnaissance operations.

4-13. The company or higher can assist in directing security efforts, for instance a screen line or counter reconnaissance effort. Regardless of external security efforts, the platoon leader is responsible for directing appropriate local security measures within the platoon's defensive sector, to identify and target enemy forces or deny them freedom of movement or opportunities to establish surveillance. These efforts might include local security patrols, listening posts, OPs, or combinations of any of these. Such efforts may also include indirect fires, active scanning, use of UASs, and maintaining directed levels of security.

DEFENSIVE OPERATIONS

4-14. A *defensive operation* is an operation to defeat an enemy attack, gain time, economize forces, and develop conditions favorable for offensive or stability operations (ADP 3-0). The three types of defensive operations are area defense, mobile defense, and retrograde. Each contains elements of the others and usually contains both static and dynamic aspects.

4-15. These three operations have significantly different concepts and pose significantly different problems. Each defensive operation is dealt with differently when planning and executing the defense. As with offensive operations, defensive operations can result in non-physical effects, such as those generated in the information environment-the aggregate of social, cultural, linguistic, psychological, technical, and physical factors that affect how humans and automated systems derive meaning from, act upon, and are impacted by information, including the individuals, organizations, and systems that collect, process, disseminate, or use information (see JP 3-04).

4-16. Stryker Infantry rifle platoons serve as the primary maneuver element or terrain controlling units for the company. They can defend within a sector or BP or serve as a security force or a reserve as part of the company's or battalion's coordinated defense. (See ATP 3-21.11 and ATP 3 21.21 for additional information.)

4-17. As part of a defense, the platoon can (although not all-inclusive) defend, delay, withdraw, counterattack, block, fix, turn, or perform security operations. The Stryker Infantry rifle platoon usually defends, as part of the company's defense in the main battle area.

AREA DEFENSE

4-18. An *area defense* is a type of defensive operation that concentrates on denying enemy forces access to designated terrain for a specific time rather than destroying the enemy outright (ADP 3-90). The Stryker Infantry rifle platoon is normally an element of a larger area defense. When conducting an area defense, the Stryker Infantry rifle platoon concentrates on denying enemy forces access to designated terrain for a specific time, limiting their freedom of maneuver, and channeling them into kill zones. When participating in a company or battalion's area defense, the Stryker platoon typically defends a BP or defends in sector. The platoon retains terrain that the attacker must control to advance.

4-19. The focus is on retaining terrain where the bulk of the defending force positions itself in mutually supporting prepared positions. The platoon maintains their positions and control the terrain between these positions. The leader uses reserve forces to reinforce fires, add depth, block penetrations, restore positions, counterattack to destroy enemy forces, or seize the initiative.

MOBILE DEFENSE

4-20. The *mobile defense* is a type of defensive operation that concentrates on the destruction or defeat of the enemy through a decisive attack by a striking force (ADP 3-90). Mobile defenses focus on defeating or destroying the enemy by allowing enemy forces to advance to a point where they are exposed to a decisive counterattack by the *striking force*—a dedicated counterattack force in a mobile defense constituted with the bulk of available combat power (ADP 3-90). The *fixing force*—a force designated to supplement the striking force by preventing the enemy from moving from a specific area for a specific time (ADP 3-90), holds attacking enemy in position to help channel attacking enemy forces into ambush areas, to retain areas from which to launch the striking force.

4-21. Typically, the striking force in a mobile defense consists of one-half to two-thirds of the defender's combat power. The striking force decisively engages the enemy as it becomes exposed in attempts to overcome the fixing force. The Stryker Infantry rifle platoon's mission as part of a larger force in a mobile defense are similar to the missions in area defense. The Stryker Infantry rifle platoon is generally part of the fixing force. However, the Stryker Infantry rifle platoon may also be part of the striking force due to its mobility. As part of the fixing force, the platoon defends within its assigned area, although the area might be larger than usual. Stryker Infantry rifle platoon primary weapon systems, both mounted and dismounted, engage the enemy from fixed positions within the area defense. (See ATP 3-21.11 for additional information.)

Note. Divisions and larger formations normally execute mobile defenses. In limited circumstances a BCT can execute a mobile defense unilaterally (see FM 3-90).

RETROGRADE

4-22. Retrogrades are approved by the higher headquarters. This includes delays, withdrawals, and retirements. Retrograde operations gain time, preserve forces, place the enemy in unfavorable positions, or avoid combat under undesirable conditions.

COMMON DEFENSIVE CONTROL MEASURES

4-23. The defending leader controls defensive operations by using control measures to provide the flexibility needed to respond to changes in the situation and allow the defender to concentrate combat power at the decisive point(s). Defensive control measures within the organization of forces of an assigned area includes designating the security area, the main battle area within the close area, with its associated forward edge of the battle area, and rear area with its echeloned support areas. The defender can use BPs and additional direct fire control and fire support coordination measures in addition to those control measures to synchronize the employment of combat power. (See FM 3-96 for additional information.)

SECURITY AREA

4-24. A *security area* is that area occupied by a unit's security elements and includes the areas of influence of those security elements (ADP 3-90). It may be located as necessary to the front, flanks, or rear of a protected unit, facility, or location. Forces in a security area furnish information on an enemy force; delay, deceive, and disrupt that enemy force; and conduct counterreconnaissance.

MAIN BATTLE AREA

4-25. The *main battle area* is the area where the commander intends to deploy the bulk of their unit to defeat an attacking enemy (FM 3-90). The defender's major advantage is the ability to select the ground on which the battle takes place. The defender positions subordinate forces in mutually supporting positions in-depth to absorb enemy penetrations.

BATTLE POSITIONS

4-26. A *battle position* is a defensive location oriented on a likely enemy avenue of approach (ADP 3-90). Units as large as a battalion task force and as small as squads or sections use BPs. They may occupy the topographical crest of a hill, a forward slope, a reverse slope, or a combination of all areas. The platoon leader selects positions based on terrain, enemy capabilities, and friendly capabilities. The leader can assign all or some subordinates BPs within the assigned area.

Types of Battle Positions

4-27. The five types of BPs are primary, alternate, supplementary, subsequent, and strong point. When assigning BPs within a company defense, the commander will designate the general location of primary BPs. Platoon leaders will designate exactly where primary BPs are located and designate alternate, supplementary, and subsequent positions as time and other resources permit, and if the terrain or situation requires them. (See figure 4-1.) Before assigning a strong point, the commander ensures that the strong point force has sufficient time and resources to construct the position.

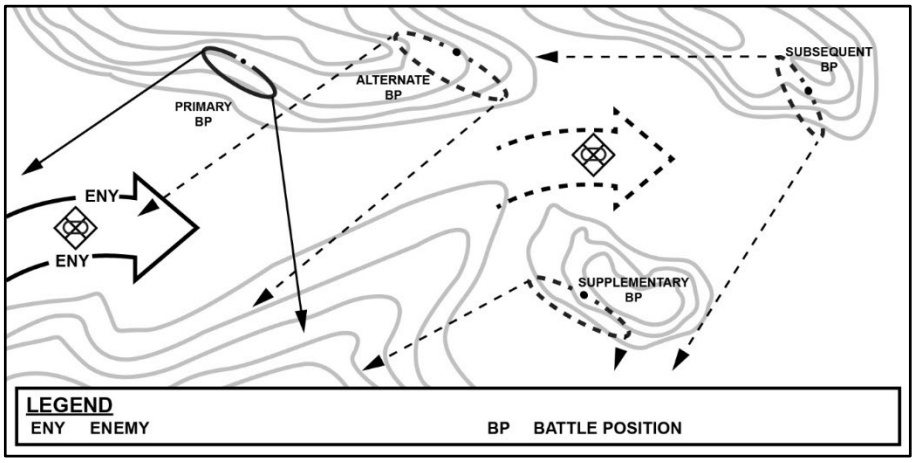


Figure 4-1. Primary, alternate, supplementary and subsequent battle positions

4-28. A *primary position* is the position that covers the enemy's most likely avenue of approach into the assigned area (FM 3-90). It is the best position from which to accomplish the defensive mission, such as the overwatch of an EA to prevent enemy penetration.

4-29. An *alternate position* is a defensive position that the commander assigns to a unit or weapon system for occupation when the primary position becomes untenable or unsuitable for carrying out the assigned task (FM 3-90). When established the alternate position covers the same area as the primary position. The correct positioning of an alternate position improves survivability by providing good cover and concealment for movement to the alternate position and back to the primary position. The position is located slightly to the front, flank, or rear of the primary BP. The position may be positioned forward of the primary BP during limited visibility operations. An alternate position is employed to supplement or support positions with weapons of limited range. During preparation, the platoon rehearses movement between primary and alternate positions while providing overwatch internally and under external overwatch. In execution, the platoon (or individual squads) may reposition back and forth between alternate and primary positions multiple times.

4-30. A *supplementary position* is a defensive position located within a unit's assigned area that provides the best sectors of fire and defensive terrain along an avenue of approach that is not the primary avenue where the enemy is expected to attack (FM 3-90). It is assigned when more than one avenue of approach runs into a unit's assigned area. For example, an avenue of approach into a platoon's assigned area from one of its flanks could require the company to direct its platoons to establish supplementary positions to allow the platoons to engage enemy forces traveling along an avenue. The platoon leader assigns supplementary positions when the platoon must cover more than one avenue of approach.

Note. Supplementary and subsequent positions are a way to achieve both flexibility and depth within the defense; however, they must be planned for with displacement criteria and then rehearsed. All leaders should know when and why Strykers, squads and/or the platoon will move to one of those positions.

4-31. A *subsequent position* is a position that a unit expects to move to during the course of battle (FM 3-90). Subsequent positions can have primary, alternate, and supplementary positions associated with them. Subsequent positions allow for planning in depth and are particularly useful when the platoon is defending in sector.

Note. The use of subsequent positions requires cross talk and coordination with adjacent units to ensure displacement to subsequent BPs does not create a gap in the defense.

4-32. A *strong point* is a heavily fortified battle position tied to a natural or reinforcing obstacle to create an anchor for the defense or to deny the enemy decisive or key terrain (ADP 3-90). A strong point implies retention of terrain to control key terrain and blocking, fixing, or canalizing enemy forces. Defending units require permission from the higher headquarters to withdraw from a strong point. All combat, maneuver enhancement, and sustainment assets within the strong point require fortified positions. In addition, extensive protective and tactical obstacles are required to provide an all-around defense. Primary positions cover the enemy's most likely avenue of approach into the area. (See figure 4-2.)

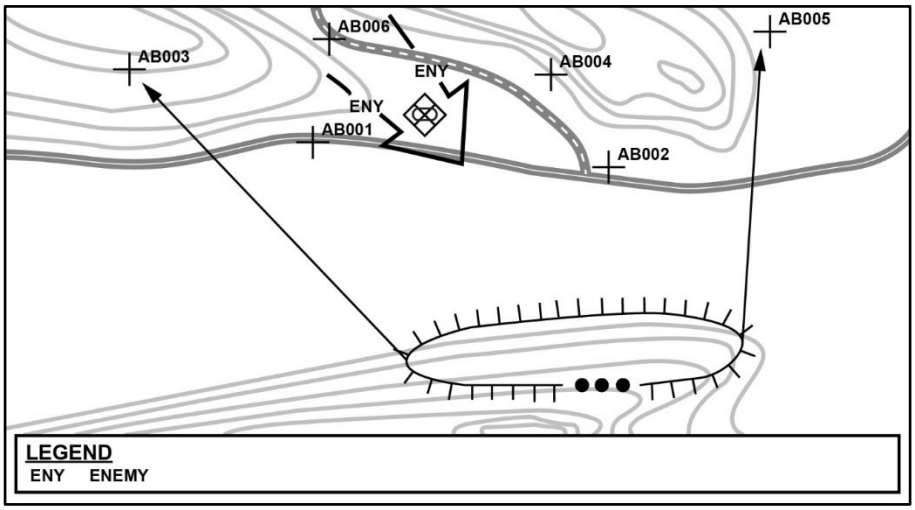


Figure 4-2. Platoon strong point battle position

Note. A minimally effective strong point typically requires a 1-day effort from an engineer unit the same size as the unit defending the strong point. (See ATP 3-21.11 for more information.)

Battle Position Covering Same Avenue of Approach

4-33. Rifle squads and Strykers are on the same BP covering the same avenue of approach (see figure 4-3). The platoon can defend against mounted and dismounted attacks and move rapidly to another position. Strykers remain on the same BP as the squads when the terrain provides good observation, fields of fire, and cover and concealment to both the squads and Strykers.

4-34. Employing both elements of the Stryker platoon on the same BP covering the same avenue of approach is the most conservative use of the platoon. Its primary advantages are that it provides increased security, facilitates the remounting of vehicles, and facilitates C2 functions because of the proximity of both the vehicle and squad elements on the same approach.

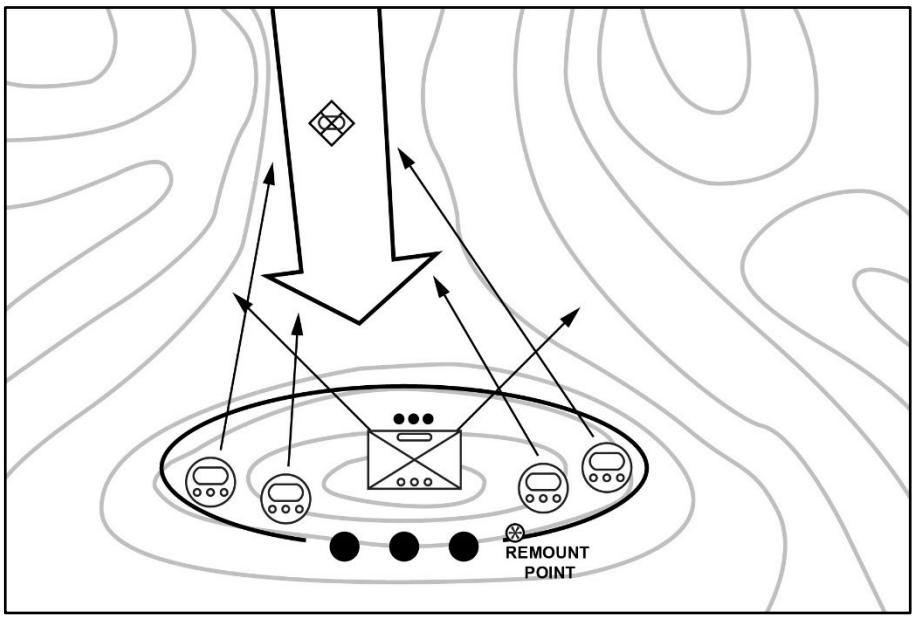


Figure 4-3. One battle position covering same avenue of approach

One Battle Position Covering Different Avenues of Approach

4-35. Rifle squads and Strykers are on the same BP covering different avenues of approach (see figure 4-4 on page 154). When the BP has two equally dangerous avenues of approach, one with long-range and one with short-range fields of fire, the Strykers position to take advantage of their long-range fires, while the rifle squads are placed for short-range fires. Each element is positioned on terrain best suited to its capabilities.

4-36. During reduced visibility, the platoon leader may direct repositioning of some rifle squad elements to provide local security for the Strykers. This method requires that plans be made to shift Strykers if a dismounted avenue of approach becomes the most dangerous avenue of approach.

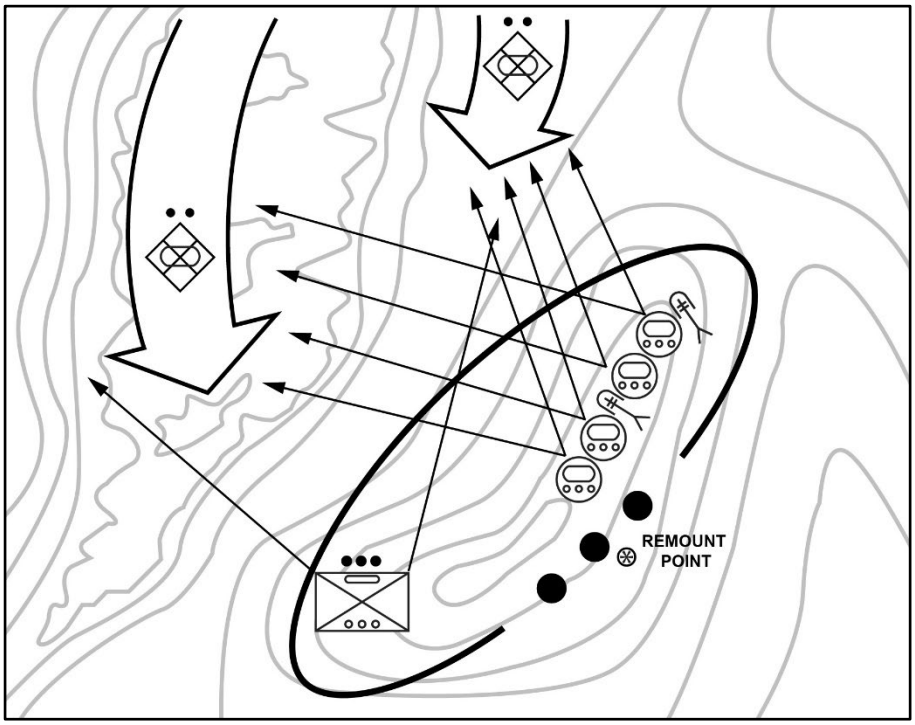


Figure 4-4. One battle position covering different avenues of approach

Two Battle Positions Covering Same Avenue of Approach

4-37. Rifle squads and Strykers are on different BPs covering the same avenue of approach (see figure 4-5). If on separate BPs, Strykers and rifle squads must fight in relation to each other when covering the same avenues of approach. Strykers can provide the rifle squads supporting fires from their primary or alternate positions. Both elements are positioned to engage enemy forces on the same avenue of approach but at different ranges and direction.

4-38. The dismounted squads must be able to conduct operations without the support of the Strykers. The platoon leader must consider the amount of weapons, ammunition, and equipment that the dismounted squads can carry.

4-39. The platoon leader may employ the Strykers well forward to perform a specific task and to provide more depth to the defensive position. A section with a squad can also conduct security operations. Normally, they do so under the direction and control of the company commander.

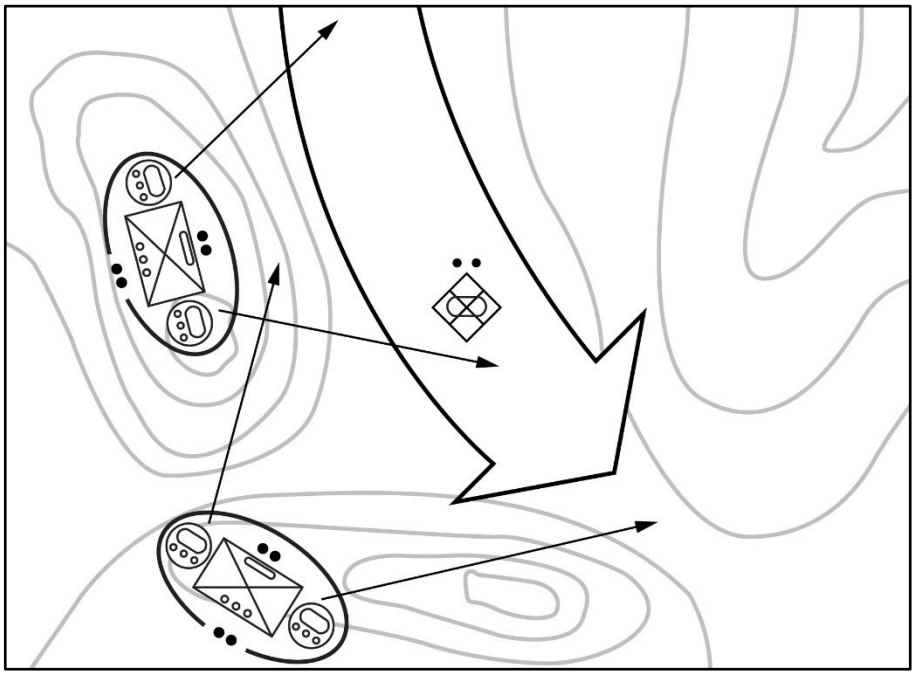


Figure 4-5. Two battle positions covering same avenues of approach

Two Battle Positions Covering Different Avenues of Approach

4-40. Strykers and dismounted squads may be on different BPs covering different avenues of approach. If the Strykers and rifle squads are fighting in relationship to each other, the platoon leader will likely locate with the dismounted squads and the platoon sergeant will locate with the mounted element. This technique may be effective when—

- Large numbers of dismounted Soldiers are required to hold a position.
- Primary positions for the dismounted squads do not allow adequate fields of fire for the Strykers.
- Dismounted squads occupy severely restricted terrain that the Strykers cannot traverse.
- Both a mounted and dismounted avenue of approach must be defended, and the terrain cannot be defended from the same BP.

SECTOR

4-41. A *sector* is an operational area assigned to a unit in the defense that has rear and lateral boundaries and interlocking fires (FM 3-0). The non-bounded side is open towards the enemy. A higher echelon headquarters uses fire support coordination and maneuver control measures such as BPs and trigger lines to synchronize subordinate units. Higher headquarters are responsible for synchronizing operations forward of the main battle and security areas or coordinated fire line. Units use sectors to synchronize and coordinate EAs and allow for mutually supporting fields of fire, which do not require coordination between adjacent units. Defensive sectors are typically deep

enough to allow defending units to establish multiple subsequent BPs within them, creating defensive depth. Units treat everything behind the forward line of own troops as an area of operations. Sectors can be further subdivided as needed. (See FM 3-90 for more information on sectors.)

FORWARD EDGE OF THE BATTLE AREA

4-42. The *forward edge of the battle area* is the foremost limits of a series of areas in which ground combat units are deployed to coordinate fire support, the positioning of forces, or the maneuver of units, excluding areas in which covering or screening forces are operating (JP 3-09.3). When the defender defends forward in an area defense the unit employs the majority of its combat forces near the forward edge of the battle area.

FORWARD LINE OF OWN TROOPS

4-43. *The forward line of own troops* is a line that indicates the most forward positions of friendly forces in any kind of military operation at a specific time (FM 3-90). The forward line of own troops normally identifies the forward location of covering or screening forces. In the defense, it may be beyond, at, or short of the forward edge of the battle area. It does not apply to small, long-range reconnaissance assets and similar stay-behind forces. Friendly forces forward of the forward line of own troops may have a restrictive fire support coordination measure, such as a restrictive fire area, placed around them to prevent fratricide incidents.

4-44. The platoon leader should use the minimum control measures required to complete their missions while providing subordinates the flexibility needed to respond to changes in the situation. Some additional common defensive control measures include—

- EA.
- BHL.
- Named area of interest (NAI).
- Target areas of interest.
- Fire support coordination measures.
- Direct fire control measures.
- Disengagement line.
- Phase lines.
- All routes for platoon and company with preplanned coordination points.
- Passage lanes.
- Obstacle groups and who is responsible for them.
- CCPs and ambulance exchange points.
- Planned hide positions and tactical AAs.

TECHNIQUES OF CONDUCTING AN AREA DEFENSE

4-45. The Stryker Infantry rifle platoon can conduct an area defense using one of three basic techniques: defend a BP, defend a sector, and defend a strong point. Paragraphs 4-46 to 4-50 describe each technique.

DEFEND A BATTLE POSITION

4-46. A BP is a general location and orientation of forces on the ground, from which units defend. The techniques allow units to concentrate fires or place units in an

advantageous position for a counterattack. The five types of BPs are primary, alternate, supplementary, subsequent, and strong point (see BPs for definitions). The purpose for defending a BP includes:

- Destroy an enemy force in the EA.
- Block an enemy avenue of approach.
- Control key or decisive terrain.
- Fix the enemy force to allow another unit to maneuver.

4-47. The Stryker Infantry rifle platoon can maneuver in and outside of the BP as necessary to adjust fires or to seize opportunities for offensive operations within the commander's intent. When the platoon leader maneuvers outside of the BP, the company commander must be notified.

DEFEND A SECTOR

4-48. A defensive sector is an area designated by boundaries that define where units operate and the terrain for which it is responsible. A *sector* is an operational area assigned to a unit in the defense that has rear and lateral boundaries and interlocking fires (FM 3-0). This technique allows the unit to maintain flank contact and security and ensures unity of effort within the scheme of maneuver. *Unity of effort* is the coordination and cooperation toward common objectives, even if the participants are not necessarily part of the same command or organization, which is the product of successful unified action (JP 1, Volume 2). Sector boundaries never split an avenue of approach. Sectors are oriented on avenues of approach and are used when the commander wishes to allow maximum freedom of action. Platoons will start in their primary BPs and displace to supplementary or subsequent BPs in accordance with established displacement criteria. Critical to a defense in sector is that defending units ensure they stay tied in with adjacent units when they displace in order to prevent gaps from emerging.

DEFEND A STRONG POINT

4-49. Defending a strong point implies retention of terrain with the purpose of stopping or redirecting enemy formations. Defense of a strong point is an uncommon mission for the Stryker Infantry rifle platoon. Strong points sacrifice the mobility of the Stryker and its weapon systems.

4-50. Defending strong points requires extensive engineer support to create obstacles and increase survivability efforts. This includes providing all assets overhead protection, trenches, and other protective construction using both natural and man-made terrain. The company prepares a strong point for all around defense and incorporates the Stryker Infantry rifle platoon into the defensive operation.

TACTICAL FRAMEWORK OF THE DEFENSE

4-51. As part of a larger element, the Stryker Infantry rifle platoon conducts defensive operations within several integrated and overlapping activities. The Stryker Infantry rifle platoon provides the company commander with flexibility to integrate mounted and dismounted assets into the defense. The company may conduct perimeter defense operations along with offensive and patrolling operations.

4-52. As in the offense, defensive operations are typically executed in a four-step tactical framework. The framework is for discussion purposes only and is not the only way of executing defensive operations. Follow through is usually a sequel or branch to the plan based upon the situation. These steps may not occur sequentially; they may occur simultaneously. (See ATP 3-21.11 for more information.) These steps for the platoon are:

- Find the enemy.
  - Intelligence drives fire and maneuver.
  - May occur in the higher echelon's security area by forces external to the platoon, or it may occur when the platoon's own security elements first identify enemy forces with an UAS, optics, or other long-range sensors.
- Fix the enemy.
  - Prevent repositioning or reinforcement making them easier to destroy.
  - Remove enemy options making them easier to destroy.
  - Use natural or reinforcing obstacles, direct and indirect fires, or use both to fix enemy forces in a position that provides relative advantage to the defending force.
- Finish the enemy.
  - Mass available combat power in the main battle area to accomplish the mission.
  - Mass the effects of direct and indirect fires to destroy enemy forces once enemy forces are fixed in positions within planned EAs.
  - Displace to additional BPs for survivability or in response to continued enemy maneuver, as necessary.
- Follow through.
  - Plan to complete the destruction of enemy forces through fires or a counterattack.
  - Consolidate and reorganize within defensive positions and transition to a follow-on mission, as necessary.

SECTION II – COMMON DEFENSIVE PLANNING CONSIDERATIONS

4-53. The planning phase of a defensive operation is a continuous process that begins when the leader receives the WARNORD, OPORD, or FRAGORD. Planning may continue as the platoon gains more information from higher headquarters, reconnaissance, and rehearsals. Some important planning considerations for the platoon leader are—

- Placement of BPs.
- Massing of direct fires in the EA.
- Channeling of the enemy into the platoon's EA using existing and man-made obstacles.

- Integration of combined arms in the defense.
- Placement of Infantry squads and Strykers, ensuring fratricide avoidance measures are in place.

4-54. Planning a defensive operation is a complex effort requiring detailed planning and extensive coordination. In the defense, synchronizing the effects of the Stryker Infantry rifle platoon's capabilities enables the platoon leader to apply overwhelming combat power against selected advancing enemy forces to disrupt the enemy's plan. As an operation evolves, the platoon leader must be prepared to shift the plan to main and supporting efforts, as necessary. Warfighting functions provide the leader a means and structure for planning, preparing, executing, and assessing the defense. The following paragraphs discuss the synchronization and coordination of activities within each warfighting function critical to the success of the Stryker Infantry rifle platoon and squad. Additionally, this section addresses environmental planning considerations in the defense. (See FM 3-96 for additional information.)

COMMAND AND CONTROL

4-55. The platoon's leaders will locate where they can best provide C2 to subordinate units and Soldiers. Understanding the enemy's likely scheme of maneuver allows the platoon leader to select those decisive point(s) where best to position leaders and key weapons to mass their effects on enemy forces.

4-56. The platoon leader ensures that their defensive plans are compatible and that control measures, remount points, contact points and phase lines, are sufficient for when assigning sector. The defensive plan must address what happens when it succeeds, and the opportunity exists to transition from defense to offense. Task, purpose, and leader assignments are designated by the platoon leader to C2 the DP, main effort, and supporting efforts. For example, the designated mounted leader will control actions at the DP.

4-57. When a platoon command post is established within the defense, it is located where the platoon leader determines it is best able to provide communications with higher, lower, adjacent, and supporting units; to assist the platoon leader in planning, coordinating, and issuing platoon orders, and to support continuous operations by the platoon. The command post will receive and consolidate internal reports and provide reports to the company command post through digital or analogue means. In static positions (for example, a BP[s]), a stationary command post location may be designated by the platoon leader where field expedient antennas, land wire, or a combination of both are employed to allow communications to be established. Such communications are established with company, subordinate static units, OPs, patrols, or combinations of such units or dispositions within the platoon's assigned area. Accurate PACE plans are crucial to a leader's situational awareness. The PACE plan designates the order in which a leader will move through available communications systems until contact can be established with the desired element.

MOVEMENT AND MANEUVER

4-58. Movement and maneuver considerations involve the movement and employment of direct fire weapons on the battlefield. In the defense, weapons positioning is critical to the Stryker Infantry rifle platoon's and squads' success. Weapons positioning enables

the platoon to mass fires at critical points on the battlefield, EAs, and shift fires as necessary. The platoon leader exploits the strengths of the weapon systems while minimizing the platoon's exposure to enemy observation and fires.

4-59. In conjunction with EA development (see section III for more information on EA development) the platoon leader designs a direct fire plan that allows them to mass the platoon's fires and then shift, distribute, or focus those fires at critical points within the EA. The direct fire plan describes the way the platoon leader envisions the fight unfolding with the Infantry squads and Strykers, whether for survivability or to better distribute fires throughout the EA. The platoon leader should prepare an immediate plan for direct fires and quickly integrate that initial fire plan with both indirect fires and the obstacle effort.

DEPTH AND DISPERSION

4-60. Dispersing positions laterally and in depth helps protect the force from enemy observation and fires. Platoon positions are established in depth, allowing sufficient maneuver space within each position for in-depth placement of vehicle weapon systems and dismounted Infantry elements. The platoon achieves depth outside the primary position by planning alternate and subsequent BPs. Sectors of fire are established to distribute and shift fires throughout the EA. Once the direct fire plan is determined, Stryker and dismounted Infantry fighting positions are constructed in a manner to support the fire support and obstacle plan. Additional considerations when determining placement of weapons systems and fighting positions are the following:

- Platoon BPs should be large enough to allow squads and the mounted element to individually reposition to alternate positions within the overall BP.
- AT weapon system missiles are best employed at 2,500 meters (dismounted and mounted).
- Infantry squads can employ the platoon's M3 MAAWS in a variety of ways, depending on the type of ammunition used to include:
  - HE ammunitions can be utilized against dismounted Infantry up to 1,200 meters away, either with direct impact or airburst.
  - Area defense munition flechette rounds can be utilized in emergency situations against assaulting Infantry at 100 meters or less.
  - HE AT rounds can engage both light and heavily armored vehicles at a range of 300 to 700 meters.
  - Obscuration smoke and illumination rounds provide additional capabilities.
- Strykers are best employed from flank positions and in positions from which they can destroy lightly armored vehicles and Infantry, usually at a range of 2,500 meters or less.
- Infantry squads should be positioned on reverse-slopes or in restricted terrain where they cannot be engaged before they fire on the enemy.
- Squads and teams can disable or destroy lightly armored vehicles with AT4s, usually at a range of 400 meters or less.
- Infantry squads can retain or deny key terrain if employed in strong points or well-covered positions.
- Infantry squads can protect obstacles or flank positions that are tied into severely restricted terrain.

FLANK POSITIONS

4-61. Flank positions enable a defending force to fire on an attacking force moving parallel to the defender's forces. A flank position provides the defender with a larger and more vulnerable target while leaving the attacker unsure of the defense's location. Major considerations for employment of a flank position are the defender's ability to secure the flank and the ability to achieve surprise by remaining undetected. Flank positions are reliant upon an effective obstacle plan to slow, canalize or disrupt enemy forces to provide defending forces sufficient engagement time to destroy the threat.

SURVIVABILITY

4-62. Survivability positions are prepared in defensive positions or strong points to protect vehicles, weapon systems, and the Infantry squads. The platoon leader should also plan to dig in pre-stock ammunition, platoon CP, and platoon CCP. Dismounted positions can be dug in and reinforced with overhead cover (OHC) to provide Infantry squads and crew-served weapons with protection against fragmentation. Vehicle fighting positions are constructed with hull-defilade firing and hide positions. However, construction of vehicle fighting positions usually requires external engineer assets that are allocated for a specific amount of time or a fixed number of positions to be dug. (See section IV for more information on the construction of vehicle fighting positions.) Before digging, the platoon should first plan to incorporate the natural terrain, including intervisibility lines or other terrain into defensive positions. The platoon leader must understand where best to use scarce dig assets and recognize the tendency that once units are in prepared defensive positions, they often want to stay in those positions. The platoon leader should develop and issue clear displacement criteria and rehearse the plan for that displacement to ensure the platoon is not fixed in position and unable to displace.

DISPLACEMENT CRITERIA

4-63. Displacement criteria define triggers for planned withdrawals, passage of lines, or reconnaissance handovers (battle handover for security operations) between units. As with engagement, disengagement, and bypass criteria, the conditions and parameters set in displacement criteria integrate the leader's intent with tactical feasibility. Conditions and parameters are event-driven, time-driven, or enemy-driven. Displacement criteria conditions and parameters are key rehearsal events due to the criticality of identifying the triggers to anticipate during the mission. An example of event-driven conditions and parameters are associated PIRs being met, enemy contact not expected in the area, and observed NAI or avenue of approach denied to the enemy. Time-driven conditions and parameters ensure the time triggers are met (for example, latest time information is of value). An OP compromised by threat or local civilian contact is a threat-driven condition. Failure to dictate conditions and parameters of displacement, nested within the higher scheme of maneuver, results in mission failure.

DISENGAGEMENT CRITERIA

4-64. *Disengagement criteria* are the protocols that specify those circumstances where a friendly force must break contact with the direct fire and observed indirect fire to avoid becoming decisively engaged or to preserve friendly combat power (FM 3-90). It dictates to subordinate elements the circumstances, in which they will displace to alternate, supplementary, or subsequent positions. The criteria are tied to an enemy

action, such as an enemy unit advancing past a certain phase line. The unit should be able to recognize indicators of enemy action early enough to execute the disengagement prior to being fixed in position by enemy fires. Criteria also are linked to the friendly situation. For example, the criteria might depend on whether artillery or an overwatch element can engage the enemy. Disengagement criteria are developed for each specific situation.

DIRECT FIRE SUPPRESSION

4-65. The attacking enemy force must not be allowed to bring direct and indirect fires to bear on a disengaging friendly force. Direct fires from the base-of-fire element, employed to suppress or disrupt the enemy, are the most effective way to facilitate disengagement. The platoon may receive base of direct fire support from another element in the company, but in most cases, the platoon establishes its own base-of-fire element. Having an internal base of fire requires the platoon leader to sequence the displacement of forces.

INDIRECT FIRES AND OBSCURANTS

4-66. Artillery or mortar fires assist the platoon during displacement, disengagement, or other maneuver during the defense. Suppressive fires slow the enemy and cause the enemy to seek cover. Smoke obscures the enemy's vision, slows the progress, or screens the defender's movement out of the BP or along the displacement route.

OBSTACLE INTEGRATION

4-67. Obstacle efforts create opportunities to engage enemy forces with direct and indirect fires. Leaders should plan to mass fires on the places that obstacles will force enemy forces to go, not on the obstacles themselves. Ideally, obstacles should be positioned far enough away from the defender that enemy elements could be engaged on the far side of the obstacle while keeping the defender out of range of the enemy's massed direct fires. One or two well-constructed obstacles are more valuable than more obstacles constructed to marginal standards.

COUNTERMOBILITY

4-68. *Countermobility* is a set of combined arms activities that use or enhance the effects of natural and man-made obstacles to prevent the enemy freedom of movement and maneuver (ATP 3-90.8). To succeed in the defense, defenders reinforce the terrain to prevent the enemy from gaining a position of advantage. Reinforcing the terrain focuses on existing and reinforcing obstacles. The platoon leader integrates obstacles into both the direct and indirect fire plans. An *obstacle* is any barrier designed or employed to disrupt, fix, turn, or block the movement and maneuver, and to impose additional losses in personnel, time, and equipment (JP 3-15). (See table 4-1 on pages 163 and 164 for more information on obstacle effects.) In support of defensive operations, countermobility activities use tactical obstacles to shape engagements and maximize the effects of fires and use protective obstacles to provide close-in protection around defensive positions.

Table 4-1. Tactical obstacle effects

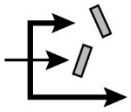
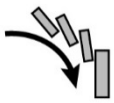
APPLICATION	*DESCRIPTION*	*PURPOSE*	*FIRES AND OBSTACLES MUST:*	*OBSTACLE CHARACTERISTICS*
DISRUPT 	• The arrows indicate the direction of enemy advance. • The length of the arrows indicate where the enemy is slowed or allowed to bypass.	• Breakup enemy formations. • Interrupt the enemy's timetable and C2. • Cause premature commitment of breach assets. • Cause the enemy to piecemeal his attack.	• Cause the enemy to deploy early. • Slow part of the enemy formation while allowing part to advance unimpacted.	• Do not require extensive resources. • Difficult to detect at long range.
TURN 	• The heel of the arrow is the anchor point. • The direction of the arrow indicates the desired direction of the turn.	• Force the enemy to move in the direction desired by the friendly commander.	• Prevent the enemy from bypassing or breaching the obstacle belt. • Maintain pressure on the enemy force throughout the turn. • Mass direct and indirect fires at the anchor point of the turn.	• Tie into impassable terrain at the anchor point. • Consist of obstacles in depth. • Provide a subtle orientation relative to the enemy's approach.

Table 4-1. Tactical obstacle effects (continued)

APPLICATION	*DESCRIPTION*	*PURPOSE*	*FIRES AND OBSTACLES MUST:*	*OBSTACLE CHARACTERISTICS*
FIX 	• The arrow indicates the direction of enemy advance. • The irregular part of the arrow indicates where enemy advance is slowed by obstacles.	• Slow an attacker within an area so the attacker can be destroyed. • Generate the time necessary for the friendly force to disengage.	• Cause the enemy to deploy into attack formation before encountering the obstacles. • Allow the enemy to advance slowly in an EA or sector. • Make the enemy fight in multiple directions once the enemy is in the EA or sector.	• Arrayed in depth. • Span the entire width of the avenue of approach. • Must not make the terrain appear impenetrable.
BLOCK 	• The vertical line indicates the limit of enemy advance and where the obstacle ties into severely restricted terrain. • The horizontal line shows the depth of the obstacle effort.	• Stop an attacker along a specific avenue of approach. • Prevent an attacker from passing through an sector or EA. • Stop the enemy from using an avenue of approach and force the enemy to use another avenue of approach.	• Prevent the enemy from bypassing or penetrating through the belt. • Stop the enemy's advance. • Destroy all enemy breach efforts.	• Must tie into impassable terrain. • Consistent of complex obstacles. • Defeat the enemy's mounted and dismounted breaching effort.
Direction of enemy attack →				

Legend: C2—command and control; EA—engagement area

Existing Obstacles

4-69. Existing obstacles are inherent aspects of the terrain that impede movement and maneuver. Existing obstacles may be natural (rivers, mountains, wooded areas) or man-made (enemy explosive and nonexplosive obstacles and structures, including bridges, canals, railroads, and their associated embankments). Although not specifically designed or intended as an obstacle, structures may pose as an obstacle based on existing characteristics or altered characteristics that result from combat operations or a catastrophic event. Structures, such as bridges and overpasses, present an inherent impediment to the enemy's mobility based on weight and clearance restrictions. Existing obstacles are shown on the combined obstacle overlay developed as part of the IPOE.

Reinforcing Obstacles

4-70. Reinforcing obstacles are those man-made obstacles that strengthen existing terrain to achieve a desired effect. For U.S. Forces, reinforcing obstacles on land consist of land mines, networked munitions, and demolition and constructed obstacles. The basic employment principles for reinforcing obstacles are—

- Supporting the maneuver commander's plan.
- Integrating with observation and fires.
- Integrating with other obstacles.
- Employing in-depth.
- Employing for surprise.

4-71. Land mines. A land mine is a munition on or near the ground or other surface area that is designed to explode by the presence, proximity, or contact of a person or vehicle. Land mines can be employed in quantities within a specific area to form a minefield, or they can be used individually to reinforce nonexplosive obstacles. Land mines can be further qualified as antivehicle or antipersonnel. They can be air-, artillery-, or ground delivered. Land mines fall into two general categories:

- Persistent mines are—
  - Land mines, other than nuclear or chemical, that are not designed to self-destruct.
  - Designed to be emplaced by hand or mechanical means and can be buried or surface emplaced.
- Nonpersistent mines—
  - Remain active for a predetermined period of time until self-destruction, self-neutralization, or self-deactivation renders the mine inactive.
  - Can self-destruct or self-deactivate.

Note. As of 31 January 2020, U.S. Forces are not authorized to employ persistent or nondetectable land mines.

4-72. Networked munitions are remotely controlled, interconnected, weapon systems designed to provide rapidly emplaced ground-based countermobility and protection capability through scalable application of lethal and nonlethal means (see JP 3-15).

4-73. Demolition obstacles are created using explosives. Examples include bridge or other structure demolition (rubble) and road craters. (See ATP 3-90.8, appendix B for more information on demolition obstacles.)

4-74. Constructed obstacles are created without the direct use of explosives. Examples include wire obstacles, antivehicle ditches, or similar construction that involves the use of heavy equipment.

4-75. Reinforcing obstacles are categorized as tactical and protective. They are employed as part of the movement and maneuver and protection warfighting functions. (See ATP 3-90.8 for additional information.) In the defense, leaders use reinforcing obstacles to—

- Slow the enemy's advance to give the platoon or squad more time to mass fires on the enemy.
- Protect defending units.
- Canalize the enemy into places where they can easily be engaged.
- Separate the enemy's armor from its infantry.
- Strengthen areas that are lightly defended.

Tactical Obstacles

4-76. The primary purposes of tactical obstacles are to shape enemy maneuver and to maximize the effects of fires. Tactical obstacles directly affect the ability of a force to move, mass, and reinforce; therefore, they affect the tempo of operations. Units integrate obstacles into the scheme of maneuver to enhance the effects of fires. Existing obstacles that a unit reinforces and integrates with observation and fires may become tactical obstacles. The types of tactical obstacles are clearly distinguished by the differences in execution criteria. The three types are—

- Directed obstacles.
- Situational obstacles.
- Reserved obstacles.

Directed Obstacle

4-77. A *directed obstacle* is an obstacle directed by a higher commander as a specified task to a subordinate unit (ATP 3-90.8). The higher commander directs and resources these obstacles as specified tasks to a subordinate unit. Units plan, prepare, and execute directed obstacles during the preparation of the assigned areas. Most tactical obstacles are directed obstacles. Directed obstacles will typically have some level of engineer support in emplacement; however, a platoon may be tasked to emplace one without engineer support. A directed obstacle should be emplaced immediately to conserve time to develop a company or platoon obstacle plan.

Situational Obstacle

4-78. A *situational obstacle* is an obstacle that a unit plans and possibly prepares prior to starting an operation but does not execute unless specific criteria are met (ATP 3-90.8). Situational obstacles are preplanned obstacles as part of a targeted area of interest. They provide flexibility for emplacing tactical obstacles based on battlefield

development. The following should be considered in addition to the obstacle employment principles:

- Identifying the need for a situational obstacle.
- Planning for the appropriate resources.
- Planning for the obstacle.
- Identifying obstacle execution triggers.
- Withholding the execution of the obstacle until needed.

Note. The U.S. ban on persistent land mines has resulted in a greater reliance on scatterable mines to fulfill tactical obstacle requirements. The limited duration of scatterable mines (after their activation) makes them the most suitable for use as situational obstacles.

Reserved Obstacle

4-79. *Reserved obstacles* are obstacles of any type, for which the commander restricts execution authority (ATP 3-90.8). The commander specifies the unit that is responsible for preparing, guarding, and executing reserved-obstacle emplacement. Units execute them only on command of the designating commander or based on specific criteria identified by the commander. The purpose of a reserved obstacle is to retain control over the mobility along an avenue of approach. Commanders use reserved obstacles when failure to maintain control over the mobility along an avenue of approach will have disastrous effects on the current battle or future operations.

Protective Obstacles

4-80. Protective obstacles are employed to protect people, equipment, supplies, and facilities against threats. For best effect, protective obstacles are tied into existing or tactical reinforcing obstacles. The platoon can use mines and wire, or it might receive additional materiel from the company, for example, Classes IV or V. Protective obstacles have two primary roles, defense, and security:

Defense

4-81. Protective obstacles provide friendly forces with local, close-in protection. They prevent the enemy from delivering a surprise assault from areas close to a position and are integrated with FPFs to defeat the final assault of the enemy. Protective obstacles are employed to defeat mounted and dismounted threats. Protective obstacles are generally built in and around defensive positions. While they will limit the enemy's mobility, they will have no impact on the threat force's use of direct fires.

Security

4-82. Protective obstacles are used to prevent or mitigate hostile actions against friendly forces and critical fixed sites (such as air facilities, bases or base camps, critical infrastructure, and sustainment sites). Protective obstacles used for security produce scalable effects that range from lethal to nonlethal and are appropriate for the situation based on the ROE.

4-83. When planning protective obstacles—

- The platoon leader evaluates the potential threat to the platoon's position and then, employs the best system for that threat.
- Protective obstacles usually are located beyond hand grenade distance (40 to 100 meters) from the Soldier's fighting position and may extend to 300 to 500 meters to tie into tactical obstacles and existing restricted terrain.
- The platoon leader should plan protective obstacles in depth and try to maximize the range of the platoon's weapons, as is performed with tactical obstacles.
- The platoon leader considers preparation time, the burden on the logistical system, the Soldiers' loads, and the risk of loss of surprise.

4-84. Protective obstacles are key enablers to survivability operations, and physical security. Units on the move rely on rapidly emplaced protective obstacles that units can quickly recover, deactivate, or destroy. Stationary units continuously improve their security posture. (See ADP 3-37 for more information on the use of obstacles in supporting protection tasks that are not considered countermobility tasks.) As an example, protective obstacles should be improved by integrating mines, trip-flares, tanglefoot, or other means.

4-85. When emplacing protective obstacles, the platoon responsible for defending them should ensure they site in the exact trace of the obstacle. Leaders in the platoon, to include Stryker VCs, should work with engineers, or those emplacing obstacles, to ensure weapons can engage enemy forces both short of and along the obstacle, and where those enemy forces will move to after being impacted by the obstacle.

Obstacle Lanes

4-86. Leaders identify mobility requirements to determine the need for lanes or gaps to be left in obstacles. Mission variables of METT-TC (I) are considered to determine if these areas remain open, closed on order, or closed with the defender able to open the lane. The on-off-on feature of networked munitions makes them well suited for lanes. Units use lanes or gaps to allow patrols (combat and reconnaissance), quick reaction force or tactical combat forces, and counterattack forces to enter and leave through the defense.

4-87. Lanes and gaps are weak points in obstacles, so units consider allocating increased direct and indirect fires to cover them. The lanes and gaps must be disseminated to all levels and overwatched as a protective measure to prevent fratricide. Obstacles that are used for rapid lane closure are often demolition obstacles or mines, for example, units may use a cratering charge to close a lane.

4-88. When the platoon is responsible for actions related to lanes through obstacles, its duties can include marking lanes in an obstacle, reporting locations of the start and ends of each lane, operating contact points, providing guides for elements passing through the obstacle, and planning and rehearsing lane closure. (See ATP 3-90.8 for additional information.)

MOBILITY

4-89. Mobility is a quality or capability of military forces which permits them to move from place to place while retaining the ability to fulfill their primary mission (see JP 3-36). Mobility tasks in the defense enable the ability to reposition forces, delay, and counterattack. Initially during defensive preparations, mobility operations focus on the ability to resupply, reposition, and conduct rearward and forward passage of forces, materiel, and equipment. Once major defensive preparations are complete, the focus normally shifts to supporting the local reserve and counterattack(s), and the higher headquarters counterattack or reserve. Priorities set by the company may specify routes for improvement in support of such missions. Normally, most engineer assets go to survivability and countermobility. At a set time or trigger, engineers disengage from obstacle and survivability position construction and start preparing for focused mobility missions. The defender analyzes the scheme of maneuver, obstacle plan, fire support plan, and terrain to determine mobility requirements. (See ATP 3-21.11 for more information on mobility operations in the defense.) Critical considerations may include—

- Lanes and gaps in the obstacle plan.
- Lane closure plan and subunit responsibility.
- Route reconnaissance, improvement, and maintenance.

PLATOON AS A RESERVE

4-90. The *reserve* is that portion of a body of troops that is withheld from action at the beginning of an engagement to be available for a decisive movement (ADP 3-90). If the Stryker Infantry rifle platoon is designated in a reserve role, positioning the reserve in a location where it can react to several contingency plans is vital to success. The designating commander considers terrain, trafficability of roads, potential EAs, and probable points of enemy penetrations and commitment time when positioning the reserve. Additionally, reserve forces must understand that they may be a primary target for enemy destruction through fires or CBRN attacks and must be prepared to counter and react to this targeting. The reserve force must understand, plan for, and rehearse multiple assigned planning priorities, and must time, and provide those times to the designating commander, for all anticipated movements.

4-91. Commanders must ensure reserves are positioned in a covered and concealed position and that they cannot be trapped in these reserve positions by the enemy. Information concerning reserves may be considered essential element of friendly information and protected from enemy reconnaissance. The reserve position is a lucrative enemy artillery target and must be concealed. The commander or platoon leader might choose to position the reserve forward initially to deceive the enemy, or to move the reserve occasionally to prevent it from being targeted by enemy indirect fires.

4-92. When designated as the reserve, the platoon leader must understand the higher headquarters' planning priorities and release criteria for employing the reserve. The reserve must know how to locate and enter the radio net for every element in the battalion.

INTELLIGENCE

4-93. The first step is the expression of the platoon leader's vision of anticipated enemy actions integrated with the company's IPOE. The battalion and company IPOE should not differ significantly, giving the platoon and squad a clear understanding of how the battalion and company commanders envision the enemy fight and plan for the operation. The company commander refines the IPOE to focus on the details of the operation in the company assigned area. The platoon leader refines the IPOE to focus on the details of the mission in the platoon assigned area. The battalion commander usually defines where and how the Infantry battalion will defeat or destroy the enemy. The Infantry rifle company commander and platoon leader then describe a vision of how their units will execute their portion of the battalion fight.

4-94. The Infantry platoon leader never has all the information needed about the enemy. Therefore, the platoon leader obtains or develops the best possible IPOE products, conducts continuous reconnaissance, and integrates new and updated intelligence products and assessments and combat information throughout the operation. The leader requests information through the company from the battalion staff to answer platoon information requirements. (See ATP 3-21.11 for additional information.)

4-95. As with all tactical planning, IPOE is a critical part of defensive planning. It helps the platoon leader define where to concentrate combat power, where to accept risk, and where to plan potential decisive points in the operation. To aid in the development of a flexible defensive plan, the IPOE must present all feasible enemy COAs. In defensive operations, intelligence products focus on—

- Effects of terrain and weather on probable enemy scheme of maneuver.
- Effects of civil considerations on friendly and enemy options.
- Enemy reconnaissance timeline and objectives. or goals.
- Enemy offensive timeline and objectives.
- Information on enemy equipment capabilities and recognition features.
- Commanders' PIRs with associated decisions.
- Indicators that differentiate between enemy COAs.
- Enemy indirect fire weapons capabilities, range arcs, and locations if available.
- Locations, composition, equipment, strengths, and weaknesses of the advancing enemy force.
- Enemy force size and likely COAs with associated decision points.
- Probable enemy squad, platoon and company mobility corridors and likely avenues of approach.
- Probable enemy scheme of maneuver.
- Terrain of tactical value to the enemy: probable assault position, PLD, SBFs, and so forth.
- Enemy vulnerabilities and high-value targets.
- Likely withdrawal routes for enemy forces.

FIRES

4-96. For the indirect fire plan to be effective in the defense, the unit must plan and execute indirect fires in a manner that achieves the intended task and purpose of each target. The platoon's scheme of fires serves to—

- Slow and disrupt enemy movement.
- Prevent the enemy from executing breaching operations.
- Destroy or delay enemy forces at obstacles using massed indirect or precision fires.
- Suppress enemy SBF elements.
- Defeat attacks along avenues of approach with FPFs.
- Disrupt the enemy to enable friendly forces to displace or counterattack.
- Obscure enemy observation or screen friendly movement during disengagement and counterattacks.
- Provide obscurants to separate enemy echelons or to silhouette enemy formations to facilitate direct fire engagement.
- Provide illumination, as necessary.
- Execute suppression of enemy air defense missions to support aviation operations.
- Deliver scatterable mines to close lanes and gaps in obstacles, disrupting or preventing enemy breaching operations, disrupting enemy movement at choke points, or separating or isolating enemy echelons.

4-97. In developing the fire plan, the platoon leader evaluates the indirect fire systems available to provide support. Considerations when developing the plan include tactical capabilities, weapons ranges, and available munitions. These factors help the platoon leader and FO determine the best method for achieving the task and purpose for each target in the fire plan. The Infantry rifle company fire support Soldiers contribute significantly to the platoon fight. Positioning is critical. The platoon leader, in coordination with the company FSO, selects positions providing the platoon FO with unobstructed observation of the assigned area, ensuring survivability.

SUSTAINMENT

4-98. When planning defensive operations, the platoon leader should consider future sustainment operations. In addition to the sustainment functions (see chapter 6) required for all missions, the platoon leader's planning process includes pre-positioning of ammunition caches, identifying the positioning of company trains, and Classes IV and V supply points, and explosive mine supply points.

4-99. The platoon leader's mission analysis may reveal the platoon's ammunition requirements during an upcoming mission exceed its basic load. This requires the platoon to coordinate with the company to pre-position ammunition caches. The platoon usually positions ammunition caches at alternate or subsequent positions. The platoon also may dig in these caches and guard them to prevent their capture or destruction.

4-100. The Stryker Infantry rifle company trains usually operate 500 to 1,000 meters or one terrain feature to the rear of the company in covered and concealed positions close enough to the platoons to provide responsive support (support distance) but out of enemy direct fire. The company trains conduct evacuation (of those wounded in action, weapons, and equipment) and resupply as required. The company 1SG or XO positions the trains and supervises sustainment operations with the platoon. It is the Stryker Infantry rifle company commander's, along with the 1SG's, responsibility to ensure all subordinate units know the locations of battalion combat and field trains as well as the company CCP, BAS, and CASEVAC and MEDEVAC procedures. The platoon leader's

analysis determines the measures for every mission. The platoon sergeant responds to whatever system of supply management the company establishes.

PROTECTION

4-101. Platoon leaders must integrate protection to preserve combat power without impeding mission accomplishment. The leader enables security, by means of providing information about the activities and resources of the enemy, through the employment of reconnaissance and surveillance within its assigned area. The platoon leader may employ counterreconnaissance (security patrols) and establish OPs to counter enemy reconnaissance and surveillance efforts. The platoon leader integrates platoon reconnaissance and surveillance efforts to include using organic UASs and security patrols tied to the company information collection effort. Platoons plan the use of obscurants to support disengagement or movement of forces and assign sectors of fire to prevent fratricide and friendly fire. Platoons may have engineer and CBRN assets attached or in support to provide additional protection capabilities. To conserve combat power, the platoon leader must *secure*—a tactical mission task in which a unit prevents the enemy from damaging or destroying a force, facility, or geographical location (FM 3-90).

ACTIVE AND PASSIVE AIR DEFENSE

4-102. In the face of an enemy air threat, the platoon usually has only active and passive (with its organic weapons) air defenses. Air defense units are usually not assigned below BCT level. However, air defense assets may be located near the platoon and may provide area coverage. If air defense elements are assigned, the higher commander with the advisement of the air defense leader determines likely enemy air avenues of approach, and plans positions accordingly. The higher commander establishes priorities for protection that may include the company command post, mortar positions, and logistics assets. A stinger section may support maneuver elements from positions to the rear of defensive BPs or along offensive attack routes as operations transition. Stinger teams on the early warning net can warn supported units of an air attack. (See ATP 3-01.8 for additional information.)

4-103. The platoon leader and subordinate leaders ensure all active and passive air defense measures are well planned and implemented, to include scanning for any hostile sUASs. (See drill 07-PLT-D8015, appendix C.) Passive measures include use of concealed routes and AAs, movement on secure routes, movement at night, increased intervals between elements of the columns, dispersion between Soldiers, using terrain to mask movement, slowing, or stopping movement to eliminate dust signature, and reducing the platoon's electromagnetic signature. Leaders must ensure all active and passive air defense measures are well planned and implemented, to include air defense warnings, air guards, camouflage of vehicles and positions, reducing vehicle signatures, and scanning for any hostile sUAS.

4-104. Air guard duties assigned to specific Soldiers during dismounted (or mounted) movements and marches give each a specific search area. For movements and marches, seeing the enemy first gives the unit time to react. Leaders understand that scanning for long periods decreases the Soldier's ability to identify enemy aircraft. During extended or long movements and marches, Soldiers are assigned air guard duties in shifts. Units

take passive measures unless or until threat aircraft are within range of assigned or attached weapons, at which time when threatened they take active measures. Active measures primarily involve engaging threat aircraft with a high volume of fires with the appropriate lead applied. Active measures include use of organic and attached weapons according to the OPORD and unit SOP.

Note. Counterrocket and artillery batteries, and countermortar fires may be located in or near an assigned area to support a mission. Battery sensors detect incoming rockets, artillery, and mortar shells and may be used to detect Group 1 and 2 UASs. The battery's fire control system predicts the flight path of incoming rockets and shells, prioritizes targets and activates in the supported assigned area warning system according to established ROE. Exposed elements within the assigned area then can take cover and provide cueing data that allows the battery's weapon system to defeat the target before the target can impact the area. Commanders clearly define command and support relationships between counterrocket, artillery, and mortar elements and supported units during planning. (See ATP 3-21.21 and ATP 3-01.60 for additional information.)

CHEMICAL, BIOLOGICAL, RADIOLOGICAL, AND NUCLEAR DEFENSE

4-105. Operationally, CBRN defense enables the unit's ability to continue military operations in a CBRN environment while minimizing the vulnerability of the force to the degrading effects of CBRN threats and hazards. Tactical-level doctrine is organized around the core functions to assess, protect, and mitigate the entire range of CBRN threats and hazards. (See FM 3-11 and ATP 3-21.11 for more information on the CBRN environment and defense activities.)

Chemical, Biological, Radiological, and Nuclear Protection

4-106. CBRN protection measures are taken to keep CBRN threats and hazards from having an adverse effect on Soldiers, equipment, and facilities. Tasks that enable CBRN protection include the following:

- Employing individual protective equipment and other CBRN protective equipment.
- Establishing CBRN alarm conditions.
- Exercising personal hygiene and force health protection programs.
- Utilizing shielding or protective cover.

4-107. CBRN protection is an integral part of all operations. Forms of protection for CBRN incidents involve employment of alarms upwind, reacting appropriately to the CBRN attack, sealing or hardening positions, assuming appropriate MOPP levels, maintaining dispersion, and OHC. Individual protective items include the protective mask, protective suit, overboots, and gloves. The higher-level commander above the SBCT establishes the minimum level of protection. Subordinate units may increase this level as necessary but may not decrease it. Regardless of the directed MOPP level, in the event of an actual or suspected chemical or biological attack, Soldiers will immediately don their protective mask and then the remainder of their protective equipment to come to MOPP 4. If radiation is encountered and the mission requires

potential exposure, radiation protection is achieved through time, distance, and shielding. (For more information CBRN protection and mitigation measures see ATP 3-11.33.)

4-108. Passive measures can be used to monitor for the presence of CBRN hazards. Depending on the threat and probability of use, periodic or continuous techniques are used. Platoon personnel will employ detection, alarm, and monitoring capabilities.

4-109. Once masked, Soldiers will not unmask until their commander approves. Units will use the unmasking procedures to determine if it is safe to unmask. (For more information about actions taken before, during and after CBRN incidents see ATP 3-11.32.)

Chemical, Biological, Radiological, and Nuclear Hazards

4-110. *Chemical, biological, radiological, and nuclear environment* is an operational environment that includes probable chemical, biological, radiological, or nuclear threats and hazards and their resulting effects (JP 3-11). CBRN environment conditions can be the result of deliberate enemy action or the result of an industrial accident. CBRN threats include the intentional employment of, or intent to employ CBRN weapons. A CBRN hazard is a substance that could create adverse effects to humans, animals, plants, or the environment due to an accidental or deliberate release and dissemination. CBRN hazards may result from weapons of mass destruction employment. (See FM 3-11 for more information on understanding each aspect of CBRN hazards as well as information on assessing, protecting against, and mitigating hazards.)

Chemical, Biological, Radiological, and Nuclear Battle Drills

4-111. The threat of conducting operations within CBRN environments necessitates proficiency in basic CBRN skills. All personnel must be trained in the basic concepts of CBRN defense to survive a CBRN-related attack or accident. Personnel must also be proficient in conducting regular battle drills under CBRN conditions. In addition to drill 03-PLT-D0071 in appendix C, there are other required CBRN defense common tasks in which personnel need to be trained.

SECTION III – AREA DEFENSE

4-112. The focus is on retaining terrain where the bulk of the defending force positions (main battle area) itself in mutually supporting prepared positions. Defenders maintain their positions and control the terrain between these positions and focus their fires into EA, which reserve units can supplement. The leader uses the reserve force to reinforce fires, add depth, block penetrations, restore positions, counterattack to destroy enemy forces, or seize the initiative.

ORGANIZATION OF FORCES

4-113. The Stryker Infantry rifle platoon leader organizes an area defense using defensive positions seeking to destroy enemy forces by interlocking fire or local counterattacks. The platoon leader (in coordination with the company commander) has the option of selecting from the two methods of positioning units: defending in-depth or

defending forward. In an area defense, the leader organizes the defending force to accomplish information collection (especially reconnaissance and surveillance), security, main battle area, reserve, and sustainment missions.

4-114. The platoon normally conducts defensive operations within the Stryker Infantry rifle company as part of an SBCT Infantry battalion's area defense to disrupt or destroy an enemy force, control terrain, or protect a friendly force. The orientation of the platoon defense is determined from the mission analysis. The platoon's purpose in the mission statement clearly focuses the platoon on the enemy, the terrain, or a friendly force. The platoon may take part in many differing roles as part of a larger force: as part of the security force and main body, conducting information collection (reconnaissance and surveillance, and security operations), occupying a BP in the main battle area, or as a reserve or part of a reserve.

4-115. The platoon uses numerous local security techniques in concert with deliberate well planned defensive positions, incorporating such things as ambushes, reconnaissance, and security patrols. The platoon leader analyzes how the terrain effects where the enemy can go and where to emplace forces from the platoon to deny the enemy from using terrain, space, personnel, supplies, or facilities.

4-116. Sustainment missions in an area defense requires a balance between establishing forward supply stocks of ammunition, barrier material, and other supplies in sufficient amounts, and having the ability to move the supplies in conjunction with enemy advances. Maintenance and medical support, with their associated repair parts and medical supplies, must also be balanced between being employed forward and having the ability to move.

4-117. A platoon may perform all these operations at the same time in its own assigned area; or it may be tasked to do one or more of them for a larger unit. (See ATP 3-21.11 and ATP 3-21.21 for additional information.)

POSITION SELECTION

4-118. The two methods for positioning of units within an area defense are defense in depth and forward defense. The Stryker Infantry rifle platoon is expected to be able to do both. While the company commander usually selects the type of area defense to use, the higher commander often defines the general defensive scheme for the Stryker Infantry rifle company and platoon. The specific mission may impose constraints such as time, security, and retention of certain areas that are significant factors in determining how the company and platoon will defend. Regardless of the method of positioning, platoon will typically defend from BPs.

DEFENSE IN DEPTH

4-119. Defense in-depth reduces the risk of the attacking enemy quickly penetrating the defense. The enemy is unable to exploit a penetration because of additional defensive positions employed in depth. The in-depth defense provides more space and time to defeat the enemy attack. Platoons can achieve depth in positions through planning subsequent or supplementary BPs. When platoons are tasked to defend, the expectation is that they plan for depth by planning for multiple BPs in depth within their assigned area. The Infantry platoon uses a defense in-depth when—

- The mission allows the platoon to fight throughout the depth of the assigned area.
- The terrain does not favor a defense well forward, and better defensible terrain is available deeper in the assigned area.
- Sufficient depth is available in the sector.
- Cover and concealment forward in the assigned area are limited.
- Weapons of mass destruction may be used.

FORWARD DEFENSE

4-120. The intent of a forward defense is to prevent enemy penetration of the defense. Due to lack of depth, a forward defense is least preferred. The platoon deploys most of its combat power into forward defensive positions near the forward edge of the battle area. While the company defense may lack depth, the platoon must build depth into the defense at their levels. Achieving depth usually comes with a cost in terms of reduced frontage but is essential to an effective defense. The leader fights to retain the forward position and may conduct counterattacks against enemy penetrations or destroy enemy forces in a forward EA. Often, counterattacks are planned forward of the forward edge of the battle area to defeat the enemy. The platoon uses a forward defense when—

- Terrain forward in the assigned area favors the defense.
- Strong existing natural or man-made obstacles, such as river or a rail line, are located forward in assigned area.
- The assigned area lacks depth due to location of the area or facility to be protected.
- Cover and concealment in rear portions of the assigned area are limited.
- Higher headquarters directs the platoon to retain or initially control forward terrain.

VARIATIONS OF THE AREA DEFENSE

4-121. The Stryker Infantry rifle platoon usually defends using one of three variations of the area defense: defense of a linear obstacle, perimeter defense, or reverse slope. The platoon also can defend using a combination of these forms. (See ATP 3-21.11 for additional information.)

DEFENSE OF A LINEAR OBSTACLE

4-122. A platoon may conduct a defense of a linear obstacle along or behind a linear obstacle within an area defense. Linear obstacles such as mountain ranges or river lines generally favor a forward defense. It is extremely difficult to deploy in strength along the entire length of a linear obstacle (see figure 4-6). The defending leader must conduct economy of force measures in some areas.

4-123. The key to success in a defense of a linear obstacle is maintaining the integrity of the defense by preventing the enemy from securing a foothold on the friendly side of the obstacle. Defending units integrate additional obstacles to stop enemy forces, channel them into planned EAs, and to further enable the integrity of the linear obstacle. The defense of a linear obstacle usually forces the enemy to deploy, concentrate forces, and conduct breaching operations.

4-124. This variation of an area defense may be used when defensible terrain is available in the forward portion of the platoon's assigned area, or to take advantage of a major linear natural obstacle. This technique allows interlocking and overlapping observation and fields of fire across the platoon's front.

4-125. Minefields and other obstacles are positioned and covered by fire to slow the enemy and inflict casualties. Engaging the enemy at long-range by supporting fires disrupts the momentum of the enemy's attack. Use fires from Strykers, mortars, machine guns, and small arms as the enemy comes into range. If the defense is penetrated, block the advance with the reserve and shift fire from the forward squads onto the enemy flanks. Then, counterattack with the reserve or a less committed squad with intense fires. The purpose is to destroy isolated or weakened enemy forces and regain key terrain.

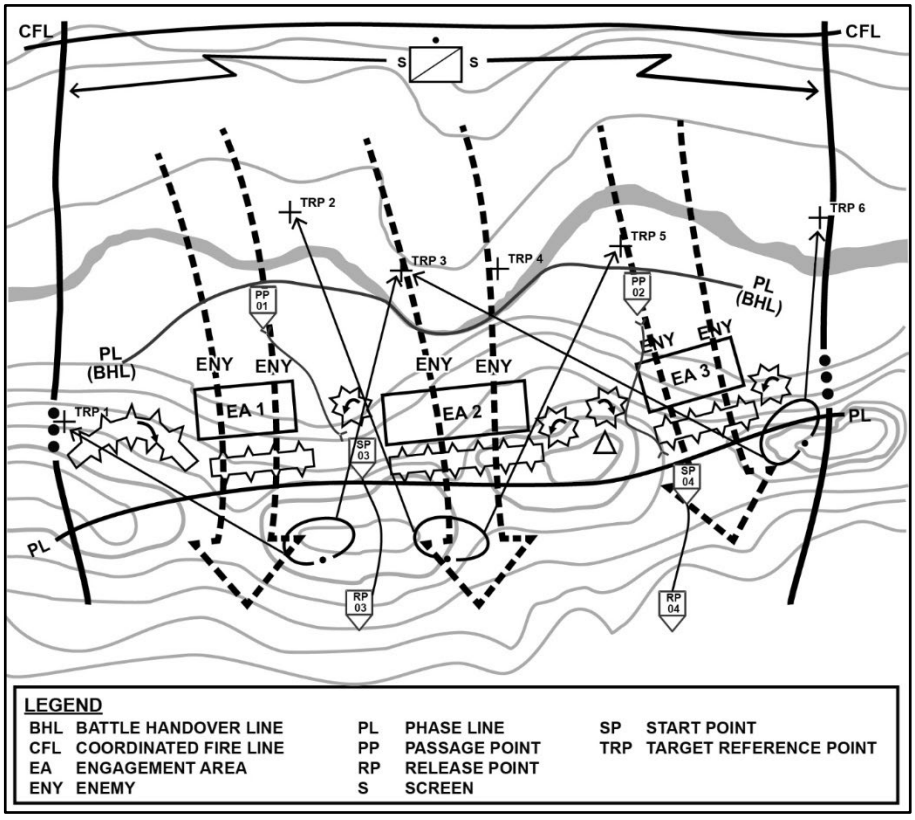


Figure 4-6. Defense of a linear obstacle

PERIMETER DEFENSE

4-126. A perimeter defense (see figure 4-7 on page 180) is a defense oriented in all directions. The platoon uses it for self-security, and to protect other units located within the perimeter. The platoon can employ a perimeter defense in urban or woodland terrain. When defending a perimeter as part of a company, the platoon leader needs to know their sector, the frontline trace of the platoon, any specified positions for their crew-served weapons and Strykers, and the location of and overlapping fires from the units

on their flanks. The Stryker platoon might be called upon to execute the perimeter defense under a variety of conditions including:

- When it must conserve or build combat power to execute offensive operations or patrolling missions.
- When it must hold critical terrain in an assigned area.
- When its defense is not tied in with adjacent units.
- When it has been bypassed and isolated by the enemy and must defend in place.
- When it is used in a reserve position, in an AA or patrol base, on a follow-on decentralized platoon operation during resupply, or when the platoon is otherwise isolated.
- When it is directed to concentrate fires into two or more adjacent avenues of approach.
- When occupying a patrol base when dismounted.

4-127. Preparing a perimeter defense is like preparing any other position defense, but the platoon must disperse in a circular configuration for all-round security. The actual shape depends on the terrain. The following actions constitute setting up a perimeter defense:

- The platoon leader assigns squads to cover the most likely approach and prepares alternate and supplementary positions within the perimeter.
- Javelin CCMS (or M3 MAAWS) covers likely armor approaches.
- The platoon may use hide positions and move forward to fire as the enemy appears.
  - The platoon leader assigns several firing positions.
  - If there are few positions for them, they are assigned a primary position and are dug in.
- Snipers (when attached) or SDM should cover likely or suspected enemy positions or OPs.
- Snipers (when attached) and squad designated marksmen also should be used to observe or overwatch areas where civilians congregate.
- Keep attached mortars near the center of the perimeter so their minimum range does not restrict their ability to fire in any direction.
- Mortars (when attached) should dig in and have covered ammunition storage bunkers.
- One or more rifle teams is held in reserve, if possible.
- The platoon leader assigns a primary position (mounted and dismounted) to the rear of the platoon, covering the most dangerous avenues of approach, and may assign the rifle squad supplementary positions since the platoon is prepared to fight in all directions.
- The platoon prepares obstacles in-depth around the perimeter.
- The platoon leader plans direct and indirect fire as for any type of defense.
- The platoon leader plans and uses direct and indirect fire support from outside the perimeter when available.
- The platoon counters enemy probing attacks by area fire weapons (artillery, mortars, claymores, and grenade launchers) to avoid revealing the locations of fighting positions (ROE-dependent).

- If the enemy penetrates the perimeter, the reserve destroys, and then blocks the penetration:
  - The reserve also covers friendly Soldiers during movement to alternate, supplementary, or subsequent positions.
  - Even though the platoon's counterattack ability is limited, it must strive to restore its perimeter.
  - Sustainment elements may support from within the perimeter or from another position.
- Supply and evacuation might be by air, so consider the availability of landing zones and drop zones (protected from enemy observation and fire) when selecting and preparing the position.
- Strykers are positioned where they can observe high-speed avenues of approach and TRPs.
- Machine gun teams are positioned with principal direction of fires or FPLs build the defense by first positioning key weapons, and then squads/teams.
- Riflemen are positioned where they can protect machine guns.
- Grenadiers are positioned to cover dead space.
- Riflemen are positioned with depth, overlap/interlock fires, and standoff to grenade range.
- The platoon leader ensures gaps/seams are closed between elements through adjacent unit coordination (left-to-right, front-to-rear).

4-128. A perimeter defense differs from other defenses in the following ways:

- The trace of the platoon is circular or triangular rather than contiguous.
- Unoccupied areas between squads are smaller.
- Flanks of squads are bent back to conform to the plan.
- The bulk of combat power is on the perimeter.

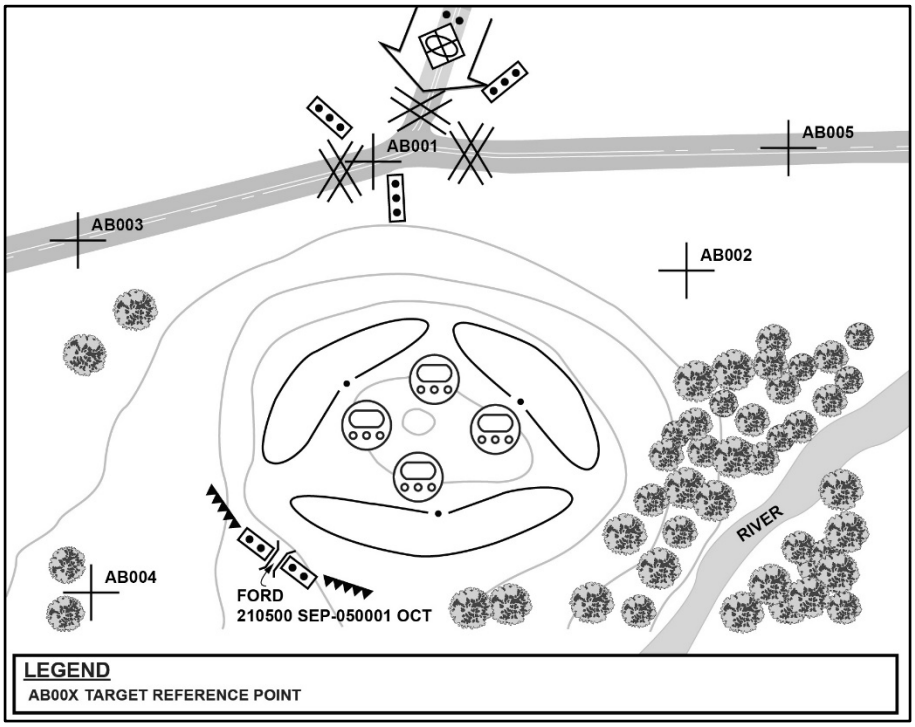


Figure 4-7. Perimeter defense

Note. A platoon perimeter defense concentrates Strykers and dismounted Infantry into one central location, which can create significant light, noise, thermal, and electromagnetic signatures.

REVERSE-SLOPE DEFENSE

4-129. An alternative to defending on the forward slope of a hill or a ridge is to defend on a reverse slope. In such a defense, the platoon is deployed on terrain that is masked from enemy direct fire and ground observation by the crest of a hill. Although some units and weapons might be positioned on the forward slope, the crest, or the counterslope (a forward slope of a hill to the rear of a reverse slope), most forces are on the reverse slope. The key to this defense is control the crest by direct fire.

4-130. To succeed, the platoon leader prevents the attacker from conducting a detailed observation of the reverse-slope defense through the deployment of aggressive patrols (combat and reconnaissance [see ATP 3-21.8, chapter 7]) and security operations forward of the topographical crest. The platoon establishes OPs and combat outposts on, or forward of the topographical crest. This allows long-range observation over the entire front, and indirect fire coverage of forward obstacles. OPs may vary in size and should include FOs. During limited visibility, the numbers may increase to improve security. Additional planning fundamentals to a defense on a reverse slope include—

- Positioning forward Strykers and squads so they block enemy approaches and exploit existing obstacles, and plans should—
  - Permit surprise fire on the crest and on the approaches around the crest.
  - Have rear and OHC to protect friendly Soldiers from fratricide while in forward fighting positions.
  - Increase OPs and patrols to prevent infiltration at night.
  - Consider attaching medium machine guns to OPs.
- Positioning the Strykers where they can provide the most flexibility, support the forward squads by fire, protect the flanks and the rear of the platoon, and counterattack, if necessary.
- Positioning the Strykers on the counterslope to the rear of the forward squad may be feasible if that position allows them to fire and hit the enemy when the enemy reaches the crest of the defended hill.
- Positioning the platoon command post to the rear where it will not interfere with the reserve or supporting units, and plans should consider that—
  - The platoon leader may have an OP on the forward slope or crest and another on the reverse slope or counterslope.
  - The OP is used on the forward slope or crest before the battle starts when the platoon leader is determining the enemy's intentions.
  - During the fight, the platoon leader moves the OP on the reverse slope or counterslope.
- Planning indirect fire well forward of, on, and to the flanks of the forward slope, crest, reverse slope, and counterslope.
- Planning FPFs on the crest of the hill to control the crest and stop assaults.
- Reinforcing existing obstacles.
- Planning protective obstacles on the reverse slope—just down from the crest where it can be covered by fire—can slow the enemy's advance and hold the enemy under friendly fire.
- Planning for counterattacks and plans to drive the enemy off the crest by fire, if possible.
- Planning to drive the enemy off by fire and movement.

4-131. Obstacles are necessary in a reverse-slope defense. Since the enemy will be engaged at close range, obstacles should prevent the enemy from closing too quickly and overrunning the positions, and they should facilitate the platoon's disengagement.

AREA DEFENSE SEQUENCE

4-132. The Stryker Infantry rifle platoon may assume a defensive mission following an attack of its own or in anticipation of an enemy attack. Most defenses will follow a sequence of events similar to the steps discussed in the paragraphs below. This sequence of events is used for discussion purposes and is not the only way to sequence an area defense. Some events may be performed simultaneously or in an order different from shown in the example sequence. For example, events (such as reconnaissance and surveillance, security, and occupation) may recur several times during the conduct of defense. With any defense, the platoon leader and platoon subordinate leaders understand events will vary depending on the mission variables of METT-TC (I) and events will overlap. The sequence of the defense is the same for both Stryker and Infantry small units (See ATP 3-21.8 for details.)

4-133. Depending on available time, defenses will be hasty or deliberate. In a hasty defense, the platoon may assume defensive positions in favorable terrain at the end of an ongoing operation. Typically, there is some time available for defensive preparations prior to the execution of the defense.

4-134. In a deliberate defense, the platoon leader will most likely move the platoon to a hide position or tactical AA before conducting a reconnaissance of BPs and receiving the commander's final OPORD. After receiving the commanders OPORD, the platoon leader completes and issues the order and uses the remaining available time to develop the EA, prepare BPs, emplace obstacles, and rehearse. The platoon will maintain local security throughout the duration and be prepared to defend, when required.

LEADER'S RECONNAISSANCE

4-135. Before occupying any position, leaders at all echelons conduct reconnaissance (building on the company commander's reconnaissance plan) of their assigned position(s). The reconnaissance effort is as detailed as possible regarding the mission variables of METT-TC (I). Reconnaissance can consist of a simple map reconnaissance, or a more detailed leader's reconnaissance and initial layout of the new position. When feasible, the platoon leader and subordinate leaders conduct a leader's reconnaissance of the complete assigned area to develop plans based on their view of the actual terrain. When available and dependent upon the situation, aviation assets may be used to conduct the leader's reconnaissance.

4-136. An effective leader's reconnaissance allows the platoon to rapidly occupy defensive positions and immediately start priorities of work. Participants in the platoon's reconnaissance include (the company commander when possible) the platoon leader, subordinate squad leaders, FO, designated mounted leader, and security personnel. The goals are, but not limited to, identification of enemy avenues of approach, EAs, sectors of fire for squads, the tentative obstacle plan, appropriate platoon BPs with associated Stryker positions, indirect fire plan, OP locations, Class V pre-stock locations, CCPs, command post locations, mortar firing point, and logistics element location. The platoon leader develops a plan for the leader's reconnaissance that includes the following:

- Provisions for security.
- Areas to reconnoiter.
- Priorities and time allocated for the reconnaissance.
- Considerations for fire support, communications, and CASEVAC and MEDEVAC plans.
- Plan to guide Infantry squads and Strykers into position.
- Contingency plan if the reconnaissance is compromised.

ESTABLISH SECURITY

4-137. When the Stryker Infantry rifle platoon is part of a larger unit's area defense, the higher-level commander (for example, the company or battalion) establishes a forward security area before the unit moves to defend. Even with this forward security area established, subordinate platoons of the company must still provide for their own local security, especially over large geographical areas or in complex terrain and noncontiguous assigned area.

4-138. The platoon will establish initial security prior to reconnoitering defensive positions. The platoon normally establishes local security with OPs. The platoon also establishes temporary rifle squad and Stryker fighting positions.

Security Operations within the Security Area

4-139. To prevent the enemy from observing and interrupting defensive preparations and identifying unit positions, the higher-level commander establishes the security area well forward of the planned main battle area, but within indirect fire and communications range. When the commander is unable to push the security area forward to achieve this objective, they may have to hold positions initially, and then transition and withdraw units to the defensive main battle area, establishing a forward security force in the process. The platoon may be called upon to act as any of these forces in the conduct of the defense.

Security Operations within the Main Battle Area

4-140. As the security forces forward of the battalion's main battle area are arrayed, the company commander and platoon leaders plan security operations within the main battle area, to prevent enemy reconnaissance, reduction of obstacles, targeting of friendly positions, and other disruptive actions. Subordinate platoons and squads secure obstacles, BPs, command posts, and logistics element locations throughout the assigned area.

Active and Passive Measures to Avoid Detection

4-141. Security in the defense includes all active and passive measures taken to avoid detection by the enemy, deceive the enemy, and deny enemy reconnaissance elements accurate information on friendly positions. The two primary tools available to the platoon leader are OPs and patrols. In planning for security in the defense, the platoon leader considers the military aspects of terrain and OAKOC. The leader uses the map to identify terrain that will protect the platoon from enemy observation and fires, while providing observation and fires into the EA. The leader uses intelligence and combat information updates to increase situational understanding, reducing the possibility of the enemy striking at a time or in a place for which the platoon is unprepared. The platoon's leaders must apply electromagnetic and other kinds of signature discipline. Additional considerations are to—

- Minimize radio traffic:
  - Leaders utilize wire communications (if available) or runners to the OPs.
  - Leaders receive reports through personal circulation in the battle area rather than by radio.
- Minimize vehicle traffic in and around the defensive positions.
- Reduce thermal signatures.
- Refresh camouflage on vehicles and equipment.
- Use camouflage nets and tie them into the terrain.
- Minimize trash and other visible signatures.
- Reduce spoil and other visible signatures from digging in.
- Utilize shade and shadow to reduce visible signatures.
- Reposition vehicles to ensure they remain concealed.

- Cover or eliminate glare from windows, lights, goggles, or other reflective surfaces.
- Avoid creating large visible signatures at LOGPAC or other times.
- Emplace air guards.

4-142. Current mission commands systems allow Stryker platoons to digitally transmit enemy situation and observation reports. This simplifies the reporting process without compromising security. Dismounted OPs still render reports by FM radio transmission.

Observation Posts

4-143. OPs provide forward security in the defense. OPs provide early warning of impending enemy contact and accurate reporting to the platoon. The platoon leader will establish OPs along the most likely enemy avenues of approach. Leaders ensure that OPs (mounted or dismounted) have communication with the platoon. OPs must be positioned so they can identify and report enemy formations early enough to effect platoon ready posture. This will allow the platoon to quickly move from their hide into their BPs before the enemy can initiate an attack. Early detection reduces the risk of the enemy overrunning the OP.

4-144. OPs may be equipped with a Javelin command launch unit to increase its ability to detect the enemy. The OP element may be equipped with IR trip flares, IR parachute flares, IR M320 rounds, and even IR mortar round support to illuminate the enemy. The platoon leader weighs the advantages and disadvantages of using IR illumination when the enemy is known to have night vision devices that detect IR light. IR and thermal equipment enable the platoon and OP to see at a greater distance, however; dismounted OPs should not be positioned beyond the supporting range of small-arms weapons.

4-145. OP elements use GPS to navigate to the exit and entry point in the platoon's position, to reduce the risk of fratricide. The platoon leader verifies the platoon and OPs location and OP locations and submits them to the company command post to ensure a no fire area is established around their positions.

Patrols

4-146. Stryker platoons actively patrol in the defense. Patrols enhance the platoon's ability to fill gaps in security between OP. Patrols also deny the enemy freedom of movement in gaps or seams between BPs. Patrol leaders must know the friendly obstacle plan and should inspect the platoon's obstacles to ensure they are still intact and have not been covertly breached. The platoon leader will send the tentative patrol route to the commander to ensure that it does not conflict with other elements. The commander then forwards the company patrol routes to battalion. This allows the operations and S-2 staff officers to ensure all routes are coordinated for fratricide prevention and no gaps are present. The patrol plan and times for departure and reentry must be disseminated to the company and platoon to avoid the risk of fratricide.

Preparation and Occupation

4-147. Preparation and occupation of BPs begin when the security force deploys to the forward edge of the battle area. During the occupation of the security area, the security force establishes OPs forward and uses these OPs to conduct long-range precision fires

onto the enemy forces. This disruption of the enemy enables the preparation and occupation of the main battle area.

4-148. Following the completion of defensive positions and occupation of the forward security force, the main element moves to begin occupation of the main battle area. Platoons within the main battle area that have established local security continue with priorities of work, refining their plan, EA development (see section V), position of forces and key weapons systems, preparing positions, constructing obstacles, planning, and synchronizing fires, logistics, and conducting inspections and rehearsals.

Plan of Occupation

4-149. The plan of occupation for the platoon must be thoroughly understood to maximize the time available for occupation and preparation of the defense. When occupying and establishing the security area, the battalion commander may lead with the scout platoon to conduct reconnaissance and establish OP along the forward edge of the security area. Company commanders must ensure that subordinate forces understand security force locations forward of the main defenses.

4-150. Within the security area, platoons within the company may be called to assist or augment forward security forces from the scout platoon or conduct security force operations in support of the battalion. During occupation of the security area, security forces establish OPs forward, and from these OPs, the security forces use long-range fires to hinder the enemy's preparations, to reduce the force of the enemy's initial blows, and to start the process of wresting the initiative from the enemy. Throughout the security area, security forces position and reposition (though most movement should be limited to avoid detection) to—

- Prevent enemy observation of defensive preparations.
- Defeat infiltrating enemy reconnaissance forces.
- Prevent the enemy from delivering direct fires or observed indirect fires into the battalion area defense.
- Provide early warning of the enemy's approach.

4-151. Within the main battle area, and depending on the situation, commanders at all levels may send a subordinate force to initially secure positions prior to the main body's arrival. The mission of this force is to continue to conduct reconnaissance and surveillance of key terrain and obstacles, guide and provide local security as the defenses main body occupies the defense and initiates priorities of work.

Priorities of Work

4-152. As all elements within the main battle area establish local security, priorities of work continue and includes but is not limited to refining the plan, positioning of forces, preparing positions, constructing obstacles, planning and synchronizing fires, positioning logistics, and conducting inspections and rehearsals. To aid in operations security and to reduce vulnerability, the platoon leader analyzes the benefits of dispersion against the requirements and resources for the security area. Such priorities of work include the following:

- Post local security.
- Set and maintain a designated level of security.

- Establish the platoon's reconnaissance and surveillance plan.
- Plan and develop EAs (see section V, paragraph 4-202).
- Position Infantry squads, Strykers, and other assets.
- Position Javelin CCMSs (or M3 MAAWS) and machine guns (designate FPLs and FPFs); assign sectors of fire.
- Prepare hasty fighting positions.
- Establish platoon command post.
- Clear fields of fire and prepare Standard Range Cards and sector sketches.
- Adjust indirect fire FPFs by ensuring the firing unit fire direction center (FDC) provides a safety box clearing of all friendly units before firing adjusting rounds.
- Emplace early warning devices, including chemical and radiological detectors.
- Plan indirect fire TRPs and FPFs.
- Improve hasty fighting positions to deliberate fighting positions as the enemy situation allows.
- Install wire communications, if applicable.
- Emplace obstacles and mines.
- Mark (or improve marking for) TRPs and direct fire control measures.
- Improve primary fighting positions (including OHC) and Stryker fighting positions.
- Prepare alternate and supplementary positions.
- Conduct maintenance (specifically, vehicles, weapons and communications equipment).
- Prepare for fire checks on Stryker weapons systems (boresight, zero, and test fire).
- Reconnoiter movements and routes, such as trafficability and timing.
- Conduct rehearsals: engagements, disengagements or displacements, and communications plan.
- Adjust positions and control measures, as required.
- Stockpile ammunition, food, and water.
- Plan and rehearse logistic resupply point procedures.
- Conduct PCC/PCI and test fire weapons systems.
- Dig trenches between positions.
- Continue to improve positions, such as replacing camouflage concealment if it changes color or dries out.
- Establish sleep and rest plan.

4-153. The platoon leader will identify and supervise priorities of work for the platoon based on the METT-TC (I) variables. Several actions must be accomplished simultaneously to meet directed timelines. Leaders must constantly supervise the preparation of fighting positions and maintain a checklist or tracking system of completed tasks. The platoon leader will keep the company commander informed on the progress levels of the defense. The key to success in defensive preparation is planning and rehearsals.

Duties and Responsibilities During Defensive Preparations

4-154. Many platoon leader duties and responsibilities during the defense can be delegated to subordinates, but the platoon leader ensures they are done. The platoon leader duties include—

- Establishing platoon timeline that is nested with company commander.
- Ensuring local security and assigning OP responsibility.
- Conducting a leader's reconnaissance with and selected leaders.
- Confirming or denying significant assumptions from the mission analysis.
- Understanding and confirming the initial terrain analysis (for example, avenues of approach, potential gaps and seams, and dead space) made prior to arrival.
- Confirming or revising as necessary the direct fire plan, to include EA, sectors of fire, Stryker positions, position key weapons, and fire control measures based on the reality of the terrain.
- Directing the platoon FO to develop the indirect fire plan to support the platoon defensive plan.
- Designating primary, alternate, supplementary, and subsequent positions supporting the direct fire plan for platoons, sections, and supporting elements.
- Preparing and issuing a platoon OPORD.
- Requiring squads and Stryker VCs/gunners to conduct coordination.
- Integrating indirect fire plan and obstacles to support the direct fire plan.
- Designating the platoon command post location (for example, collocating with a squad) and positioning key weapons.
- Checking the platoon command post and briefing the platoon sergeant on the situation and logistics requirements.
- Making two copies of the platoon defensive sector sketch and fire plan upon receipt of the squad's sector sketches and—
  - Retaining one copy.
  - Forwarding one copy to the company.
- Confirming the direct fire plan Stryker and squad positions before digging starts.
- Coordinating with the adjacent units (from left to right and front to rear).
- Checking with the company commander for all changes or updates in the orders.
- Finishing the security, deception, counterattack, and obstacle plans.
- Walking the platoon positions after they are dug.
- Confirming clear fields of fire and complete coverage of the platoon's entire sector by all key weapons.
- Looking at the defensive plan from an enemy point of view, conceptually and physically.
- Checking dissemination of information.
- Checking interlocking fires, and dead space.

- Ensuring immediate correction of deficiencies.
- Ensuring rehearsals are conducted and obstacle locations reported.
- Ensuring routine report status of and completion of defensive preparations to the company.

4-155. Platoon sergeant's duties and responsibilities include—

- Establishing the platoon command post and ensuring wire communications link the platoon, squads, and attached elements, if applicable.
- Supervising execution of the platoon's obstacle plan.
- Establishing CCPs, platoon logistics release points, and detainee collection points, and locating company-level points.
- Briefing squad leaders on the platoon command post location, logistics plan, and routes between positions.
- Assisting the platoon leader with the sector of fire and sector sketch.
- Requesting and allocating pioneer tools, barrier materiel, rations, water, and ammunition.
- Walking the positions with the platoon leader.
- Supervising emplacement of Strykers, squads, key weapons, check Standard Range Cards, and sector sketches.
- Establishing routine security or alert plans, radio watch, rest plans, and briefing the platoon leader.
- Supervising continuously and assisting the platoon leader with other duties as assigned.
- Selecting slit trench location and ensuring it is properly marked.

4-156. During defensive preparations, the squad leader—

- Emplaces local security.
- Confirms positioning and assigned sectors of fire within the squad.
- Confirms positioning and assigned sectors of fire for the Javelin CCMS and medium machine gun teams.
- Positions and assigns sectors of fire for automatic rifleman, grenadiers, and riflemen.
- Establishes command post and wire communications.
- Confirms designated FPL and FPFs, such as changes to locations, directions, or systems.
- Clears fields of fire and prepares Standard Range Cards.
- Prepares squad Standard Range Card and sector sketches.
- Digs fighting positions.
- Establishes communication and coordination within the platoon and adjacent units.
- Coordinates with adjacent units and reviews sector of fire and sector sketches.
- Emplaces tactical and protective obstacles.
- Emplaces AT and claymore mines.
- Marks or improves marking for TRPs and other fire control measures.
- Improves primary fighting positions and adds OHC (stage 2).
- Prepares supplementary and alternate positions (same procedure as the primary position).

- Establishes sleep and rest plans.
- Distributes and stockpiles ammunition, food, and water.
- Digs trenches to connect positions.
- Continues to improve positions, construct revetments, replace camouflage, and add to OHC.

4-157. Stryker VC/gunner duties and responsibilities are to—

- Emplace local security.
- Confirm positioning and assigns sectors of fire, priority targets, FPFs for Stryker weapons systems.
- Confirm EA and targets with platoon leader.
- Clear fields of fire and prepares a Standard Range Card and submit a copy to platoon leader.
- Mark or improves markings for TRPs and other direct fire control measures.
- Assist in the placement (sighting in) of tactical and protective obstacles.
- Supervise digging in primary Stryker fighting positions.
- Control engineer and dig assets for allotted time and passes assets off to the next position.
- Prepare alternate and supplementary positions (same procedure as the primary position).
- Confirm engagement criteria with the platoon leader.
- Brief crew on logistics plan, CASEVAC plan, maintenance plan, and rest plan.

4-158. During defensive preparations, the FO—

- Assists the platoon leader in planning the indirect fires to support defensive missions.
- Advises the platoon leader on the status of all firing units, and on the use of obscurants or illumination.
- Coordinates with the company FSO, firing units, squad leaders and section leaders to ensure the fire plan is synchronized and fully understood.
- Ensures the indirect fire plan is rehearsed and understood by all.
- Ensures all FPFs are adjusted as soon as possible.
- Recommends and assists the platoon leader with an observation plan.
- Coordinates and rehearses all repositioning of observers within the platoon sector to ensure they can observe targets or areas of responsibility.
- Develops triggers.
- Reports information collection activities.
- Ensures redundancy in communications and observers.

Adjacent Unit Coordination

4-159. The goal of adjacent unit coordination is to ensure unity of effort in accomplishment of the platoon mission. *Unity of effort* is the coordination and cooperation toward common objectives, even if the participants are not necessarily part of the same command or organization that is the product of successful unified action (JP 1, Vol 2). Items adjacent units coordinate include—

- Unit positions, locations of key leaders' call signs and frequencies.
- Locations of OPs and patrols.

- Overlapping fires (to ensure direct fire responsibility is clearly defined).
- Identification and coverage of dead space and exploitable gaps or seams between units.
- TRPs (to ensure identification and, if necessary, a coordinated method of target handoff).
- Ownership responsibilities and coverage of terrain features (roads, trails, and dead space) that lay along boundaries.
- Alternate, supplementary, and subsequent BPs.
- Indirect fire information.
- Obstacles (location and type).
- Air defense considerations, if applicable.
- Routes to be used during occupation and repositioning.
- Sustainment considerations.
- Adjacent unit CCPs.
- Method of handing off targets that move from, or into, an adjacent unit's EA.

Coordination

4-160. In the defense, coordination ensures that units provide mutual support and interlocking fires. In most circumstances, the platoon leader conducts face-to-face coordination (the preferred method due to reduced signal emissions) to facilitate understanding and to resolve issues effectively. However, when time is extremely limited, digital coordination may be the only means of sending and receiving this information. The platoon leader should send and receive the following information using the radio or C2 system before conducting face to face coordination:

- Location of key leaders.
- Location of fighting positions.
- Location of observations posts and withdrawal routes.
- Location and types of obstacles.
- Location of *contact points*—in land warfare, point on the terrain, easily identifiable, where two or more units are required to make contact (JP 3-50).
- Location of *coordination point*—a point that indicates a specific location for the coordination of tactical actions between adjacent units (FM 3-90).
- Location, activities, and passage plan for scouts and other units forward of the platoon's position.
- Platoon's digital sector sketch.
- Location of all Soldiers and units operating in and around the platoon's sector.

4-161. Current techniques for coordination hold true for units such as the SBCT that are digitally equipped. If a digitized and a nondigitized unit are conducting adjacent unit coordination, face-to-face is the preferred method. The leader of the digitized unit has the option to enter pertinent information about the nondigitized unit into command-and-control systems for later reference. The digitally equipped platoon leader should show the adjacent unit leader the digital sector sketch. If face-to-face coordination is not possible, leaders share pertinent information by radio.

Occupation of Defensive Positions

4-162. The Stryker platoon occupies defensive positions following the platoon leader's plan and the results of the leader's reconnaissance. To ensure an effective and efficient occupation, each Stryker and Infantry squad moves to a location marked by the reconnaissance element or is put in position by a designated guide, all positions are annotated on the operational graphics. Time is a critical factor, and leaders must make the most of the time available. Platoons may have several other defensive positions and EAs to develop or may be preparing for a counterattack. Paragraphs below describe techniques for a hasty versus deliberate occupation (see chapter 3 for definitions of hasty and deliberate).

Hasty Occupation

4-163. The platoon may conduct a hasty occupation in the defense during a counterattack or after disengagement and movement to alternate, supplementary, or subsequent defensive positions. The platoon leader issues a FRAGORD covering the following minimum information:

- Changes in the enemy and or friendly situation.
- Platoon task and purpose (what the platoon must accomplish and why).
- Task and purpose for each subordinate element.
- The direct fire plan, including TRPs, sectors of fire, likely fire patterns and any anticipated methods of engagement such as volley fires by platoon, triggers, or disengagement criteria.
- Designates TRPs or other necessary direct fire control measures.
- Coordinating instructions.

4-164. At a minimum, the following actions must be taken:

- If there is time, the platoon leader may choose to do a hasty reconnaissance of the BP before occupying.
- The platoon approaches the defensive positions from the rear or flank, occupying hull-defilade positions if available.
- The platoon confirms the tentative direct fire plan and makes any required updates to the direct fire plan.
- Platoon dismounts Infantry squads, if required.
- Infantry squads occupy fighting positions in support of direct fire plan.
- Platoon leader confirms Infantry squads assigned sectors of fire.
- The platoon leader brings up all four vehicles into a hull defilade position and gunners—
  - Visually inspect the defensive sector to confirm line of sight.
  - Identify dead space before individually backing down into the defilade.
- The platoon leader continues to improve the defensive positions, including:
  - Emplacing chemical alarms and radiological detectors.
  - Preparing sector sketches.
  - Coordinating with adjacent units.
  - Implementing appropriate security measures.

Deliberate Occupation

4-165. The platoon conducts deliberate occupation of defensive positions when time is available, when enemy contact is not expected, and when friendly elements are positioned forward in sector to provide security for forces in the main battle area. Establishing defensive positions is accomplished concurrently with the development of the EA. The platoon leader directs the initial reconnaissance from the EA and then tentatively emplaces vehicle and weapon system positions.

4-166. Once the defensive positions are established, subordinate leaders can begin to develop their sector sketches and fire plans based on the tentative plan developed during the leader's reconnaissance. Stryker positions are improved while the direct fire plan is finalized and proofed. Depending on factors of METT-TC (I), particularly the enemy's anticipated timeline for attack, the platoon may occupy hide positions when preparations are underway, then occupy the defensive positions just before initiating the defensive operation.

Defensive Position Preparation

4-167. The platoon leader, with guidance from the company commander, designates the level of preparation for each defensive position based on the time available and other tactical considerations for the mission. The three levels of defensive position preparation are listed here in descending order of thoroughness and time required:

- Occupy:
  - The platoon completes the preparation of the position from where it will initially defend.
  - The position is fully reconnoitered, prepared, and occupied before the defend-no-later-than time specified in the company order.
  - The platoon must rehearse the occupation, and the platoon leader must establish a trigger for occupation of the position.
- Prepare:
  - Squad and Stryker positions in defensive positions should be marked, along with direct fire control measures in the EA.
  - Survivability positions may be dug, ammunition caches pre-positioned, and protective obstacles emplaced.
- Reconnoiter.
  - Both the EA and defensive positions will be fully reconnoitered.
  - Tentative weapon positions should be planned in the defensive positions, and limited direct fire control measures should be established in the EA.

4-168. The company commander assigns platoon defensive positions to allow each platoon to concentrate its fires or to place it in an advantageous position for the counterattack. The size of the platoon defensive position can vary, but it should provide enough depth and maneuver space for subordinate elements to maneuver into alternate or supplementary positions and to counterattack.

4-169. The defensive position is a general position on the ground. The platoon leader places their Strykers on the most favorable terrain based on the higher unit mission and commander's intent. The platoon then fights to retain the position unless ordered by the company commander to counterattack or displace.

Positions Formed by Natural Terrain

4-170. Positions formed by natural terrain are usually best because they are easy to modify. If preparation is necessary, extensive engineer support is required. Each position is camouflaged with either natural vegetation or a camouflage net, and the spoil is flattened out or hauled away. All fighting positions for the platoon are planned as deliberate positions. Since the lack of time usually does not allow full construction of a deliberate position, only some parts of the position are prepared. For example, a natural depression or reverse slope would shield the position from frontal attack but would be vulnerable on the flanks and rear of the position.

4-171. Digging hide locations and concealed routes between fighting positions is normally not practical due to the lack of engineer assets and time. Engineer assets are used to dig the hull-defilade position. The ramps and concealed routes require only partial clearing and leveling with an engineer asset. If time permits, the fighting position is expanded to include a hide position. Driver stop positions are marked with engineer tape and/or a chemical light to identify turret and hull defilade locations.

SECURITY AREA ENGAGEMENT

4-172. When the platoon is operating as part of the higher echelon's security area defense, the platoon leader integrates engagements within the higher echelon's defense. Security forces within the defense can come in the form of the scout platoon, or sniper squad. The Stryker Infantry rifle platoon may have these units attached to them as part of the security area force. This can be in support of the higher headquarters' scheme of fires using SBCT or higher echelon artillery, or in support of the battalion and company scheme with the use of organic mortars and allocated artillery fires.

4-173. The scheme of fires within the security area combined with the use of tactical obstacles serve to disrupt the enemy and canalize the enemy in the EAs, and to force the enemy to commit enemy engineer assets prior to the main battle area engagement. Tactical obstacles (for example, situational obstacles) and fire support tasks are planned and triggered relative to specific enemy COAs. They are essential, allowing for more effective engagements within the security area. Forward security forces employed forward may cover these situational obstacles with direct fires or indirect fires prior to their withdrawal to positions within the main battle area.

4-174. A platoon may support a higher echelon or its own scheme of maneuver by fighting a delay through the depth of the security area and into the main battle area. The purpose may be to take advantage of restrictive avenues of approach, to set the conditions for a counterattack, or to avoid a decisive engagement until favorable conditions are set. As security forces complete the rearward passage of lines, main battle area forces assume control of the battle at the BHL. Battle handover from forward security forces to forward main battle area forces requires firm, clear arrangements—

- For assuming command of the action.
- For coordinating direct and indirect fires.
- For the security force's rearward passage of lines.
- For closing lanes in obstacles.
- For movement of the security force with minimal interference to main battle area actions.

4-175. As security area engagements transition into the main battle area, security area forces withdraw to BPs within the main battle area and counterattack or reserve positions. Security area forces may move to a flank or to the rear of the main battle area to provide security. (See ATP 3-21.10 for additional information.)

MAIN BATTLE AREA ENGAGEMENT

4-176. The platoon leader seeks to defeat, disrupt, or neutralize the enemy's attack forward of or within the main battle area. The platoon leader integrates direct and indirect fires with the obstacle plan, local counterattacks, and, when established, reserve forces to destroy the enemy in designated EAs or to force the enemy transition to a retrograde or hasty defense. The leader uses planned EAs and BPs to attack the enemy throughout the depth of the defense. Direct fire control measures allow the platoon to focus, shift, or distribute their fires as necessary. However, fire support may be limited to critical points and times. Control measures allow the leader to rapidly concentrate the use of combat power at the decisive point(s), provide flexibility to respond to changes, and allocate responsibility of terrain and obstacles to synchronize the employment of combat power.

4-177. As attacking forces reach the forward edge of the battle area, the enemy will try to find weak points in the defense and attempt to force a passage, possibly by a series of probing attacks. Forward elements engage the enemy's lead forces as the enemy attack develops along identified enemy avenues of approach. The platoon arrays forces and establishes EAs using obstacles and fires to canalize enemy forces. When shaping efforts allow for the canalization the enemy, the enemy advance slows, and the increased density of forces present good targets for defensive fires within EAs. The maximum effects of these simultaneous and sequential fires, brought to bear at this stage of the battle, enable the destruction of the attacking enemy force. Additional considerations and key leader duties may include:

- Recognizing and taking advantage of opportunities to mass the platoon's fires; engaging enemy initial attack when they are delayed by terrain, obstacles, or other battlefield conditions.
- Utilizing planned direct fire control measures to focus, shift, or distribute the platoon's direct fires within the enemy formation or between different formations and target sets.
- Controlling the platoon's rates of fire.
- Looking for opportunities to reload the antitank guided missile (ATGM) or upload ready racks from covered positions.
- Alerting to threats posed by a following enemy echelon and opportunities to mass fires in depth.
- Alerting for opportunities to displace between primary and alternate positions and controlling displacement by platoon, squad, or Stryker element.
- Alerting for emerging conditions that meet displacement criteria thereby executing controlled movements to subsequent or supplementary positions by platoon, squad, or Stryker element.
- Alerting to emerging conditions that indicate the platoon is at risk of being fixed by enemy fires or rapid advance.
- Providing periodic SITREPs, or assessments of enemy progress and friendly ability to complete the mission to company commander.

- Reacting to enemy fires (for example, artillery and/or aviation) and CBRN hazards.
- Alerting to conditions that warrant release of friendly situational obstacles.
- Reporting enemy actions that answer PIR or inform commanders' decision-making.
- Reporting enemy situation and being alert to emerging threats or opportunities, or the changing nature of the situation.
- Monitoring consumption of Class V (see table 6-2 on page 292 for all classes of supplies) and alert to opportunities to resupply from pre-positioned stocks.
- Reporting to higher headquarters, monitoring stockage levels, and cross leveling or resupply.
- Conducting CASEVAC and MEDEVAC procedures.
- Meeting criteria to commitment the reserve.

FOLLOW THROUGH

4-178. During the planning for the defensive operation, the platoon leader must discern from the company OPORD what the potential follow-on missions are and begin to plan how to achieve them. During this planning, the leader determines the possible timeline and location for defeat in detail, consolidation, reorganization, and transition which best facilitate future operations and provide adequate protection.

Consolidation

4-179. The platoon leader and platoon subordinate leaders plan and prepare for consolidate during TLP. The following actions are usually a part of consolidation:

- Eliminating remaining enemy resistance in BPs, noncontiguous assigned areas, and the security area.
- Reestablishing, reoccupying fighting positions and adjusting unit boundaries.
- Preparing for enemy counterattack.
- Reestablishing local security including OPs and patrols to deny enemy direct or indirect fire on defensive positions.
- Preparing for and assisting the passage of follow-on forces (if required).
- Continuing to improve security by conducting other necessary defensive actions, which include EA development, direct fire planning, and BP preparation.
- Adjusting FPFs and registering targets along likely mounted and dismounted avenues of approach.
- Closing gaps or lanes in obstacles; repairing or replacing damaged or breached obstacles and replacing expended mines.
- Securing enemy detainees.

Reorganization

4-180. Reorganization usually is conducted concurrently with consolidation. It consists of actions taken to prepare the unit for follow-on tasks. Depending on the nature of combat, the platoon leader may have to make significant decisions about how to reorganize the platoon. For instance, a decision to continue to fight with three reduced-strength squads, or to combine three reduced squads into two (or even one) full

squad. As with consolidation, the platoon leader and platoon subordinate leaders plan and prepare for reorganization during TLP. During reorganization, the platoon leader ensures the following actions are taken:

- Provide essential medical treatment and evacuate casualties, as necessary.
- Treat and evacuate wounded detainees and process the remainder of detainees.
- Reestablish key leaders using the designated succession of command.
- Reestablish manning of key weapons and equipment: vehicle crews, close combat missile system, machine guns, grenade launchers, and RTOs.
- Reestablish communications within the organization too higher headquarters, and with adjacent units.
- Cross-level personnel and adjust forces as required to support operations.
- Conduct resupply operations.
- Redistribute ammunition.
- Conduct required maintenance.
- Continue improving defensive positions, as necessary.

Transition

4-181. At the conclusion of an engagement, the platoon may continue the defense, or if ordered, transition to the offense. The platoon leader considers the higher commander's concept of operations, friendly capabilities, and enemy situation when making this decision. All missions should include plans for exploiting success or assuming a defensive posture. The platoon should assume that the enemy will continue to engage known friendly positions with indirect fires even if their attack has culminated.

4-182. A company commander may order a defending platoon to conduct a hasty operation (for example, counterattack or retrograde) or participate in a movement to contact. As part of a reserve force, the platoon may execute a counterattack to destroy exposed enemy elements and free decisively engaged friendly elements. A base-of-fire element suppresses or fixes the enemy force while the counterattack element moves on a concealed route to firing positions from which it can engage the enemy in the flank and rear. The counterattack force must maneuver rapidly, often fighting through enemy flank security elements, to complete the counterattack before the enemy can bring follow-on forces forward to influence the fight. Platoon leaders remain flexible and prepared for follow-on mission or plan to execute contingency plans in the commander's order.

SECTION IV – RETROGRADE

4-183. A *retrograde* is a type of defensive operation that involves organized movement away from the enemy (ADP 3-90). The enemy may force a retrograde or the commander may execute it voluntarily. In either case, the higher commander of the force executing the operation must approve retrograding. The three variations of the retrograde are delay, withdrawal, and retirement.

4-184. Retrogrades are conducted to improve a tactical situation or preventing a worse situation from developing. Stryker Infantry rifle platoons and squads usually conduct retrogrades as part of a larger force but may conduct independent retrogrades

(withdrawal) as required. *Retrograde movement* is any movement to the rear or away from the enemy (FM 3-90). Retrograde operations can accomplish the following:

- Resist, exhaust, and defeat enemy forces.
- Draw the enemy into an unfavorable situation.
- Avoid contact in undesirable conditions.
- Gain time.
- Disengage a force from battle for use elsewhere for other missions.
- Reposition forces, shorten lines of communication, or conform to movements of other friendly units.
- Secure favorable terrain.

DELAY

4-185. A *delay* is when a force under pressure trades space for time by slowing down the enemy's momentum and inflicting maximum damage on enemy forces without becoming decisively engaged (ADP 3-90). Delays allow units to trade space for time, avoiding decisive engagement and safeguard its forces. Ability of a force to trade space for time requires depth within the area assigned to the delaying force. The amount of depth required depends on several factors, including the—

- Amount of time to be gained.
- Relative combat power of friendly and enemy forces.
- Relative mobility of forces.
- Nature of terrain.
- Ability to shape the assigned area with obstacles and fires.
- Degree of acceptable risk.

4-186. Delays succeed by forcing the enemy to concentrate forces to fight through a series of defensive positions. Delays must offer a continued threat of serious opposition, forcing the enemy to repeatedly deploy and maneuver. Delaying forces displace to subsequent positions before the enemy can concentrate sufficient resources to engage decisively and defeat delaying forces in current positions. The length of time a force can remain in position without facing danger of becoming decisively engaged is primarily a function of relative combat power and METT-TC (I). (See ATP 3-21.11 and ATP 3-21.8 for additional information.) Delays gain time to—

- Allow friendly forces to establish a defense.
- Cover withdrawing forces.
- Protect friendly force's flanks.
- Allow friendly forces to counterattack.

4-187. Leaders normally assign areas that are deeper than they are wide. If the leader plans the delay to last only a short time or the assigned area depth is limited, delaying units may be forced to fight from a single set of positions. If the leader expects the delay to last for longer periods, or sufficient depth is available, delaying units may delay from either alternate or successive positions. The platoon can slow the advance of the enemy by causing casualties and equipment losses by employing—

- Ambushes.
- Artillery and mortar fire.
- Snipers.

- Obstacles.
- Minefields (to include phony minefields).

WITHDRAWAL

4-188. To *withdraw* is to disengage from an enemy force and move in a direction away from the enemy (ADP 3-90). Withdrawal is a planned retrograde operation, which a force in contact disengages from an enemy force and moves away from the enemy. Although the leader avoids withdrawing from action under enemy pressure, it is not always possible. Withdrawal is used to preserve the force or release it for a new mission.

4-189. Withdrawals are inherently dangerous. They involve moving units to the rear and away from what is usually a stronger enemy force. The heavier the previous fighting and closer the contact with the enemy, the more difficult the withdrawal. Units usually confine rearward movement to times and conditions when the advancing enemy force cannot observe the activity or easily detect the operation. (See ATP 3-21.11 and ATP 3-21.8 for additional information.)

Note. Employment of Psychological Operations teams with tactical loudspeakers can facilitate withdrawal through the use of sonic deception that, for example, suggests to the enemy there are larger numbers of U.S. troops than in reality and that a withdrawal is occurring in other places than the actual location(s) and direction(s).

PLANNING A WITHDRAWAL

4-190. The leader plans and coordinates a withdrawal in the same manner as a delay. METT-TC (I) applies differently because of differences between a delay and withdrawal. A withdrawal always begins under the threat of enemy interference. Because the force is most vulnerable when the enemy attacks, the leader plans for a withdrawal under pressure. The leader then develops contingencies for a withdrawal without pressure. In both cases, the leader's main considerations are to—

- Plan a deliberate break from the enemy.
- Employ deception techniques to disrupt and delay enemy actions.
- Displace the main body rapidly, free of enemy interference.
- Safeguard withdrawal routes.
- Retain sufficient maneuver, functional/multifunctional support, and sustainment capabilities throughout the operation supporting forces in contact with the enemy.

TYPES OF WITHDRAWALS

4-191. Withdrawals may be assisted or unassisted. They may or may not take place under enemy pressure. These two factors combined to produce four variations. Figure 4-8 depicts a mission graphic for a withdrawal and withdrawal under enemy pressure. The withdrawal plan considers which variation the force currently faces.

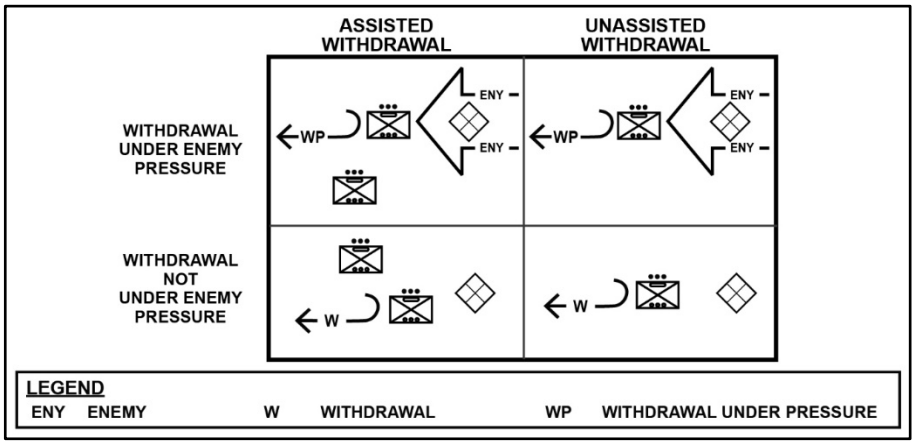


Figure 4-8. Types of withdrawals

4-192. Leaders prefer to conduct a withdrawal while not under enemy pressure and without assistance. Actions by the enemy, as well as additional coordination needed because of the presence of an assisting unit, complicate the operation.

Assisted Withdrawal

4-193. During an assisted withdrawal, the assisting force occupies positions to the rear of the withdrawing unit and prepares to accept control of the situation. Both forces closely coordinate the withdrawal. A withdrawing force can receive assistance from another force in the form of—

- Additional security for the area through which the withdrawing force will pass.
- Information concerning withdrawal routes (reconnaissance and trafficability).
- Loudspeaker operations for sonic deception against enemy forces.
- Forces to secure choke points or key terrain along withdrawal routes.
- Elements to assist in movement control, such as traffic control post.
- Required maneuver, direct fire support and sustainment, which can involve conducting a counterattack to assist the withdrawing unit in disengaging from the enemy.

Unassisted Withdrawal

4-194. During an unassisted withdrawal, the withdrawing unit establishes routes and develops plans for the withdrawal. It establishes the security force as a rear guard while the main body withdraws. Sustainment and protection forces usually withdraw first, followed by combat forces. As the unit withdraws, the detachment left in contact (DLIC) disengages from the enemy and follows the main body to its final destination. A *detachment left in contact* is an element left in contact as part of the previously designated security force while the main body conducts its withdrawal (FM 3-90). It simulates, as nearly as possible, the continued presence of the main body until it is too late for an enemy force to react by conducting activities such as electronic transmissions or attacks. The DLIC requires specific instructions about what to do when the enemy

force attacks and when and under what circumstances to delay or withdraw. If the DLIC must disengage from the enemy force, it uses the same techniques as in the delay.

4-195. A *stay-behind operation* is an operation in which a unit remains in position to conduct a specified mission while the remainder of the force withdraws or retires from an area (FM 3-90). While both a DLIC and a stay-behind force delay and disrupt the enemy, the biggest difference is the level of stealth. A stay-behind force delays the enemy through small scale engagements such as raids and ambushes. A stay-behind force only masses its combat power when combat power ratios and the tactical situation are in its favor. A DLIC engages the enemy and tries to represent itself as a larger force, so its presence must be known as it fights in a very conventional manner. Both forces seek to link-up with friendly forces when they accomplish their commander's intent.

Withdrawal Not Under Pressure

4-196. In a withdrawal not under pressure, platoons may serve as or as part of the DLIC. The Stryker is especially suited for this task because of its protection, mobility, and organic weapon systems. The platoon leader may designate one squad and Stryker to execute the DLIC mission for the platoon or constitute the DLIC using elements from the remaining rifle squads and Strykers with the platoon sergeant as the DLIC leader. A DLIC is used to deceive the enemy into thinking that the entire force is still in position. As the DLIC, the platoon—

- Repositions Strykers, squads, and weapons to cover the company's withdrawal.
- Repositions a squad and Stryker to each of the other platoon positions to cover the most dangerous avenue of approach into the position.
- Continues the normal operating patterns of the company and simulates company radio traffic.
- Covers the company withdrawal with planned direct and indirect fires if the company is attacked during withdrawal.
- Withdraws once the company is at its next position.

Withdrawal Under Pressure

4-197. In a withdrawal under enemy pressure, all units withdraw simultaneously when available routes allow, using delaying tactics to fight their way to the rear. When simultaneous withdrawal of all forces is not practical, (for example, when the Stryker platoon cannot prepare and position the security force, it conducts a fighting withdrawal) the platoon leader decides the order of withdrawal. The platoon withdraws from the enemy by conducting fire and movement to the rear until disengaged and then mounts its Strykers and continues with the mission. Squads and Strykers not in contact are withdrawn first to provide suppressive fire and to allow Strykers and squads (or teams) in contact to withdraw. Several factors influence this decision:

- Subsequent missions.
- Availability of transportation assets and routes.
- Disposition of friendly and enemy forces.
- Level and nature of enemy pressure.
- Degree of urgency associated with the withdrawal.

METHODS OF DISENGAGEMENT

4-198. Based on the OPORD, the unit may be required to retain defensive positions and to remain and fight for a certain amount of time, or it may be required to *disengage*—a tactical mission task in which a unit breaks contact with an enemy to conduct another mission or to avoid becoming decisively engaged (FM 3-90) and displace to subsequent positions. The company may have to remain and fight as long as possible, or it may have to disengage and displace to subsequent positions. A platoon, as part of a company, may disengage to defend from another BP, prepare for a counterattack, delay, withdraw, or prepare for another mission.

FIRE AND MOVEMENT

4-199. Fire and movement to the rear is the basic method for disengaging. All available fires are used to slow the enemy and allow platoons to move away. The company commander may move subordinate platoons and mass fires to stop or slow the enemy advance before beginning the movement away from the enemy.

4-200. Using bounding overwatch, a base of fire is formed to cover platoons or squads moving away from the enemy. One platoon or squad acts as the base of fire, delaying the enemy with fire or retaining terrain blocking the advance, while other platoons or squads disengage. Strykers should also be used as a base of fire element.

4-201. Moving platoons or squads get to their next position and provide a base of fire to cover the rearward movement of forward platoons and squads. Fire and movement are repeated until contact with the enemy is broken, the platoons pass through a different base-of-fire force, or the platoons are in position to resume their defense.

PLAN FOR DISENGAGEMENT

4-202. Tactics used by the platoon to disengage from the enemy differ according to the company commander's plan for disengagement, how the platoon is deployed, and other factors. The following actions apply in all cases:

- Maximum use is made of the terrain to cover rearward movement.
- Strykers and squads back out of position and move, attempting to keep a terrain feature between them and the enemy.
- Rapid movement and effective base of fire enhance mobility and are key to a successful disengagement.

4-203. Plans for disengagement may be part of any defensive plan. When squads and Strykers are separated, there are three ways they can disengage: by squads and fire teams; by thinning the lines when they must cover their own movement; or simultaneously when they are covered by another force (see ATP 3-21.8 for more information). When the squads disengage, they assemble and move as one element to a remount point using proper movement techniques.

DISENGAGEMENT USING STRYKERS

4-204. When Strykers and squads are at the same position, the squads normally move to the remount point while the Strykers provide suppressive fire. The Strykers then quickly move to the remount point, linkup with the Infantry, load them, and move out. Squads will use the disengagement techniques discussed in ATP 3-21.8. The method selected is dictated by the enemy situation, terrain, and the Stryker's ability to serve as a base of fire.

4-205. Because of the Stryker's speed and protection against small-arms fire and artillery shell fragments, it is usually best for the squads (when dismounted) to disengage while covered by the Stryker. If the Strykers are not able to support the squads by fire or if the squads are heavily engaged, the vehicle element may disengage first and move to a position to assist the squads in disengagement.

Simultaneous Disengagement

4-206. When Strykers disengage simultaneously, they move as a platoon as quickly as possible. The platoon normally uses this method when Strykers are covered by another force and speed is the most critical factor. If the squads are already mounted, the entire platoon moves using movement techniques to a position designated by the commander. If squads are dismounted, Strykers move to the remount point to pick them up, or they may provide SBF from a new position to allow the squads to disengage.

Stryker Disengagement

4-207. When Strykers must cover their own disengagement, two Strykers will stay in position as a base of fire while two Strykers bound to the rear. The Strykers that stay in position must cover the entire sector until the bounding Strykers reach positions where they can provide a base of fire. Disengaging Strykers can obscure their movement with the RWS-mounted smoke launchers. The smoke billows in a small semi-circle around the disengaging vehicle, allowing the covering Strykers to continue their base of fire. Dismounted Infantry can use smoke with hand grenades, grenade launchers, and the M3 MAAWS.

RETIREMENT

4-208. A *retirement* is when a force out of contact moves away from the enemy (ADP 3-90). Retirement is a form of retrograde, which a force not in contact with the enemy moves away from the enemy. A retiring unit organizes for combat but does not anticipate interference by enemy ground forces. Typically, another unit's security force covers the movement of one formation as the unit conducts a retirement. However, enemy forces may attempt to interdict the retiring force through unconventional forces, air strikes, air assault, or long-range fires. The leader anticipates enemy actions and organizes the unit to fight in self-defense. The leader usually conducts retirement to reposition forces for future operations or to accommodate the current concept of operations. (See ATP 3-21.11 for additional information.)

SECTION V – ENGAGEMENT AREA DEVELOPMENT

4-209. EA development is a complex function that requires parallel planning and preparation for the platoon and squad to accomplish the tasks for which they are responsible. Despite this complexity, EA development resembles a drill, and the platoon leader and subordinate leaders use an orderly, standard set of procedures. The steps of EA development are not a rigid sequential process. Some steps may occur simultaneously to ensure the synergy of combined arms. The platoon leader integrates these steps within the TLP and the IPOE (see chapter 2 for more information). Beginning with evaluation of mission variables of METT-TC (I), the EA development process (asterisks [*] denote steps that occur simultaneously)—

- Identifies likely enemy avenues of approach.
- Determines most likely enemy COA.
- Determines where to kill the enemy.
- Positions subordinate forces and weapon systems. *
- Plans and integrates obstacles. *
- Plans and integrates fires. *
- Rehearses the execution of operations in the EA.

4-210. The *engagement area* is an area where the commander masses effects to contain and destroy an enemy force (FM 3-90). *Contain* is a tactical mission task in which a unit stops, holds, or surrounds an enemy force (FM 3-90). The platoon leader uses natural and man-made obstacles to canalize the attacking force into an EA where they can be destroyed by direct and indirect fires. The key to success is the platoon leader's ability to integrate the obstacles, fires and direct fires plans within the EA to achieve the Stryker Infantry rifle platoon's and squads' tactical purposes (see figure 4-9 on page 204). (See ATP 3-21.11 and ATP 3-21.21 for additional information.)

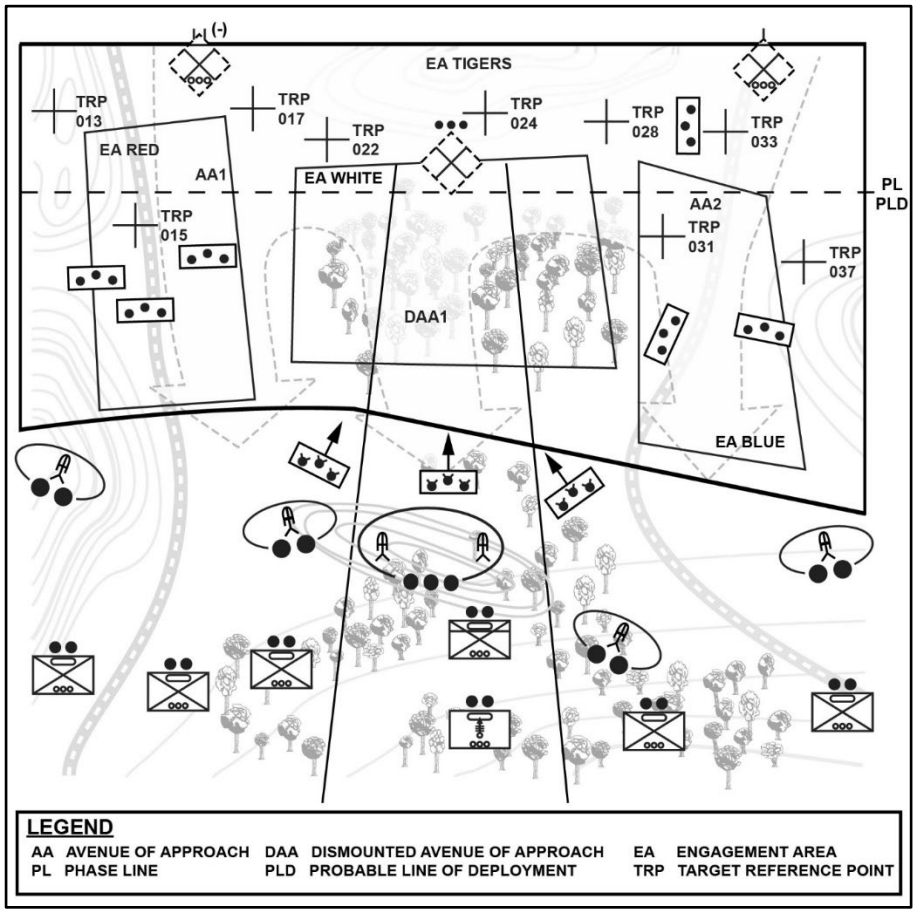


Figure 4-9. Engagement area example

4-211. Stryker Infantry rifle platoons will generally defend in a company level EA where they may mass fires into portions of a company's EA or defend decentralized platoon EAs. The success of the EA depends on how effectively the platoon leader can integrate obstacle and indirect fire plans with their direct fire plan to achieve the platoon's purpose.

IDENTIFY LIKELY ENEMY AVENUES OF APPROACH

4-212. During the IPOE the platoon leader creates the graphic terrain analysis overlay, which is similar to the MCOO prepared by the battalion S-2. As an example, the MCOO references the classifications of severely restricted terrain, restricted terrain, and unrestricted terrain. Identifying avenues of approach is important because all COAs that involve maneuver depend on available avenues of approach. During defensive operations, it is important to identify avenues of approach that support threat offensive capabilities when identifying the most likely enemy COA.

4-213. The platoon leader conducts an initial reconnaissance of the terrain using OAKOC. If possible, the platoon leader does this from the enemy's perspective along each avenue of approach into the sector of fire or the proposed EA. The platoon leader looks for existing obstacles and potential avenues of approach the enemy may follow. The platoon leader tries to determine how the enemy will use the terrain to their advantage and uses this to develop the defensive plan.

4-214. Avenues of approach consist of a series of mobility corridors through which a maneuvering force must pass to reach its objective. Avenues of approach must provide ease of movement and enough width for dispersion of a force large enough to affect the outcome of the operation significantly. Avenues of approach are developed by identifying, categorizing, and grouping mobility corridors and evaluating avenues of approach. Procedures, techniques, and considerations when identifying the enemy's likely avenues of approach include the following:

- Conduct initial reconnaissance and, if possible, do so from the enemy's perspective along each avenue of approach into the sector or EA.
- Identify *key terrain,* which is an identifiable characteristic whose seizure or retention affords a marked advantage to either combatant (ADP 3-90).
- Identify *decisive terrain,* which is key terrain whose seizure and retention is mandatory for successful mission accomplishment (ADP 3-90), and includes:
  - Locations affording positions of advantage over the enemy.
  - Natural obstacles and choke points restricting forward movement.
- Determine which avenues provide cover and concealment for the enemy while allowing the enemy to maintain its tempo.
- Evaluate lateral routes connecting each avenue of approach.

IDENTIFY MOST LIKELY COURSE OF ACTION

4-215. During the IPOE process (determine threat COAs) the platoon leader will identify and describe threat COAs that can influence the platoon's assigned area and area of interest. SITEMPs and COA statements for each COA are developed by the battalion S-2 cell. These outputs will assist in the platoon leader's analysis. The platoon leader will also gain an understanding from the company commander's order and will continue to refine that understanding through their own analysis and during reconnaissance of the defense. Procedures and considerations in determining the enemy's most likely COA (enemy scheme of maneuver) include the following:

- Determine how the enemy will structure the attack.
- Determine how the enemy will use reconnaissance and surveillance assets. Will the enemy attempt to infiltrate friendly positions?
- Determine where and when the enemy will change formations and establish SBF positions.
- Determine where, when, and how the enemy will conduct the assault or breaching operations.
- Determine where and when the enemy will commit follow-on forces.
- Determine the enemy's expected rates of movement.

- Assess the effects of enemy combat multipliers and anticipated locations/areas of employment.
- Determine what reactions, the enemy is likely to have in response to projected friendly actions.

DETERMINE WHERE TO KILL THE ENEMY

4-216. Generally, leaders at the platoon level decide where to kill the enemy within an EA assigned by a higher headquarters; however, leaders at the platoon level must assess the best place to kill the enemy within the assigned area by understanding the terrain effects and the enemy they will face.

4-217. An analysis of the terrain, enemy scheme of maneuver and avenues of approach enables the platoon leader to understand how the enemy will enter, and flow through the platoon's assigned area. The platoon leader then uses that analysis to determine where in the EA (assigned or identified) to most effectively mass fires on the enemy. For example, rough terrain where the enemy is slowed; terrain that lends itself to a flanking shot; naturally constricting terrain such as a defile, or areas that can be improved with reinforcing obstacles. In planning where to kill the enemy, the platoon leader must be careful not to make flawed assumptions about how the enemy will maneuver. For example, do not assume the enemy force will choose to come out of a woodline and expose itself to fires just because the company's EA is on an open piece of terrain.

4-218. Once the platoon understands where it can most effectively kill enemy forces, it emplaces natural or man-made TRPs to focus their fires. TRPs enable the platoon to shift fires from one to another, distribute fires across a target array, or change the focus of fires. After analysis, the platoon leader identifies the most advantageous places to concentrate fires within the EA and identifies TRPs to focus, distribute, and shift fires within those places. The following steps apply in identifying and marking where the enemy engagement is to occur:

- Identify TRPs matching the enemy's scheme of maneuver allowing the platoon (Strykers and squads) to identify where it will engage enemy forces through the depth of the assigned sector.
- Identify and record the exact location of each TRP.
- Use thermal sights to ensure visibility at the appropriate range under varying conditions, including daylight and limited visibility (darkness, smoke, dust, or other obscurants) when marking TRPs.
- Determine how many weapon systems will focus fires on, around, or between each TRP to achieve the desired purpose.
- Determine which element will mass fires on each TRP.
- Determine trigger/engagement lines for all weapons systems.
- Establish EAs around TRPs.
- Develop direct fire plan that focuses on each TRP and incorporates all appropriate direct fire control measures.
- Determine engagement criteria and priorities (see appendix A for more information on direct fire planning).

POSITION SUBORDINATE FORCES AND WEAPON SYSTEMS

4-219. Once the platoon leader understands where they intend to kill the enemy, the next step is to position forces and weapons. With an understanding of how the enemy will move through the EA, optimal places to kill enemy forces within the EA, and tentative TRPs designated, the platoon leader plans where to emplace Strykers, machine guns, AT missiles, and squad BPs to most effectively cover those places with direct fires.

4-220. The platoon leader plans the use of primary and secondary sectors of fire, primary and alternate, subsequent, and supplementary BPs, and direct fire control measures to enable the platoon to focus, shift, and distribute direct fires throughout the EA. To position weapons effectively, leaders must know weapons system characteristics, capabilities, and limitations as well as the effects of terrain and the tactics used by the enemy. Platoon leaders should position weapons where they have protection, avoid detection, and surprise the enemy with accurate and lethal fires. Leader must ensure that weapons have a clear line of sight to observe TRPs. Additionally, emplacement of forces and weapon systems needs to support the desired obstacle effect to maximize the effectiveness of the EA. The following steps apply in selecting and improving BPs and emplacing the Stryker Infantry rifle platoon and squads, antiarmor weapon systems, crew-served weapon systems, Strykers, and individual fighting positions:

- Select tentative Stryker and squad defensive positions capable of massing fires in likely target locations; ensure they can observe tentative TRPs from the prone position.
- Conduct a leader's reconnaissance of the tentative defensive positions.
- Drive the EA to confirm that the selected positions are tactically advantageous.
- Confirm and mark the selected defensive positions.
- Ensure the defensive positions do not conflict with those of adjacent units and are effectively tied in with adjacent positions.
- Select primary, alternate, and supplementary fighting positions to achieve the desired effect for each TRP.
- Ensure the VCs and squad leaders position weapon systems so the required numbers of weapons, Strykers, and or squads effectively cover each TRP.
- Ensure that positions allow VC/gunner to observe the EA from the defilade position and engage enemy forces from the hull down position (defilade).
- Stake vehicle positions following the unit SOP so engineers can dig in the positions while Stryker crews perform other tasks.
- When established, mark and rehearse route(s) and trigger(s) for the defending force to move from its hide position(s) (concealed from enemy observation) to its OPs and/or BPs.

Note. When possible, select BPs while moving in the EA. Using the enemy's perspective enables the platoon leader to assess survivability of positions.

PLAN AND INTEGRATE OBSTACLES

4-221. The platoon leader, as directed by the company commander, with the assistance of the engineer leader (when attached) determine an obstacle's intent relative to its location, and effect to block, disrupt, fix, or turn attacking enemy forces into planned EAs. Countermobility planning includes the positioning of protective obstacles to prevent the enemy from closing with defensive BPs, and integrating mines, wire, indirect fires, and direct fires in conjunction with placement. The following apply in planning and integrating obstacles during defensive missions:

- Platoon leader must understand what obstacle effort the platoon has been tasked to emplace by higher headquarters, whether an obstacle group or a specific directed obstacle and will take priority.
- Obstacle effort is time-intensive; platoons must immediately start emplacing obstacles.
  - Start with known obstacles, as directed by higher headquarters, while continuing to plan the company or platoon obstacle effort.
  - Emplace lower-priority obstacles while planning for higher priority obstacles.
- Obstacles shape the EA by achieving specific effects, including denying enemy access to terrain (block), forcing the enemy to change direction (turn), significantly delaying their movement (fix), or limiting their ability to move freely or maintain their movement formations (disrupt).
  - *Block* is an obstacle effect that integrates fire planning and obstacle effort to stop an attacker along a specific avenue of approach or prevent the attacking force from passing through an engagement area (FM 3-90).
  - *Turn* is an obstacle effect that integrates fire planning and obstacle effort to divert an enemy formation from one avenue of approach to an adjacent avenue of approach or into an engagement area (FM 3-90).
  - *Fix* is an obstacle effect that focuses fire planning and obstacle effort to slow an attacker's movement within a specified area, normally an engagement area (FM 3-90).
  - *Disrupt* is an obstacle effect that focuses fire planning and obstacle effort to cause the enemy to break up its formation and tempo, interrupt its timetable, commit breaching assets prematurely, and attack in a piecemeal effort (FM 3-90).
- Protective obstacles are positioned close to friendly unit positions to disrupt an enemy assault.
- Tactical wire obstacles support the defensive scheme, for instance by running along a machine gun FPL.
- The obstacle or obstacle groups' intent is determined with the engineer platoon leader confirming the target, relative location, and effect.
- The platoon leader ensures intent supports the commander's scheme of maneuver.
- In conjunction with the engineer platoon leader, identify, site, and mark the obstacles within the obstacle group, tie reinforcing obstacles into natural obstacles.
- The platoon leader ensures coverage of all obstacles with observation and direct and/or indirect fires.

- The platoon leader ensures Strykers and squads can observe and fire on obstacles but also on the terrain the enemy will use when making contact with those obstacles.
- The platoon leader assigns responsibility for guides and lane closure as required.
- According to METT-TC (I), the platoon leader assists engineer platoons in emplacing obstacles, securing Class IV/V point, and securing obstacle work sites.
- The platoon leader coordinates engineer disengagement criteria, actions on contact, and security requirements with the engineer platoon leader at the obstacle work site.
- The platoon leader assesses what effect the obstacle will have on the enemy.
- The platoon leader understands resources required to construct each obstacle effect based off the enemy they are facing (blocking obstacle requires significantly more time and resources than a disrupting obstacle).
- Obstacle emplacement is manpower-intensive, and it is primarily the rifleman's job to accomplish.
- Obstacle emplacement is an essential priority of work and must be closely supervised and tracked to completion or it will not be accomplished to standard.

4-222. The obstacle's purpose will influence many aspects of the operation, from selection and design of obstacle sites to actual conduct of the defense. Once the tactical obstacle has been emplaced, the platoon leader must report its location and any necessary gaps in the obstacle to the company commander. This ensures that the company commander can integrate obstacles with their direct and indirect fire plans, refining their EA development.

PLAN AND INTEGRATE FIRES

4-223. The platoon leader, with the assistance of the FO, determines the purpose of fires and where that purpose is best achieved. This plan provides the most effective fires resources and mitigate the risk of fratricide as the attacking enemy nears the designated EAs while supporting air assets, army aviation, and CAS attacks. During EA development, direct fire control measures, and fire support coordination measures such as TRPs and trigger lines are critical. When planning and integrating direct and indirect fires, the platoon leader must accomplish the following:

- Determine the purpose of fires if the company commander has not already done so.
- Determine where the purpose will best be achieved if the company commander has not already done so.
- Establish the observation plan that includes—
  - Redundancy for each target.
  - Observers such as the platoon leader, team leaders, and other subordinate elements.
- Establish triggers based on enemy movement rates.
- Obtain accurate target locations using organic target location devices or survey/navigational equipment.
- Refine target locations to ensure coverage of obstacles.

- Plan FPF.
- Request critical friendly zone for protection of maneuver elements and no fire areas for protection of OPs and forward positions.
- Allow leaders to walk the terrain with their FOs to ensure the observers can fire targets at pre-planned triggers, when they are able, which ensures the observers can provide bottom-up refinement through the fires planning process.

Note. Leaders at the platoon level provide bottom-up refinement on the effectiveness of the higher fire support plan. Leaders at the platoon level have a better appreciation of the terrain within the EA because of their proximity to the EA.

4-224. The platoon leader should continually assess the direct fire, BP, obstacle, and indirect fire plans to ensure that they remain integrated. The direct fire and indirect fire plans should both take advantage of the effects of emplaced obstacles on the enemy's maneuver. When the plans are out of synch, the platoon leader should make adjustments to the plan.

ENGAGEMENT AREA REHEARSALS

4-225. The purpose of rehearsals is to ensure every leader and Soldier understands the plan and elements are prepared to cover their assigned areas with direct and indirect fires. The platoon will likely participate in a company level EA rehearsal. The company commander has several options for conducting a rehearsal, but the mounted rehearsal is the most common and most effective. One technique for the mounted rehearsal in the defense is to have the company trains, under the control of the company XO, move through the EA to depict the enemy force while the commander and subordinate platoons rehearse the battle from the team defensive positions. The rehearsal should cover—

- Rearward passage of security forces (as required).
- Closure of lanes (as required).
- Movement from the hide position (when used) to the BP.
- Use of fire commands, triggers, and maximum engagement lines to initiate direct and indirect fires.
- Shifting of fires to refocus and redistribute fire effects.
- Disengagement criteria.
- Identification of displacement routes and times.
- Preparation and transmission of critical reports using radio and digital systems, as applicable.
- Assessment of the effects of enemy weapon systems.
- Displacement to alternate, supplementary, or subsequent BPs.
- Cross leveling or resupply of Class V (see table 6-2 on page 292 for all classes of supplies).
- CASEVAC and MEDEVAC procedures.
- Evacuation of casualties.
- Friendly passage of lines or reducing own obstacles to counterattack or pursue enemy.

Note. When conducting their rehearsal, the platoon leader should coordinate with the company to ensure other units' rehearsals are not planned for the same time and or location. Coordination will lead to more efficient use of planning and preparation time for all company elements. It will eliminate the danger of misidentification of friendly forces in the rehearsal area.

SECTION VI – FIGHTING POSITIONS

4-226. The defensive plan normally requires building fighting positions. The Stryker platoon uses fighting positions for its dismounted Infantry and for its Strykers. Whether the platoon is in a defensive perimeter or on a deliberate ambush line, the platoon will seek cover from fire and concealment from observation. Upon occupation, the platoon will immediately establish hasty fighting positions and designate sectors of fire. When the platoon occupies fighting positions, the platoon continuously improves them. The time available to the platoon will influence how far the platoon gets with its preparation, whether it is hasty or well-prepared deliberate positions.

LEADER RESPONSIBILITIES

4-227. Leaders ensure assigned fighting positions enable Soldiers to engage the enemy within the Soldiers' assigned sector of fire to the maximum effective range of the Soldiers' weapon (terrain dependent) with grazing fire and minimal dead space. Leader responsibilities include requirements to—

- Protect Soldiers.
- Plan and select fighting position sites.
- Provide materials.
- Supervise construction.
  - Ensure fighting positions are accurately oriented to the terrain they defend.
  - Ensure fighting positions are mutually supporting.
  - Ensure fighting positions are sighted in on the obstacles they cover.
- Inspect periodically.
- Request technical advice from engineers as required.
- Improve and maintain unit survivability continuously.
- Determine if need to build up or build down OHC.

CHARACTERISTICS OF FIGHTING POSITIONS

4-228. Fighting positions protect Soldiers by providing cover from direct and indirect fires and concealment through positioning and proper camouflage. Because the battlefield conditions confronting Soldiers are never standard, no single standard fighting position design fits all tactical situations. The two types of fighting position are hasty and deliberate. The one constructed depends on time and equipment available, and the required level of protection. However, if time is available, the unit will continue to improve their positions. Ultimately hasty positions should be improved or modified to become deliberate positions. Fighting positions are designed and constructed to protect

the individual soldier and the Soldier's weapons systems. See ATP 3-21.8 for detailed information on—

- Hasty and deliberate fighting positions.
- One and two Soldier fighting positions.
- Machine gun fighting positions.
- Close-combat missile fighting positions.
- Class IV material requirements (see table 6-2 on page 292 for all classes of supplies) for standard OHC.

STRYKER DEFENSIVE POSITIONS

4-229. Initially, Stryker platoons will use natural cover and concealment in hide positions to increase survivability. Battlefield success requires maneuver among fighting positions and maximum use of terrain is necessary to conceal the Strykers maneuvering between fighting positions. The maximum use of wadis or draws, reversed slope hills, and natural concealment is required to conceal fighting vehicles maneuvering among fighting positions. Digging prepared positions for Strykers requires considerable effort and engineer support. Crews use these fighting positions for individual protection as well. Deliberate fighting positions are required to protect a vehicle from kinetic energy and hypervelocity projectiles.

4-230. Success on the battlefield requires maneuver between hide and fighting positions when Strykers are not engaging enemy targets. Strykers use defilade positions when in the defense. If time and blade assets are available, each vehicle fighting position may have a hide position dug in.

4-231. Leaders should position Strykers where they can engage attacking enemy forces from their flanks. This means placing fighting positions on the flank of enemy mounted avenues of approach. Flank positions in restrictive terrain provide windows of opportunity to engage the enemy and afford the Stryker additional protection from enemy. The basis for this technique is to limit exposure only to the enemy vehicles the Stryker is firing at. It then shifts to other firing positions as enemy vehicles are destroyed. These positions restrict observation and vulnerability to only one segment of the platoon's EA therefore, only those enemy vehicles that can be seen and engaged by the Stryker can return fire.

4-232. Leaders should consider the following when employing Strykers in the defense:

- Use a hide position when possible and stay in it until the enemy is in the EA.
- A keyhole position which provides a window to engage the enemy and afford the Stryker additional protection from enemy direct fire.
- Have a backdrop and avoid anything that may catch the enemy's eye.
- Position to the flank of an enemy mounted approach and behind frontal cover because it is easier for the attacker to acquire and destroy a target to their front than those to their flank or rear.
- Use covered routes into and out of firing positions.
- Plan multiple positions for each vehicle.
  - Use a guideline of 75 meters or more between primary and alternate Stryker positions.
  - This decreases the enemy's ability to acquire the Stryker following an engagement.

- To conserve dig assets, vehicles must use the natural terrain as a starting point to achieve hull-defilade.
  - Avoid positions that expose weapons to large numbers of enemy systems.
  - It is best to hide weapons from major portions of the enemy formation.
  - The weapon should be able to engage one or two of the enemy vehicles at the same time.
  - It must be able to shift from its assigned sector of fire to engage other portions of the enemy formation (see figure 4-10).
- Take care in orientation of individual vehicle positions because the narrow visibility makes it difficult to maintain a wide sector of scan without exposing the Stryker weapons system.

Note. Do not construct berms. To be effective, a berm needs more than 20 feet of dirt, and this makes it easier for the attacker to spot the position. Dig turret-defilade fighting positions instead.

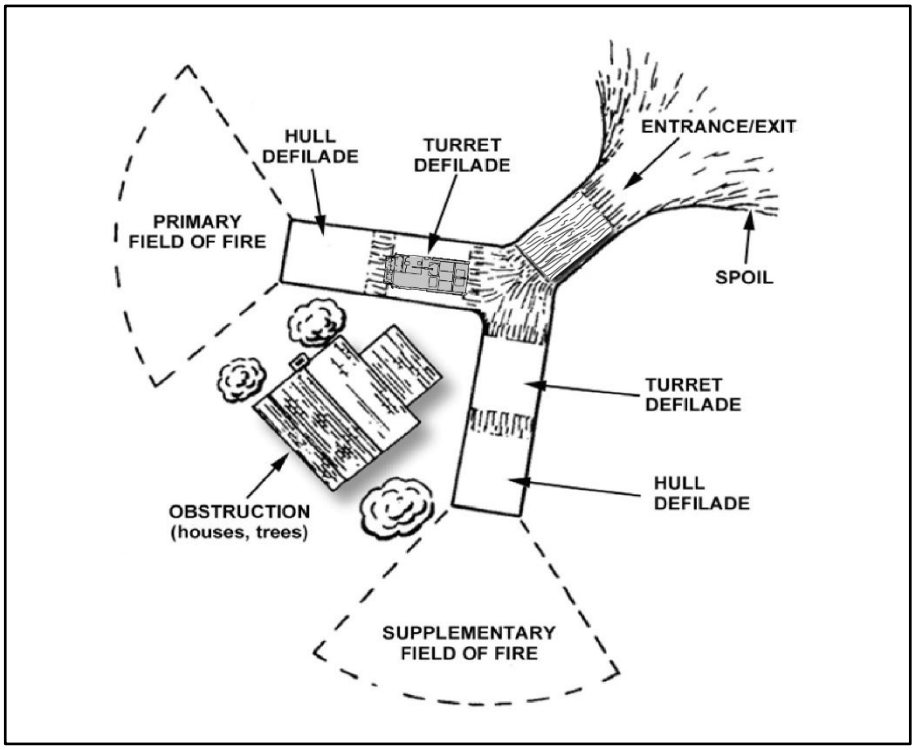


Figure 4-10. Stryker fighting position, example

Note. Platoon leaders will mark and prioritize BPs with the attached engineers platoon leader who also considers obstacle emplacement and survivability improvements. Each D7 bulldozer team can emplace a deliberate turret-defilade fighting position in 1.6 hours (see ATP 3-37.34).

HASTY STRYKER FIGHTING POSITIONS

4-233. Hasty fighting positions for combat vehicles take advantage of natural terrain features. Preparing these positions requires a minimal construction effort. A natural depression, such as a sunken road, shields the position from frontal attack and provides limited concealment if properly camouflaged. Protection improves if the position is deeper, and the parapet extends around the vehicle's sides.

DELIBERATE STRYKER FIGHTING POSITIONS

4-234. Deliberate fighting positions are required to protect a vehicle from kinetic energy and hypervelocity projectiles and extensive engineer support is required. Deliberate vehicle fighting positions are holes in the ground that provide cover and concealment, reducing the target signature. The position is constructed in three parts: hull defilade, turret defilade, hide location, and concealed access ramp or route (see figure 4-10 on page 213). Positions formed by natural terrain are best because of easy modification. Each position is camouflaged with natural vegetation or a camouflage net, and the spoil is flattened out or hauled away. Fighting positions are planned as deliberate positions. The maneuver commander directs engineer earthmoving assets to construct the following types of fighting positions (see ATP 3-37.34):

- Hull defilade leaves the vehicle optics and weapons systems above ground, allowing for the observation and engagement of targets.
- Turret defilade places the entire vehicle below ground level to provide protection to crew and vehicle.
- Hide location allows the vehicle to be concealed away from the fighting while also putting weapons and optics below ground level.
- The hide position includes overhead concealment when possible.
- Concealed access ramp or route (natural or constructed) allows the vehicle to move from its hide position to its fighting positions.

Note. The position of Stryker optics precludes the crew from observing their assigned sector while positioned in the turret defilade. The commander may choose to assume risk and have only hull defilade positions prepared so the crews can observe their sectors of fire and engage enemy with their weapons systems.

4-235. The platoon leader must prioritize the survivability effort within the platoon. The platoon may have time only to dig in positions that have the least amount of natural cover and concealment. Soil composition should also be a consideration in defensive positions selection; sites to avoid include those where the soil is overly soft, hard, wet, or rocky.

DA FORM 5517 (STANDARD RANGE CARDS)

4-236. A Standard Range Card is a sketch of an area that a direct fire weapon system is assigned to cover. A Standard Range Card aids in planning and controlling fires and aids the crew in acquiring targets during limited visibility. It is an aid for replacement personnel, squads, and platoons to move into the position and to orient on their assigned area. During good visibility, the gunner should have no problems maintaining

orientation in their assigned area. During poor visibility, they may not be able to detect lateral limits. If the gunner becomes disoriented and cannot find or locate reference points or area limit markers, they can use the Standard Range Card to locate the limits. The gunner should make the Standard Range Card so that they become more familiar with the terrain in their area. They should continually assess the area and if necessary, update their Standard Range Card. (See appendix A for more information on the Standard Range Card.)

SECTOR SKETCHES

4-237. Detailed sketches aid in the planning, distribution, and control of the platoon fires. Gunners prepare the Standard Range Card. Squad leaders prepare squad sector sketches, VCs/gunners prepare section sketches, and the platoon leader prepares the platoon sketch. (See appendix A for a detailed description of the sector sketch.)

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Chapter 5
Tactical Enabling Operations and Activities

As in all operations, Infantry platoons and squads conduct a variety of tactical enabling operations. This chapter addresses security operations, troop movement, relief in place, passage of lines, linkup, breaching, tactical deception, security, AA, CBRN defense, C-UAS and EW, patrols, and patrolling.

SECTION I – SECURITY OPERATIONS

5-1. *Security operations* are those operations performed by commanders to provide early and accurate warning of enemy operations, to provide the forces being protected with time and maneuver space within which to react to the enemy, and to develop the situation to allow commanders to effectively use their protected forces (ADP 3-90). They prevent surprise, reduce uncertainty, and provide early warning of enemy activities. This section addresses the general security considerations, fundamentals of security, and types of security operations. (See ATP 3-21.8 for more information.)

SECURITY ACTIVITIES

5-2. Security operations are not to be confused with the more general term of security (see chapter 5, section VIII). Security includes a wide range of activities such as preventing unauthorized access into secure areas or establishing perimeter security around a base camp. Security is inherent in all operations and is always the first priority of work. Security is the responsibility of every Soldier and unit whereas security operations are distinct missions. The following activities (local security, OPs, and combat outposts) are general security considerations that are applicable to all security operations and units.

LOCAL SECURITY

5-3. *Local security* is the low-level security activities conducted near a unit to prevent surprise by the enemy (ADP 3-90). All units are responsible for their own local security. Local security is not an operation of its own. It includes any local measure taken by units that protect against enemy actions. It involves avoiding enemy detection or deceiving the enemy about friendly positions and intention. Local security provides immediate protection to friendly forces and is typically performed by a unit for self-protection, but it may also be provided by another unit when the security requirements are greater than that unit's security capabilities. Local security may include countermobility (see paragraph 4-68) and survivability activities (see paragraph 4-62) as well as the use of active and passive measures (see paragraph 4-141) to provide local security.

OBSERVATION POSTS

5-4. An *observation post* is a position from which observations are made or fires are directed and adjusted (FM 3-90). All OPs should possess appropriate communications.

Commanders task subordinate units to perform reconnaissance and combat patrols to cover dead space and gaps between OPs. Units place restrictive fire support coordination measures (such as no-fire area or restrictive fire area) around OP locations to prevent fratricide. Dismounted Infantry OPs provide maximum stealth but lack the speed to displace, optics, and weapons of the mounted element.

5-5. It takes a minimum of two Soldiers to establish an OP, and then they can only operate effectively for no more than 12 hours. OPs manned for more than 12 hours require a minimum of an Infantry squad to ensure continuous operation. Under limited visibility, units can establish OPs as listening posts to take advantage of the increased auditory acuteness that occurs when Soldier vision is degraded.

COMBAT OUTPOSTS

5-6. A *combat outpost* is a reinforced observation post capable of conducting limited combat operations (FM 3-90). Using combat outposts is a technique for employing security forces in restrictive terrain that precludes mounted security forces from covering the area. Leaders use combat outposts when enemy forces infiltrating into and through the security area could overrun smaller OPs. Leaders use a combat outpost to extend the depth of the security area, to keep friendly forward OPs in place until they can observe the enemy force's main body, or to secure friendly forward OPs that enemy forces might encircle.

FUNDAMENTALS OF SECURITY OPERATIONS

5-7. Five fundamentals of security operations establish the framework for security operations. These fundamentals provide a set of principles that remind leaders of the inherent characteristics required to execute security operations. These fundamentals include provide early and accurate warning, provide reaction time and maneuver space, orient on the force, area, or facility to be secured, perform continuous reconnaissance, and maintain enemy contact. (See FM 3-96 for additional information.)

PROVIDE EARLY AND ACCURATE WARNING

5-8. The platoon, detects, observes, and reports threat forces that can influence the company main body. Early detection and warning through rapid reporting enables the protected commander to make timely and well-informed decisions to apply forces relative to the threat. As a minimum, security forces should operate far enough from the protected force to prevent enemy ground forces from observing or engaging the protected force with direct fires.

PROVIDE REACTION TIME AND MANEUVER SPACE

5-9. The platoon (security force) provides the protected force with enough reaction time and maneuver space to respond effectively to likely enemy actions by operating at a distance from the protected force and by offering resistance (within its capabilities and mission constraints) to enemy forces. Providing the Stryker platoon with an assigned area that has sufficient depth to operate enhances its ability to provide reaction time and maneuver space to the protected force.

ORIENT THE FORCE, AREA, OR FACILITY TO BE SECURED

5-10. While reconnaissance forces orient on the enemy, security forces orient on the protected force by understanding their scheme of maneuver and follow-on mission. The platoon (security force) focuses all its actions on protecting and providing early warning operating between the protected force and known or suspected enemy.

PERFORM CONTINUOUS RECONNAISSANCE

5-11. Reconnaissance fundamentals are implicit in all security operations. The platoon (security force) continuously seeks the enemy and reconnoiters key terrain. The platoon uses continuous reconnaissance to find the enemy (intelligence drives fire and maneuver), develop the situation, report rapidly and accurately, retain freedom of maneuver to provide early and accurate warning, and provide reaction time and maneuver space to the protected force. The platoon conducts zone, area, or route reconnaissance along with using OPs and combat outpost to detect enemy movement or enemy preparations for action and to learn as much as possible about the terrain with the ultimate goal of determining the enemy's COA and to assist the protected force in countering it.

MAINTAIN ENEMY CONTACT

5-12. Once the platoon (security force) makes enemy contact, it does not break contact unless the commander specifically directs it. However, the individual security asset that first makes contact does not have to maintain that contact if the entire security force maintains contact with the enemy. The platoon leader ensures that subordinate security assets hand off contact with the enemy from one security asset to another in this case. The platoon must continuously collect information on the enemy's activities to assist the protected main body in determining potential and actual enemy COAs and to prevent the enemy from surprising the protected force.

TYPES OF SECURITY OPERATIONS

5-13. Security operations provide the protected force with varying levels of protection and are dependent upon the size of the unit conducting the security operation. All security operations provide protection and early warning to the protected force. The four types of security operations are screen, guard, cover, and area security.

SCREEN

5-14. Screens provide less protection than guards or covers. Screen missions are defensive in nature and accomplished by establishing a series of OPs and patrols to ensure observation of the assigned sector. The screen force gains and maintains enemy contact consistent with the fundamentals and destroys or repels enemy reconnaissance units by conducting counterreconnaissance. A unit performing a screen observes, identifies, and reports enemy actions.

GUARD

5-15. A guard differs from a screen in that a guard force contains sufficient combat power to defeat, cause the withdrawal of, or fix the lead elements of an enemy ground force before it can engage the main body with direct fire. A guard force routinely

engages enemy forces with direct and indirect fires. The guard force commander normally organizes the guard force as an area defense, a delay, a zone reconnaissance, or a movement to contact (see FM 3-90).

COVER

5-16. *Cover* is a type of security operation done independent of the main body to protect them by fighting to gain time while preventing enemy ground observation of and direct fire against the main body (ADP 3-90). The biggest difference between a guard force and a covering force is that a covering force can operate independently of the main body, while a guard force relies on indirect support from the main body.

AREA SECURITY

5-17. *Area security* is a type of security operation conducted to protect friendly forces, lines of communications, installation routes and activities within a specific area (FM 3-90). Area security operations occur during all types of operations. They allow commanders to provide protection to critical assets without a significant diversion of combat power.

5-18. Area security operations protect specific critical and vulnerable assets or terrain from enemy observation and direct fire. These operations can consist of escorting friendly convoys and protecting critical points such as bridges, C2 nodes, or participating in protection of large areas, such as airfields. The platoon may perform area security operations as part of a larger force or as an independent platoon mission.

5-19. Stryker platoons normally conduct area security missions to protect valuable points, areas, or assets. Whether these require protection and the amount of protection they require depend on the higher headquarters analysis. The platoon leader must integrate the elements into the overall security plan for the area to be protected.

5-20. The Stryker platoon will initially establish a perimeter around the area to be secured. The platoon will then develop a defense based on METT-TC (I) variables and establish the priority of work. To further improve the position, the platoon employs hasty protective minefields, wire, and other obstacles (as appropriate and available). Once it sets up vehicle positions and obstacles, the platoon develops a fire plan and submits the plan the company headquarters. This plan includes integrated direct and indirect fire plans.

5-21. In addition to setting up the platoon position around the asset to be secured, the platoon employs patrols and OPs to enhance security (see figure 5-1). Reconnaissance patrols will collect information on enemy forces and destroy small dismounted enemy reconnaissance elements. The platoon OPs will observe likely avenues of approach, provide early warning of enemy activity, and aid in control of indirect fires.

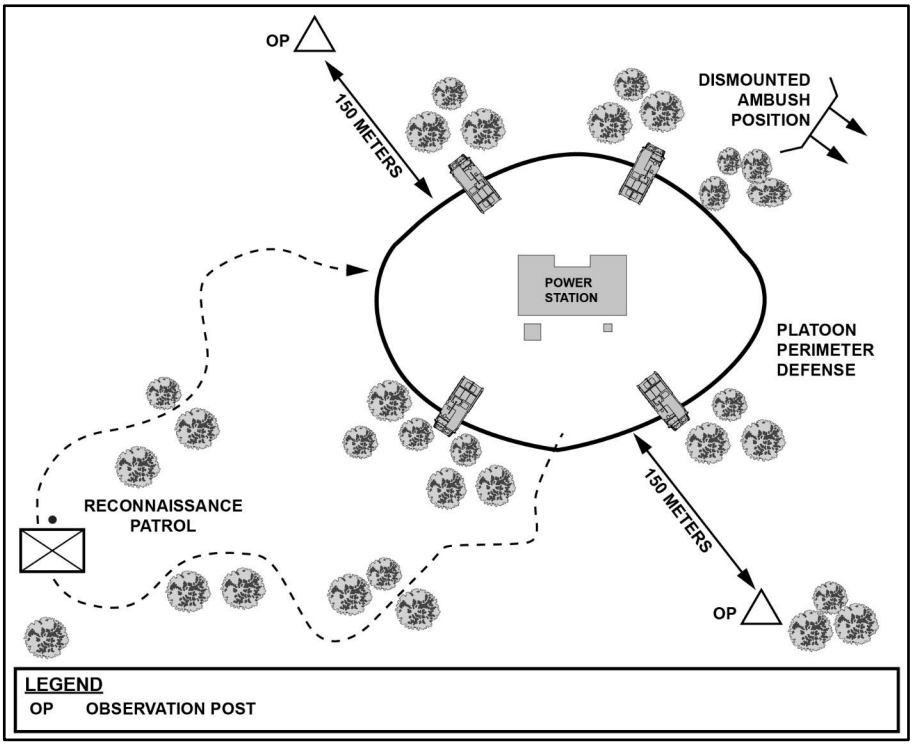


Figure 5-1. Platoon area security, example

SECTION II – TROOP MOVEMENT

5-22. *Troop movement* is the movement of Soldiers and units from one place to another by any available means (FM 3-90). This is inherent in all military operations. Successful movement places Soldiers and equipment at their destination at the proper time, ready for combat. Stryker Infantry small units perform troop movements using different methods such as dismounted and mounted movement. The method employed depends on the situation, the size and composition of the moving unit, the distance the unit must cover, the urgency of execution, and the condition of the troops. This section addresses the methods of troop movement and the variations of marches.

TYPES OF MOVEMENT

5-23. The ability of leaders to posture their units in the right starting location to conduct operations depends on their ability to move their forces. The essence of battlefield agility is the capability to conduct rapid and orderly troop movement to concentrate combat power at decisive points and times. Units can expect the enemy to attempt to deny freedom of movement throughout their assigned area. The two methods of troop movement are nontactical and tactical movement.

NONTACTICAL MOVEMENT

5-24. *Nontactical movement* is a movement in which troops and vehicles are arranged to expedite their movement and conserve time and energy when no enemy ground interference is anticipated (FM 3-90). Units only conduct nontactical movements in secure areas. Examples of nontactical movements include rail and highway movement in the continental United States.

TACTICAL MOVEMENT

5-25. A *tactical movement* is a movement in which troops and vehicles are arranged to protect combat forces during movement when a threat of enemy interference is possible (FM 3-90). Units maintain security against enemy attacks from both the air and ground and prepare to take immediate action against enemy ambushes, although they do not expect contact with significant enemy ground forces. During movement, the moving force employs security measures, even when contact with enemy ground forces is not expected. During a tactical movement, units are always prepared to take immediate action. There are three variations of a tactical movements that units of all types can conduct: approach march, forced march, and tactical road march.

Approach March

5-26. An *approach march* is the advance of a combat unit when direct contact with the enemy is intended (FM 3-90). Units employ an approach march when they know the approximate location of enemy forces. The approach march terminates in a march objective such as an attack position or it can be used to transition to an attack, for example, when the unit is no longer conducting a movement to contact. During approach marches, units use movement formations and movement techniques (see chapter 3) to balance security and speed throughout the operation.

Forced March

5-27. A *forced march* is a march longer or faster than usual or in adverse conditions (FM 3-90). Forced marches require speed, exertion, and an increase in the number of hours marched each day beyond normal standards. Soldiers cannot sustain forced marches for more than a short period. In a forced march, the platoon may not halt as often or for as long as recommended for vehicle maintenance, rest, and feeding. Leaders must understand that immediately following a long and fast march, Soldiers experience a temporary deterioration in their physical condition. The combat effectiveness and cohesion of the unit also temporarily decreases, and the plan must accommodate stragglers. (See ATP 3-21.18 for additional information concerning forced marches.)

Tactical Road March

5-28. A *tactical road march* is a rapid movement used to relocate units within an assigned area to prepare for combat operations (FM 3-90). The primary consideration of the tactical road march is rapid movement. Typically, Stryker Infantry small units execute a tactical road march using the dismounted method of troop movement. Based on the mission variables of METT-TC (I) a unit can execute a mounted method of troop movement. In both methods, the moving force employs security measures, even when

contact with enemy ground forces is not expected. During a tactical road march, the leader is always prepared to take immediate action if the enemy attacks.

METHODS OF TROOP MOVEMENT

5-29. There are five methods of troop movements that units can execute. Generally, units can execute these methods in combination. For example, as in Stryker units, the platoon may initially execute a mounted movement and then transition to a dismounted movement. Additionally, each method can be applied to nontactical or tactical movement. These methods are dismounted movement, mounted movement, air movement, rail movement (see ATP 4-14 for additional information concerning rail movement), and water movement (see ATP 3-21.8 for more information on the methods of troop movement.)

- *Dismounted movement* is a movement of troops and equipment mainly by foot, with limited support by vehicles (FM 3-90).
- *Mounted movement* is the movement of troops and equipment by combat and tactical vehicles (FM 3-90).
- *Air movement* is air transport of units, personnel, supplies, and equipment including airdrops and air landings (JP 3-36).
- Water movement is the transport of troops, supplies, and equipment by watercraft such as landing craft and barges.
- Rail movement is the transport of troops, supplies, and equipment by rail, such as passenger cars and freight cars.

SECTION III – RELIEF IN PLACE

5-30. During a relief in place, the responsibilities of the replaced elements for the mission and the assigned area are transferred to the incoming unit (see FM 3-90). The incoming unit then continues the operations as ordered. A platoon leader conducts a relief in place as part of a larger operation, primarily to maintain the combat effectiveness of committed units. The higher headquarters directs when and where to conduct the relief and establishes the appropriate control measures. Normally, the unit relieved is defending. However, a relief may set the stage for resuming offensive operations. (See ATP 3-21.11 for more information.)

TYPES OF RELIEF IN PLACE

5-31. The commander directing the relief, in coordination with subordinate elements during planning, determine the most appropriate type of relief in place. The three types of relief in place operations are sequential, simultaneous, or staggered.

SEQUENTIAL

5-32. A sequential relief in place occurs when each element in the relieved unit is relieved in succession, from right to left or left to right, depending on how it is deployed. This technique is the most deliberate and time-consuming; however, it minimizes confusion and maintains the best mission command and readiness posture. A sequential relief involves sequentially relieving maneuver platoons of the company one at a time. Separate routes to the rear of relieved platoons' locations are planned for each platoon

(or squad) and placed on the operations overlay. Routes are labeled sequentially and correspond to the order in which the platoon executes them during the relief. When the lead platoon reaches its release point, Strykers and squads are guided into the positions they will occupy. Crews exchange Standard Range Cards and fire support information. Once the relief occurs, relieved units move to the rear to occupy their next location. When the lead platoon is in position, the next platoon moves along its designated route(s) to relieve its counterpart. This process repeats until each platoon has been relieved.

SIMULTANEOUS

5-33. A simultaneous relief in place occurs when all elements are relieved at the same time. Simultaneous relief takes the least time to execute but is more difficult to control and more easily detected by the enemy. A simultaneous relief involves relieving platoons of the company at the same time. Separate routes to the rear of the relieved platoons' locations are planned and labeled for each platoon and placed on the operations overlay. When relieving platoons reach their release points, Strykers and squads are guided to the positions they are occupying. Crews exchange Standard Range Cards and fire support information, and the relieved unit then moves to the rear to its next location.

STAGGERED

5-34. A staggered relief in place occurs when each element is relieved in a sequence determined by the tactical situation, not its geographical orientation. As with a sequential relief, staggered reliefs can occur over a significant amount of time. Separate routes to the rear of the relieved platoons' locations are planned and labeled for each platoon and placed on the operations overlay. When relieving platoons reach their release points, Strykers and squads are guided to the positions they are occupying. Information exchanges and transfers of supplies are the same as in the other two techniques. Once the relief occurs, relieved units move to the rear to occupy their next location. When the first platoon to move is in position, the next platoon is identified to move along its designated route(s) to relieve its counterpart: thereby repeating the relief process. This process repeats until each platoon has been relieved.

RELIEF IN PLACE PLANNING AND PREPARATION

5-35. Once ordered to conduct a relief in place, the platoon leader of the relieving unit contacts the leader of the unit to be relieved. The collocation of unit command posts also helps achieve the level of coordination required. If the relieved unit's forward elements can defend the assigned area, the relieving unit executes the relief in place from the rear to the front. This facilitates movement and terrain management.

5-36. When planning for a relief in place, the platoon leader takes the following actions:

- Issues a WARNORD immediately.
- Accompanies platoon key leaders in the advance party to conduct detailed reconnaissance and coordination.
- As the relieving unit, adopts the outgoing unit's normal pattern of activity as much as possible.
- As the relieving unit, determines when the platoon will assume responsibility for outgoing unit's position.

- As the relieving unit, collocates with the relieved unit's headquarters.
- Maximizes operations security to prevent the enemy from detecting the relief operation, to include minimizing signatures on electromagnetic spectrum.
- Plans to transfer excess ammunition; wire; petroleum, oil, and lubricants; and other material of tactical value to the incoming unit.
- Controls movement by reconnoitering, designating, and marking routes, and providing guides.

5-37. The incoming and outgoing unit leaders meet to exchange tactical information, conduct a joint reconnaissance of the area, and complete other required coordination. The two leaders carefully address passage of command and jointly develop contingency actions to deal with enemy contact during the relief. This process usually includes coordination of the following information:

- Location of Stryker and individual fighting positions including, hide, alternate, and supplementary positions.
- Verification of fighting positions by leaders, both by conventional map and use of C2 systems that are available.
- The enemy situation.
- The outgoing unit's tactical plan, including graphics, platoon and company direct and indirect fire plans, sector sketches, and key weapons' Standard Range Cards.
- Direct and indirect fire support coordination, including indirect fire plans and time of relief for supporting artillery and mortar units.
- Types of weapon systems being replaced.
- Time, sequence, and relief technique.
- Location and disposition of obstacles, and time when the leaders will transfer responsibility.
- Supplies and equipment to be transferred.
- Movement control, route priority, and placement of guides.
- Command and signal information.
- Limited visibility considerations.
- Maintenance, sustainment support, and evacuation for disabled vehicles.

5-38. Since a relief in place is often conducted during hours of limited visibility, IR or thermal equipment may speed the operation. Units follow prescribed SOP to mark positions and routes with IR lights to facilitate the occupation of or withdrawal from the position. These marking signals should be incorporated into the platoon leader's OPORD and SOP.

Note. Threat forces may have peer night vision or thermal capabilities. Units should be aware and exercise caution when marking positions with IR or heat sources. Platoons still need to mark positions during limited visibility, but they ensure markings are only visible to friendly forces by using directional markings.

5-39. During the coordination, graphics are exchanged digitally to reduce time and increase accuracy. Sector sketches are exchanged between units; however, transferring digital information does not relieve the leader of physically coordinating between units.

5-40. During the exchange of positions, the departing unit hands over Stryker or individual position Standard Range Cards to the relief element.

EXECUTION

5-41. When executing a relief in place, the linkup (see section V) method chosen prior to the intermediate AA (see chapter 5, section VIII) usually involves conducting linkup at a predetermined contact point(s). During movement to the contact point(s), the platoon leader monitors the progress and execution of the linkup to ensure that established positive control measures are followed or adjusted as required. Contact points must be readily recognizable and posted on overlays. When possible, the moving force should halt short of the contact point and send a smaller force (patrol or team) forward to pinpoint the contact point. After the patrol makes contact with the force in position at the contact point, the patrol may leave a portion of patrol at the contact point then move back with the remaining members of the patrol to guide the subordinate unit back to conduct linkup. Following linkup, the relieving force is guided to an AA, or depending on the situation, guided directly into relief position(s). Relief of individual elements can be conducted in one of the following two ways:

- By using separate Stryker and individual positions with the relieving element occupying a position separate from the relieved element but still covering the same sector.
- By using the same Stryker and/or individual position with the relieving element occupying vehicle or individual fighting positions in the same BP as the relieved element.

SECTION IV – PASSAGE OF LINES

5-42. A *passage of lines* is an operation in which a force moves forward or rearward through another force's combat positions with the intention of moving into or out of contact with the enemy (JP 3-18). This type of operation becomes necessary when the moving unit(s) cannot bypass the stationary unit and must pass through it. The primary purpose of the passage is to maintain the momentum of the moving elements. A unit conducts a passage of lines to continue an attack, conduct a counterattack or retrograde; pass-through security or main battle forces; and anytime one unit cannot bypass another unit's position. A passage of lines may involve engagement with the enemy shortly before or after the completion of the operation, and usually involves a battle handover. (See ATP 3-21.11 for more information.)

5-43. Passage of lines occur under two basic conditions. A *forward passage of lines* occurs when a unit passes through another unit's positions while moving toward the enemy (ADP 3-90). A *rearward passage of lines* occurs when a unit passes through another unit's positions while moving away from the enemy (ADP 3-90). The unit conducting the passage of lines will establish passage lanes and coordination points for the passing unit. In some situations, as when the platoon is using multiple passage points, the platoon leader will take responsibility for planning and coordinating each phase of the operation.

PASSAGE OF LINES PLANNING AND PREPARATION

5-44. A passage of lines is a complex operation requiring close supervision and detailed planning, coordination, and synchronization between the unit conducting the passage and the unit being passed. The headquarters ordering the passage of lines is responsible for planning and coordination; however, specific coordination tasks are normally delegated to subordinate units. In planning a passage of lines, the platoon leader must consider the following tactical factors and procedures:

- The passage should facilitate transition to follow-on missions through multiple lanes or lanes wide enough to support doctrinal formations for the passing units.
- Deception techniques, such as smoke, may be employed to enhance security during the passage.
- The commander must clearly define the battle handover criteria and procedures used during the passage.
- A *battle handover* is a coordinated mission between two units that transfers responsibility for fighting an enemy force from one unit to another (FM 3-90).
- The order should cover the roles of both the passing unit and the stationary unit and direct and indirect fires.
- If necessary, the commander specifies the location of the BHL as part of the unit's graphic control measures as follows:
  - For a forward passage, the BHL is normally the LD for the passing force.
  - In a rearward passage, it is normally a location in direct fire range of the stationary force.
  - In general, a defensive handover is complete when the passing unit is clear of stationary units' sector and the stationary unit is ready to engage the enemy.
  - Offensive handover is complete when the passing unit has deployed and crossed the BHL.
- The passing and stationary units coordinate obstacle information to include the locations of enemy and friendly obstacles, existing lanes and bypasses, and guides for the passage.
- The platoon leader ensures air defense coverage, which is imperative during the high-risk passage operation.
- Normally, the stationary unit will be responsible for providing air defense, allowing the passing unit's air defense assets to move with it.
- Responsibility for sustainment actions, such as vehicle recovery or CASEVAC in the passage lane must be clearly defined for both passing and stationary units.
- To enhance mission command during the passage, platoon leader or platoon sergeant will co-locate with a mission command element.

5-45. Terrain management is critical to successful completion of a passage of lines. At least two units are occupying and concentrated on the same terrain. The leaders of both units at all levels must understand their respective plans and be flexible in their execution. Terrain is controlled through the sharing of a common operational picture and overlays that contain—

- Assigned area(s) or AAs.
- Attack positions(s).
- BHL.
- Primary and alternate routes.
- Checkpoint data.
- Friendly and enemy unit locations and status.
- Passage points and lanes.
- Fire support coordination measures.
- Friendly and enemy obstacle types and locations.
- Sustainment locations and descriptions (for example, ambulance exchange points and CCPs).
- Contact points.

5-46. A passage of lines may require either the reduction of some obstacles or the opening and closing of lanes through friendly obstacles. The passing unit should task the attached engineer officer if available to coordinate with the stationary unit engineer or stationary commander. At a minimum, this coordination must address the following:

- Location and status of friendly and enemy tactical obstacles.
- Routes and locations of lanes and bypasses through friendly and enemy obstacles.
- Transfer of obstacle and passage lane responsibilities.

5-47. As with any activity involving transferred combat responsibility from one unit to another, the complex nature of a passage of lines involves risk. The passage of lines is either hasty or deliberate. In a hasty passage of lines, leaders use verbal orders. In a deliberate passage of lines, both the stationary and moving force have time to—

- Review fire support observation plan, target execution, communication linkages, and mutual support.
- Confirm fire support coordination measures.
- Review routes and positioning.
- Identify locations and descriptions of obstacles, lanes, bypasses, and markings.
- Identify locations of any stockpiles, especially engineer stockpiles.
- Identify and assign responsibility for closing passage lanes after the passage of lines is complete.
- Identify air defense weapons locations, early warning communications, air threat, and WCS.
- Identify passage point recognition procedures.
- Assign responsibility for route management, contact points, checkpoints, and use of guides.
- Identify locations for and movement of sustainment units.

5-48. Detailed reconnaissance and coordination are critical in a passage of lines. The platoon leader normally conducts all necessary reconnaissance and coordination for the passage. However, the platoon leader may designate the platoon sergeant or squad leader to conduct liaison duties for reconnaissance and coordination. The following items of information are coordinated:

- Unit designation and composition, to include type and number of passing vehicles.
- Fratricide prevention measures to be taken:
  - Fire support control measures.
  - Coordinated fire lines.
  - RFL.
  - Weapons orientation.
  - Combat identification panels.
  - Start point.
  - Release points.
  - Far side recognition using IR and advanced optics.

5-49. Units plan their passages of lines to maintain enemy contact and provide constant fires on enemy forces. They reduce risk and ensure synchronization through detailed planning and centralized execution. The need for positive control increases during the passage because of the intermingling of passing and stationary forces. The passage requires close coordination, clearly understood control measures, and liaison among all headquarters and echelons involved in the passage. Clear identification of the moment or event that causes one force to assume responsibility for the assigned area from another is vital to successfully performing this task. The passage of lines requires effective communication between passing and stationary forces. Units build redundancy of communication signals and means into their passage plans. They also designate contact points to ensure effective communication between these forces at the lowest possible tactical level for example, near and far recognition signals.

FORWARD PASSAGE OF LINES

5-50. During a forward passage, the passing unit first moves to an AA or an attack position behind the stationary unit. Designated liaison personnel move forward to link up with guides and confirm coordination information with the stationary unit. Guides lead the passing elements through the passage lane.

5-51. The platoon conducts a forward passage by employing tactical movement. It moves quickly, uses appropriate dispersal and formations whenever possible, and keeps radio traffic to a minimum. It bypasses disabled Strykers and other vehicles, as needed. Once committed to the passage lanes, the unit does not stop and makes every effort to move rapidly through to the passage lane release point.

5-52. The platoon holds its fire until it passes the battle hand-over line or designated fire control measure unless the commander has coordinated fire control with the stationary unit. Once clear of passage lane restrictions, the unit may temporarily halt at the designated attack position or continue its tactical movement according to orders. (See figure 5-2 on page 230.)

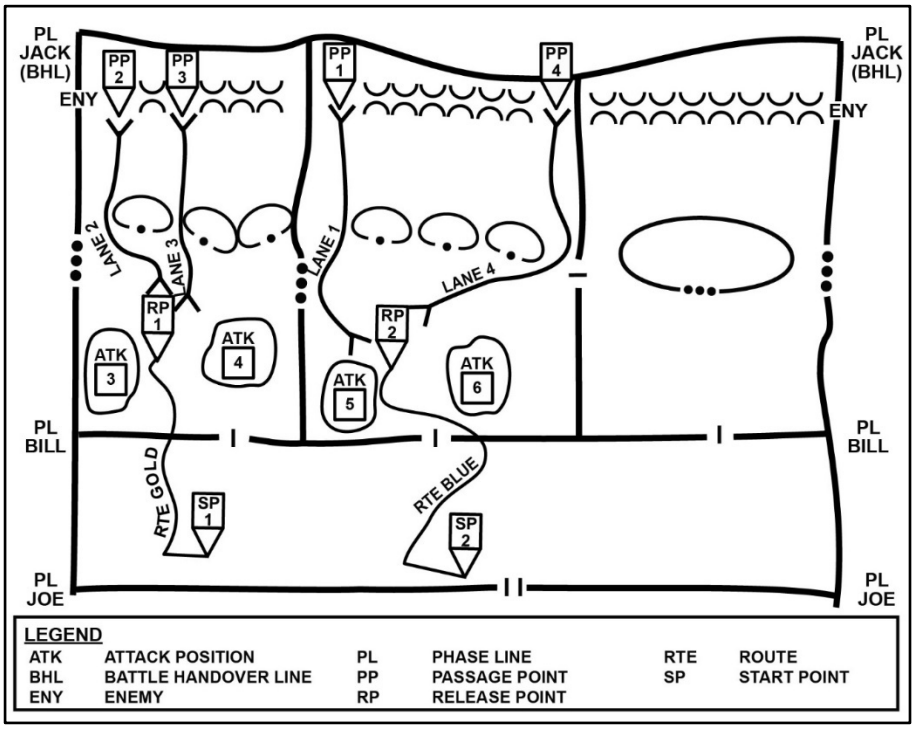


Figure 5-2. Forward passage of lines

REARWARD PASSAGE OF LINES

5-53. During the rearward passage the passing unit contacts the stationary unit while it is still beyond direct fire range and conducts coordination as discussed previously. Near recognition signals and location of the BHL are emphasized. Additional fire control measures, such as RFLs, may be employed to further minimize the risk of fratricide. (See figure 5-3.)

5-54. Because of the increased risk of fratricide during a rearward passage, coordination of recognition signals and fire restrictions is critical. Rehearsals and training can help reduce fratricide. The passing unit should make radio contact with the stationary unit in sufficient time to disseminate information to subordinate units. The passing unit should remain well outside the range of direct fire weapons until radio contact is established. Once radio contact is established the stationary and passing units confirm the plan for near recognition signal before they begin the passage. Detailed plans, coordination and rehearsals can help reduce the risk of fratricide.

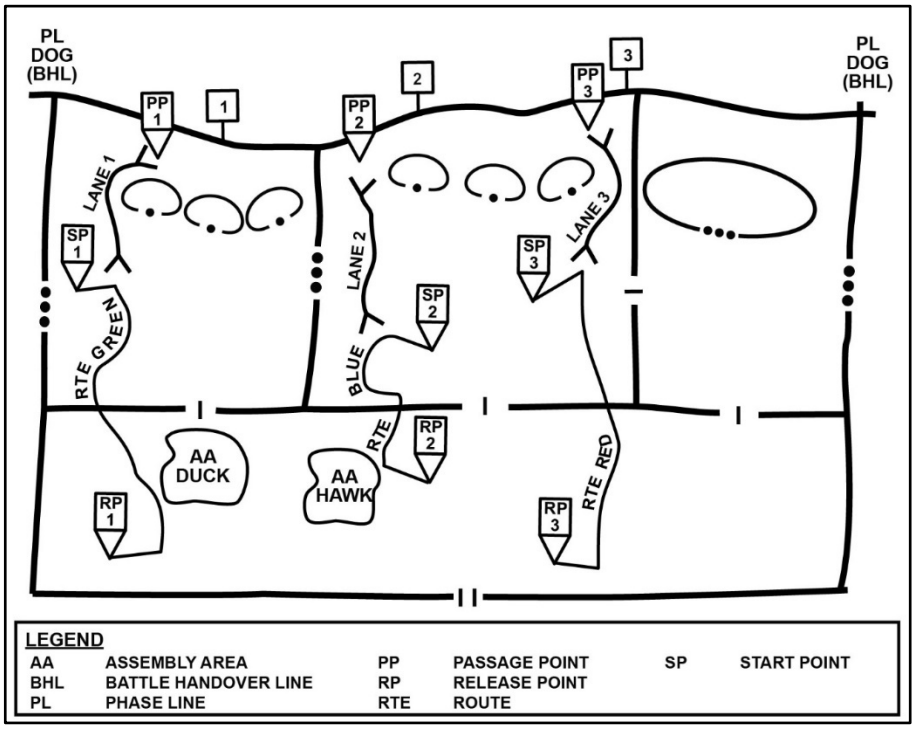


Figure 5-3. Rearward passage of lines

5-55. Following coordination, the passing unit continues tactical movement toward the passage lane. Weapon systems are oriented toward the enemy, and the passing unit maintains its own security until it passes the BHL. If the stationary unit provides guides, the passing unit may conduct a short halt to link up and coordinate with them. The passing unit moves quickly through the passage lane to a designated location behind the stationary unit. (See table 5-1 on page 232.)

Table 5-1. Stationary and passing unit responsibilities

Stationary Unit	*Passing Unit*
Clears lanes or reduces obstacles along routes.	May assist with reducing obstacles.
Provides locations of obstacles and friendly units.	Provides order of movement and scheme of maneuver. Provides times, number of vehicles, and personnel.
Clears and maintains routes up to the BHL.	May assist with maintaining routes.
Provides traffic control for use of routes and lanes.	Augments the traffic control capability of the stationary unit as required.
Provides security for passage up to the BHL.	Maintains protection measures, turret orientation, and weapons control status.
Identifies locations for the passing unit to use as an AA.	Reconnoiters from its current location to its AA designated by the stationary unit.
Provides the passing unit previously coordinated or emergency logistics assistance within its capabilities	Assumes full responsibility for its own sustainment support forward of the BHL.
Controls all fires in support of the passage.	Positions available artillery to support the passage.
Disseminates information.	Confirms combat identification markings.
Legend: AA—assembly area; BHL—battle handover line	

SECTION V – LINKUP

5-56. A *linkup* is a type of enabling operation that involves the meeting of friendly ground forces, which occurs in a variety of circumstances (FM 3-90). Linkup entails the meeting of friendly ground forces. Both forces may be moving toward each other, or one may be stationary. It may occur in, but is not limited to, the following situations:

- Advancing forces reaching an objective area previously secured by friendly forces such as an airborne or an air assault.
- Units conducting coordination for a relief in place.
- Cross-attached units moving to join their new organization.
- Units moving forward during a follow and support mission with a fixing force.
- Units moving to assist an encircled force.
- Units converging on the same objective during the attack.
- Units conducting a passage of lines.
- Units conducting reconnaissance forward of the main body.
- Units who have requested maintenance, recovery, and supply support (when not otherwise planned).

PLANNING CONSIDERATIONS

5-57. To aid in navigation and to prevent fratricide, the Stryker's communications equipment allows for constant position or location updating between elements conducting the linkup operation. For example, the moving squad or Stryker can monitor the location of the stationary unit and linkup site using the position updates and digital graphics displayed on the commander's tactical display. Likewise, the stationary unit can monitor the moving unit's location as it moves along the prescribed route to the linkup point. As the moving force closes on the linkup site, both the stationary and moving force are aware of the other's location, thus reducing the possibility of fratricide.

5-58. Once the moving unit arrives close to the linkup location, the stationary unit should challenge it. For example, the stationary unit can give the moving unit a series of flashes using an IR source during limited visibility. The moving force responds with a pre-coordinated number of flashes. The challenge and password may be accomplished digitally or with audible signals.

5-59. Night vision devices enhance linkups conducted during limited visibility. IR lights act as recognition signals and aid in the linkup. This is particularly advantageous when the moving unit has difficulty finding the linkup site due to bad weather or restrictive terrain. Both units must know the capabilities of the enemy, and they must exercise caution when using IR devices against an enemy with night vision capability.

5-60. Aviation units and UASs are helpful in linkup operations. Observation helicopters can assist in the initial coordination between the forces to be linked up. Attack or observation helicopters can assist in route reconnaissance and provide early warning of enemy locations. Aviation also can extend the range of communications.

PLANNING AND PREPARATION FOR LINKUP

5-61. Whenever possible, joining forces exchange as much information as possible before starting an operation. The headquarters ordering the linkup establishes—

- A common operational picture.
- Command relationship and responsibilities of each force before, during, and after linkup.
- Coordination of direct and indirect fire support before, during, and after linkup, including control measures.
- A linkup method.
- Recognition signals and communication procedures to use, including pyrotechnics, armbands, vehicle markings, gun-tube orientation, panels, colored obscurant (smoke), lights, and challenge and passwords.
- Operations to conduct following linkup.

5-62. The higher headquarters who orders the linkup, in coordination with the units linking up, establishes control measures for the linkup, and—

- Assigns each unit a sector defined by left and right boundaries and an RFL also acts as a LOA.
- Establishes a no fires area around one or both units and establishes a coordinated fire line beyond the area where the unit's linkup.
- Establishes a no fire areas to prevent delivery of fire support across RFLs or boundaries where they can impact friendly forces.

EXECUTION

5-63. The platoon and squad can conduct linkup activities independently or as part of a larger force. Within a larger unit, the platoon may lead the linkup force. The linkup consists of three phases. The following actions are critical to the execution of a linkup. A linkup consists of far recognition signal, coordination, and movement to the linkup point and linkup.

FAR RECOGNITION SIGNAL

5-64. During this phase, the forces conducting a linkup establish both radio and when possible digital communications before reaching direct fire range. The lead element of each linkup force should monitor the radio frequency of the other friendly force.

Note. Digital equipment and night vision devices enhance execution of linkup operations and reduce the likelihood of fratricide.

COORDINATION

5-65. Before initiating movement to the linkup point, the forces must coordinate necessary tactical information including the following:

- Known enemy situation.
- C2 systems.
- Number of friendly personnel; type and number of friendly vehicles.
- Disposition of stationary forces (if either unit is stationary).
- Routes to the linkup point and rally point, if any.
- Direct and indirect fire control measures.
- Near recognition signals.
- Communications information.
- Sustainment responsibilities and procedures.
- Finalized location of the linkup point and rally points, if any.
- Special coordination, such as those covering maneuver instructions or requests for medical support.

MOVEMENT TO THE LINKUP POINT AND LINKUP

5-66. All units or elements involved in the linkup must enforce strict fire control measures to help prevent fratricide. Linkup points and RFLs must be recognizable by moving or converging forces. Linkup elements take the following actions:

- Conduct far recognition using radios or C2 systems.
- Conduct short-range (near) recognition using the designated signal.
- Complete movement to the linkup point.
- Establish local security at the linkup point.
- Conduct additional coordination and linkup activities, as necessary.

SECTION VI – BREACHING

5-67. A breach is a synchronized operation under the control of the maneuver commander in contact with the obstacle or enemy defense. During maneuver, the commander attempts to bypass and avoid obstacles and enemy defensive positions to the maximum extent possible to maintain tempo and momentum. Breaching enemy defenses and obstacle systems is normally the last choice to prevent loss of personnel, time, and/or equipment.

5-68. The platoon may have to breach an obstacle in front of their objective or may be part of a larger operation. Whenever possible, units should attempt to find a bypass, enabling them to maintain the momentum of the operation. Leaders must ensure that conducting the bypass provides a tactical advantage without exposing the unit to unnecessary danger. Breaching operations begin when friendly forces detect an obstacle. Breaching operations end when friendly forces destroy the enemy on the far side of the obstacle, or when battle handover has occurred between a unit conducting the breaching operation and follow-on forces.

5-69. The breach could be a deliberate breach on a known obstacle or a hasty breach if the platoon encounters an unknown obstacle during an offensive operation. Types of obstacles include wire, mines, ditches, abatis, and so on. Each type of obstacle requires different breaching methods. Obstacles may be of such size and complexity that the platoon conducts a separate breach mission or supports a breach mission as part of a larger unit. Platoons should be prepared to be the breach, support, or assault force in support of a company or larger operation. The Infantry squads should be trained in each element of the breach and be prepared to execute a planned or unplanned breach. (See ATP 3-90.4 for more information.)

BREACHING TYPES

5-70. Breaching activities must be adapted to best exploit the situation. The level and type of planning distinguish which of the three general types of breaching (deliberate, hasty, and covert) are used to meet mission variables.

DELIBERATE BREACH

5-71. A deliberate breach is the systematically planned and executed creation of a lane through a barrier or obstacle (see ATP 3-90.4). Typically, a unit uses a deliberate breach against a strong defense or complex obstacle system. It is characterized by the most

planning, preparation, and buildup of combat power on the near side of obstacles. A deliberate breach is similar to a deliberate attack, requiring detailed knowledge of the defense and obstacle systems. Subordinate units are task-organized to accomplish the breach. The breach may require securing the far side of the obstacle with an assault force before or during reduction.

HASTY BREACH

5-72. A *hasty breach* is the creation of lanes through enemy minefields by expedient methods such as blasting with demolitions, pushing rollers or disabled vehicles through the minefields when the time factor does not permit detailed reconnaissance, deliberate breaching, or bypassing the obstacle (JP 3-15). A hasty breach is an adaptation to the deliberate breach and is conducted when less time is available. It may be conducted during a deliberate or hasty attack due to lack of clarity on enemy obstacles or changing enemy situations.

5-73. An in-stride breach is a type of hasty breach used to describe the situation when a subordinate unit is expected to be able to organize for the conduct of a hasty breach with its organic or task-organized assets, without affecting the higher unit scheme of movement and maneuver or commander's intent. In-stride breaches are generally not used below the company level since a platoon is unable to form effective support, breach, and assault forces with its squads.

COVERT BREACH

5-74. A covert breach is the creation of lanes through minefields or other obstacles that are planned and intended to be executed without detection by an adversary. Its primary purpose is to reduce obstacles in an undetected fashion to facilitate the passage of maneuver forces. A covert breach is conducted when surprise is necessary or desirable and when limited visibility and terrain present the opportunity to reduce enemy obstacles without being seen. Through surprise, the commander conceals their capabilities and intentions and creates the opportunity to position support and assault forces to strike the enemy while unaware or unprepared. The support force does not usually provide suppressive fire until the initiation of the assault or in the event that the breach force is detected. A covert breach is usually conducted during limited visibility. It uses elements of deliberate and hasty breaching, as required.

BREACHING ACTIVITIES AND CHARACTERISTICS

5-75. Breaching activities are conducted to allow maneuver despite the presence of enemy reinforcing obstacles that are covered by fire and used to shape EAs. Breaching activities are characterized by thorough reconnaissance, detailed planning, extensive preparation and rehearsal, and a massing of combat power. Breaching activities include the reduction of minefields and other obstacles. (See ATP 3-90.4 for more information.) Characteristics that support breaching activities include numerous factors.

BREACH AREA

5-76. The *breach area* is a defined area where a breach occurs (ATP 3-90.4). It is established and fully defined by the higher headquarters of the unit conducting the breach.

POINT OF BREACH

5-77. *Point of breach* is the location at an obstacle where the creation of a lane is being attempted (ATP 3-90.4). Initially, POBs are planned locations only. Normally, the breach force determines the actual POBs during the breach.

REDUCTION AREA

5-78. *Reduction area* is a number of adjacent points of breach that are under the control of the breaching commander (ATP 3-90.4). The following apply:

- The commander conducting the attack determines the size and location of the reduction area that supports the seizure of a point of penetration.
- The reduction area is indicated by the area located between the arms of the control graphic for breach.
- The length and width of the arms extend to include the entire depth of the area that must be reduced.

REDUCTION

5-79. *Reduction* is the creation of lanes through a minefield or obstacle to enable passage of the attacking ground force (JP 3-15).

FAR SIDE OBJECTIVE

5-80. *Far side objective* is a defined location oriented on the terrain or on an enemy force that an assaulting force seizes to eliminate enemy direct fires to prevent the enemy from interfering with the reduction of obstacles and allows follow-on forces to move securely through created lanes (ATP 3-90.4).

POINT OF PENETRATION

5-81. *Point of penetration* is the location, identified on the ground, where the commanders concentrates their efforts to seize a foothold on the far side objective (ATP 3-90.4).

LANE

5-82. A *lane* is a route through, over, or around an enemy or friendly obstacle that provides passage of a force (ATP 3-90.4). The following apply:

- The route may be reduced and proofed as part of breaching, constructed as part of the obstacle, or marked as a bypass.
- The number and width of lanes vary depending on the enemy situation, the size and composition of the assaulting force, and the scheme of movement and maneuver.

PROOF

5-83. *Proof* is the verification that a lane is free of mines or explosive hazards and that the width and trafficability at the point of breach are suitable for the passing force (ATP 3-90.4).

BREACHING TENETS

5-84. The leaders apply the tenets of breaching when planning breaching operations. Breaching tenets apply whenever an obstacle is encountered, whether the unit is conducting an attack or route clearance operations. These tenets are integrated during planning. (See ATP 3-90.4 for more information.) The tenets are—

- Intelligence.
- Breaching fundamentals.
- Breaching organization.
- Mass.
- Synchronization.

INTELLIGENCE

5-85. Critical to the platoon's success depends largely on the leader's ability to see the assigned area. They must identify how the enemy applies obstacles to the terrain and how to counter the enemy's use of obstacles. This is done with the IPOE process. During the IPOE process, the SITEMP is developed. The situational template is a graphic depiction of expected threat dispositions and capabilities based on threat doctrine for a particular enemy COA. Reconnaissance efforts prior to the operation should confirm enemy obstacles which may require a deliberate breach. Appropriate IPOE and analysis of the SITEMP should highlight potential enemy obstacle locations requiring a hasty breach. Analysis of defending enemy forces helps to identify the most effective point of penetration to support the attack. The location of the desired point of penetration is the point from which planning begins. Once the point of penetration is identified the platoon leader can begin to reverse plan beginning with actions on the objective, pinpointing the POB and complete the planned breach. Required obstacle information gathered from reconnaissance should include—

- Location of existing or reinforcing obstacles.
- Composition of obstacles: mine, wire, antivehicle ditch, or a combination.
- Orientation of long axis of obstacles.
- Width and depth of obstacles (in meters), particularly obstacle belts.
- Soil conditions.
- Potential breach lane locations, with depth at those points.
- Potential bypass locations.
- Composition of minefields (buried or surface laid AT and antipersonnel mines).
- Types of mines and fuzes (determines effectiveness of mechanical or explosive reduction techniques.)
- Composition of complex obstacles (combination of wire, mines, and antivehicle ditches).
- Location of direct and indirect fire systems overwatching obstacle.
- Estimate of likely planned obstacle effect.

BREACHING FUNDAMENTALS

5-86. Suppress, obscure, secure, reduce, and assault are the breaching fundamentals applied to ensure success when breaching against a defending enemy. These obstacle reduction fundamentals will always apply, but they may vary based on the mission

variables of METT-TC (I) mission, enemy, terrain and weather, troops and support available, time available, civil considerations, and informational considerations.

Suppress

5-87. The mission of the support force is to suppress the enemy overwatching the obstacle or breach area. Effective suppression protects friendly forces as they reduce and then maneuver through an obstacle. Suppression must occur from a position that can range enemy forces in-depth well beyond the obstacle, which may mean planning an SBF that is close to enemy forces. Successful suppression generally triggers subsequent actions in the breach area. The platoon leader plans for direct and indirect fire control measures that ensure that forces at the POB are not impacted by those fires. The POB location can be anticipated but must be refined by the breach force in execution. The breach force also provides additional suppressive fires as the situation dictates; however, its primary focus is on reducing the obstacle. Indirect fires also support suppression. The platoon leader with the assistance of the FO, should plan fires that both suppress forces in overwatch of the breach area and serve to isolate them from enemy reinforcements.

Obscure

5-88. Obscuration degrades observation and target acquisition by enemy forces while concealing friendly force reduction and assault activities. Obscuration planning factors include the length and duration of required obscuration, plus the weather and environment. In urban areas, indirect delivered obscuration and suppressive fires will be more restricted. Movement is obscured using mortars (due to their ability to fire high-level trajectory) and artillery-fired obscurants. Smoke grenades or smoke pots (smoke pots have a longer duration but take time to emplace and build) can screen or conceal the platoon to degrade enemy detection, observation, and engagement. Typically, the most effective placement of obscuration is between the obstacle and the overwatching enemy forces. Stryker platoon grenadiers use smoke rounds to provide persistent obscuration throughout the breach operation. (See ATP 3-11.50 for additional information on obscuration.)

Secure

5-89. Identifying the extent of the enemy defense is critical in selecting the appropriate technique to secure the POB. The POB must be secured before reducing the obstacle. Friendly forces secure the POB to prevent enemy forces from interfering with the reduction of lanes and passage of assault forces. The breach force must be resourced with sufficient maneuver assets to provide local security against the enemy that the support force cannot adequately engage. Elements within the breach force that secure the reduction area may also be used to suppress the enemy once reduction is complete.

5-90. Friendly forces secure reduction areas to prevent the enemy from interfering with obstacle reduction and the passage of the assault force through lanes created during the reduction. Security must be effective against outposts and fighting positions near the obstacle and against overwatching units as necessary. The far side of the obstacle must be secured by fires before attempting efforts to reduce the obstacle. The attacking unit's higher headquarters is responsible for isolating the breach area by fixing adjacent units, attacking enemy reserves in-depth, and providing counterfire support.

5-91. The breach force must be resourced with enough maneuver assets to provide local security against the enemy forces the supporting force cannot engage sufficiently. Elements within the breach force securing the reduction area also may be used to suppress the enemy once reduction is complete. The breach force also may need to assault to the far side of the breach and provide local security so the assault element can seize its initial objective.

Reduce

5-92. *Reduce* is a tactical mission task in which a unit destroys an encircled or bypassed enemy force (FM 3-90). Reduction cannot be accomplished until effective suppression and obscuration is achieved and the POB secured. Once the breach force is committed to the POB, the breach force leader must assess the effectiveness of mortar or artillery smoke and, if necessary, adjust based on wind speed and direction, and the location of actual threat forces. The breach force will reduce, proof, and mark the required number of lanes to pass the assault force to breach the obstacle. Follow-on forces will continue to improve and reduce the obstacle when required. When possible, the breach force also should try to secure a foothold to assist in the passage of the assault force.

Assault

5-93. The assault force's primary mission is to seize the far side of the objective. The assault force should be committed as soon as the security element of the breach force has established security on the far side of the obstacle. If the assault force culminates on the far side objective or establishes defensive areas follow-on forces may leapfrog forward. These actions should be planned and rehearsed.

BREACHING ORGANIZATION

5-94. The platoon leader, when tasked, organizes the platoon to accomplish breaching fundamentals quickly and effectively. This generally requires the leader to organize as either one or part of the support, breach, or assault force with the necessary assets to accomplish its role. The support force’s primary responsibility is to suppress any enemy element capable of placing direct fires on the reduction area during the breach. The breach force assists in the passage of the assault force by providing local security and reducing, proofing, and marking lanes. The assault force’s primary mission is to destroy the enemy and seize terrain on the far side of the obstacle to prevent the enemy from placing direct fires on the created lanes. Table 5-2 shows the relationship between the breach organization as well as the responsibilities of each force.

Table 5-2. Breaching organization, fundamentals, and responsibilities

Breaching Organization	*Breaching Fundamentals*	*Responsibilities*
Support force	Suppress. Obscure.	Suppress enemy direct fire systems covering the reduction area. Control indirect fires and initiate obscuring smoke within the breach area. Prevent enemy forces from repositioning or counterattacking to place direct fires on the breach force.
Breach force	Suppress (provides additional suppression). Obscure (provides additional obscuration in the reduction area). Secure (provides local security). Reduce.	Refines/controls obscuration. Reduce, proof, and mark the necessary lanes in an obstacle (mark the left handrail). Provide local security on the near side and far side of the obstacle. Provide additional suppression of the enemy overwatching the obstacle. Assumes control of obscuration upon commitment to the breach. Assist the passage of the assault force through created lanes. Report the lane status/location.
Assault force	Assault. Suppress (if necessary)	Seize the far side objective. Reduce the enemy protective obstacles. Provide clear lanes from the reduction area to the BHL for follow-on forces. Prevent the enemy from placing direct fires on follow-on forces as they pass through the created lanes. Conduct battle handover with follow-on forces. Provide reinforcing fires for the support force. Destroy the enemy on the far side of the obstacle if the enemy is capable of placing direct fires on the reduction area.

Legend: BHL—battle handover line

Support Force

5-95. The support force's primary responsibility is to suppress the enemy's ability to place direct on friendly forces in the reduction area. The support force usually leads movement of the breach force element. After identifying the obstacle, it moves to covered and concealed areas and establishes SBF positions. The support force sends a report describing the location and complexity of the obstacle, the composition of enemy

forces that are overwatching the obstacle, and the location of possible bypasses. The platoon leader informs the commander whether they can maneuver to a bypass or conduct a breach. The support force must—

- Isolate the area with fires and establish an SBF position to destroy, fix, or suppress the enemy. Depending on METT-TC (I) variables, this could be the entire platoon if necessary.
- Use Strykers and available Infantry to support breach and assault forces.
- Use direct and indirect fires to suppress the enemy and to neutralize weapons that can bring fires on the breach force.
- Request suppressive artillery fires and smoke for obscuration.
- Lift or shift supporting fires as the breach and assault forces execute their missions.
- Be prepared to shift positions either for survivability, to gain additional range, or maintain effective suppression on enemy forces that displace or adjust their firing positions.
- Explain to the platoon leader how long the breach will likely take and what the plan is for an appropriate allocation of ammunition and planned rates of fire to establish and maintain suppression for an allotted time (see direct fire planning appendix A for an example of using time suppression.

Breach Force

5-96. The breach force assists in the passage of the assault force by reduce, proofing, and marking lanes. The breach force may be a combined-arms force. It may include engineers, reduction assets, and enough maneuver forces to provide additional suppression and local security. The breach force may apply portions of the following breaching fundamentals as it reduces an obstacle.

Suppress

5-97. The breach force must be allocated enough maneuver forces to provide additional suppression against various threats, including:

- Enemy direct-fire systems that cannot be observed and suppressed by the support force due to the terrain or the masking of the support force's fires by the breach force as it moves forward to reduce the obstacle.
- Counterattacking, repositioning, or both counterattacking and repositioning forces that cannot be engaged by the support force.

Obscure

5-98. Upon arrival at the POB, the breach force assesses the effectiveness of artillery or mortar smoke and makes necessary adjustments. The breach force will employ smoke pots, vehicle mounted smoke, handheld smoke, or indirect fire obscurants. These type obscurants provide for screening and conceal lanes as the assault force passes through them. As the breach force starts their breach, they generally assume control of obscuration fires from the support force as they are in a better condition to assess its effects.

Secure

5-99. The breach force secures itself from threat forces providing close in protection of the obstacle. The breach force also secures the lanes through the tactical obstacles once they are created to allow safe passage of the assault force.

Reduce

5-100. The breach force performs its primary mission by reducing the obstacle. To support the development of a plan to reduce the obstacle, the composition of the obstacle system must be an information requirement. If the obstacles are formidable, Infantry platoons and squads will be augmented with engineers to conduct reduction. Without engineers and special equipment such as Bangalore torpedoes and line charges, minefields must be probed.

Assault Force

5-101. The breach force assaults through the POB to the far side of an obstacle and seizes the foothold. The assault force's primary mission is to destroy the enemy and seize terrain on the far side of the obstacle to prevent the enemy from placing direct fires on the created lanes. The assault force may be tasked to assist the support force with suppression during obstacle reduction.

5-102. The assault force must be sufficient in size to seize the point of penetration. Combat power is allocated to the assault force to achieve a minimum 3:1 ratio in the breach area point of penetration. The breach and assault assets may maneuver as a single force when conducting breaching operations. The platoon may be tasked as the assault force when conducting a company attack.

5-103. If the obstacle is defended by a small enemy force, assault and breach forces' missions may be combined. This simplifies C2 and provides more immediate combat power for security and suppression.

5-104. Fire control measures are essential because support and breach forces may be firing on the enemy when the assault force is committed. Suppression of overwatching enemy positions must continue, and other enemy forces must remain fixed by fires until the enemy has been destroyed. The assault force must assume control for direct fires on the assault objective as support and breach force fires are ceased or shifted.

MASS

5-105. Breaching is conducted by rapidly applying concentrated efforts at a point to reduce obstacles and penetrate the defense. Massed combat power is directed against the enemy's weakness. The location selected for breaching depends largely on the weakness in the enemy's defense, where its covering fires are minimized. If friendly forces cannot find a natural weakness, they create one by fixing the majority of the enemy force and isolated a small portion of it for attack.

SYNCHRONIZATION

5-106. Breaching operations require precise synchronization of the breaching fundamentals by the support, breach, and assault forces. Failure to synchronize effective

suppression and obscuration with obstacle reduction and assault can result in rapid and devastating losses of friendly troops in the obstacles or the enemy's EA.

5-107. The company and platoon best achieve synchronization in a breaching operation best by using detailed reverse planning, clear instructions to subordinate elements, effective mission command, and extensive rehearsals. The emphasis is on the steps of suppress, obscure, secure, reduce, and assault. Planning considerations for synchronization during breaching, listed in reverse order, include the following:

- Reverse planning starts with actions on the objective.
- The planned actions on the objective influence the size and composition of the assault force, and the number and location of lanes the team must create.
- Analysis of the enemy objective determines the most likely point of penetration.
- The relationship between the point of penetration and the enemy's obstacle effort determines the breach area and the most likely POB.
- Lane requirements, topography, and the type of obstacles determine the type and number of reduction assets task organized to the breach force.
- The ability of the enemy's infantry to interfere with the breach determines whether friendly forces will secure the breach site by fires or by force.
- The enemy's ability to mass fires at the breach site dictates the nature of the required suppression fires (including the composition of the support force, and the type and amount of supporting fires).
- The location of the enemy and the availability of clear fields of fire determine the location of the support force and its SBF position.

REVERSE PLANNING

5-108. The platoon leader along with the platoon sergeant and squad leaders develop the breaching plan using the reverse planning sequence in figure 5-4, when planning for a protective obstacle breach. The platoon leader can plan to breach wire, minefields, trenches, and craters. The following considerations must be made:

- Reverse planning begins with actions on the objective.
- Actions on the objective begin from the designated point of penetration.
- The planned point of penetration determines the POB.
- The size and composition of support, breach, and assault forces are based on the results of reverse planning:
  - Actions on the objective drive the size and composition of the assault force.
  - The ability of the enemy to interfere with the reduction of the obstacle determines the size and composition of the security element in the breach force.
  - The ability of the enemy to mass fires on the POB determines the amount of suppression and size and composition of the support force.

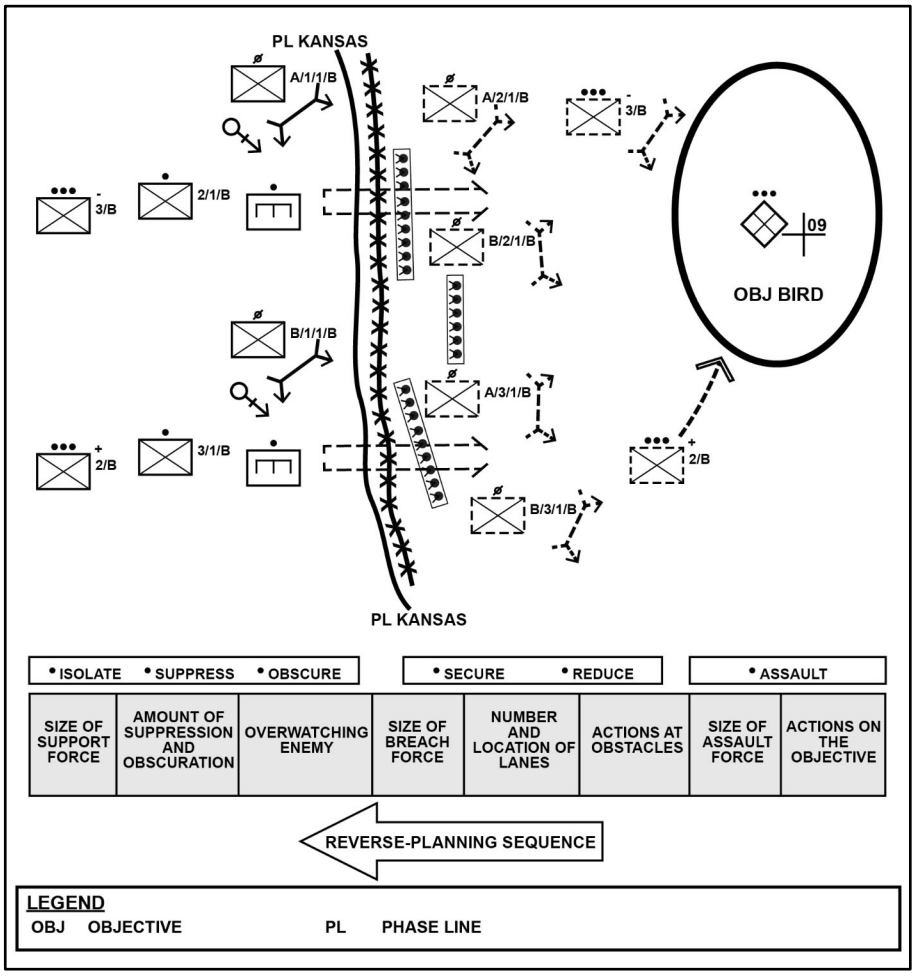


Figure 5-4. Reverse planning

CONDUCTING THE BREACH

5-109. The platoon leader designates a support force or base of fire element using Strykers and Infantry squads. The platoon leader designates one squad as the breach squad and remaining squad as an assault squad The assault squad's task is to assault through the obstacle once the breach has been made. The designated support force squad with vehicles move to the support position and establishes a base of fire. The platoon sergeant moves forward to the SBF position and adjusts Stryker and medium machine gun positions if necessary and assumes control of the support force. On the platoon leader's signal, the platoon's support, assault, and breach force take the following actions (see figure 5-5 on pages 246 and 247 and platoon drill 07-PLT-D9412):

- The platoon suppresses or destroys known, or suspected enemy positions that can engage the breach force.
- The platoon obscures the enemy position with smoke.

- The platoon maintains fire superiority while conserving ammunition and minimizing forces in contact.
- The platoon leader leads the breach and assault squads along the covered and concealed route to the breach point.
- The platoon FO calls for and adjusts indirect fires, as directed by the platoon leader to support the breach and assault.
- The breach squad executes actions to breach the obstacle (footpath) and reports to the platoon leader.
- The platoon leader leads the assault squad through the breach in the obstacle and positions it on the far side.
- On the platoon leader's orders and using the same covered and concealed route as the breaching squad, the platoons support force moves through the breach and to a covered and concealed position on the far side.
- The breaching squad continues to widen the breach, as directed, to allow vehicles to pass through and secure the far side.
- The platoon leader provides a SITREP to the company commander.

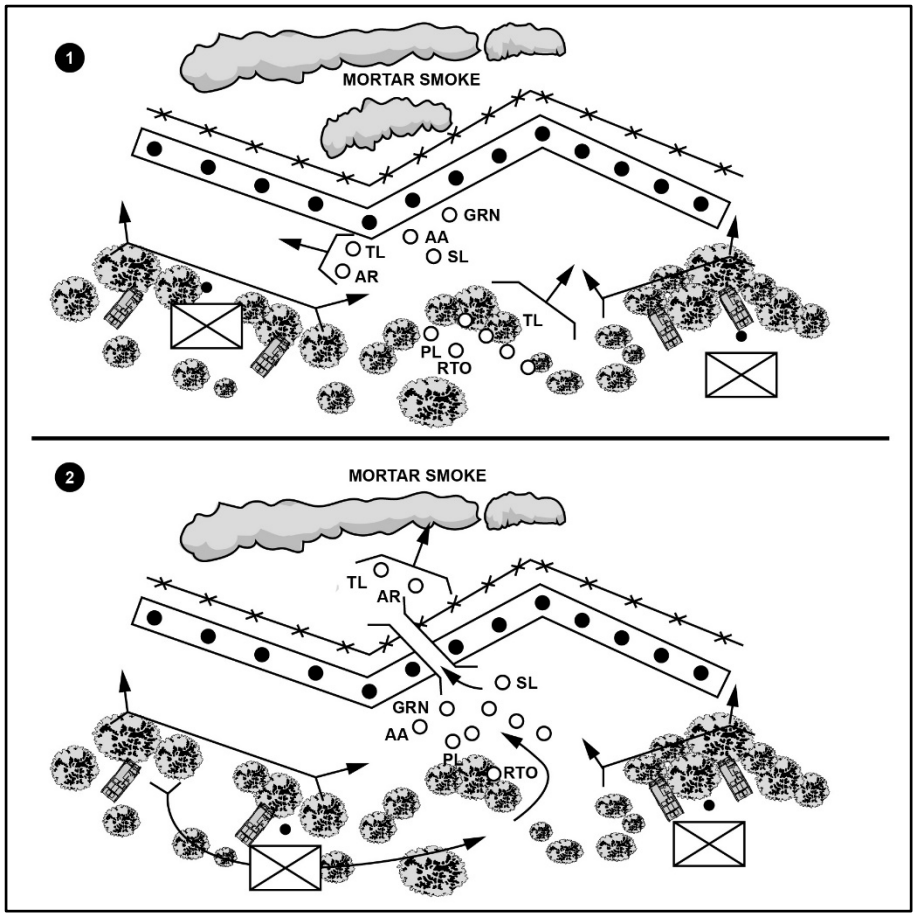


Figure 5-5. Conduct initial breach of a wire mined obstacle

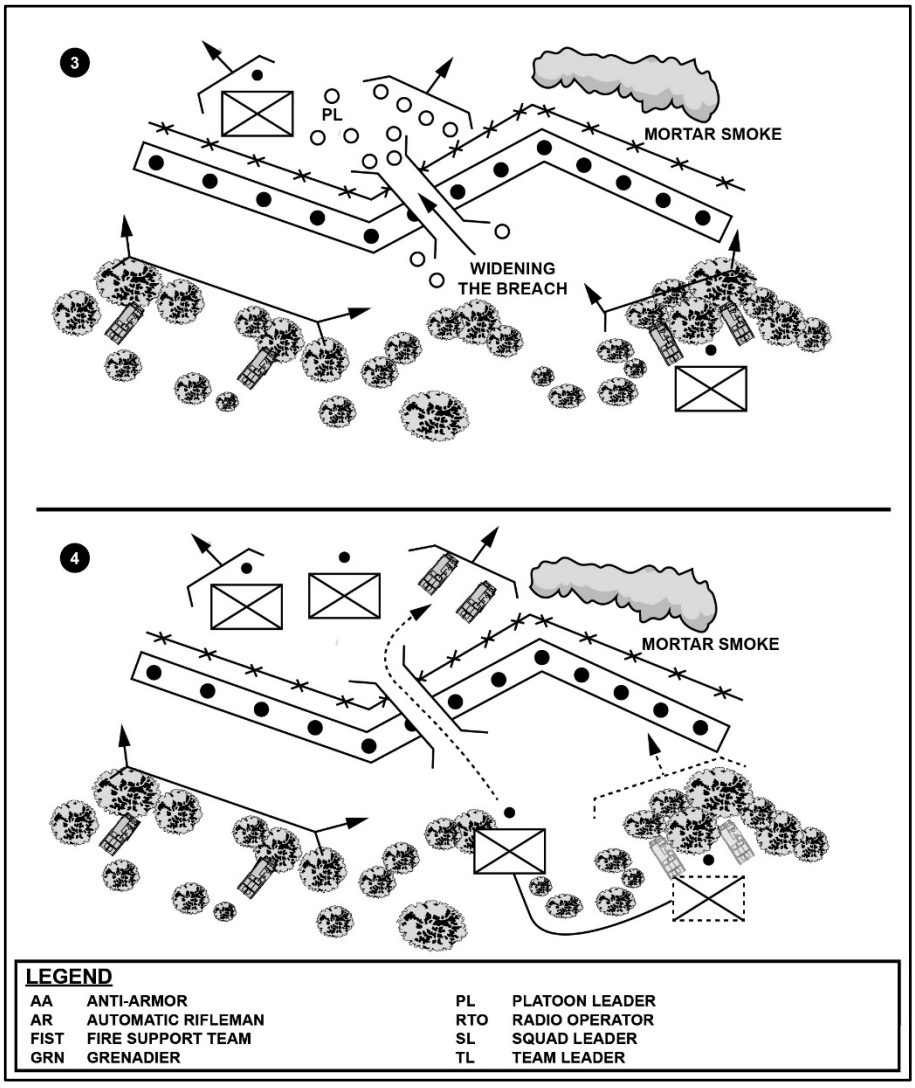


Figure 5-5. Conduct initial breach of a wire mined obstacle (continued)

OBSTACLE REDUCTION TECHNIQUES

5-110. Soldiers use obstacle reduction tools and techniques to breach specific types of obstacles. The three obstacle reduction techniques are explosive, mechanical, and physical. The platoon leader will have to select the best option available based on METT-TC (I), equipment, and assets available. The platoon will also have to overcome distinct disadvantages while conducting breaching operations. The pace of the breach is slow, and the operation leaves the platoon vulnerable to enemy attack. Becoming proficient at using obstacle reduction tools will reduce the amount of time the platoon spends breaching. (See ATP 3-90.4 for more information.)

EXPLOSIVE

5-111. When employing explosives during breaching operations, leaders must consider overpressure and minimum safe distance requirements. Explosive breaching tools include—

- Bangalore torpedoes.
- Material from demolition kits.
- Prepared explosive charges, such as flexible linear and water impulse charges.
- M183 satchel charge.
- Man-portable line charge.
- Antipersonnel obstacle breaching system.
- Mine-clearing line charge.

Note. Different types of demolitions can be used for mine and wire obstacle reduction. FM 3-34 covers each different type of demolition available to support all Infantry missions.

MECHANICAL

5-112. Mechanical breaching is vehicles, tools, or other nonballistic or nonexplosive devices to make the breach. Mechanical breaches can be used for wire obstacles or buildings and doors in an urban environment. Stryker platoons can use—

- Surface mine plows, clearing blades, and rollers (if available).
- Strykers to pull away wire obstacles.
- Dynamic entry tools.
- Onboard BII.

PHYSICAL

5-113. While mechanical and explosive reduction procedures are normally preferred, a unit may need to use physical procedures for the following reasons:

- Assets are unavailable (not on hand, not mission-capable).
- Assets are ineffective because of the type of obstacle or terrain limitations.
- The platoon is trying to reduce the obstacle undetected, and stealth is required.

5-114. Physical procedures involve dismounted personnel (engineers if available) using simple equipment to create a lane through an obstacle or to clear an obstacle. These procedures expose personnel to fire and may be personnel and time intensive. Some examples of physical procedures are—

- Grappling hook (hand thrown and weapon launched).
- Probing.
- Wire/bolt cutters or snips.
- Breachers blanket.

URBAN OBSTACLE REDUCTION

5-115. Understanding how to employ and incorporate obstacle reduction techniques is an important part of urban operations. Gaining quick access to targeted buildings and rooms is integral. Reduction teams need to be supported by fires or obscurants.

Reduction operations should be performed during hours of limited visibility whenever possible. Reduction techniques vary based on construction encountered and munitions available. (See ATP 3-06.11 for more information on urban operations.)

5-116. The primary role of the Stryker during urban operations is to provide mobility, suppressive fire, and protection for Infantry squads. The Stryker has the capability to breach exterior walls and fortifications. The penetration achieved by the Stryker's weapons systems are effective at penetrating and reducing most structures in the urban environment. The penetration ability of the medium and heavy machine guns depends on the range to the target and type of material fired against. The rounds can easily penetrate internal walls, partitions, plaster, floors, and ceilings. Continued and concentrated machine gun fire can breach most urban walls, but typically cannot breach thick reinforced concrete walls or dense natural stone block walls. (See ATP 3-06.11 for more information on weapons effects.)

SECTION VII – TACTICAL DECEPTION

5-117. Surprise, a principle of war, is a combat multiplier that amplifies the effects of the other principles of war (see FM 3-0). Every echelon works to achieve surprise in an operation and only by multiple echelons working together is surprise achieved. The easiest way to achieve surprise is to use deception. Deception creates psychological effects as well as enhances the psychological effects of, for example, successfully isolating or dislocating enemy units and personnel, degrading their combat effectiveness and the ability to resist U.S. military operations. This section provides a brief overview of the considerations unique to tactical deception operations. (See ATP 3-21.11 and FM 3-90 for additional information.)

5-118. *Tactical deception* is a friendly activity that causes enemy commanders to take action or cause inaction detrimental to their objectives (FM 3-90). Tactical deception operations are designed to support the commander's plan by enhancing the probability of mission success and require approval two echelons above the executing unit. It allows units to create windows of opportunity outside the higher commander by exploiting enemy assumptions about what the unit will do in particular circumstances and causing the target to react to false indicators. The purpose of tactical deception is to—

- Gain the initiative.
- Reduce the overall operational risk.
- Preserve combat power.

5-119. Units have two options to disseminate the tactical deception plan to their subordinates. It is imperative that the unit maintains operational security for the success of the operation. The first option is for the unit's leaders to know the true task and purpose of the organization, subordinates may receive a different task and purpose to maintain operational security. The second option is for the unit to provide complete briefings to their subordinates. In both options, caution must be exercised to ensure that deception details are not mentioned in their OPORDs. Operations security must be recognized as a vital element of the variation of the tactical deception.

5-120. Leaders conduct tactical deception at every echelon with either the means they have or with assistance from their higher echelon. *Deception means* are methods, resources, and techniques that can be used to convey information to the deception target

(JP 3-13.4). Deception means are the tools that friendly commanders use to accomplish tactical deception. Leaders normally employ deception plans to supplement several means that aim to mislead multiple types of enemy sensors. This increases credibility and the likelihood of deceiving the deception target. Tactical deception means provide the signatures, associations, and profiles of friendly alleged activities to the enemy. Typically, the means are found in either the coordinating instructions of an order or through commander's guidance. The two tactical deception means categories are physical and technical.

PHYSICAL MEANS

5-121. Physical means are resources, methods, and techniques used to convey information normally derived from direct observation or active sensors by the deception target. (Most physical means also have technical signatures visible to sensors that collect scientifically or electronically.) Examples might include—

- Movement of the platoon.
- Decoy equipment and devices.
- Sonic deception (sound to confuse, misguide, and disrupt).
- Security measures.
- Tactical actions.
- Reconnaissance, surveillance, and security activities.

TECHNICAL MEANS

5-122. Technical means are resources, methods, and techniques used to convey or deny selected information or signatures. Technical means may be applied with corresponding physical means or alone to replicate something physical that is absent from visual contact. Examples of technical means might include—

- The establishment of communications networks and interactive transmissions that replicate a specific unit type, size, or activity.
- Emission or suppression of chemical or biological indicators and warnings associated with a specific capability or activity.
- Organic capabilities that disrupt an enemy sensor or affect data transmission.

VARIATIONS OF TACTICAL DECEPTION

5-123. Variations of tactical deception are missions that a higher headquarters can assign to a subordinate unit. A unit may be told to conduct one of the two variations of tactical deception: feints and demonstrations. The selected variation(s) and execution depend on the unit's understanding of the current situation, appropriateness to the circumstances, as well as the commander's desired end state. All other deception guidance should be issued in the coordinating instructions or done to accomplish the commander's intent.

5-124. Units should consider the cost of tactical deception in terms of resource expenditure. For tactical deception to appear real, units must dedicate adequate resources. The cost depends on the variation of tactical deception (demonstration or feint) and its objective. The units should also measure costs in risk and flexibility. For example, it may be very risky for the success of a unit's main effort to rely solely on the success of a planned demonstration. Should the demonstration not produce the expected

enemy reaction, it could cause the main effort to fail. Flexibility is built into the plan by using branches, sequels, or executable deceptions.

DEMONSTRATION

5-125. A *demonstration* is a variation of tactical deception used as a show of force in an area where a unit does not seek a decision and attempts to mislead an adversary (FM 3-90). The commander uses demonstrations and feints in conjunction with other military deception activities. The commander generally attempts to deceive the enemy and induce the enemy commander to move reserves and shift fire support assets to locations where they cannot immediately affect the friendly main effort or take other actions not conducive to the enemy's best interests during the defense. The commander must synchronize the conduct of these variations of an attack with higher and lower echelon plans and operations to prevent inadvertently placing another unit at risk. Both variations are always shaping efforts, but a feint will require more combat power and usually requires ground combat units for execution.

FEINT

5-126. A *feint* is a variation of tactical deception that makes contact solely to deceive the adversary as to the location, time of attack or both (FM 3-90). The principal difference between a feint and a demonstration is that in a feint the commander assigns the force an objective limited in size, scope, or some other measure. The force conducting the feint makes direct fire contact with the enemy but avoids decisive engagement. The planning, preparing, and executing considerations for demonstrations and feints are the same as for the other attack. The commander assigns the operation to a subordinate unit and approves plans to assess the effects generated by the feint, to support the operation.

SECTION VIII – ASSEMBLY AREA

5-127. An *assembly area* is an area a unit occupies to prepare for an operation (FM 3-90). A company AA is a location where the platoon leader and subordinate leaders within the AA direct and supervise mission planning and preparation for the next mission. The platoon will receive and issues orders, service and repair vehicles and equipment, receive and issue supplies, and feed and rest Soldiers in the AA. Forces occupy AAs where enemy contact is likely and commitment of the unit to combat is possible or anticipated.

5-128. A *tactical assembly area* is an area that is generally out of the reach of light artillery and the location where units make final preparations (PCC and PCI) and rest, prior to moving to the line of departure (JP 3-35). Tactical AAs are where enemy contact is likely and the commitment of a unit into combat is possible or anticipated. Examples of tactical AAs include locations occupied by units designated as tactical reserves, by units after completing a rearward passage of lines, temporarily by units during tactical movement, and by units during reconstitution. Units in tactical AAs are typically preparing to move forward to execute a forward passage of lines followed by offensive operations or have been assigned a reserve mission by their higher commander.

PLANNING CONSIDERATIONS

5-129. Units likely to occupy AAs include units designated as tactical reserves, units completing a rearward passage of lines, units preparing to move forward to execute a forward passage of lines, units performing tactical movements, and units conducting reconstitution. The tactical mobility of the Stryker allows for AAs to be established at greater distances from the LD than other Infantry units.

5-130. Although AAs are generally secure from enemy interference, commanders must consider the possibility of enemy attacks or observation. Planning for, occupying, and departing an AA is difficult and time consuming and require careful consideration. Ideally, an AA provides—

- Suitability for defensive operations.
- Concealment from air and ground observation.
- Adequate entrances, exits, and internal routes.
- Sufficient area for the dispersion of subunits and their vehicles consistent with the enemy and friendly tactical situation.
- Sufficient space for sustainment operations (unit trains, maintenance operations, and command posts).
- Enough distance from other areas and units to preclude mutual interference.
- Cover from direct fire.
- Terrain masking of electromagnetic signatures.
- Terrain allowing observation of ground and air avenues into the AA.
- A location beyond enemy medium artillery range.
- Good drainage and soil conditions that can sustain unit vehicles and individual Soldier movement.

5-131. The platoon moves with as much secrecy as possible, normally at night and along routes that prevent or degrade the enemy's capabilities to observe or detect during the occupation of the AA. The proper location and size of AAs contributes significantly to both security and flexibility. The location should facilitate future operations, so movement to subsequent positions can take place smoothly and quickly by concealed routes. An AA must be large enough to accommodate the type and size of the force occupying it.

ORGANIZATION

5-132. The Stryker platoon will typically occupy a portion of the perimeter of a company AA (see figure 5-6). When the platoon is assigned their own AA, it is referred to as a patrol base (see chapter 5, section XI). The AA is planned and organized in the same way as a perimeter defense (see chapter 4).

5-133. The company commander organizes the AA into a perimeter and assigns each platoon a sector of that perimeter. The commander also assigns positions to the attachments and the mortar section, and selects the company command post location, which is typically located near the center of the AA. The commander and the FSO plan indirect fires in and around the AA. Once in position, the platoons establish OPs and conduct patrols to secure the area (see figure 5-6). The platoon leaders then plan the defense for their area of the perimeter. Machine gunners, AT section, and attachments such as ATGMs prepare Standard Range Cards. Fighting positions are prepared

according to available time and other defensive measures are taken as appropriate (see chapter 4).

5-134. The company may assign separate individual AAs to the platoons, which establish their own perimeter defense. The areas between platoons are secured by security patrols and are usually under the control of the company. The company command post, company trains, and mortar section generally establish their positions with one of the rifle platoons.

Note. When the platoon is assigned a separate AA, the platoon will normally establish a perimeter defense in the form of a patrol base. (See chapter 5, section XI for information on patrol bases.)

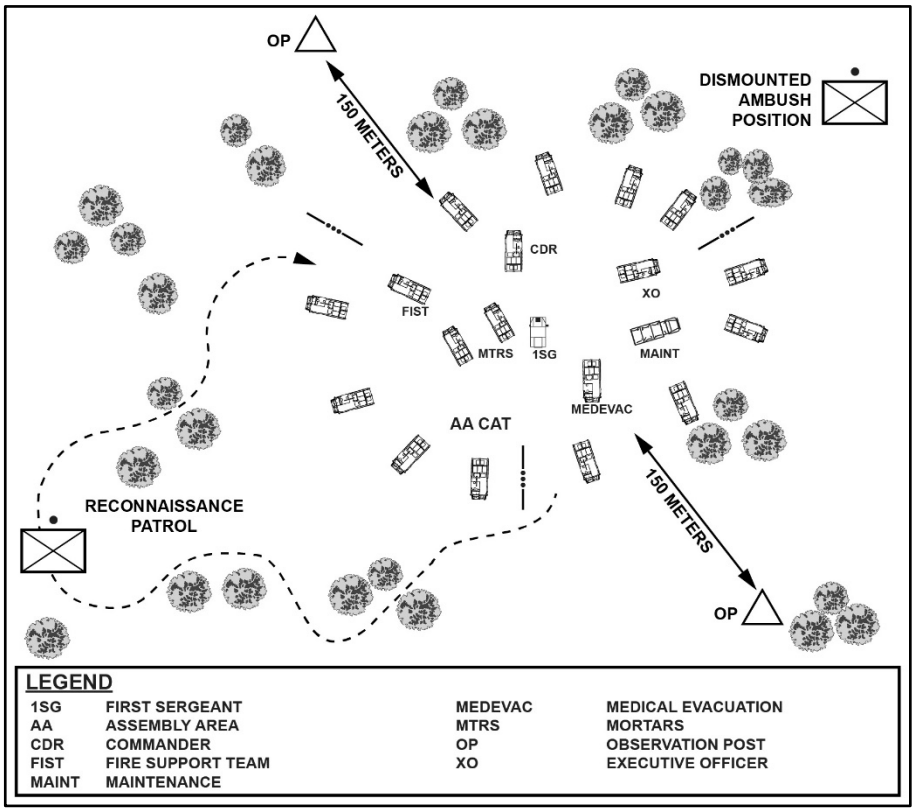


Figure 5-6. Company assembly area, example

QUARTERING PARTY

5-135. Usually, the SBCT Infantry rifle company employs a quartering party (also known as an advance party) to help in the occupation of an AA. A *quartering party* is a group dispatched to a new assigned area in advance of the main body (FM 3-90). The quartering party usually accompanies the route reconnaissance effort to the designated AA.

5-136. Company and platoon SOPs establish the exact composition of the quartering party and its transportation, security, communications equipment needs, and specific duties. However, it is small enough to move quickly while still maintaining a significant self-defense capability. For example, the quartering party could consist of one vehicle from a platoon and a vehicle from the headquarters section.

5-137. The SBCT Infantry rifle company XO, 1SG, or a senior noncommissioned officer usually leads the quartering party. The leader of the quartering party is empowered by the commander of the main body to make tactical decisions. The quartering party secures, reconnoiters, and organizes an area for the main body's arrival and occupation. The quartering party's actions at the AA include the following:

- Reconnoiter for enemy forces and CBRN contamination.
- Establish security throughout the depth of the AA.
- Evaluate the condition of the route leading into the AA and the suitability of the area (drainage, space, internal routes).
- Organize the area based on the commander's guidance; designate and mark tentative locations for platoons' vehicles, command post vehicles, and trains.
- Improve and mark entrances, exits, and internal routes.
- Mark bypasses or removes obstacles (within the party's capabilities).
- Develop a digital AA overlay and send overlays to the platoon and company main body.

Note. The quartering party typically reconnoiters and confirms the tentative locations selected by the company commander based on a map reconnaissance. However, when necessary, the quartering party may change previously assigned locations based on the considerations discussed earlier such as available cover, concealment, and terrain allowance for observation of ground and air avenues.

5-138. The quartering party leader briefs the quartering party after the plan is completed. The briefing follows the standard five-paragraph order format. In it, the quartering party leader emphasizes actions at halts and critical areas, actions of the quartering party in the AA, contingency plans, and procedures to request and receive fire support, protection, and sustainment. The leader covers, in detail, MEDEVAC procedures, actions on contact, and actions to take if separated from the quartering party. Rehearsal and back-brief times are scheduled.

5-139. Before and after rehearsals and during final preparations, the commander ensures the quartering party leader is aware of any changes to the current enemy situation, probable enemy COAs, the weather forecast, and the terrain and vegetation likely en route to and in the AA. The quartering party leader coordinates with the commander to determine any mission changes, for example, whether or not the quartering party is to remain in the AA and await the remainder of the company, or a change to the route and movement restrictions to be used by the quartering party.

5-140. Quartering party leaders ensure current and projected air defense WCS, and air defense warning are known. If a CBRN threat is present, CBRN reconnaissance is conducted in conjunction with the route reconnaissance. The route should be adjusted

to avoid CBRN contamination. The contaminated areas should be marked, and guides used to redirect the main body to the clean route.

5-141. The quartering party navigates to the AA, generally along one route. If the quartering party moves along a route to be used by the main body and the main body has not yet sent a reconnaissance element forward, the quartering party conducts a route reconnaissance during its movement. The quartering party also may execute a time-distance check of the designated route. The quartering party reports these times and distances to the main command post after moving through the release point.

5-142. Upon arrival in the AA, the quartering party moves to its assigned positions and executes the required reconnaissance. The quartering party also has the following responsibilities at the AA:

- Determines locations for units.
- Identifies unit left and right limits of fire, records this information, and sends updates to the unit's commander.
- Determines the location for the command post, which may include establishing communications equipment, laying wires, and so forth.
- Verifies subordinate unit locations and sectors of fire to ensure there are no gaps in coverage.
- Transmits changes or updates to the main command post to alert the main body to changes in the route and AA.

5-143. The quartering party provides the results of their reconnaissance to the company command post. Guides then move to the release points to meet and guide their units. Guides are especially needed during periods of limited visibility.

5-144. Once the quartering party finishes preparing the AA, the quartering party waits for the arrival of the main body, maintains surveillance, and provides security of the area within its capabilities.

OCCUPATION OF ASSEMBLY AREA

5-145. The Stryker Infantry rifle platoon will occupy the AA as an element of the SBCT Infantry company. SOPs and guides assist Stryker VCs to quickly find their positions and assume designated positions in the AA. The platoon, as part of the company, occupies its positions upon arrival using the procedures for hasty occupation of a BP. The platoon should maintain dispersion when occupying their positions in the AA.

5-146. The commander establishes local security and coordinates with adjacent units, assigning weapons orientation and sector of fire for each platoon and subordinate element. If the company occupies the AA alone, it establishes a perimeter defense. While in the AA, each platoon is responsible for its own protection activities, such as local security. In certain circumstances, the platoon may occupy the AA alone or first, before the main body arrives. When the platoon occupies the AA alone, they establish a perimeter defense. Considerations when occupying the AA alone are—

- To select locations to afford dispersion and hide positions.
- To orient or position vehicles to facilitate defense.
- To establish command posts and train centrally located for security, ease of support, and road access.
- To establish OPs to provide security.

- To establish communications (by wire or messenger if necessary).
- To coordinate in a detailed manner with adjacent units.
- To establish coverage of roads, trails, other avenues of approach and dead space.
- To ensure overlapping coverage at boundaries to prevent gaps or seams.

ACTIONS IN THE ASSEMBLY AREA

5-147. Following occupation of the AA, the platoon prepares for future operations by conducting TLP and priorities of work according to the company SOP and OPORDs. These preparations include the following:

- Establish and maintain security (at the appropriate readiness level).
- Develop a defensive fire plan and forward it to the main command post via Blue Force Tracker or Joint Capabilities Release, if equipped.
- Complete Standard Range Cards and sector sketches.
- Select alternate, supplementary positions, and rally points.
- Emplace OPs.
- Establish communications.
- Camouflage vehicles.
- Develop an obstacle plan.
- Emplace CBRN alarms.
- Employ SBCT Infantry rifle squads to conduct dismounted security patrols to clear dead space and restrictive terrain.
- Conduct TLP.
- Conduct PCCs and PCIs; based on time available.
- Perform maintenance on vehicles and communications equipment.
- Verify weapons system status; conduct bore sighting, prepare-to-fire checks, test firing, and other necessary preparations.
- Distribute air defense WCS.
- Conduct resupply, refueling, and rearming operations.
- Conduct rehearsals and other training for upcoming operations.
- Conduct personal care and hygiene activities.
- Adjust task organization, as needed.
- Account for personnel, to include attachments and sensitive items.
- Reestablish vehicle load plans, as needed.
- Conduct mess or chow and rest plan as necessary.

READINESS CONDITIONS

5-148. The readiness conditions (REDCONs) allow changing situations and ensure completion of necessary work and rest plans. The commander uses the REDCON status as a standardized method to adjust the unit's readiness to move and fight. REDCON normally consists of four levels.

REDCON LEVEL 1

5-149. REDCON level 1 is full alert, which means the unit is ready to move and fight. CBRN alarms and hot loop equipment are stowed, dismounted OPs have been pulled in,

all personnel are mounted with weapons manned, engines started, and the platoon is ready to move immediately.

REDCON LEVEL 2

5-150. REDCON level 2 is full alert, which means the unit is ready to fight. Equipment is stowed (except hot loop and CBRN alarms), PCCs are complete, personnel alert and ready to mount vehicles, dismounted OPs may remain in place (pending guidance from the commander), and the platoon is ready to move within 15 minutes of notification.

REDCON LEVEL 3

5-151. REDCON level 3 is reduced alert. The platoon is in 50 percent security while the other 50 percent executes priorities of work and rest plan, and the platoon is ready to move within 30 minutes of notification.

REDCON LEVEL 4

5-152. REDCON level 4 is minimum alert. Dismounted OPs are manned, one soldier per platform monitors the radio and provides security with turret weapons, Infantry squads reduce to 33 percent security, remaining Soldiers execute priorities of work and rest plan. Platoon maintains digital and FM communications with the company and adjacent platoons. The platoon is ready to move within 1 hour of notification.

ASSEMBLY AREA DEPARTURE

5-153. Departing the AA is oftentimes the first step of a mission. When occupying a company AA, the platoon leader must understand the commander's scheme for departing the AA, often referred to as uncoiling from the AA. This step in the operation must be planned for and rehearsed by key leaders at a minimum. Leaders must understand the sequence and timing of the departure. Readiness levels ensure that platoon is ready to move when required without needlessly wasting time and fuel. The number of vehicles moving in a potentially confined area may result in confusion, congestion, and loss of tempo, especially during times of limited visibility. The platoon leader must factor in these departure conditions into the mission timeline.

5-154. The AA is occupied with the follow-on mission in mind to preclude congestion on departure. Routes from positions within the AA follow mission graphics and typically the start point for a directed route is reconnoitered and timed. Subordinate units designate a linkup point, and units move to and through that point based on their reconnaissance and anticipated enemy threat.

SECTION IX – COUNTER-UNMANNED AIRCRAFT SYSTEM AND ELECTROMAGNETIC WARFARE

5-155. The platoon and company should assume they are being observed by enemy reconnaissance and targeting systems, and not assume they are under a protective umbrella of friendly air and missile defense units. UASs are everywhere. While not all hostile air threats require engagement using air defense measures from air and missile defense units, there is still a requirement to detect, identify and be prepared to counter and defeat all classes of UASs. (See ATP 3-01.81 for classes of UASs.)

COUNTER-UNMANNED AIRCRAFT SYSTEMS

5-156. The adversary's use of commercial off-the-shelf technology to gain a tactical advantage compromises the platoon's ability to conduct operations without revealing their intentions and making themselves vulnerable to attack. Not all encounters with unknown UAS means the unit is at risk or under attack. However, spotting unidentified UAS either stationing on, or transiting through the unit's location may indicate an imminent attack. The platoon must react quickly, appropriately respond, and report when recognizing signs of possible enemy observation or attack. Whether a counter response is available or not, units must implement passive air defense measures to include camouflage, cover, concealment, and hardening to protect lives and equipment. (See ATP 3-01.81 for C-UAS operations.)

UNMANNED AIRCRAFT GROUPS

5-157. UASs are categorized into Groups 1 through Group 5, this designation is based on weight, operating altitude, and speed. Bigger platforms tend to have a more robust suite of capabilities. While group designations help in understanding UAS and their capabilities, it is important that leaders understand the lines of differentiation between different groups operationally are not rigid. UAS are categorized into Group 1 (includes mini and micro systems) through Group 5 (strategic level assets). Groups are typically based on weight, operating altitude, and speed. See table 5-3 on pages 259 and 260 for a brief description of the UAS Groups.

5-158. All UASs should be considered threats but the immediate threat to the Stryker Infantry rifle platoon is the low, slow, and small (LSS) sUAS. They are slow, small, tactical-level UASs operating at relatively low altitudes. The ability to operate within such low altitudes decreases the likelihood of friendly forces detecting the threat in a timely manner. LSS UASs provide cost effective, high payoff means of surveillance and reconnaissance. Integrated air and missile defense capabilities can effectively counter larger classes of UAS but have difficulty tracking, identifying, and defeating LSS UASs. UAS Groups 1 and 2 are commonly known as sUAS. An sUAS has a lower radar cross-section than groups 3, 4, and 5 UAS. Integrated air and missile defense capabilities can effectively counter larger classes (Groups 3, 4, and 5). Air and missile defense assets have difficulty tracking, identifying, and defeating sUASs. The low radar cross-section is harder to detect by friendly forces' early warning and detection capabilities. Launch and recovery requirements allow sUAS launching capability from unimproved areas by a single person or small team, making them more difficult to find. Advances in technological capabilities enable the employ of sUASs with little to no operator interaction. The challenge is at the brigade and below level with planning for and defending against LSS sUAS threats.

Table 5-3. Unmanned aircraft system groups

Group	*Weight (lbs)*	*Speed (kts)*	*Normal operating altitudes (ft)*	*Notes*	*Threat and COTS examples*	*Friendly examples*
Group 1: micro/mini UAS	0–20	<100	<1,200 AGL	Generally, hand launched commercial-off-the-shelf, radio-controlled platforms. The have limited ranges and small payload capabilities. They offer real time video. Operated within line of sight of the user They offer real time video. Operated within line of sight of the user.	DJI	0–20
Group 2: small tactical	21–55	101–250	<3,500 AGL	Small airframes with low radar cross sections provide medium range and endurance. Launched from unimproved areas with a small number of people involved. Requires line of sight to the ground control station.	SKY-09P	Scan Eagle
Group 3: tactical	56–1,320	101–250	<FL 180	Similar to Group 1 and 2 UAS, requires a larger logistical footprint. Range and endurance vary significantly among platforms.	Shahed	RQ-7B Shadow

Table 5-3. Unmanned aircraft system groups (continued)

Group	*Weight (lbs)*	*Speed (kts)*	*Normal operation altitudes*	*Notes*	*Threat and COTS example*	*Friendly example*
Group 4: strategic or theater	>1,320	Any speed	<FL 180	Relatively large systems operated at medium to high altitudes. This group has extended range and endurance capabilities. Normally requires a runway for launch and recovery	Forpost	MQ-1C Gray Eagle MQ-1A/B Predator
Group 5: Strategic	>1,320	Any speed	>FL 180	Operates at medium to high altitudes having the greatest range, endurance, and airspeed. Requires large logistical footprint like that of manned aircraft and has a suite of optics for targeting and weaponry for engagements	Wing Loong II	RQ-4 Global Hawk MQ-9 Reaper

Legend: AGL—above ground level; COTS—commercial-off-the-shelf; ft—feet; FL—flight level; kts—knots; lbs—pounds; UAS—unmanned aircraft system

5-159. UAS groups 1 and 2 are abundant and difficult to detect on the battlefield. They constitute one of the most significant threats facing friendly ground forces when integrated with indirect fire capabilities. The technological enhancements, accessibility, and economic feasibility of the LSS UAS systems makes them an area of interest for potential adversaries. When planning for threat UAS leaders should assume that all UAS platforms may be capable of being outfitted with a suite of capabilities. Planning for threat UAS should assume within the planning process that all UAS platforms may be capable of being outfitted with a suite of capabilities. These may include intelligence, surveillance, reconnaissance, and targeting capabilities. UAS payloads may utilize some form of electro-optical or IR optics, radar, signals intelligence, or laser designation supporting delivery of EW, air-to-surface weapons, or one-way lethal payloads.

COUNTER-UNMANNED AIRCRAFT SYSTEM PLANNING

5-160. Platoon leaders must plan for the threat environment where the units will conduct operations. Passive air defense, combined arms for air defense and counterreconnaissance tasks training should be an integral part of the units' C-UAS practices. The unit should develop and refine C-UAS planning and tailored to the expected threat environment. The platoon and company must plan and execute operations as an integrated combined arms team employing all forms of passive air

defense techniques when active air defense is limited or not available. IPOE provides the commander and staff with specific threat information on known enemy locations, tactics, and threat capabilities.

5-161. Examples of key tasks to integrate into plans and combined arms unit training strategies addressing LSS UAS threats include the following:

- Employ dedicated observers (conducting air guard techniques).
- Perform visual aircraft recognition training.
- Conduct air threat avoidance techniques.
- Establish a security force and quick reaction force.
- Establish an early warning organic sensor network.
- Conduct UAS reporting procedures.
- Perform cover and concealment.
- Select appropriate LSS UAS defeat mechanisms.
- Conduct hardening of unit positions.
- Disseminate the air defense warning and WCS.
- Employ counter tracking techniques.

5-162. Platoon leaders must understand the plan for friendly UAS employment. This assists the platoon in differentiating from friendly and threat UAS and disseminating the information when one is launched at platoon, company, or battalion levels.

TECHNIQUES FOR CONDUCTING COUNTER-UNMANNED AIRCRAFT SYSTEM AIR GUARD

5-163. Platoon security operations are complemented by employing air guard techniques. An air guard may assist with mitigating the threat to a UAS's capability to conduct reconnaissance, surveillance and intelligence gathering operations and execute attacks on friendly forces. Air guards need to be vigilant, eyes on the horizon. Air guards will perform actions such as search and scan techniques for approaching threat UASs while observing their assigned sectors. Air guards should position themselves where they can best observe and more importantly listen for threat UAS. When listening, OPs should exercise noise discipline, ensure all engines are off and remove their headgear to listen. Early warning is the key for air guards since it is their job to alert the formation of any possible air threats. Reporting threat UAS activity should include an estimate of the threat location from the air guard position. The air guard reports the approximate distance, time, duration, size, estimated elevation, and direction the UAS was heading when detected. Reporting of a threat UAS should utilize a standard reporting format. (See table 5-4 on page 262 for an example reporting format in accordance with ATP 3-01.81.) Leaders should always have a plan for air guards:

- Plan for air guards while moving and at halts.
- Plan for air guards in AAs, and defensive positions.
- Plan for air guards when in overwatch positions.

Table 5-4. Unmanned aircraft system reporting format

Line	*Information Example*	*Example*
1	Size	Report the number of UASs or size of the formation
2	Activity	Report detailed account of actions: What is the UAS's direction of movement? Was there any hostile action? Is the threat UAS loitering in one spot? Is it flying straight? Was the threat UAS approach observed or was it spotted overhead?
3	Location	Report where the activity was seen. Include 6-to 8-digit grid coordinate of reporting element and either grid or distance and direction from reporting element location (known point).
4	Unit (Description of UAS)	Include details such as whether it is fixed-wing, rotor, or multi-rotor • If fixed-wing— ▪ Estimated length of wingspan. ▪ Tail configuration. • If rotor/multi-rotor–identify the number of rotors if multi-rotor. • Height. • Payload, sensors, and weapons. • Any lights. • Other distinguishable markings.
5	Time	Report the time the activity was observed.
6	Equipment	If possible, report all equipment associated with the UAS, such as payload or weapons
Legend: UAS—unmanned aircraft system		

5-164. Based on threat activity and mission tasks relative to C-UAS observers (air guards) should consider developing quick reference or pre-deployment and combat checklists to focus the team on C-UAS. The checklist should be available through standard military digital devices or in hardcopy form and include—

- Current UAS trends (type classification).
- Specific data on local air threats and NAI.
- Secure radio operations and frequencies.
- Unit call signs to request support (quick reaction force or reconnaissance and intelligence information collection support).
- Military map of area.
- Binoculars and night vision devices.

- Orientation techniques (location, heading, speed, and line-of-sight).
- C-UAS spot report.

PASSIVE DEFENSE

5-165. Platoons should be ready to employ passive defense measures to protect themselves from detection, observation, and attack. Passive defense measures decrease the effectiveness of enemy attacks using UAS. Damage-limiting and attack avoidance measures are passive defense measures that are used to avoid detection from aerial threats and limit damage if attacked. Platoons must use caution when exercising C-UAS passive measures. Commanders should select positions of advantage that provide concealment for Soldiers, equipment, and unit activities. When planning damage-limiting and attack avoidance measures, the commander should consider placing their forces on the following passive defense tasks:

- Practice light restrictions and discipline during times of limited visibility and night operations.
- Early warning of air threats to the lowest echelons is essential to countering the UAS threat.
- Practice good operational security.
  - Operational security is essential part of the planning process.
  - Commanders and leaders must always enforce their units' operational security measures.
- Use EMCON to limit electromagnetic and acoustic footprint.
- Employ selective and controlled use of electromagnetic, acoustic, or other emitters to optimize mission command systems and controlling capabilities while minimizing operations security.
- Use camouflage and concealment.
  - Camouflage is the use of natural or artificial materials to disguise personnel and/or equipment.
  - Concealment is used to reduce the factors of recognition by hiding, blending, and disguising.
- Employ counter tracking measures.
  - When moving a tracked or wheeled platoon avoid leaving multiple sets of tracks when occupying an AA or BP.
  - Multiple sets of tracks leave a large overhead signature.
- Use decoys and deception.
  - Using decoys to set up false locations, with smoke to draw attention away from an operation.
  - Using emitters and emulators can deceive collection activities and can conceal unit activities from enemy detection.
- Use hardening.
  - Use protective construction and OHC to provide damage-limiting cover for friendly forces and equipment.
  - The hardening and fortifying of cover will limits the threat UAS's ability to visually see and limit the damaging effects of an aerial attack.

- Use of obscurants.
  - Use optical and noise reducing measures to limit the glare or noise of equipment.
  - Place mud on headlights and use camouflage nets to obscure the glare of windshields to prevent drawing attention to a position.
- Unit dispersion:
  - Disperse assets to minimize detection and damage if attacked, which may be the best damage-limiting measure.
  - Proper dispersion of units and equipment lessens target density and reduces the lethal effects of threat ordnance.
- Maintain vigilance.
  - Platoons must assume they are always vulnerable to enemy targeting attempts.
  - This is especially true when conducting troop movements or performing supply actions or move through open areas or concentrate at choke points.
- Establish early warning network using the radios and digital networks.
- Minimize heat signature by turning engines off when stationary.

ACTIVE DEFENSE

5-166. Platoon leaders and commanders have the responsibility to take whatever action is necessary to protect their forces and equipment against attack and ensure their Soldiers operate in accordance with established ROE. Engagement authority for UAS is delegated to the Soldier to execute air defense engagements. Soldiers encountering groups 1, 2, and 3 UAS should consider these as threats eligible for engagement unless positively identified as non-threatening. Active measures for the company must include basic rules that assist in the identification and defeat process for threat UASs. For example, establish SOPs for disseminating WCS and hostile criteria. *Weapons control status* is an air and missile defense control measure declared for a particular area and time by an area air defense commander, or delegated subordinate commander, based on the ROE that establish the conditions under which fighters and surface air defense weapons are permitted to engage threats (JP 3-01). WCSs can apply to weapon systems, volumes of airspace, or types of air platforms. The commander should consider training their forces on the following active measures:

- Define characteristics for threat UAS which includes speed, altitude, location, and heading.
- Develop and transmit WCS, which includes established restricted and engagement zones.
- Define categories of WCS as follows:
  - Weapons-free—weapons systems may fire at any target not positively identified as friendly (least restrictive WCS).
  - Weapons-tight—weapons systems may only fire at targets identified as hostile in accordance with current ROE.
  - Weapons-hold—weapons systems may only fire in self-defense or when ordered by proper higher authority (most restrictive WCS).
- Use air guards for every vehicle and position to establish 360-degree security and execute the following:

  - React to threat UASs by determining distance and bearing to the threat and take pictures if possible.
  - Immediately report sightings of threat UAS (spot report) as prescribed by the SOPs.
- Respond in accordance with established unit SOP if the air guards' position and personnel become threatened, which could include:
  - Moving to alternate positions.
  - Engaging the threat UAS with small arms using combined arms for air defense firing techniques.
  - Requesting engagement support with air and missile defense weapon systems and aviation assets.

5-167. Platoons should always post an air guard day and night for all operations. If two or more teams are posted, then assign sectors. Air guards must be trained to watch but also listen for adversary UAS. Listening and OPs should also be assigned the air guard mission. While moving or stationary all members of the platoon should be vigilant and on the watch for threat UAS.

ELECTROMAGNETIC WARFARE

5-168. *Electromagnetic warfare* is military action involving the use of electromagnetic and directed energy to control the electromagnetic spectrum or to attack the enemy (JP 3-85). Commanders and subordinate leaders at each echelon integrate EW activities into operations through cyberspace electromagnetic activities. EW capabilities are applied from the air, land, sea, space, and cyberspace by manned, unmanned, attended, or unattended systems. Cyberspace electromagnetic activities are the process of planning, integrating, and synchronizing cyberspace and EW operations. *Cyberspace operations* are the employment of cyberspace capabilities where the primary purpose is to achieve objectives in or through cyberspace (JP 3-0).

ELECTROMAGNETIC WARFARE CAPABILITIES

5-169. EW capabilities assist in shaping the OE to gain an advantage. For example, EW may be used to set favorable conditions for cyberspace operations by simulating networked sensors, denying wireless networks, or other related actions. Operations in cyberspace and the electromagnetic spectrum depend on EW activities maintaining freedom of action in both. EW consists of three functions, electromagnetic attack, electromagnetic protection, and electromagnetic support. In any environment, the primary focus at the platoon and company level is on electromagnetic protection considerations as it relates to communications within small-unit operations.

5-170. During planning units must prepare for denied, degraded, and disrupted C2 systems and reduced access to cyberspace and space operations capabilities. Enemy force EW activities, when they are most effective, may simply look like nothing is wrong. Key indicators that command-and-control systems are being degraded include—

- Degraded voice communications.
- Uncharacteristically few voice or digital transmissions.
- Increased latency for data transmissions.
- Frequent and accurate targeting by threat lethal and nonlethal effects.
- Increased pings or network intrusions.
- Inconsistent digital common operational picture, for example, spoofing.
- Inaccurate GPS data or no satellite lock and inconsistency between inertial navigation aids and GPS-enabled systems.

ELECTROMAGNETIC PROTECTION

5-171. *Electromagnetic protection* is a division of electromagnetic warfare involving actions taken to protect personnel, facilities, and equipment from any effects of friendly or enemy use of the electromagnetic spectrum that degrade, neutralize, or destroy friendly combat capability (JP 3-85). For example, electromagnetic protection includes actions taken by the commander and subordinate leaders to ensure friendly use of the electromagnetic spectrum, such as frequency agility in a radio or variable pulse repetition frequency in radar. They avoid confusing electromagnetic protection with self-protection. Both defensive electromagnetic attack and electromagnetic protection protect personnel, facilities, capabilities, and equipment. However, electromagnetic protection protects from the effects of electromagnetic attack (friendly and enemy) and electromagnetic interference, while defensive electromagnetic attack primarily protects against lethal attacks by denying enemy use of the electromagnetic spectrum to guide or trigger weapons. (See ATP 3-12.3 for a detailed discussion on EW functions and activities.)

5-172. Efforts to increase survivability and prevent degraded C2 systems include the following actions:

- Reduce radio power settings.
- Use messengers and hand and arm signals or pyrotechnics for routine communications.
- Minimize length of FM transmissions through brevity codes and execution checklists.
- Use terrain to mask transmission signatures.
- Employ directional antennas.
- Use remote antennas/carry spare antennas.
- Require physical presence of leaders at briefings orders, such as distributing information via analog means in person.
- Use camouflage and deception in all environments.
- Dig in command post.
- Use communications windows to reduce transmissions.
- Employ encryption/cypher techniques.
- Occupy hardened facilities when available.
- Plan to displace or make routine survivability moves.
- Ensure signature discipline across all energy spectrums.
- Use leader discipline and assume that the platoon is always visible and able to be targeted and behave accordingly.

5-173. Efforts that counter the effects of degraded C2 systems include the following actions:

- Establish and disseminate a viable PACE plan.
- Train to recognize indicators.
- Develop and rehearse contingency plans during the planning process and preparations.
- Maintain analog common operational pictures at all echelons.
- Train to operate from the commander's intent, and analog graphics and synchronization matrixes.
- Keep plans as simple as possible, so they are less susceptible to friction.

EMISSION CONTROL

5-174. Leaders are responsible for EMCON as an element of electromagnetic protection that inhibits enemy EW capabilities from detecting, intercepting, finding, fixing, or engaging emitters. *Emission control* is the selective and controlled use of electromagnetic, acoustic, or other emitters to optimize command and control capabilities while minimizing, for operations security: a. detection by enemy sensors; b. mutual interference among friendly systems; and/or c. enemy interference with the ability to execute a military deception plan (JP 3-85).

5-175. In large-scale combat operations against near-peer competitors, the enemy is expected to use EW capabilities to detect, intercept, deny, degrade, disrupt, destroy, or manipulate friendly communications, C2, and intelligence capabilities. Emissions control is a planning aid designed to help leaders develop standard procedures and battle drills for their unit's unique suite of emitters using an appropriate mix of the EMCON considerations listed in table 5-5 on page 268.

Table 5-5. Emission control considerations

Techniques and Procedures	
Minimize length and frequency of radio transmissions. *	Use SATCOM information on these practices.
Use appropriate power settings. *	Use HF transmissions.
Plan radio messages. *	Use electronic counter-countermeasures (ECCM).
Use electronic terrain masking. *	Train while employing radio silence.
Establish and enforce a PACE communication plan (see paragraph 2-33). *	Ensure electronic equipment is properly grounded and has shield cables.
Use remote antennas.	Train on land navigation (without GPS).
Use brevity codes and proword execution matrixes.	Set radar cueing cycles.
Use secure landlines.	Execute survivability moves.
Use directional antennas.	Ensure electronic equipment is properly grounded and has shield cables.
Use line-of-sight communications parallel to the FLOT.	Understand the impact of terrain composition on emissions.
Use alternate means of communications for planning/preparation; use primary for execution.	Recognize communications jamming (reporting criteria).
Use data-burst transmissions.	Recognize GPS jamming (reporting criteria).
Mask with camouflage netting.	Recognize radar jamming (reporting criteria).
Use encrypted GPS.	Recognize satellite jamming (reporting criteria).
*__Note__: These emission control considerations should always be practiced, but leaders emphasize them more as threats involving the electromagnetic spectrum (EMS) elevate.	
Legend: FLOT—forward line of own troops, GPS—Global Positioning System, HF—high frequency, PACE—primary, alternate, contingency, and emergency, SATCOM—satellite communications	

5-176. EMCON prevents the threat discovering and attacking the locations of friendly forces with EW. When establishing EMCON best practices, it is important to understand the general categories and status criteria for EMCON levels. Based on the tactical situation, the commander can dictate the appropriate EMCON level to the platoon. During operations, commanders consider EMCON level 3 (amber) as the baseline condition. Even if given no guidance, the platoon leader should implement EMCON measures within the platoon. Table 5-6 captures the five EMCON levels and the general descriptive criteria associated with each level. (See FM 3-12 and ATP 3-12.3 for additional information.)

Table 5-6. Emission control conditions (levels)

EMCON Condition	*Description*
EMCON 1 Green	Describes a situation where there is no apparent hostile activity against friendly emitter operations. Operational performance of all EMS-dependent systems is monitored, and password encryption enabled systems are used as a layer of protection.
EMCON 2 Yellow	Describes an increased risk of attack after detection. Increased monitoring of all EMS activities is mandated, and all end users must make sure their systems are secure, encrypted, power levels monitored, and transmissions limited. EMS usage may be restricted to certain emitters, and rehearsals for elevated EMCON is ideal.
EMCON 3 Amber	Describes when a risk has been identified. Counter ECM (encryption, FH, directional antennas) on important systems is a priority, and the CEWO's alertness is increased. All unencrypted systems are disconnected.
EMCON 4 Red	Describes when an attack has taken place, but the EMCON system is not at its highest alertness. Non-essential emitters may be taken offline, alternate methods of communication may be implemented, and modifications are made to standard lower EMCON configuration (for example, power levels and antenna types).
EMCON 5 Black	Describes when attacks are taking place based on the use of the EMS. The most restrictive methods of EP are enforced. Any compromised systems are isolated from the rest of the network.
Legend: CEWO—cyber and electronic warfare officer; EMCON—emission control; ECM—electromagnetic countermeasures; EMS—electromagnetic spectrum; EP—electromagnetic protection; FH—frequency hop	

SECTION X – PATROLS AND PATROLLING

5-177. A *patrol* is a detachment sent out by a larger unit to conduct a specific mission that operates semi-independently and return to the main body upon completion of mission (ATP 3-21.8). Patrolling fulfills the Infantry's primary function of finding the enemy to engage them or report their disposition, location, and actions. Patrols act as ground sensors or early warnings for larger units and the planned action determines the type of patrol. (See ATP 3-21.8 for more information on patrolling.)

5-178. When a patrol is made up of a single unit, such as a rifle squad sent out on a reconnaissance patrol, the squad leader is responsible and designated as the patrol leader. If a patrol is made up of mixed elements from several units, then the senior officer or noncommissioned officer is designated as the patrol leader. This temporary title defines the role and responsibilities during the mission. The patrol leader may designate an assistant, normally the next senior Soldier in the patrol, and subordinate element leaders the patrol leader requires.

Note. In this section, the patrol leader is the person in charge of the patrol. In a platoon-size element, that person would most likely be the platoon leader. The assistant patrol leader is the second person in charge of the patrol. In a platoon-size element, that person most likely is the platoon sergeant.

COMMON CONSIDERATIONS

5-179. Stryker units can conduct either mounted or dismounted patrols. The Stryker vehicle provides protection, firepower, and mobility to the Infantry as they conduct patrols. The two types of patrols are combat and reconnaissance. The planned action determines the type of patrol. Regardless of the type of patrol being sent out, the commander must provide a clear task and purpose to the patrol leader.

5-180. The leader of any patrol, regardless of the type or the tactical task assigned, has an inherent responsibility to plan and prepare for possible enemy contact while patrolling. Patrols are assigned a tactical mission. After the mission, the patrol leader reports to the commander and describes the patrol's actions, observations, and condition.

PURPOSE OF PATROLLING

5-181. The planned action determines if the patrol is combat, or reconnaissance focused. Regardless of the type of patrol, the unit needs a clear task and purpose. There are several specific purposes which can be accomplished by patrolling:

- Gathering information on the enemy, on the terrain, or on the populace.
- Regaining contact with the enemy or with adjacent friendly forces.
- Engaging the enemy in combat to destroy them or inflict losses.
- Providing unit security.
- Protecting essential infrastructure or bases.
- Deterring and disrupting insurgent or criminal activity.

ORGANIZATION OF PATROLS

5-182. A patrol is organized to perform a specific mission. It must be prepared to secure itself, navigate accurately, identify, and cross danger areas, and reconnoiter the patrol objective. If it is a combat patrol, it must be prepared to SBF, breach obstacles, and assault the objective. If it is a reconnaissance patrol, it must reconnoiter and conduct surveillance of an objective area while securing itself. Additionally, a patrol must be able to conduct detailed searches as well as deal with casualties and detainees. The capabilities of the Stryker provide leaders with options such as using the Stryker in an SBF role or as a CASEVAC vehicle or transporting the Infantry quickly to support an element in another assigned area.

5-183. The patrol leader identifies those tasks that must be or will likely be conducted during the patrol and decides which elements will perform which tasks. Where possible, the leader should maintain squad and fire team integrity. Squads and fire teams may perform more than one task during the time a patrol is away from the main body, or it may be responsible for only one task. The leader must plan carefully to identify and assign all required tasks in the most efficient way. Special team and squad equipment is

stowed on Strykers. Consideration should be made to ensure that the Infantry can get to their equipment, when necessary.

5-184. The headquarters element of a patrol (for example, platoon size) normally consists of the patrol leader (platoon leader) and an RTO. The platoon sergeant may be designated as the assistant patrol leader. Additional teams and individuals common to all patrols generally include—

- FO, combat medics, and CLSs.
- Aid and litter teams responsible for locating, treating, and evacuating casualties.
- Detainee teams responsible for processing detainees, according to the five Ss (search, silence, segregate, speed, and safeguard) and leader's guidance and may also be responsible for accounting for and controlling recovered personnel.
- Surveillance team responsible for conducting surveillance on the objective area.
- Recorder designated to record all information collected during the patrol.
- Compass and pace Soldiers to navigate using terrain association, dead reckoning, or a combination of both.

MOUNTED PATROLS

5-185. An analysis of METT-TC (I) mission, enemy, terrain and weather, troops and support available, time available, civil considerations, and information considerations variables determines whether the patrol is mounted or dismounted. Some factors to consider when determining which mode to use include—

- Mission, especially where distance and speed are factors.
- Onboard visibility, navigation, and communication.
- Firepower, protection, and mobility.
- Stealth and surprise.
- Terrain.

MOUNTED PATROL CONSIDERATIONS

5-186. Stryker platoons may frequently conduct mounted patrols. The planning and coordination required for dismounted patrols apply to vehicle mounted patrols. The patrol leader additionally considers the following:

- Organize and orient vehicle gunners and VCs to maintain 360-degree security and, for urban areas, high-low security.
- Carefully consider leader locations in each vehicle and within the convoy.
- Rehearse mounted battle drills, reaction to contact, roll over drills, and mounting and dismounting in contact.
  - If water hazards are present, include evacuation of the vehicle under these conditions.
  - Include drivers in all rehearsals.
- Plan alternate routes to avoid civilian traffic and roadblocks.

- Remember that four is generally the minimum number of vehicles to conduct an operation.
  - If one vehicle is disabled or destroyed, it can be recovered while the others provide security.
  - Unit tactical SOPs determine the number of vehicles required.
- Establish a bump plan; when a vehicle goes down, leader(s) must know where they will move to continue the mission without delay.
- Plan for actions required if a vehicle breaks down and must be repaired or recovered.
  - Review self-recovery procedures.
  - Plan actions in case a vehicle gets stuck and cannot be recovered.
  - Plan actions for catch-ups and breaks in contact.
- Establish PACE communications plan.
- Secure external gear to prevent theft, but in case of fire, bomb, or attack, burning material attached to the vehicle may create a greater hazard than the initial attack.
- Plan for heavy civilian vehicle and pedestrian traffic.
- Conduct a map reconnaissance and identify likely chokepoints, ambush sites (intersections), and overpasses.
- Plan primary and alternate routes to avoid potential hazards.
- Drive offensively and unpredictably, but within ROE restrictions.
- Avoid stopping since it can create a potential kill zone.
- Learn the characteristics of the vehicle; to include how high a vehicle can clear curbs and other obstacles, its turning radius, its high-speed maneuverability, and its estimated width (especially with slat armor).

PATROLS WITH MOUNTED AND DISMOUNTED PHASES

5-187. Stryker platoons and squads can conduct patrols with both mounted and dismounted phases. They are planned and executed the same way as a mounted or dismounted patrol. The mounted patrol normally moves to a DP (often the designated objective rally point) and conducts the same actions on the objective as a dismounted patrol. If possible, the Strykers establish an SBF position to cover the objective, establish blocking positions provide security, or otherwise support the actions of the dismounted element. The dismounted element conducts its required part of the mission and returns to the vehicles, remounts, and continues mission. Types of combat patrols that are especially suited for mounted movement include antiarmor ambushes, reconnaissance, and security patrols covering long distances.

COMBAT PATROLS

5-188. A *combat patrol* is a patrol that provides security and harasses, destroys, or captures enemy troops, equipment, or installations (ATP 3-21.8). When the commander assigns a combat patrol mission, the commander intends the patrol to make contact with the enemy and engage in close combat. A combat patrol always tries to remain undetected while moving, but when it discloses its location to the enemy, it is with a sudden and violent attack. For this reason, the patrol normally carries a significant number of weapons and ammunition. It may carry specialized munitions. The three

commonly assigned combat patrol missions are raid, ambush, and security. (See ATP 3-21.8 for more information on combat patrols.)

PATROL LEADER PLANNING AND PREPARATION

5-189. Planning and preparation are the processes by which the leader develops a specific COA for execution focused on the expected results from the patrol. Planning and preparation help the patrol leader create and communicate a common vision and a shared understanding between subordinate leaders. The two processes result in an order that synchronizes the action of forces in time, space, and purpose to achieve objectives and accomplish missions. The leader relies on intuitive decision making and direct contact with subordinate leaders to integrate activities when circumstances are not suited for a more deliberate planning timeline.

Note. As with any mission assigned to the patrol, the patrol leader employs TLP, see chapter 2, to develop the plan and prepare for the mission.

5-190. The patrol leader normally will receive the OPORD in the company command post where communications are good and vital personnel are available for coordination. The patrol leader must identify required actions on the objective, plan backward to the departure from friendly lines, then forward to the reentry of friendly lines. Because patrols act semi-independently, move beyond the supporting range of the parent unit, and often operate forward of friendly units, coordination and activities must be thorough and detailed. As the patrol leader plans, the following elements in paragraphs are considered:

- Environment, local situation, and possible threats.
- Explosive threats and hazards, including mines.
- Operations update.
- Mission and tasks.
- Locations and routes, which may include drop-off points, pick-up points, planned routes; rally points, exit and re-entry points, and alternates for each should be covered in detail.
- Posture, which may be soft or hard depending on the situation and environment.
- Biometric enrollments/biometric-enabled watchlist.
- Personnel recovery and isolated Soldier guidance.
- Actions on contact and actions at the scene of an incident.
- ROE, rules of interaction, and rules for escalation of force.
- Communications plan or lost communications plan.
- EW countermeasures plan.
- Standard and special uniforms and equipment.
- Medical, and the leader should ensure that every patrol has a combat medic and one CLS qualified Soldier with a CLS bag.
- Attachments—the patrol leader must ensure all personnel attached to the patrol are introduced to the other patrol members and briefed thoroughly on the tactical SOP, all patrol special orders, and existing chain of command.
- Personnel who may be attached to a unit going out on patrol, such as:
  - Machine gun, antiarmor, sniper, sapper, and air defense teams.
  - Signal intelligence and human intelligence collection teams.

- Interpreters and host-nation security forces.
- Explosive ordnance disposal teams.
- Female Soldiers specifically designated and trained to search local women, when required.
- Military police or military working dog teams.

ORGANIZATION

5-191. The three essential elements for a combat patrol are assault, support, and security. Assault elements accomplish the mission during actions on the objective. Support elements suppress or destroy enemy on the objective in support of the assault element. Security elements assist in isolating the objective by preventing enemy from entering and leaving the objective area as well as by ensuring the patrol's withdrawal route remains open. The size of each element is based on the situation and patrol leader's analysis of the mission variables of METT-TC (I).

Assault Element

5-192. The assault element is the combat patrol's main effort. Its task is to conduct actions on the objective. In most cases, the assault element will accomplish the overall purpose. This element must be capable (through inherent capabilities or positioning relative to the enemy) of destroying or seizing the target of the combat patrol. Activities typically associated with the assault element include—

- Conducting assault across the objective to destroy enemy equipment, capturing or killing enemy, and clearing key terrain and enemy positions.
- Maneuvering close enough to the objective to conduct an immediate assault if detected.
- Being prepared to support itself if the support element cannot suppress the enemy.
- Providing support to a breach element (when established) in breaching of obstacles, if required.
- Planning detailed fire control and distribution.
- Conducting controlled withdrawal from the objective.

5-193. Analysis of the mission variables of METT-TC (I) may result in the requirement to organize special purpose teams and activities. Designated special purpose teams and activities may include—

- Surveillance teams to establish and maintain covert observation of an objective for as long as it takes to complete the patrol's mission.
- Search teams to find and collect documents, equipment, and information in the objective area.
- Detainee teams to capture, secure, and document detainees.
- Demolition teams to plan and execute the destruction of obstacles and when necessary, enemy equipment.
- Breach team to create lanes in protective obstacles (particularly for a raid) to assist the assault team in getting to the objective.
- Aid and litter teams to identify, collect, render immediate aid, and coordinate CASEVAC.

Support Element

5-194. Strykers can be used as a main or initial SBF element. Platoon leaders must plan dismounted and mounted SBF to ensure that the assault element can accomplish their assigned tactical task. The support element suppresses the enemy on the objective using direct and indirect fires. The support element is a shaping effort setting conditions for the mission's main effort. This element must be capable of supporting the assault element (and breach team[s] when established). The support force can be divided into multiple elements.

5-195. The support element is organized to prevent a threat of enemy interference with the assault elements. The support force suppresses, fixes, or destroys elements on the objective. The support force's primary responsibility is to suppress enemy forces to prevent them repositioning against the main effort. The support force—

- Initiates fires and gains fire superiority with crew-served weapons and indirect fires.
- Controls rates and distribution of fires.
- Shifts or ceases fire on signal.
- Overwatches the withdrawal of the assault element.

Security Element

5-196. The security element is a supporting effort having three roles. The first is to isolate the objective from enemy personnel and vehicles attempting to enter the objective area. These actions range from simply providing early warning, to blocking enemy movement. This element may require several different forces located in various positions. The patrol leader is careful to consider enemy reserves or response forces that will be alerted once the engagement begins. The second role is to prevent enemy from escaping the objective area. The third role is to secure the patrol's withdrawal route.

5-197. All elements of the patrol are responsible for their own local security. What distinguishes the security element is they are protecting the entire patrol. Their positions must be such they can, in accordance with their engagement criteria, provide early warning of approaching enemy.

5-198. The security element is organized to prevent a threat of enemy interference with the assault element. To facilitate the success of the assault element, the security element must fix, or block (or at a minimum screen) all enemy security or response forces located on parts of the battlefield away from the raid objective, or ambush site.

5-199. The OP graphic control measure symbol (see figure 5-7 on page 276) identifies the security element position(s) during combat patrols. An ideal security OP—

- Does not mask fires of the main body.
- Provides timely information to the main body. (Gives the leader enough time to act on information provided.)
- Can provide an SBF position.

Note. The OP graphic control measure symbol (see figure 5-7 on page 276) is also used to identify a reconnaissance and security element position(s) during reconnaissance patrols.

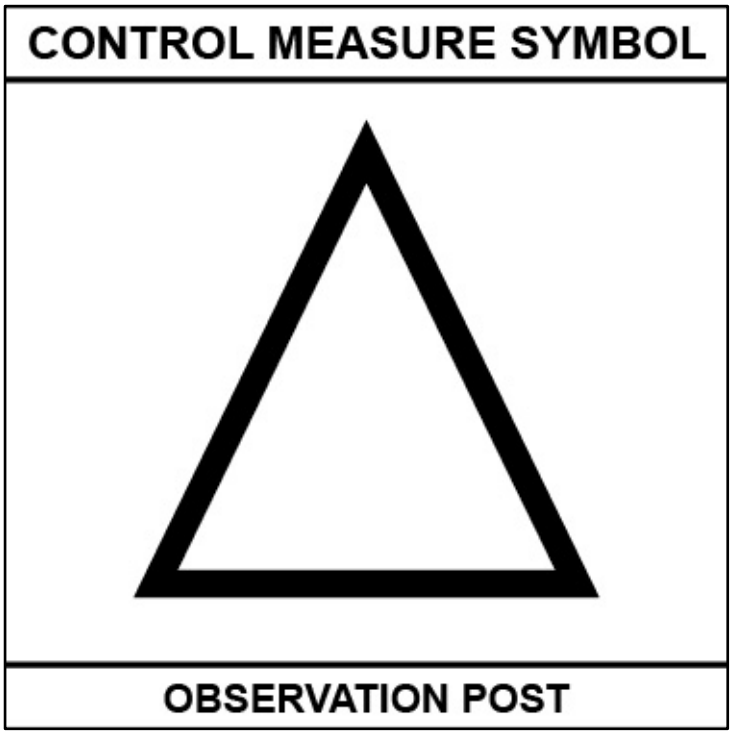


Figure 5-7. Observation post control measure symbol

COMBAT PATROL MISSIONS

5-200. Commanders assign combat patrol missions when they intend to make contact with the enemy. During combat patrols, the element collects and reports information gathered during the mission, whether related to the combat task or not. The three combat patrol mission tasks are raid, ambush, and security. (See ATP 3-21.8 for more information on the three combat patrol mission tasks.)

RAID

5-201. A *raid* is a variation of attack to temporarily seize an objective with a planned withdrawal (FM 3-90). A raid is a variation of an attack, usually small scale, requiring detailed intelligence (precise, time-sensitive, all-source intelligence), planning, and preparation (see figure 5-8). At the platoon level, a raid is a surprise attack against a position or installation for a specific purpose other than seizing and holding the terrain. A raid patrol retains terrain just long enough to accomplish the intent of the raid. The raid ends with a planned withdrawal off the objective and a return to the main body. Characteristics of a raid include—

- Destruction of essential systems or facilities (C2 nodes, logistical areas, other high value areas).
- Collection of critical information.
- Capturing of hostages or prisoners.

- Confusing the enemy or disrupting their plans.
- Detailed information collection (significant collection assets committed during planning).
- C2 from the higher headquarters to synchronize the operation.
- Taking advantage of a window of opportunity.

5-202. When planning the raid, the patrol leader considers the phases of the raid. All phases should be rehearsed but with special emphasis on the objective seizure and task accomplishment phase, and the withdrawal phase. Raids are normally conducted in five phases:

- Phase I—insertion and/or infiltration.
- Phase II—objective area sealed off (isolation).
- Phase III—surprise attack.
- Phase IV—objective seized, and task accomplished.
- Phase V—withdrawal.

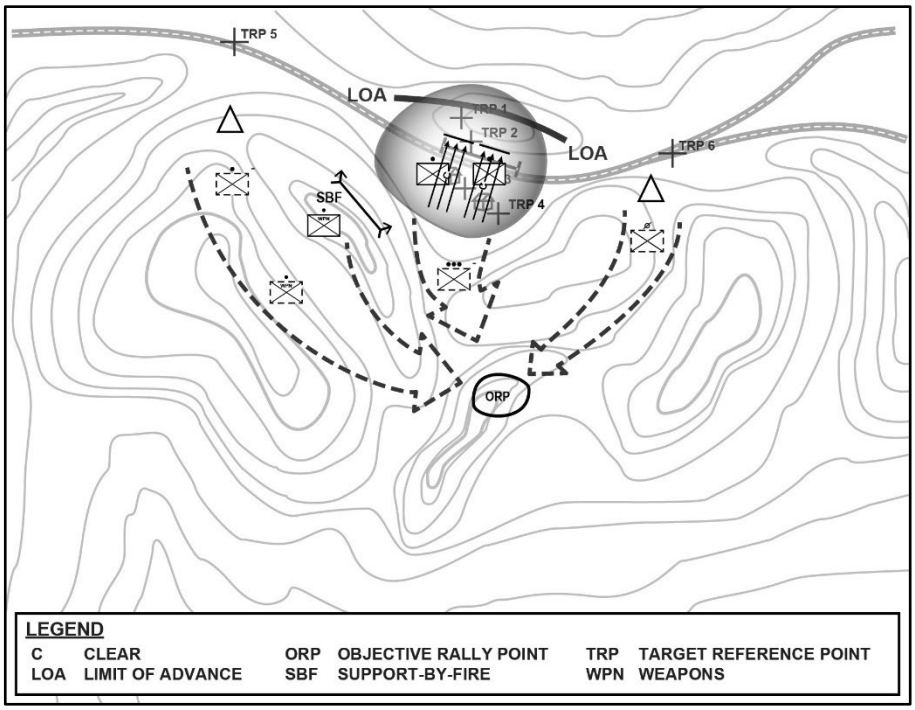


Figure 5-8. Raid (objective seized and tasked accomplished), example

AMBUSH

5-203. An *ambush* is a variation of attack from concealed positions against a moving or temporarily halted enemy (FM 3-90). It can include an assault to close with and destroy the target or as an ABF. An ambush need not seize or hold ground. The general purpose of an ambush is to destroy or to harass enemy forces. The ambush combines the advantages of the defense with the advantages of the offense, allowing a smaller force with limited means the ability to destroy a much larger force. Ambushes are enemy-

oriented. Terrain is held only long enough to conduct the ambush, and then the force withdraws.

5-204. Ambushes range from simple to complex and synchronized; short duration of minutes to long duration of hours; and within hand grenade range, to maximum standoff. Ambushes employ direct fire systems as well as other destructive means, such as AT missiles, command-detonated mines and explosives, and indirect fires on the enemy force. The ambush may include an assault to close with and destroy the enemy or may just be a harassing ABF. Ambushes may be conducted as independent operations or as part of a larger operation. The purpose of an ambush is either harassment or destruction. A harassing ambush is one in which attack is by fire only (meaning there is no assault element). A destruction ambush includes assault to close with and destroy the enemy.

5-205. The three forms of ambushes are point, area, and antiarmor. In a point ambush, Soldiers deploy to attack a single kill zone. In an area ambush, Soldiers deploy as two or more related point ambushes. These ambushes at separate sites are related by their purpose. A unit smaller than a platoon normally does not conduct an area ambush. Antiarmor ambushes focus on moving or temporarily halted enemy armored vehicles. Stryker medium caliber weapons systems, along with their advanced optics can be very effective in antiarmor ambushes. In an area ambush, Strykers can be used in a blocking position or separate point ambush site.

5-206. Based on the amount of time available to set an ambush, ambushes are hasty or deliberate. A hasty ambush is conducted based on an unanticipated opportunity. It is used when a patrol sees the enemy before the enemy sees it, and the patrol has time to act. The leader gives the prearranged signal to start the action, and all Soldiers move to concealed firing positions, prepared to engage the enemy. Depending on the mission, the patrol may allow the enemy to pass if the enemy does not detect the patrol.

5-207. A deliberate ambush is conducted against a specific target at a location chosen based on current intelligence products and assessments. With a deliberate ambush, leaders plan and prepare based on detailed information allowing them to anticipate enemy actions and enemy locations. Detailed information includes type and size of target, organization or formation, routes and direction of movement, time the force will reach or pass certain points on its route, and weapons and equipment carried.

SECURITY PATROL

5-208. Security patrols prevent surprise of the main body by patrolling to the front, flank, and rear of the main body to detect and destroy enemy forces in the local area. These patrols detect and disrupt enemy forces conducting reconnaissance (counterreconnaissance) of the main body or massing to conduct an attack. They normally are away from the main body of the unit for limited periods, returning frequently to coordinate and rest. Security patrols do not operate beyond the range of communication and supporting fires from the main body, especially mortar fires, because they normally operate for limited periods, and are combat-oriented.

Note. Leaders orient their security effort by identifying a *security objective*—the most important entity to protect during that specific security effort (FM 3-90) within a patrol's assigned area.

5-209. A security patrol is sent out from a unit location when the unit is stationary or during a halt to search the local area, detect enemy forces near the main body, and to engage and destroy the enemy within the capability of the patrol. This form of combat patrol normally is sent out by units operating in close terrain with limited fields of observation and fire. Although this form of combat patrol seeks to make direct enemy contact and to destroy enemy forces within its capability, it should try to avoid decisive engagement. When the main body is stationary, the security patrol prevents enemy infiltration, reconnaissance, surveillance, or attacks (for example, patrolling the area surrounding a BP or the area between BP). When the main body is moving, the security patrol prevents the unit from being ambushed or coming into surprise chance contact.

RECONNAISSANCE PATROLS

5-210. A reconnaissance patrol employs many tactics, techniques, and procedures throughout the course of the patrol, one of which may include an extended period of surveillance. A reconnaissance patrol collects information and confirms or disproves the accuracy of information previously gained. The intent for this type of patrol is to avoid enemy contact and accomplish its mission without engaging in close combat. Reconnaissance patrols always try to accomplish their mission without being detected or observed. Because detection cannot always be avoided, a reconnaissance patrol carries the necessary arms and equipment to protect itself and break contact with the enemy. Platoons or squads generally perform three types of reconnaissance patrols: area reconnaissance, route reconnaissance, or zone reconnaissance.

Note. The main difference between the performance of reconnaissance operations and security operations is that reconnaissance operations orient on the enemy and terrain, while security operations orient on the friendly force, area, or facility.

5-211. Leaders orient their reconnaissance effort by identifying a *reconnaissance objective*—the most important result desired from that specific reconnaissance effort (FM 3-90)—within a patrol's assigned area. The objective can be either threat or terrain based, depending on what type of operation its higher echelon is conducting. Every reconnaissance mission specifies a reconnaissance objective by priority, intent, and the information to obtain. For a platoon or squad, the reconnaissance objective is usually a small and narrowly defined area, such as a particular building, a bridge or suspected enemy position designated as an NAI.

ESSENTIAL ELEMENTS FOR A RECONNAISSANCE PATROL

5-212. A reconnaissance patrol normally travels light, with as few personnel and as little arms, ammunition, and equipment as possible. This increases stealth and mobility in close terrain. Regardless of how the patrol is armed and equipped, the patrol leader always plans for direct-fire contact with a hostile force. Leaders must anticipate where they may possibly be observed and control the hazard by planning their movement or employment to lessen their risk. If detected, or unanticipated opportunities arise, reconnaissance patrols must be able to rapidly transition to combat. A reconnaissance patrol is organized with a reconnaissance element and a security element.

Reconnaissance Element

5-213. The reconnaissance element gathers information to answer PIRs which enable leaders to make tactical decisions. The primary means is reconnaissance with extended periods of surveillance enabled by tactical movement, and continuous and accurate reporting. Thorough and accurate reconnaissance and surveillance is important. However, avoiding detection is equally important. The following are activities normally associated with reconnaissance and extended periods of surveillance:

- Reconnoitering all terrain within the assigned area, route, or zone.
- Determining trafficability routes or potential avenues of approach (based on the personnel or vehicles to be used on the route):
  - Inspecting and classifying all bridges, overpasses, underpasses, and culverts on the route.
  - Locating fords or crossing sites near bridges on the route.
- Determining the time it takes to traverse the route.
- Reconnoitering to the limit of direct fire range—
  - Terrain influencing the area, route, or zone.
  - Built-up areas.
  - Lateral routes.
- Reconnoitering natural and man-made obstacles to ensure mobility along the route, within capabilities.
- Locating a bypass or reducing/breaching, clearing, and marking—
  - Lanes.
  - Defiles and other restrictive or severely restrictive terrain.
  - Minefields.
  - Contaminated areas.
  - Log obstacles, such as abatis, log cribs, stumps, and posts.
  - Antivehicle ditches.
  - Wire entanglements.
  - Fills, such as a raised railroad track.
  - Other obstacles along the route.
- Conducting zone reconnaissance and area reconnaissance accomplishing the following activities within the unit's capability (unless otherwise ordered):
  - Finding and reporting all enemy forces within the zone.
  - Based on engagement criteria, clearing all enemy forces in the designated assigned area of the unit conducting reconnaissance.
  - Inspecting and classifying all bridges in the zone.
  - Inspecting and classifying all overpasses, underpasses, and culverts.
  - Locating fords, crossing sites, or obstacle bypasses in the zone.
  - Reconnoitering specific terrain in the zone, such as an NAI.
  - Reporting reconnaissance information.
  - Confirming or denying commander's PIR.
- Conducting extended periods of surveillance may include—
  - Decision points where decisions by the commander are required-for example, determining an enemy COA.
  - Information requirements to identify critical events linked to NAIs and target area of interests.

- Finding all threat forces influencing movement along the area, route, or zone.
- Reporting information.

Note. Stryker Infantry rifle platoons and squads typically require engineer augmentation to complete a full technical inspection of bridges, roads, and culverts; however, platoons and squads do have the ability to conduct a general assessment.

Security Element

5-214. The security element's primary purpose is to protect the reconnaissance element. The security element provides overwatch to the reconnaissance element from SBF positions. This element must be able to observe the reconnaissance objective and avenues of approach as well as provide early warning. The security element is prepared to provide alternate communications to higher headquarters or relay for the reconnaissance element. Security elements must be able to engage the enemy with direct and indirect fire within and beyond the reconnaissance objective. If a reconnaissance element is compromised, the security element immediately provides overwhelming fires against enemy forces to enable the element in contact to withdraw. This worst-case scenario must be well-rehearsed and well thought out.

Reconnaissance Objective

5-215. Reconnaissance begins at the designated transition point and ends with a follow-on transition to tactical movement away from the reconnaissance objective. Leaders mark the follow-on transition point with a control measure like the first transition point, using a linkup point, an LOA, or a phase line. During this phase, leaders execute one of the three types of reconnaissance (area, zone, or route). These types of reconnaissance are distinguished by the scope of the reconnaissance objective. The types of reconnaissance patrols are area, zone, and route. (See ATP 3-21.8 for more information on actions on the reconnaissance objective.)

Area Reconnaissance Patrol

5-216. *Area reconnaissance* is a form of reconnaissance operation that focuses on obtaining detailed information about the terrain or enemy activity within a prescribed area (FM 3-90). Area reconnaissance patrols focus on obtaining detailed information about the enemy activity, terrain, and/or specific civil considerations within a prescribed area. The area may be given as a grid coordinate, an objective, on an overlay. In an area reconnaissance, the patrol uses surveillance (vantage points or OPs) around the objective to observe it and the surrounding area. The area may include a town, a neighborhood, a ridgeline, woods, an airhead, or any other feature critical to operations. The area may consist of a single point (such as a bridge or an installation). Areas are normally smaller than zones and not usually contiguous to other friendly areas targeted for reconnaissance. Because the area is smaller, units conduct an area reconnaissance quicker than a zone reconnaissance. Other unique techniques falling under area reconnaissance actions on the objective include point, contact, civil, and tracking reconnaissance patrols. (See chapter 7, section IV for more information on unique area reconnaissance techniques.)

ROUTE RECONNAISSANCE PATROL

5-217. *Route reconnaissance* is a form of reconnaissance operation to obtain detailed information of a specified route and all terrain from which the enemy could influence movement along that route (FM 3-90). A route reconnaissance patrol is conducted to obtain detailed information about one route and all its adjacent terrain, or to locate sites for emplacing obstacles. Route reconnaissance is oriented on a road, a narrow axis such as an infiltration lane, or on a general direction of attack. Patrols conducting route reconnaissance operations attempt to view the route from both the friendly and enemy perspective. The Stryker provides the dismounted Infantry with protection, firepower, and mobility, as route reconnaissance can be conducted both dismounted and mounted. Stryker Infantry rifle platoons and squads conducting the patrol require augmentation with technical expertise for a complete detailed route reconnaissance. However, platoons are capable of conducting hasty route reconnaissance or area reconnaissance of selected points along a route. (See ATP 3-21.8 for more information on route reconnaissance.)

5-218. A route reconnaissance patrol focuses along a specific line of communications (such as a road, railway, or cross-country mobility corridor). It provides new or updated information on route conditions such as trafficability, determining radius of a curve, or degree of slope. Additional more detailed information may include obstacles and bridge classifications, and enemy and civilian activity along the route. This type of reconnaissance includes not only the route itself, but also all terrain along the route from which the enemy could influence the friendly force's movement. A route reconnaissance patrol is conducted to obtain and locate the following:

- Detailed information about trafficability on the route and all adjacent terrain.
- Detailed information about enemy activity or enemy force moving along a route.
- Sites for emplacing hasty obstacles to slow enemy movement.
- Obstacles, CBRN contamination, and so forth.

ZONE RECONNAISSANCE PATROL

5-219. *Zone reconnaissance* is a form of reconnaissance operation that involves a directed effort to obtain detailed information on all routes, obstacles, terrain, and enemy forces within a zone defined by boundaries (FM 3-90). Zone reconnaissance techniques include the use of moving elements, stationary teams, or multiple area reconnaissance actions.

5-220. When moving elements are used, the elements (squads or fire teams) move along multiple routes to cover the whole zone. When the mission requires a patrol to saturate an area, the patrol uses one of the following techniques: the fan, the box, converging routes, or successive sectors. (See ATP 3-21.8 for more information on zone reconnaissance techniques.)

POST PATROL ACTIVITIES

5-221. Immediately on reentering the secure base or rejoining the unit, the patrol leader positively verifies and accounts for all members, equipment, and any included attachments or detainees of the patrol. The patrol leader also reports the patrol's return and conducts a debrief with the whole patrol to capture all information while it is still

fresh. The patrol leader then submits or briefs the patrol report (see figure 5-9 on page 284) to the commander or designated representative.

ACCOUNTING FOR WEAPONS AND EQUIPMENT

5-222. The patrol leader is responsible for verifying all the patrol's weapons, ammunition, munitions, and equipment are properly accounted for and reporting the status to the commander or the command post. Lost or missing equipment must be reported immediately. The patrol may be ordered to return to the area where it was lost, if it is assessed safe to do so, and try to find the item.

DEBRIEF

5-223. The patrol leader should conduct a "debrief" with the entire patrol as soon as possible after entering the secure location or rejoining the main body. This allows the leader to capture low-level information while the Soldiers' memories are fresh and information relevant. Normally the debriefing is oral. Sometimes, a written report is required. Information on the written report should include—

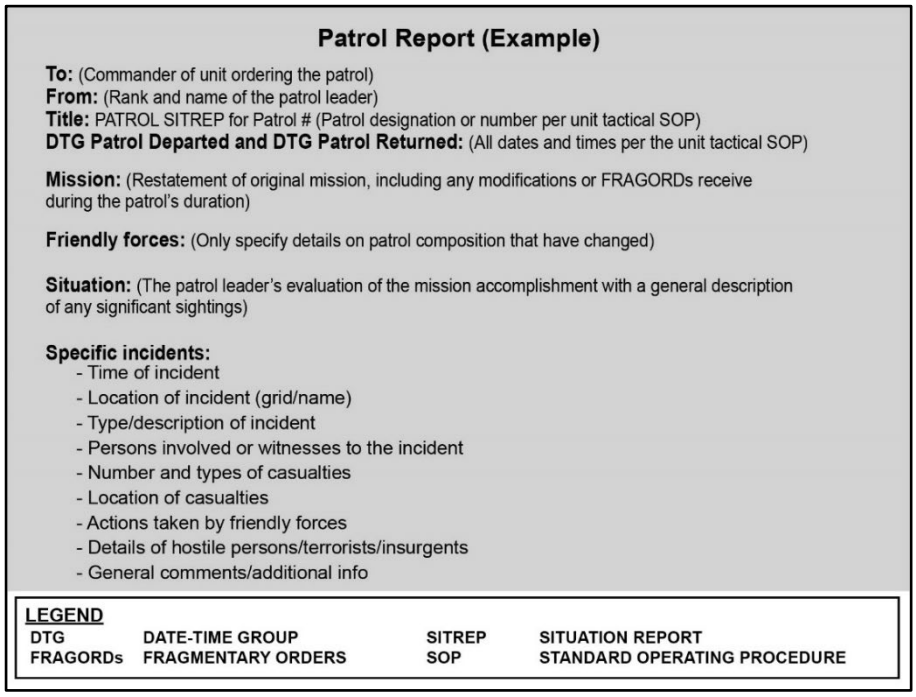
- Size and composition of the unit conducting the patrol.
- Mission of the platoon such as type of patrol, location, and purpose.
- Departure and return times.
- Routes using checkpoints, grid coordinates for each leg or include an overlay.
- Detailed description of terrain and enemy positions identified.
- Results of contact with the enemy.
- Unit status at the conclusion of the patrol mission, including the disposition of dead or wounded Soldiers.
- Number of isolated Soldiers' platoons or squads unable to recover during execution of the mission.
- Conclusions or recommendations.

PATROL REPORT

5-224. The patrol leader is responsible for the patrol report (see figure 5-9 on page 284) and may be assisted by the assistant patrol leader and specialist personnel attached to the patrol. Immediately after the debriefing, the patrol leader should render the patrol report to the commander. This report may be verbal or written, simple, or elaborate depending on the situation and commander's requirements.

5-225. When GPS devices are used by the patrol, gathering route information is easier and faster. The actual route the patrol took is important for planning future patrol routes and actions. Enemy intelligence operations attempt to identify patterns set by U.S. and coalition patrols, including the locations of halts. This may result in attack against locations regularly used by security forces.

5-226. Additional information may include the number of biometric enrollments and identification on the biometric-enabled watchlist; if anyone was detained according to the instructions on the biometric-enabled watchlist; and what the status is.



Patrol Report (Example)

To: (Commander of unit ordering the patrol)
From: (Rank and name of the patrol leader)
Title: PATROL SITREP for Patrol # (Patrol designation or number per unit tactical SOP)
DTG Patrol Departed and DTG Patrol Returned: (All dates and times per the unit tactical SOP)

Mission: (Restatement of original mission, including any modifications or FRAGORDs receive during the patrol's duration)

Friendly forces: (Only specify details on patrol composition that have changed)

Situation: (The patrol leader's evaluation of the mission accomplishment with a general description of any significant sightings)

Specific incidents:
- Time of incident
- Location of incident (grid/name)
- Type/description of incident
- Persons involved or witnesses to the incident
- Number and types of casualties
- Location of casualties
- Actions taken by friendly forces
- Details of hostile persons/terrorists/insurgents
- General comments/additional info

LEGEND

DTG	DATE-TIME GROUP	SITREP	SITUATION REPORT
FRAGORDs	FRAGMENTARY ORDERS	SOP	STANDARD OPERATING PROCEDURE

Figure 5-9. Patrol report example

Chapter 6
Sustainment

In a Stryker Infantry unit, sustainment operations maintain the force during continuous combat operations. The Stryker platoon can deploy in either the mounted or dismounted roles. The platoon leader oversees and aids in the sustainment planning however, the platoon sergeant is the platoon's main sustainment planner and executer. The platoon sergeant works closely with the company XO and 1SG to forecast anticipated sustainment requirements for future missions and ensures the platoon receives the required support for its assigned mission. Sustainment responsibilities and procedures in the Stryker platoon remain basically the same as other formations. The company normally forecasts supplies and pushes, rather than pulls them to the platoon.

SECTION I – PLANNING AND RESPONSIBILITIES

6-1. Planning sustainment operations is primarily a company, FSC and battalion-level operation. The company commander and XO plan the concept of support for the company's operation. The platoon leader and platoon sergeant are responsible for sustainment planning, preparation, execution, and assessment at the platoon level. Sustainment is characterized by the eight principles: integration, anticipation, responsiveness, simplicity, economy, survivability, continuity, and improvisation. (See FM 3-96 and FM 4-0 for additional information.) The platoon leader, with the assistance of the platoon sergeant, integrates these guiding principles to shape the sustainment concept of support for the platoon. This section describes sustainment operations in support of the platoon, specifically responsibilities, functions, tasks, and activities, and unit relationships throughout high operating tempo of decentralized operations.

PLANNING CONSIDERATIONS

6-2. The platoon leader develops their sustainment plan by determining exactly what they have on hand to accurately predict their support requirements. The sustainment plan is based on five considerations, including:

- How will the platoon come to 100 percent stockage on all supplies prior to the mission?
- Can it complete the assigned mission with that quantity of supplies, or will it require resupply prior to the end of the mission?
- How will the platoon manage its ready- and semi-ready stowage?
- How will the platoon resupply at the end of the mission?
- Which section is the priority for resupply at any time in the operation?

6-3. The sustainment plan should provide answers to operational questions such as the following (see table 6-1 on pages 286 and 287):

Table 6-1. Operational questions for the sustainment plan

What	*Considerations*	*Specific Needs*
Types of support	Based on the nature of the operation and specific tactical factors, what types of support will the platoon need?	
Quantities	In what quantities will this support be required?	•Will emergency resupply (Classes III and V) be required during the battle? •Does this operation require pre-stocked supplies
Threat	What is the composition, disposition, and capabilities of the expected enemy threat? How will these affect the sustainment plan during execution?	•Where and when will the expected contact occur? •What is the platoon's anticipated Class V expenditure to manage these contacts? •What are the platoon's expected casualties and vehicle losses based on the nature and location of expected contact? •What impact will the enemy's special weapons capabilities (such as CBRN) have on the battle and on expected sustainment requirements? •How many enemy prisoners of war are expected, and where?
Terrain and weather	How will terrain and weather affect the sustainment plan during the battle?	•What ground will provide the best security for maintenance and CCPs? •What is the platoon's vehicle and CASEVAC routes? •What are the company's dirty routes for evacuating contaminated personnel, vehicles, and equipment?

Table 6-1. Operational questions for the sustainment plan (continued)

What	*Considerations*	*Specific needs*
Time and location	When and where will the platoon need sustainment support?	•Where and when in the operation should the platoon pause to transfer Class V from semi-ready to ready boxes? •Based on the nature and location of expected contact, what are the best sites for the CCP? •Where will the enemy prisoners of war collection points be located?
Requirement	What are the support requirements by element and type of support?	•Which squad has priority for emergency Class III resupply? •Which squad has priority for emergency Class V resupply?
Risk	Will lulls in the battle permit support elements to conduct resupply operations in relative safety?	
Resupply techniques	Based on information developed during the sustainment planning process, which resupply technique should the platoon use?	

Legend: CASEVAC—casualty evacuation; CBRN—chemical, biological, radiological, and nuclear; CCP—casualty collection point

6-4. After this initial analysis, the platoon leader and platoon sergeant should have an understanding of how much Class III and V supplies (see table 6-2 on page 292 for all classes of supplies) the platoon will consume and where in the mission that will occur; whether it can achieve the assigned mission using onboard stowage or whether it will have to be resupplied, whether internally (cross-level, pre-stocks, upload from semi-ready stowage) or externally; where casualties are most likely to occur, with the associated CCPs; and what, if any, external resources are required and how they will be allocated or controlled. With this understanding, the platoon's leaders make a detailed plan.

INDIVIDUAL RESPONSIBILITIES

6-5. The Stryker Infantry platoon and squad must plan, prepare, and execute its portion of the company sustainment plan. Concurrent with other operational planning, the

platoon develops its sustainment plan during the mission analysis and refines it in the war-gaming portion of the TLP. Rehearsals normally are conducted at each echelon to ensure the smooth, continuous flow of materiel and services.

6-6. Sustainment responsibilities for the platoon and squad include report and request support requirements through the company and ensure sustainment operations are properly executed when support elements arrive in the platoon area. The platoon sergeant is normally in charge of these functions, with guidance and oversight provided by the platoon leader. The platoon sergeant must submit timely and accurate personnel and logistical reports, along with other necessary information and requests. Sustainment reporting begins early enough that necessary supplies can be requested for a specific operation and continues during an operation all the way through consolidation and reorganization.

PLATOON LEADER

6-7. The platoon leader is ultimately responsible for the sustainment plan and for the condition and performance of the platoon's equipment and materiel. The platoon leader works directly with the platoon sergeant to determine specific sustainment requirements of the tactical plan and reports those requirements to the company XO. The platoon leader must anticipate sustainment requirements and ensures arrangements are made to provide the necessary support requirements to the platoon during all phases of the operation. In that role, the platoon leader duties include the following:

- Attending company sustainment rehearsals and ensures the platoon knows what actions to take at the company's resupply points.
- Ensuring that the platoon's vehicles and weapons systems are maintained and operational, within the platoon's maintenance capabilities.
- Ensuring that equipment cannot be repaired at platoon level is reported to FMT as soon as possible using DA Form 5988-E (*Equipment Maintenance and Inspection Worksheet*) or DA Form 2404 (*Equipment Inspection and Maintenance Worksheet*).
- Knowing the status of current platoon maintenance activities, including corrective actions for equipment faults, maintenance work orders, organic maintenance elements, and requisition of repair parts.
- Keeping the commander informed of the platoon's maintenance status.
- Coordinating with the XO in planning, directing, and supervising unit maintenance for the platoon.
- Developing and supervising an ongoing maintenance training program.
- Ensuring that the platoon has the appropriate technical manuals on hand and are trained and supervised to complete operator maintenance properly.
- Ensuring that unit PMCS are performed on all assigned equipment per the appropriate operator's manuals.
- Ensuring that drivers are trained and licensed to operate platoon vehicles and equipment.
- Planning and rehearsing a maintenance evacuation plan for every mission.

- Knowing the current logistic status of the platoon, and how quickly each resource (water, fuel, ammunition, subsistence) is being expended or consumed and ensures the platoon sergeant reports the logistics status report to the company XO or 1SG, which may be required more frequently during periods of increased intensity.
- Knowing the basic load and total carrying capacity of Class I water in gallons, Class III bulk fuel in gallons, Class III (P) in quarts for each critical type, Class IV, and Class V by type of ammunition in the platoon (see table 6-2 on page 292 for all classes of supplies).

PLATOON SERGEANT

6-8. The platoon sergeant is the platoon's primary sustainment executer. They keep the platoon leader abreast on all logistic reports but send the reports to the XO or 1SG. The platoon sergeant executes the platoon's logistical plan, relying heavily on platoon and company SOPs. The platoon sergeant directly supervises and controls the platoon's assets. During preparations for the mission, the platoon sergeant works closely with the platoon leader and squad leaders to determine specific support requirements of the tactical plan. The platoon sergeant then ensures proper arrangements are made to provide those support requirements. The platoon sergeant also performs these logistical functions:

- Directing and supervising unit maintenance of platoon equipment, vehicles, and weapon systems.
  - Time constraints may not allow platoons to PMCS all equipment daily, so the platoon sergeant must develop a schedule to ensure it is checked in a reasonable time.
  - At a minimum, weapons and vehicles must be checked daily.
- Assisting the platoon leader with the responsibilities and assuming these responsibilities in the platoon leader's absence.
- Supervising and accounting for platoon personnel during maintenance periods.
- Ensuring that repair parts are used or stored as they are received.
- Collecting reports of the platoon's maintenance status in the field and sending the appropriate consolidated reports to maintenance personnel.
- Tracking changes in consumption of Class I (subsistence), Class III B (fuel), Class III P (petroleum products), Class IX (repair parts), and expenditure rates of Class V (ammunition); reports the logistical status report to the XO or 1SG.
- Maintaining accountability and serviceability of all equipment including hand receipts, shortage annexes, and direct exchange of broken equipment.
- Ensuring that vehicles are always topped off with fuel in garrison and that they receive adequate fuel in the field.
- Monitoring actions during resupply on site and ensuring each VC is tracking actions at the resupply point.
- Planning resupply requirements to mitigate CBRN contamination (for example, numbers of suits, water requirements, decontamination kits).
- Rehearsing and directing the platoon's CASEVAC plan.
- Ensuring the wounded and dead are not evacuated together and are in opposite areas at the company CCP:
  - Wounded in one area.

  - Deceased in a separate area out of line of sight of the wounded.
  - Contaminated casualties in a separate area.
- Directing and supervising the collection, initial identification, and evacuation of human remains to the company CCP.
- Keeping the platoon leader informed of the platoon's maintenance and logistics status.
- Knowing the basic load and total carrying capacity of Class I water in gallons, Class III bulk fuel in gallons, Class III (P) in quarts for each critical type, Class IV, and Class V by type of ammunition in the platoon (see table 6-2 on page 292 for all classes of supplies).

STRYKER VEHICLE COMMANDER AND DRIVER

6-9. VCs and drivers are responsible for requesting appropriate classes of supplies in a timely manner and vehicle and weapons maintenance for their vehicle. In large part, the platoon's maintenance status, and thus its combat readiness, depends on their commitment to proper maintenance procedures. Their duties in this area include—

- Ensuring that the equipment inspection and maintenance worksheet (DA Form 5988-E or DA Form 2404) is filled out accurately and updated per DA Pam 750-8.
- Ensuring that each DA Form 2408-4 (*Weapon Record Data*) is updated following live fires.
- Ensuring that dispatch records are completed accurately and turned in on schedule.
- Ensuring that the crew is properly trained in PMCS procedures and that PMCS are performed on the vehicle per the appropriate technical manual. The crew must be made to use the technical manual to ensure correct checks are being completed.
- Ensuring that, as a minimum, the assigned driver for each vehicle is properly trained and licensed.
- Ensuring that repair parts are installed upon receipt or are stored in authorized locations.
- Ensuring that all components of end item and BII are properly marked, stored, maintained, and accounted for.
- Ensuring that each vehicle is always topped off with fuel in garrison and that it receives as much fuel as possible at every opportunity in the field.
- Updating the platoon sergeant constantly on the maintenance and logistics status of the vehicle.
- Conducting vehicle crew drill rehearsals (to include under CBRN conditions).

SQUAD LEADER

6-10. Squad leaders are responsible for all assigned equipment and ensure squad members perform all their assigned duties. The squad leader's sustainment duties include—

- Ensuring Soldiers perform proper maintenance on all assigned weapons and equipment.
- Ensuring that the equipment inspection and maintenance worksheet (DA Form 5988-E or DA Form 2404) is filled out accurately and updated per DA Pam 750-8.
- Ensuring Soldiers maintain personal hygiene.
- Compiling personnel and logistics reports of the squad and submitting them to the platoon sergeant as directed or in accordance with unit SOP.
- Obtaining all classes of supplies, equipment (except Class VIII and mail from the platoon sergeant, ensuring proper distribution) (see table 6-2 on page 292 for classes of supplies).
- Cross-leveling supplies and equipment throughout the squad.

SUPPLY AND FIELD SERVICES

6-11. Supply provides the materiel required to accomplish the mission. Supplies such as subsistence items, water, ammunition, barrier materials, and petroleum, oil, and lubricants are the most common. Field services maintain combat strength of the force by providing for its basic needs and promoting its health, welfare, morale, and endurance. Field services provide life support functions.

6-12. The Stryker Infantry rifle platoon normally deploys with 72 hours of supplies specific to its assigned mission. Supply commodities are used in support of missions and are separated into ten supply classes (see table 6-2 on page 292).

Table 6-2 Classes of supply.

Class	*Definition*
I	Basic rations of food and water—things that are consumed by people and animals at a relatively standardized rate. The quantity of this is not affected by combat or terrain conditions.
II	Clothing and equipment—that will allow the team to conduct basic operations and functions. It includes tool sets and kits, (unclassified) maps of the area, housekeeping supplies, tents and other basic shelter requirements. It also includes weapons and vehicles.
III	Petroleum, oil, and Lubricants (POL)—everything from liquids and gases, to coolants, and other fuels that will assist in the camp becoming truly activated with power and mobility. It does not include fuel for aircraft, or for weapons such as flame-throwers.
IV	Construction materials—including installed equipment. It also covers fortification and barrier materials (fencing, walls, sandbags, barbed wire, and so on), and additional/bonus "Class II" items such as additional vehicles.
V	Ammunition and explosives—this will range from hand grenades, rockets and bombs, to explosives, mines, missiles and rockets.
VI	Personal demand items—ranging from toothpaste and shampoo to toilet paper, cameras and alcohol. "Class 6" stores is a common reference, by U.S. Army personnel, for stores that sell alcohol and cigarettes.
VII	Major end items—including rocket launchers, tanks, and other large vehicles.
VIII	Medical material including bandages, IV's, tubes, needles, swabs, and so forth, including the gear used to fix this equipment. An extension of this are the categories of VIIIA—medical consumables—and VIIIB—blood, platelets, plasma, and packed red cells.
IX	Repair parts—needed to fix all equipment such as oil filters, tires, bumpers, air filters, tank tracks and weapon repair.
X	Material to support non-military programs—such as agriculture and economic development. It can sometimes be referred to as "civil affairs". An example would be the U.S. Army's assistance to the people of Afghanistan in the form of fertilizer, pesticide, shovels, rakes, and cash given to local contractors.
MISC	Miscellaneous—anything that does not fall in one of the existing classes of supply.
Note	This list of the classes of supply is based on North Atlantic Treaty Organization and U.S. Army Forces' needs.

RESUPPLY OPERATIONS

6-13. There are two methods of resupply operations; planned and emergency. Normally planned resupply operations that are rehearsed and synchronized with the maneuver plan

are essential to conducting operations. Emergency resupply should only be used in critical situations where the supply is essential to mission success. The company tactical SOP specifies cues and procedures for each method. Methods used for resupply in the field is dependent on mission variables. (See ATP 3-21.11 and ATP 4-90.)

LOGISTICS STATUS REPORT

6-14. The logistics status is an internal status report that identifies logistics requirements, provides visibility on critical shortages, and allows commanders to project mission capability. Accurate reporting of the logistics and Army Health System support status is essential for keeping units combat ready. The platoon sergeant compiles reports from all the squads and sections, to include attachments, and completes the unit's logistics status report. Once completed, reports are forwarded to the company 1SG or XO. Logistics status reports should be completed at least daily (based off unit SOP) but may be required more frequently during periods of increased intensity or high operating tempo. (See ATP 3-21.11 and FM 4-0 for additional information.)

6-15. The platoon sergeant continually monitors the platoon's supply status through logistical reports and automated SITREPs. The platoon sergeant notifies the 1SG before a specific vehicle, or the platoon is critically short of these major classes of supply (see table 6-2 on page 292 for all classes of supplies). The platoon sergeant must ensure each vehicle crew maintains a stock of oil, grease, and hydraulic fluid, replenishing these petroleum, oils, and lubricants products every time refueling takes place. When planning refueling operations, the unit must top off vehicles whenever the tactical situation permits. The 1SG and XO should balance the range and fuel capacity of the unit vehicles against the requirements of future operations.

PLANNED RESUPPLY

6-16. Planned resupply operations cover items in Classes I, III, V, and IX, mail, and other items requested by the platoon. When possible, the platoon should conduct planned resupply daily. Ideally, it does so during periods of limited visibility. Strykers and other vehicles use large amounts of fuel, so the platoon must resupply Class III at every opportunity. The platoon should have a plan for all classes of supply for both the mounted elements and the Infantry squads. Unmanned ground vehicles can be used to transport supplies to the Infantry squads. Planned resupplies can occur during an operation if they are well thought out and planned. Effectively planned resupply enables the Stryker platoon to continue the operation unimpeded.

6-17. Leaders must be alert to opportunities to deconflict sustainment operations with the scheme of maneuver to ensure the company and platoons are able to refuel/rearm before they commit to the fight, as opposed to afterwards. The company may plan for specific platoons to be refueled or rearmed as necessary during the operation. The platoon leader must fully comprehend the company sustainment plan to effectively executive a resupply during an operation. Before requesting emergency resupply, the first step is to cross-level supplies as much as possible on systems (for example cross-leveling ammunition from one Stryker to the other).

6-18. There are multiple techniques for the resupply of supplies, personnel, and equipment. The following are examples of techniques for planned resupply:

- LOGPAC.
- Pre-positioned.
- Cache.

Logistics Package Operation

6-19. The LOGPAC technique offers a simple, efficient way to accomplish routine sustainment operations. The key feature, a centrally organized resupply convoy, originates at the field trains (see figure 6-1). The convoy carries all items needed to sustain the company for a specific period (usually 24 hours) or until the next scheduled LOGPAC. The tactical SOP will specify the LOGPAC's exact composition and march order. The supply sergeant initiates tactical movement from the field trains to the combat trains under the supervision of the FSC transportation platoon leader. The supply sergeant and LOGPAC will then linkup with the 1SG at the combat trains. The 1SG or representative will depart the company trains and meet the LOGPAC at the combat trains. The 1SG will then initiate tactical movement from the combat trains to a pre-established company resupply point.

6-20. As directed by the commander or XO, the 1SG establishes the company resupply point. They use the service station or tailgate methods and briefs each LOGPAC driver on which method to use. When they have the resupply point ready, the 1SG informs the commander. The company commander then directs each platoon or element to conduct resupply based on OPORD and tactical situation.

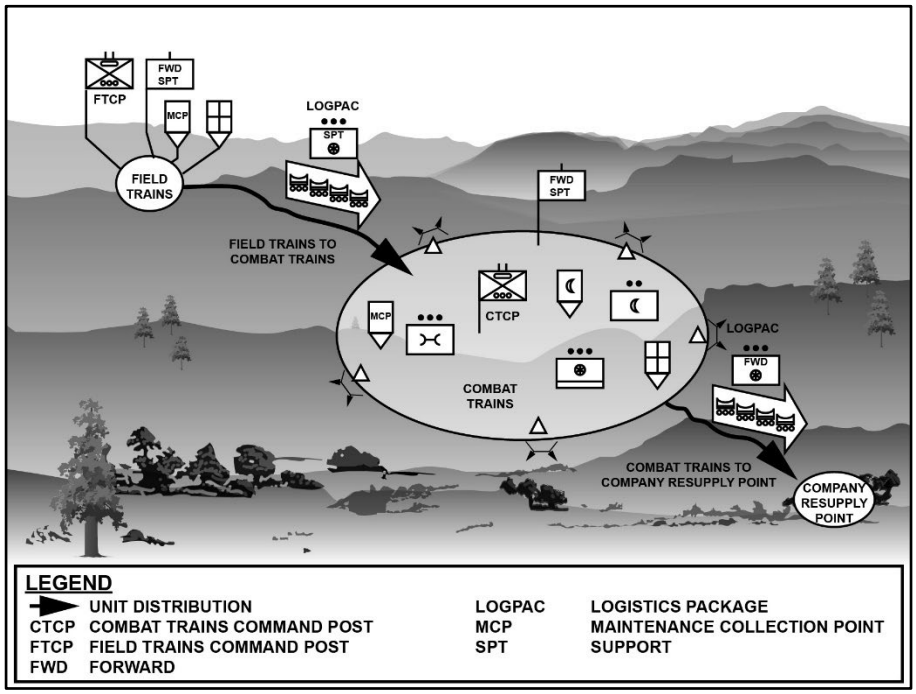


Figure 6-1. Field trains resupply convoy, example

Service Station Method

6-21. The service station method (see figure 6-2 on page 296) allows the platoon with their squads to move to and pass through a centrally located resupply point. The service station method is very flexible and may be used in conjunction with any platoon movements, from a screen line or defensive positions, from an AA, or during a planned lull in offensive operations. Depending on the tactical situation, a vehicle or squad moves out of its position, conducts resupply operations, and moves back into position. This process continues until the entire platoon has received its supplies. If done in conjunction with a movement, such as a tactical road march, the platoon sets local security on the near side, passes through the service station, establishes security on the far side, and then continues movement until all vehicles and Infantry squads are complete.

6-22. In using this method, vehicles enter the resupply point following a one-way traffic flow. Only vehicles that require immediate maintenance stop at the maintenance holding area. Vehicles move through each supply location to receive Class I, II, VI, VII, IX and mail from the company's supply sergeant, and refuel and draw Class III (P) and Class V from the distribution platoon (see table 6-2 on page 292 for all classes of supplies). Typically, one or two crew or dismounted Soldiers will pick up prepared plates and collect other necessary supplies, such as exchanging water cans. If there is more time available, the crews and Infantry squads may rotate individually to eat and pick up mail and sundries. Due to the decentralized nature of combat operations, the service station resupply is a good method for the platoon's leaders to see and visually assess the platoon's Soldiers, vehicles, and equipment. If time is available, the platoon leader may choose to complete a full PCI.

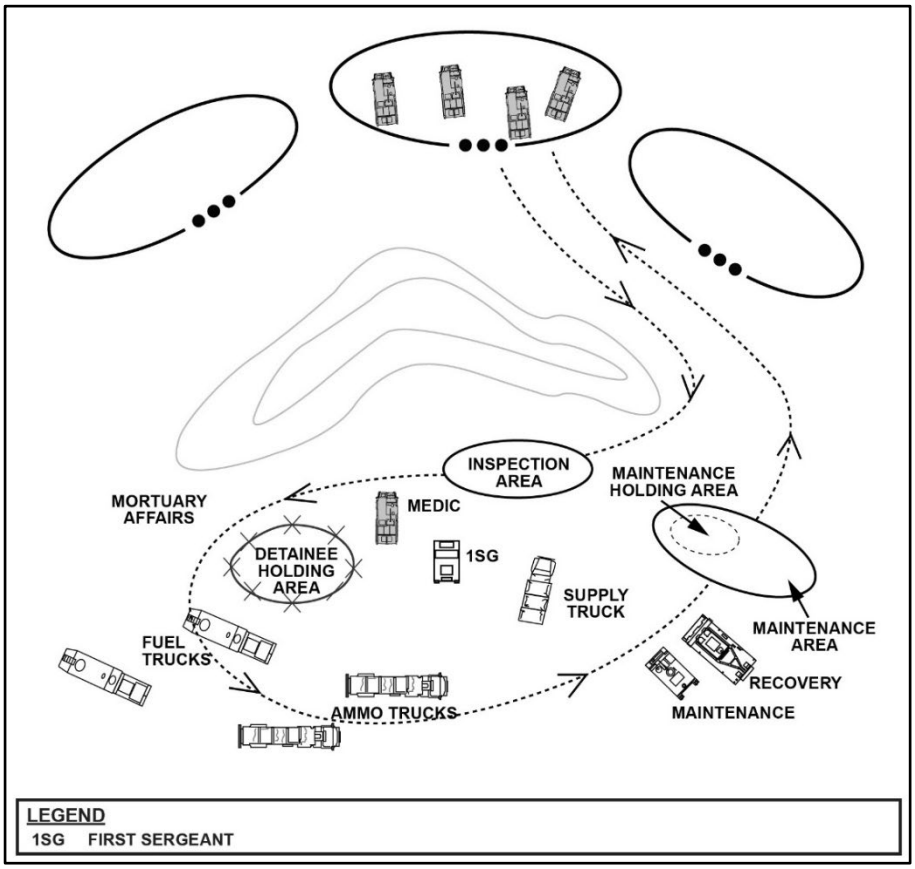


Figure 6-2. Service station resupply method

Tailgate Method

6-23. In AAs the company and platoon may use the tailgate method to minimize movement (see figure 6-3). Vehicles remain in their positions, or they back out a short distance to allow trucks carrying Class III and V supplies to reach them. The supply sergeant may also accompany the distribution platoon's vehicles, issuing Class I and all other required classes of supplies from the tailgate to each vehicle, or else establishes a centralized feeding area through which the crews and Infantry squads individually rotate. While there, they pick up mail and sundries, and refill or exchange water cans. They centralize and turn over detainees. They take Soldiers killed in action and their personal effects to the holding area, where the company leaders assume responsibility for them.

6-24. If the AA is constrained for space, the company 1SG may decide to use a combination of service station and tailgate in which the distribution platoon's trucks conduct service station resupply outside of the AA while the supply sergeant conducts other aspects of resupply from a centralized location within the AA.

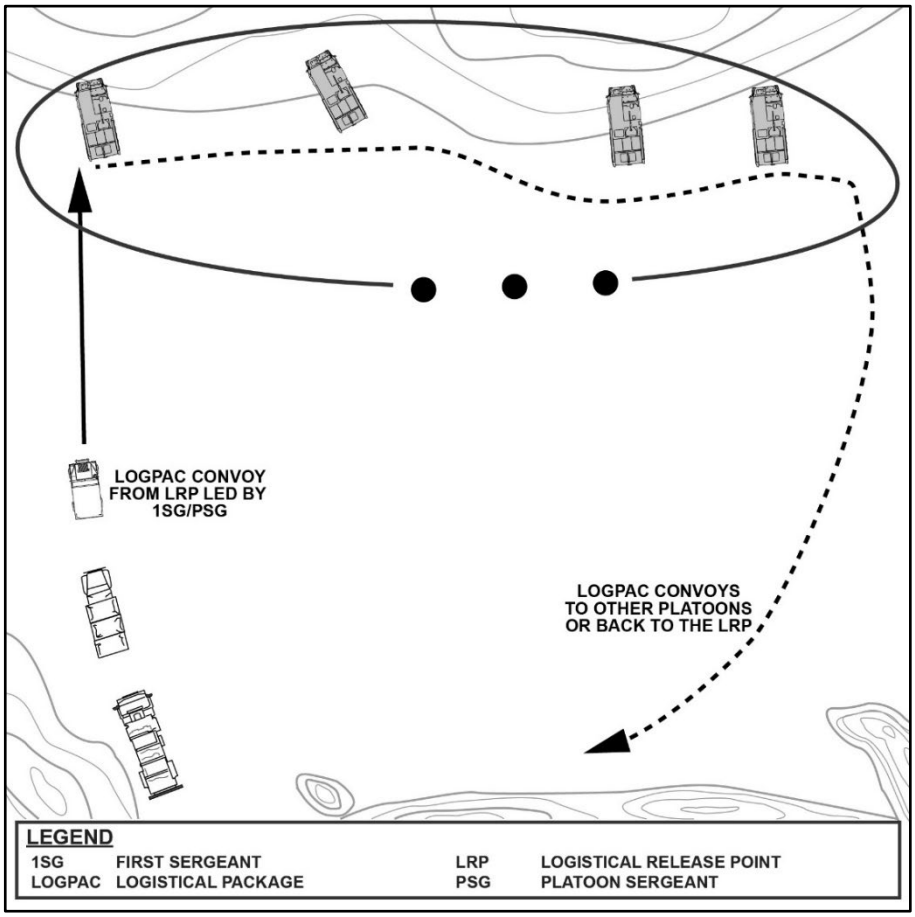


Figure 6-3. Tailgate resupply method

Pre-positioned Supplies

6-25. In defensive operations, or other times as appropriate, the platoons will most likely need pre-stocked supplies, also known as pre-positioned or cached resupply. Normally, the platoon only pre-positions Classes IV and V items, but they can pre-position Class III supplies. However, they must refuel platoon vehicles before they move into fighting positions, while first occupying the BP, or while moving out of their fighting position to refuel.

6-26. All levels must carefully plan and execute pre-stock operations. All leaders, down to VCs and squad leaders must know the exact locations of pre-positioned sites. During reconnaissance or rehearsals, they verify these locations. The platoon takes steps to ensure the survivability of the pre-positioned supplies. These measures include selecting covered and concealed positions and digging in the pre-stock positions. The platoon leader must have a removal and destruction plan to prevent the enemy from capturing pre-positioned supplies.

6-27. During offensive operations, the platoon can pre-position supplies on trucks or Strykers well forward on the battlefield. This works well if the platoon expects to use a large volume of fire, with corresponding ammunition and fuel requirements, during a fast-moving operation.

Cache

6-28. A cache is a pre-positioned and concealed supply point. Caches are different from standard pre-positioned supplies because the supported or supporting units conceal the supplies from the enemy whereas units might not conceal other pre-positioned supplies. Caches can reduce Soldiers' loads, and units can establish caches for a specific mission or as a contingency measure. Units may conceal cache sites above or below ground. Above ground caches are easier to access but are more vulnerable to discovery by the enemy, civilians, or animals.

Emergency Resupply

6-29. Occasionally (normally during combat operations), the platoon might have such an urgent need for resupply that it cannot wait for a routine LOGPAC. Emergency resupply could involve CBRN defense supplies, equipment, Classes III, V, VIII, and water (see table 6-2 on page 292 for all classes of supplies).

6-30. The platoon leader must understand the battalion and company priority of support in the sustainment plan. If the platoon is not priority for support during that phase of an operation, they will likely not receive an emergency resupply. This is why it is of the upmost importance that the platoon leader does a thorough sustainment analysis with their platoon sergeant during TLPs.

6-31. Emergency resupply can be conducted using either the service station or tailgate method, although procedures may have to be adjusted when the company is in contact with the enemy. In the service station method, individual vehicles pull back during a lull in combat on order of the commander or platoon leader; they conduct resupply and then return to the fight. With tailgate resupply, the company brings limited supplies forward to the closest concealed position behind each vehicle or element.

Aerial Resupply

6-32. *Aerial delivery* is the air transport of cargo, equipment and/or personnel to a desired location on the ground by aircraft (ATP 4-48). Overland resupply might not work, due to terrain or the existing enemy threat. The platoon must initiate a request for resupply and must push it through company to the battalion. The platoon must prepare to receive the supplies at the specified time and location.

SECTION II – TACTICAL COMBAT CASUALTY CARE

6-33. TCCC is divided into the three phases—care under fire, tactical field care, and tactical evacuation care. TCCC occurs during a combat mission and is the military counterpart to prehospital emergency medical treatment. (See FM 4-02 for additional information.)

CARE UNDER FIRE

6-34. In the care under fire phase, combat medical personnel and their units are under effective hostile fire and are very limited in the care they can provide. In essence, only those lifesaving interventions that must be performed immediately are undertaken during this phase. Casualty care under fire has a positive impact on the morale of a unit. Casualties are cared for at the point of injury (or under nearby cover and concealment) and receive self- or buddy-aid, advanced first aid from the CLS, and/or emergency medical treatment from the platoon or company combat medics.

Note. Nonmedical personnel (specifically individuals performing self-aid and buddy-aid and CLSs within the platoon assist combat medics within platoons and the company senior combat medic in their duties. Individuals (self-aid and buddy-aid) and CLS administer appropriate TCCC. If needed, Soldiers are evacuated to the Role 1 medical treatment facility (MTF), or BAS in the battalion support area, or the Role 2 MTF (brigade support medical company of the brigade support battalion) in the brigade support area of the SBCT. (See ATP 3-21.21 and FM 3-96 for additional information.)

6-35. All platoon CLSs and the combat medic carry multiple blank versions and use (they complete all entries as fully as possible) DD Form 1380 to document pre-MTF care at the point of injury. Such care relates to both battle and nonbattle injuries. Once completed, DD Form 1380 is visibly attached to the patient when transferred to the CCP and/or to a Role 1 or Role 2 MTF. All entries on the DD Form 1380 will be made using a non-smearing pen or marker. All entries on the DD Form 1380 should be printed clearly, including the first responder’s name.

6-36. During the fight, casualties should remain under cover where they received initial treatment (self-aid or buddy-aid). As soon as the situation allows, casualties are moved to the platoon CCP when established. Once treated by the combat medic in the platoon area, patients are normally evacuated to the company CCP and then back to the BAS. Unit SOPs address these activities, to include the marking of casualties in limited visibility operations. Small, standard, or IR chemical lights work well for this purpose. Once the casualties are collected, evaluated, and treated, they are prioritized for evacuation back to the company CCP.

6-37. An effective technique, particularly during an attack, is to task-organize a logistics/aid and litter team under the 1SG. This team carries additional ammunition forward to the platoons and evacuates casualties to either the company CCP or the BAS. The commander determines the size of the team during mission analysis.

6-38. When the platoons are widely dispersed, casualties might be evacuated directly from the platoon CCP by nonmedical or medical vehicle or helicopter. Helicopter evacuation might be restricted due to the threat of enemy ground to air small arms, shoulder fired or other air defense weapons (surface to air). In some cases, the casualties must be moved to the company CCP before evacuation. If the capacity of the battalion's organic ambulances is exceeded, unit leaders may reassign supply or other nonmedical, nonstandard evacuation vehicles to backhaul or otherwise transport non-urgent casualties to the BAS. In other cases, the platoon sergeant may direct platoon aid and litter teams to carry the casualties to the rear.

6-39. Leaders minimize the number of Soldiers required to evacuate casualties. Casualties with minor wounds can walk or even assist with carrying the more seriously wounded. Soldiers should use approved litters when available (rigid-litter, pole-less litter, collapsible/folding litter, or skid). Soldiers can make a travois which is field-expedient litters by cutting small trees and putting the poles through the sleeves of buttoned uniform blouses. A travois, or skid, might be used for CASEVAC. Wounded are strapped on this type of litter, then one person can pull it. It can be made locally from durable, rollable plastic. In rough terrain, or on patrols, litter teams evacuate casualties to the company CCP or BAS. They remain at the BAS until transportation is available to a Role 2- or 3-level care facility.

CASUALTY TREATMENT AND EVACUATION

6-40. Unit SOP and OPORD address casualty treatment and evacuation in detail. They cover the duties and responsibilities of key personnel, the evacuation of chemically contaminated casualties (on separate routes from noncontaminated casualties), and the priority for operating key weapons and positions. They specify preferred and alternate methods of evacuation and make provisions for retrieving and safeguarding the weapons, ammunition, and equipment of casualties. Slightly wounded personnel are treated and returned to duty by the lowest echelon possible. Platoon combat medics evaluate (under the control to the platoon sergeant) ill Soldiers and either treat or evacuate them as necessary. MEDEVAC and CASEVAC are rehearsed like any other critical part of an operation.

6-41. As casualties occur, the nearest observer informs the platoon sergeant who then informs the 1SG via the most expedient method available (for example, radio voice). The 1SG then submits a personnel status report to the personnel staff officer section.

This report documents duty status changes on all casualties. A casualty report in the form of a DA Form 1156 (*Casualty Feeder Card*) is filled out when a casualty occurs, or as soon as the tactical situation permits. This usually is done by the Soldier's squad leader and turned in to the platoon sergeant, who forwards it to the 1SG. A brief description of how the casualty occurred (including the place, time, and activity being performed) and who or what inflicted the wound is included. If the squad leader does not have personal knowledge of how the casualty occurred, the squad leader gets this information from Soldiers who have the knowledge.

DA FORM 1156 (CASUALTY FEEDER CARD)

6-42. The DA Form 1156 is used to report the following:

- Report Soldiers who have been wounded.
- Soldiers captured or killed in action who are missing or not recovered.

6-43. The following information pertains to the DA Form 1156:

- The Soldier with the most knowledge of the incident should complete the witness statement.
- During lulls in the battle, the platoon forwards casualty information to the company headquarters.
- The 1SG ensures a completed DA Form 1156 is forwarded to the personnel staff officer, who then enters the data into the Defense Casualty Information Processing System (see figures 6-4 and 6-5 on page 302).

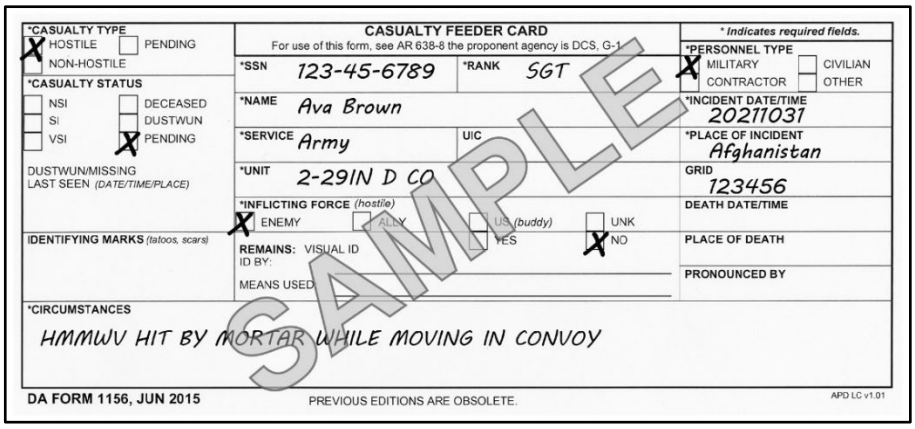


Figure 6-4. DA Form 1156 (Casualty Feeder Card) (front)

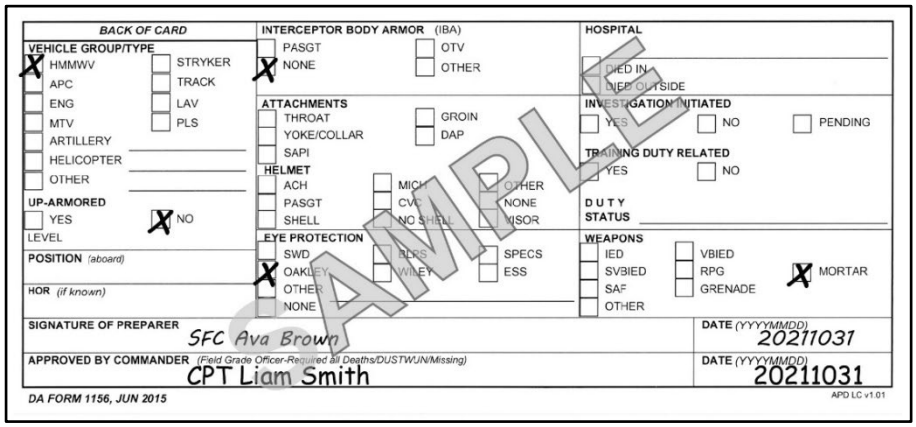


Figure 6-5. DA Form 1156 (Casualty Feeder Card) (back)

6-44. Before casualties are evacuated to the CCP or beyond, leaders remove all key operational or sensitive items and equipment, including communications security devices or signal operating instructions, maps, position location devices. Every unit should establish an SOP for handling the weapons and ammunition of its wounded or killed in action. Protective masks must stay with the individual.

6-45. Casualties are taken to the CCP for classification based on their medical condition, assigned evacuation precedence (urgent, priority, routine, and convenience), and availability of MEDEVAC platforms. Within a CCP, the combat medic conducts triage of all patients, takes the necessary steps to stabilize their conditions, and initiates the process of evacuating them to the rear for further treatment. The combat medic helps the 1SG arrange evacuation via ground or air ambulance, or by nonstandard means. (See FM 4-02 and ATP 4-02.2 for a detailed discussion of evacuation precedence for Army operations at Roles 1 through 3 MTFs.)

6-46. When possible, the battalion medical platoon ambulances provide evacuation and en route care from the Soldier's point of injury or the CCP to the BAS. The ambulance team supporting the company or platoon works in coordination with the combat medic supporting the company or platoon. In mass casualty situations, nonmedical vehicles can be used to assist in CASEVAC as directed by the platoon leader or company commander. Plans for the use of nonmedical vehicles to perform CASEVAC should be included in the unit SOP. Ground ambulances from the brigade support medical company or other supporting ambulances evacuate patients from the BAS back to the brigade support medical company MTF located in the brigade support area.

TACTICAL FIELD CARE

6-47. During the tactical field care phase, medical personnel and their patients are no longer under effective hostile fire and medical personnel can provide more extensive patient care. In this phase, interventions directed at other life-threatening conditions, as well as resuscitation and other measures to increase the comfort of the patient may be performed. The physician and physician assistant at the BAS or during tailgate medicine support provide TCCC. Tailgate medical support refers to an economy of force device employed primarily to retain maximum mobility during movement halts or to avoid the

time and effort required to set up a formal, operational treatment facility (for example, during rapid advance and retrograde operations) (see FM 4-02). During tactical field care, personnel must be prepared to transition back to care under fire or to prepare the casualty for tactical evacuation, as the tactical situation dictates. (See FM 4-02 and ATP 4-02.4 for more information on tactical field care.)

6-48. The organic medical resources within its headquarters and headquarters company include a medical platoon staffed with a field surgeon, physician assistant, and numerous combat medics. The mission of the battalion medical platoon is to provide Role 1 Army Health System support to the Soldiers of the Infantry battalion. Role 1 (also referred to as unit-level medical care) is the first medical care a Soldier receives. The medical platoon within the Infantry battalion is configured with a headquarters section, medical treatment squad, MEDEVAC squad, and combat medic section. The treatment squad consists of two teams (treatment team alpha and team bravo). The treatment squad operates the BAS and provides Role 1 medical care and treatment (to include disease and nonbattle injury prevention, sick call, emergency medical treatment [including TCCC], and patient decontamination). Team alpha is clinically staffed with the physician assistant while team bravo is clinically staffed with the field surgeon. Medical platoon ambulances provide MEDEVAC and en route care from the Soldiers' point of injury, the CCP, or an ambulance exchange point to the BAS. The ambulance squad is four teams of two ambulances composed of one emergency care sergeant and two ambulance aide/drivers assigned to each ambulance. (See ATP 4-02.4 for additional information on the medical platoon.)

TACTICAL EVACUATION

6-49. In the tactical evacuation phase, casualties are transported from the battlefield to an MTF. MTFs provide medical treatment and include the Role 1 facility, such as a BAS, Role 2 facility brigade support medical company of the brigade support battalion, dispensaries, clinics, and hospital (see figure 6-6 on page 304). Evacuation can be by either MEDEVAC (dedicated platforms [ground or air] manned with dedicated medical providers) or CASEVAC (ranging from nondedicated, but tasked, platforms [ground or air] augmented with medical equipment and providers to platforms of opportunity without medical equipment or providers).

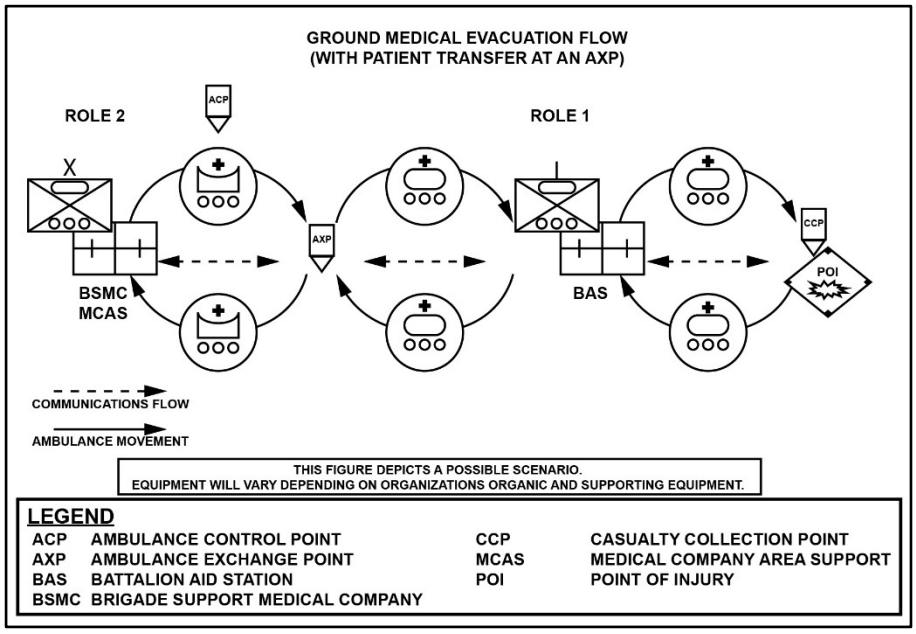


Figure 6-6. Ground medical evacuation flow, example

6-50. *Casualty evacuation* is the movement of casualties aboard nonmedical vehicles or aircraft without enroute medical care (ATP 4-02.13). CASEVAC encompasses a wide spectrum of potential capability depending on the mix of transport platform, medical equipment, and medical providers allocated to the mission. At the upper end of the spectrum, nondedicated platforms can be outfitted with the requisite medical equipment and MEDEVAC assets. At the lower end of the spectrum, CASEVAC can be no more than the transport of casualties using platforms of opportunity with no medical equipment or medical providers (in using such assets, the risk of not moving the casualty must outweigh the risk evacuating the casualty in such a manner). Effective CASEVAC complements MEDEVAC by providing additional evacuation capacity when number of casualties (workload) or reaction time exceeds the capabilities of MEDEVAC assets. CASEVAC requires detailed assessment and planning to achieve an effective integration of MEDEVAC and CASEVAC capabilities. (See ATP 4-02.13 for more information on CASEVAC.)

CAUTION

Casualties transported in a CASEVAC platform may not receive proper en route medical care or be transported to the appropriate MTF that can best address the casualty's medical needs. This may have an adverse impact on the casualty's prognosis, long-term disability or even death may result.

6-51. *Medical evacuation* is the timely and effective movement of the wounded, injured, or ill to and between medical treatment facilities on dedicated and properly marked medical platforms with en route care provided by medical personnel (ATP 4-02.2). MEDEVAC includes the provision of en route medical care, whereas CASEVACs may not provide proper medical care during movement. MEDEVAC is the key factor to ensuring the continuity of care to Soldiers by providing care during evacuation and facilitating the transfer of patients between MTFs to receive required specialty care. This ensures that medical resources (personnel, equipment, and supplies [to include blood]) can be rapidly transported to areas of critical need on the battlefield.

Note. The Army MEDEVAC system is comprised of dedicated, standardized MEDEVAC platforms (ground and air ambulances). These ground and air ambulances have been designed, staffed, and equipped to provide en route medical care to patients being evacuated and are used exclusively to support the medical mission, in accordance with the law of armed conflict and the Geneva Conventions (see FM 6-27).

Dedicated air MEDEVAC aircraft include specifically trained medical personnel to provide en route care. The 9-line MEDEVAC Request Card is the standard method to request air ambulance MEDEVAC.

SECTION III – LOAD CONSIDERATIONS (BASIC, COMBAT, VEHICLE)

6-52. The basic, combat, and Soldier's load are a main concern of the leader. Because leaders cannot prepare for all possible operations, they must prepare for the most likely contingencies based on available information.

UNIT BASIC AND COMBAT LOADS

6-53. There are few, if any, contingencies in which U.S. Forces have all the supplies they need for an operation. Because of this, every unit's daily logistical reports must accurately reflect not only its operational needs but what supplies, and equipment are on hand. As much as possible, logistics planners try to standardize push packages, providing all units with enough of each supply item in anticipation of their requirements.

6-54. During planning, units assess their basic load to determine its adequacy to support an operation. A *basic load* is the quantity of supplies required to be on hand within, and

moved by a unit formation, expressed according to the wartime organization of the unit or formation, and maintained at the prescribed levels (JP 4-09). Units further configure their basic load into combat loads for specific missions. A *combat load* is the minimum mission-essential equipment and supplies as determined by the commander responsible for carrying out the mission, required for Soldiers to fight and survive immediate combat operations (ATP 3-21.71). Combat loads are not standardized nor are quantities established since all are mission dependent. Basic and combat loads are directed by the company commander and are generally prescribed by unit SOP.

BASIC LOAD

6-55. The basic load includes supplies that the SBCT Infantry rifle company keeps on its organic support vehicles for use in combat. For supply classes other than ammunition, the basic load covers supplies kept by units for use when combat is initiated. The quantity of each item of supply in a basic load is based on the number of days the unit may have to sustain itself in combat without resupply. For ammunition (Class V), the basic load is the quantity of ammunition required to be on hand to meet combat needs until resupply can be accomplished. (See table 6-3.) (See figure 6-7 on page 308.)

Table 6-3. Days of Supply Classes I, III, and IV, example

Echelon	*CLASS I*	*CLASS III*		*CLASS IV*
Individual	Nine MREs (three per day) 1.3 gallons of water carried by Soldier load	None		None
Squad/Stryker	99 MREs (9 cases) 14.3 gallons of water carried by Soldier load Two 5-gallon water cans	Class III bulk 53 gallons (full fuel tank) Two 5-gallon fuel cans Class III package (PET) 15W40 TES 295 Military 5606 80w90 Antifreeze	 2 quarts 2 quarts 2 quarts 1 quart 1 quart	Four rolls concertina wire Six pickets
Platoon	405 MREs (36 cases) 58.5 gallons of water carried by Soldier load Eight 5-gallon water cans	Class III bulk 212 gallons (full fuel tanks) Eight 5-gallon fuel cans Class III PET 15w40 TES 295 Military 5606 80w90 Antifreeze	 2 gallons 2 gallons 2 gallons 1 gallon 1 gallon	16 rolls concertina wire 24 pickets

Legend: MRE—meal, ready to eat; PET—petroleum; TES 295—transmission fluid; W—winter

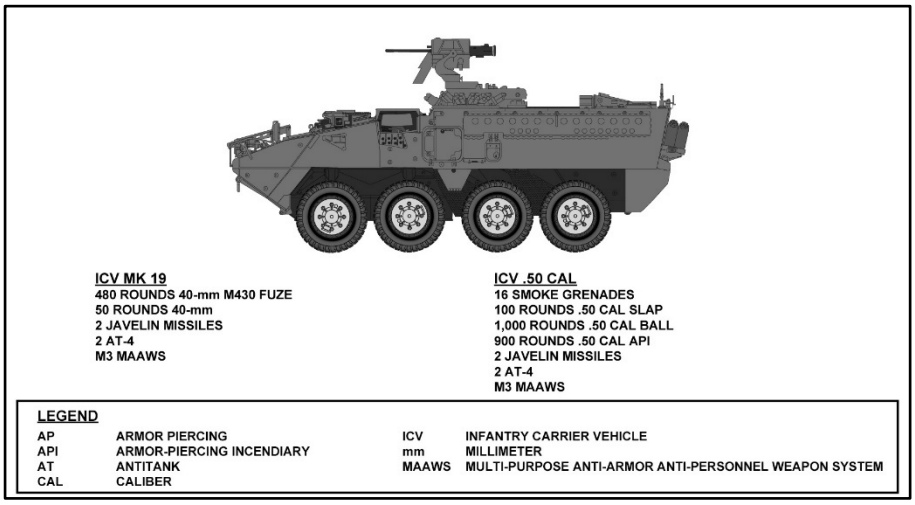


Figure 6-7. Basic load for Stryker, example

COMBAT LOAD

6-56. The platoon's combat load varies by mission and includes the supplies physically carried. Like the basic load, the platoon's combat load is specified by higher headquarters. The company commander directs some minimum requirements for the combat load. The unit tactical SOP or the platoon and company OPORD specify most items and equipment to be carried. The company OPORD or SOP specifies the amount of ammunition required for a specific type of operation. (See figure 6-8 on page 310.)

6-57. Combat load is the minimum mission-essential equipment required for a Soldier to operate (fight, if required) and survive during the immediate operation (see figure 6-8 on page 310). Supplies and equipment not carried in a combat load are secured and transported in sustainment loads and contingency loads. Soldiers carry loads in one of three type combat loads depending on the situation. (See ATP 3-21.18 for types of combat loads.) The three types of combat loads are—

- Fighting load.
- Approach march load.
- Emergency approach march load.

Fighting Load

6-58. The fighting load is the essential items a Soldier needs to maneuver on, close with and destroy enemy forces in direct fire contact. Fighting load is the sum of everything worn or carried by the Soldier. For missions requiring mobility, speed, and/or stealth, carrying heavy loads is a disadvantage. Cross-loading machine gun ammunition, shoulder-fired munitions, water, and radio operator's equipment across the march unit is essential to balance out the loads carried within the unit.

Approach March Load

6-59. An approach march load includes the fighting load plus additional essential equipment. The approach march load may include an assault pack or rucksack, and all the other items not needed in the fighting load but now required. Approach march loads, for when direct contact with the enemy is intended, are dropped in an assault position, in an objective rally point, or when receiving effective enemy fires prior to an assault. Execution of this technique must be planned for and rehearsed, and may require transportation assets, when available, to retrieve equipment later in the operation. An approach march load allows Soldiers to fight and sustain themselves until resupplied, though, approach march loads should not exceed 100 pounds.

Emergency Approach March Load

6-60. Operations requiring an emergency approach march load should only be used when necessary to accomplish a specific mission. For example, Soldiers may be required to carry heavier loads through terrain impassable by vehicles or when ground and air transportation resources are unavailable. Excessive weights associated with these loads significantly impact the unit's ability to move to the final destination without physically exhausting Soldiers. Physical exhaustion significantly limits the cognitive ability and mental focus of leaders and Soldiers and inhibits their combat effectiveness. When carrying an emergency approach march load, commanders should seek to limit march distances and provide Soldiers time to recover before executing follow-on activities.

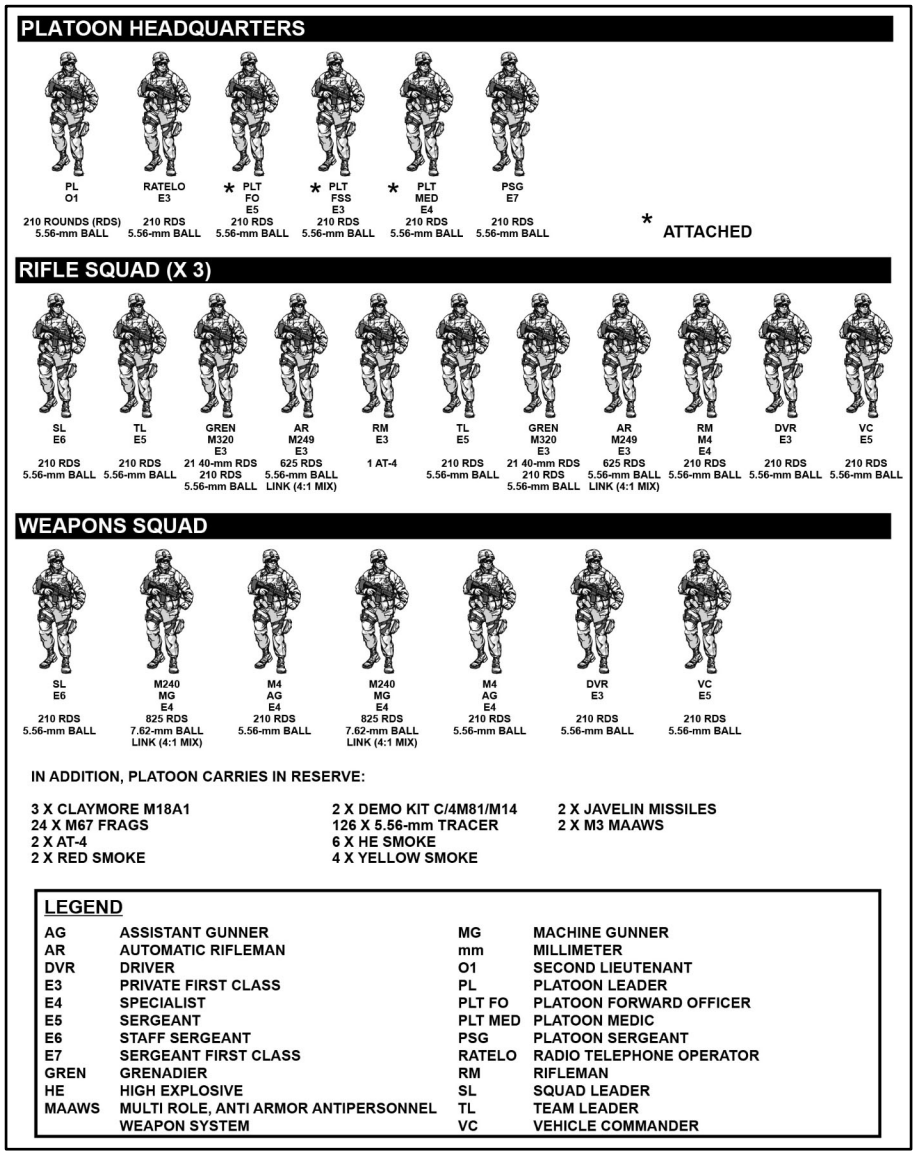


Figure 6-8. Stryker Infantry rifle platoon combat load

STRYKER VEHICLE LOAD CONSIDERATIONS

6-61. When planning Stryker vehicle loads the platoon leader considers Classes I, III (Bulk), III (Package), IV, and V requirements depending on the type of operation they are conducting (see table 6-2 on page 292 for all classes of supplies). The platoon leader refers to the unit SOPs for their different classes of supply requirements. Stryker equipped platoons have an advantage over dismounted Infantry units because of its ability to carry additional classes of supplies on the carrier vehicle. For Class V ammunition, the higher commander OPORD or SOP specifies the platoon's basic load.

The combat load also includes the Class III (P) and IV requirements for operations. For all other classes of supply leaders do a METT-TC (I) analysis based on mission duration.

SECTION IV – MAINTENANCE

6-62. The maintenance of weapons and equipment is continuous. Every Soldier must know how to maintain their weapon, vehicle, and equipment according to the applicable technical manual. Maintenance includes inspecting, testing, servicing, repairing, requisitioning, recovering, and evacuating vehicles and equipment. Maintenance at the platoon and squad level comprises thorough PMCS and accurate reporting of maintenance problems to the company, and taking necessary actions to resolve maintenance problems, such as installing requested parts.

MAINTENANCE REPAIR FLOW

6-63. Maintenance and the early identification of problems prevent equipment down-time and the reduction of combat effectiveness. The result of good routine PMCS is fully mission-capable equipment. The PMCS results are logged on the DA Form 2404 or the DA Form 5988-E. Stryker crews use a digital maintenance worksheet that is loaded on a tablet. These forms are the primary means through which the platoon and squads obtain maintenance support or repair parts. The forms follow a pathway from Infantry squad and crew level to the brigade support area and back. Per unit SOP, the company XO or 1SG supervises the flow of these critical maintenance documents and parts. The flow of reporting and repairing equipment includes the following:

- The platoon leader and platoon sergeant receive the hard copy DA Form 5988-E or tablet digital copy from the XO or 1SG.
  - The platoon leader and platoon sergeant review the DA Form 5988-E to ensure correctness prior to distribution.
  - If there are discrepancies, they notify the XO immediately.
- The DA Form 5988-E or DA Form 2404 (digital copy for crews) is distributed to the Infantry squads and Stryker commanders, and they oversee their squads and crews conducting the PMCS of the Strykers, squad individual weapons, and equipment.
  - Typically, the driver will perform a PMCS on the hull and the VC/gunner will perform a PMCS on the weapons system and other components.
  - The crew utilizes the proper -10 level technical manual to conduct a thorough PMCS following the before, during, or after procedures.
- The crews and squads annotate faults on the DA Form 5988-E, or DA Form 2404, or tablet in accordance with the -10 level technical manual.
  - The faults annotated will either be a deficiency fault, or a deadline fault.
  - If the fault renders the vehicle or piece of equipment nonmission capable, the crew or squad member notifies the squad leader and VC, and then continues with the PMCS.
- Once the crew or squad member completes the PMCS, the Stryker VC or squad leader coordinates with the attached FMT to verify the faults.
  - If a fault renders the Stryker or piece of equipment nonmission capable, the FMT utilizes parts on hand to bring the vehicle to fully mission-capable status.

  - If they do not have the part on hand, the part will have to be sent forward from the combat trains command post, brigade support area, or ordered by the battalions prescribed load list clerk.
- When the faults have been verified by the attached FMT, the platoon leader collects all maintenance worksheets and reviews them to understand the status of their vehicles and equipment.
  - The platoon leader gives or transfers the maintenance worksheets to the XO.
  - The XO and 1SG review the forms and update the company vehicle status report.
- The 1SG transports or transfers the maintenance worksheet copies to the next LOGPAC to be submitted to the battalion's FSC maintenance section.
  - The FMT chief will verify the faults and annotate the correct national stock number for the part to be ordered.
  - The company's assigned prescribed load list clerk will order the part and update the maintenance worksheet with the new faults and parts ordered.
  - The 1SG will transport the new maintenance worksheet with the provided faults and parts ordered back to the company on the following LOGPAC.
- If the repair or installation of the part requires more time than the operation allows, the Stryker or piece of equipment may be transported to the unit maintenance collection point (MCP) for further repair.

6-64. The unit tactical SOP should detail when maintenance is performed, to what standards, and who inspects it. The squad and section leader are most often the one who inspects maintenance work, with the platoon sergeant and platoon leader conducting spot-checks. Besides operator maintenance, selected Soldiers are trained to perform limited maintenance on damaged weapons and battle damage assessment and repair.

6-65. Inoperative equipment is fixed as far forward as possible. When a piece of equipment is damaged, it should be inspected to see if it can be repaired on the spot. If equipment cannot be repaired forward, it is evacuated immediately or returned with a LOGPAC. Even if the item cannot be evacuated at once, the maintenance system is alerted to prepare for repair or replacement. If a replacement is available (from an evacuated Soldier or inoperative equipment), it is sent forward. If not, the leader must work around it by prioritizing remaining equipment. For example, using a squad radio for the company command net if the platoon radio is broken.

SCHEDULED SERVICES

6-66. Used to maintain equipment reliability, scheduled services are performed on all platoon equipment. Equipment services are specified maintenance actions performed qualified mechanics and assisted by equipment operators when required. Where equipment, components, and systems are routinely checked, adjusted, lubed, and so on, according to engineer specifications. Maintenance personnel use scheduled services to replace faulty items and avoid projected component failures based on analysis and engineering documentation.

6-67. The platoon leader and the XO adjust the service schedule to fit the company training schedule. Services may be conducted sooner than the prescribed interval but cannot be conducted later. The platoon leader refers to the technical manuals for all

pieces of equipment in their platoon to determine the prescribed service schedule. Services may occur on a quarterly, semiannual, or annual basis. Equipment that is delinquent on services may be nonmission-capable. In a garrison environment, units may conduct fleet-wide vehicle services simultaneously; however, in a combat environment, units should conduct individual vehicle services sequentially.

LEVELS OF MAINTENANCE

6-68. The Army has two levels of maintenance: field and sustainment. Field maintenance consists primarily of troubleshooting, repairing, or replacing parts and assemblies on the user's system or platform. Sustainment maintenance is performed by U.S. Army Materiel Command elements normally comprised of civilians and contractors who return equipment to a national standard, after which the equipment is placed back into the Army's overall supply system.

6-69. The link between the using organization and maintenance support is a trained operator/crew who can properly use and maintain the equipment. The continued demand for equipment requires that the operator and/or crew perform PMCS. Maintainers usually diagnose down to the major component failure. They then replace that component and return the system to operational condition. Based on METT-TC (I), the Soldier can diagnose and replace subcomponent items depending on the availability of tools, parts, and time.

6-70. Replace forward means a Soldier performs on-system maintenance. On-system refers to replacing components or subcomponents at the point of repair, the breakdown site, or the MCP. Repair rear means that Soldiers perform off-system maintenance. Off-system refers to those actions taken to return components and subcomponents of weapons systems to serviceable condition. These repairs are performed at designated places throughout the battlefield.

Field Maintenance

6-71. Field maintenance is on-system maintenance and mainly involves preventive maintenance and replacement of defective parts. The goal of field maintenance is to repair and return equipment to the Soldier. It covers tasks previously assigned to operator/crew, organization/unit, and direct support maintenance levels. It includes some off-system maintenance critical to mission readiness.

6-72. Platoon leaders ensure that vehicle crews and equipment operators perform PMCS. To provide quick turnaround of maintenance problems, each maneuver company has a FMT from the supporting FSC team dedicated to support them. These FMTs have forward repair systems and mechanics trained in the company's equipment. The company 1SG usually positions the FMT in the company trains.

6-73. During offensive operations, the FMT usually follows one terrain feature behind the company in the company trains. In the defense, it is usually located in a static location one terrain feature behind the company. This positioning enhances security and enables the FMT to react quickly when platoons request support. In some situations, METT-TC (I) factors dictate that the FMT be positioned at the MCP to further enhance security and survivability.

Sustainment Maintenance

6-74. Sustainment maintenance comprises repairing components off the user's platform. Those repaired components then go back into the supply system. Echelons above BCT perform this level of maintenance. To maximize unit combat readiness, maintenance personnel must repair and return the equipment to the user as quickly as possible. Repairs should be made as far forward as possible.

Maintenance Collection Point

6-75. When a vehicle or piece of equipment cannot be fixed quickly on site, it is moved to the MCP, where it is repaired by the FSC. The platoon may provide operators to go with the vehicle to the MCP. When not involved in on-site actions, the FMT can assist with operations in the MCP.

VEHICLE RECOVERY

6-76. Recovery is the process of freeing or retrieving immobile, inoperative, or abandoned equipment from its current position and returning it to service or to a maintenance site for repairs. These actions typically involve extracting, towing, lifting, or winching. Limit towing usually to a field maintenance site or the nearest MCP (see ATP 4-31).

6-77. If a Stryker is disabled, immobile, gets stuck or will not start, the platoon FMT and crew must repair or recover it as quickly as possible. If the Stryker cannot be repaired, a recovery team is dispatched to perform recovery operations at the breakdown site or from an intermediate coordinated location. The recovery section accomplishes its mission by performing damage assessment and initial damage classification and then recovering the battle-damaged equipment.

6-78. A stationary vehicle is vulnerable to direct fire, indirect fire, and air attack. During large-scale combat operations, the immobilized Stryker presents a large target for the enemy. Personnel not involved in the recovery operation should move a safe distance away and provide security. If the main weapon system is still operational, both the VC/gunner and driver remain with the vehicle. The VC/gunner can still scan and engage targets until the vehicle is recovered.

6-79. If the vehicle cannot be recovered quickly, the platoon leader may decide to reorganize Soldiers and equipment among the other vehicles and continue mission. The driver and VC/gunner may be left with the disabled vehicle to wait for help, or the vehicle may have to be abandoned or destroyed in place if the enemy situation warrants, and the crew has chain of command approval.

Note. Recovery operations on the battlefield and in general can be extremely hazardous. Conduct a risk assessment and safety must remain a top priority for each recovery mission. Proper maintenance of recovery vehicles and serviceability of authorized rigging and other equipment is essential to ensure safe recovery missions.

6-80. During the planning phase the platoon leader and platoon sergeant should develop a plan of action for repair and or recovery of damaged and disabled equipment. This information is disseminated during the platoon OPORD and through subsequent rehearsals. Ensure PCCs include platoon recovery equipment such as tow bars, tow cables, and extraction straps. Ensure equipment is complete and are rated for the types of vehicles operating in the platoon. The platoon leader and platoon sergeant need to know the location of the closest maintenance control point. Depending on the level or the severity of battle damage, recovery is usually by the following methods:

- Self-recovery.
- Like-vehicle recovery.
- Dedicated recovery.
- Expedients.

SELF-RECOVERY

6-81. Self-recovery starts at the location where the equipment becomes mired or disabled. The operator and crew use the BII and additional authorized list or on-vehicle equipment items to perform self-recovery. When the equipment has a mechanical failure, the operator and crew will use the equipment's technical manual to perform troubleshooting procedures with the tools available in the BII and additional authorized list or on-vehicle equipment. When self-recovery fails, the operator and crew can request assistance from available like vehicles. (See the appropriate technical manual.)

LIKE RECOVERY

6-82. Use like-vehicle recovery when self-vehicle recovery fails. The principle is to use another piece of equipment of the same weight class or heavier to extract the mired, disabled, or damaged equipment by using tow bars, chains, tow cables, and or approved recovery equipment. When self-recovery and like-recovery are not practical or are unavailable, put in a request to use dedicated recovery assets.

6-83. The most common form of self-recovery is recovery of like vehicle with a tow bar. Before using a tow bar (or any piece of recovery equipment), leaders and operators must answer the following questions:

- Is the tow bar safe to use?
- Does it have all the safety pins and clips?
- Is the tow bar approved and have the capacity to tow the disabled vehicle?
- Is the towing vehicle equal to or greater than the weight of the vehicle being towed? If not, do not use. (See the appropriate technical manual.)

DEDICATED RECOVERY

6-84. Dedicated recovery vehicles are specifically designed and equipped for recovering other vehicles. Wheeled wreckers and tracked recovery vehicles are examples. These

are used when self-recovery or like-vehicle recovery is not possible because of the severity of the situation, safety considerations, or the inability to use like-vehicle assets employed in their primary mission. In general, wheel recovery systems recover wheeled vehicles, and track recovery systems recover tracked vehicles. Requests from the platoon sergeant or platoon leader for dedicated recovery systems located with the FSC team go to the XO.

Note. Check the appropriate vehicle technical manual prior to recovery and towing operations. Crewmembers need to check technical manual towing requirements for safe recovery operations and use of tow bar and or cables. Technical manuals list vehicle operator requirements for moving the Stryker, vehicle speeds, and distances while towing.

Appendix A

Direct Fire Planning and Control

Suppressing or destroying the enemy with direct fires is fundamental to success in close combat. Direct fire planning is fundamentally the same for both offensive and defensive operations. The challenge for Stryker Infantry rifle platoons in the offense is to control the focus and distribution of fires on the move against a static enemy. In the defense, the goal is to build an EA where the leaders can mass fires by properly focusing and distributing the platoon's firepower. The platoon leader must be able to mass the fires of all available resources at critical points and times to be successful on the battlefield. To achieve this, the Stryker Infantry rifle platoon leader must understand how to integrate the fires of both the Stryker's and the Infantry squads. These fires must be controlled so that the platoon can effectively distribute the effects of fires through the width and depth of planned, or unplanned, targets or EAs. Effective planning also allows the platoon to focus their fires on portions of a planned target or rapidly shift between targets as the need arises. This appendix discusses principles of fire control process, direct fire planning, and direct fire control.

SECTION I – DIRECT FIRES

A-1. Direct fire is inherent in maneuver, as is close combat. Small-unit leaders of the Infantry rifle platoon must plan to focus, distribute, and shift the overwhelming mass of the platoon's direct fire capability at critical locations and times to succeed in combat. Efficient and effective fire control means the platoon acquires the enemy and masses the effects of direct fires to achieve decisive results in the close fight. This section covers the principles of direct fire, direct fire planning, and direct fire control.

PRINCIPLES OF DIRECT FIRE

A-2. When executing direct fires, leaders must know how to apply several fundamental principles. The purpose of the principles of direct fire is not to restrict the actions of subordinates. Applied correctly, they help the platoon to accomplish its primary goal in direct fire engagements both to acquire first and shoot first. These principles give subordinates the freedom to act quickly upon acquisition of the enemy. This discussion focuses on the following principles:

- Mass the effects of fire.
- Destroy the greatest threat first.
- Avoid target overkill.
- Employ the best weapon for the target.
- Minimize friendly exposure.

- Plan and implement control measures to avoid fratricide.
- Plan for limited visibility conditions.
- Develop contingencies.

MASS THE EFFECTS OF FIRE

A-3. The platoon must mass its fires to achieve decisive results. Massing entails focusing fires at critical points and distributing the effects. Random application of fires is unlikely to have a decisive effect.

DESTROY THE GREATEST THREAT FIRST

A-4. The order in which the unit engages enemy forces directly relates to the danger they present and how the engagement will seize the initiative. Leaders should assess the greatest threat not only in terms of capability, but also how a given target nests within the enemy's capabilities and desired friendly end state. The enemy forces' threat depends on their weapons, range, and positioning in relation to and comparison to the friendly force. In general, a friendly force, when presented with multiple targets, should initially concentrate fires to destroy the greatest threat, and then distribute fires over the remainder of the enemy force. At the tactical unit level, the greatest threat may be an enemy C2 system, which directs the fires and maneuver of the enemy force.

AVOID TARGET OVERKILL

A-5. Use only the amount of fire required to achieve necessary effects. Target overkill wastes ammunition and ties up weapons better employed acquiring and engaging other targets. The idea of having every weapon engage a different target, however, must be tempered by the requirement to destroy the greatest threats first. Two simple ways to minimize overkill are with sectors of fire, and by establishing fire patterns. Establishing primary and secondary sectors of fire ensures direct fires are planned throughout the width of the area. Leaders ensure that Soldiers first engage targets in their assigned primary sector and then engage targets in their secondary sector if their primary sector is clear. Soldiers should not engage outside of these sectors unless directed to. Utilizing one of the standard fire patterns (frontal, cross, or depth) acts similarly to an assigned sector, but also controls the sequence of targets to be engaged. For instance, in frontal fires, the right-most Soldier engages the right-most target first and works inwards. In prepared defensive positions with frontal cover, the default fire pattern is almost always a cross pattern which interlocks with adjacent fighting positions.

EMPLOY THE BEST WEAPON FOR THE TARGET

A-6. Using the appropriate weapon for the target increases the probability of rapid enemy destruction or suppression; at the same time, it saves ammunition. The platoon has many weapons with which to engage the enemy. Target type, range, and exposure are key factors in determining the weapon and ammunition that should be employed, as are weapons and ammunition availability and desired targets effects. Additionally, platoon leaders should consider individual crew capabilities and proficiency when deciding on the employment of weapons systems. The platoon leader task-organizes, and arrays forces based on the terrain, enemy, and desired effects of fires. For example, if an enemy dismounted assault is expected in restricted terrain, the platoon leader would

employ Infantry squads, taking advantage of their ability to best engage numerous targets while using Strykers in support.

MINIMIZE FRIENDLY EXPOSURE

A-7. Units increase their survivability by exposing themselves to the enemy only to the extent necessary to engage them effectively. Natural or artificial defilade provides the best cover from lethal direct fire munitions. Crews and squads minimize their exposure by constantly seeking effective available cover, attempting to engage the enemy from the flank, remaining dispersed, firing from multiple positions, and limiting engagement times. Conversely, the overreliance on covered positions can result in individual vehicles or the entire platoon becoming fixed in position. The platoon leader must develop displacement criteria and carefully monitor the platoon to ensure they do not become fixed in place by an aggressive enemy force.

PLAN AND IMPLEMENT CONTROL MEASURES TO AVOID FRATRICIDE

A-8. Leaders must be proactive in reducing the risk of fratricide and noncombatant casualties. They have several tools to assist them in this effort: graphic control measures for friendly forces, engagement criteria, identification training for combat vehicles and aircraft, the unit's weapons safety posture, the WCS, recognition markings, and a common operational picture to include Standard Range Cards, sector sketches, are of operations sketches, and rehearsals. Knowledge and employment of applicable ROE are additional means of preventing noncombatant casualties.

Note. It is oftentimes difficult to distinguish between friendly and enemy dismounted Soldiers. Leaders must constantly monitor the positions of friendly forces.

PLAN FOR LIMITED VISIBILITY CONDITIONS

A-9. At night, limited visibility fire control equipment enables the platoon to engage enemy forces at nearly the same ranges that are applicable during the day. Obscurants such as dense fog, heavy obscuration, and blowing sand, however, can reduce the capabilities of thermal and IR equipment. Thermal sights on Strykers can assist the crew and squads in detecting and engaging enemy infantry forces in conditions such as heavy obscurants and low illumination. Leaders should develop contingency plans for such extreme limited visibility conditions. Although decreased acquisition capabilities have minimal effect on area fire, point target engagements likely will occur at decreased ranges. Typically, firing positions, whether offensive or defensive, must be adjusted closer to the area or point where the leader intends to focus fires. Another alternative is the use of visual or IR illumination when there is insufficient ambient light for passive light intensification devices. While night vision capabilities can deliver high accuracy, their use can be hazardous. The use of tracers, lasers, IR illuminators, or even the glow of unshielded optics can be detected by peer forces and then targeted for fires. Additionally, the use of optics tends to significantly limit peripheral vision by both individuals and units. Leaders must ensure that their forces deliberately widen their scan to reduce tunnel-vision and observe the full width of assigned sectors.

DEVELOP CONTINGENCIES

A-10. Leaders initially develop plans based on their units' maximum capabilities; they make backup plans for implementation in the event of casualties or weapon damage or failure. While leaders cannot anticipate or plan for every situation, they should develop plans for what they view as the most probable occurrences. Building redundancy into these plans, such as having two systems observe the same assigned area, is an invaluable asset when the situation (and number of available systems) permits. Designating secondary sectors of fire provide a means of shifting fires if adjacent elements are knocked out of action.

DIRECT FIRE PLANNING

A-11. Platoon and squad leaders must plan how to employ their units to destroy and defeat the enemy. They must maneuver their unit to bring the maximum fire on the enemy. The platoon leader must plan how to organize, sequence, and maneuver their platoon to obtain the best effect on enemy forces.

A-12. Direct fire planning is fundamentally the same for both offensive and defensive operations. The challenge for the platoon in the offense is to control the focus and distribution of fires on the move against a generally static enemy. While in the defense, the goal is to build an EA where the leaders can mass fires by properly focusing and distributing the platoon's firepower.

ORIENT, FOCUS, DISTRIBUTE, AND SHIFT FIRES

A-13. Leaders plan direct fires to be able to C2 their fire. Determining where and how they can mass fires is an essential step in the process for planning direct fires in both the offense and defense. This planning must enable leaders to orient, focus, distribute, and shift their direct fires in execution.

A-14. Orienting fires allows the leader to effectively engage the enemy with direct fires. The plan must allow friendly forces to acquire enemy elements rapidly and accurately. Orienting friendly forces on probable enemy locations and on likely avenues of approach speeds target acquisition. Conversely, failure to orient subordinate elements results in slower acquisition, greatly increases the likelihood that enemy forces can engage first.

A-15. Leaders determine points or areas to focus combat power after identifying probable enemy locations. The leader's visualization of where and how the enemy may attack or defend enables the leader to determine the volume of fire necessary at points to have a decisive effect. Leaders establish weapons ready postures for the unit as well as triggers for initiating fires based on where and how they want to focus. Leader evaluates the risk of fratricide and establishes controls to prevent it. Control measures, although not inclusive, include the designation of recognition markings, weapons safety posture, and WCS.

A-16. Distribution of fires enables the firing unit to distribute the effects of fires throughout the width and depth of the enemy array. Shifting fires means the ability to shift fires from one area to another area rapidly. In the defense these are typically planned areas; however, in the offense, they may be where necessary or needed. A leader

typically shifts the focus or distribution of fires from one area to another in response to an emerging threat or a changed enemy formation.

A-17. Leaders shift fires to refocus and redistribute the effects based on the evolving estimate of the situation as the engagement proceeds. Situational awareness becomes an essential part of the fire control process at this point. Leaders apply the same techniques and considerations, including fire control measures that they used earlier to focus fires.

PLANNING CONSIDERATIONS

A-18. The platoon leader plans direct fire in conjunction with development of their estimate of the situation and completion of the plan. Determining where and how the platoon can and will mass fires are an essential step as the leaders develop the concept of the operation.

A-19. Based on where and how they want to focus and distribute fires, platoon leader and subordinate leaders select appropriate direct fire control measures, engagement criteria and priorities, establish the weapons ready postures for Strykers and dismounted Infantry elements, and triggers for initiating fires. *Engagement criteria* are the protocols that specify those circumstances for initiating engagement with an enemy force (FM 3-90). Leaders understand probable methods of engagement and anticipate how they will initiate and control direct fire. Using this understanding, leaders develop likely fire commands based on anticipated enemy target arrays. Leaders refine that understanding by considering how the enemy formation will change after initial engagements. Leaders must evaluate the risk of fratricide and establish controls to prevent it; these measures include designation of recognition markings, WCS, and weapons safety posture.

A-20. After identifying probable enemy locations, leaders determine the points or areas on the ground where they can focus combat power against the enemy. Their visualization of where and how the enemy will attack or defend assists them in determining enemy locations and the volume of fire against the enemy to have a decisive effect. If they intend to mass the fires of more than one subordinate element, leaders must establish the means for distributing fires.

A-21. After determining where and how they will mass and distribute fires, leaders then must orient elements so they can rapidly and accurately acquire the enemy. Leaders also can war-game the selected COA or concept of operations to determine probable requirements for refocusing and redistributing fires and to establish other required controls. During mission preparation, leaders plan and conduct rehearsals of direct fires (and of the fire control process) based on their mission analysis.

A-22. The end state of direct fire planning is an understanding of how the leaders will fight the platoon in contact, linked to the enemy's anticipated scheme of maneuver. The completed plan is disseminated, rehearsed, and refined during TLP. The completed plan takes the principles of direct fire planning into account and ensures understanding of the following:

- Required direct fire control measures.
- Where the platoon will mass fires to achieve success.
- How and where the platoon will distribute, focus, and shift direct fire.
- Engagement priorities and engagement criteria.

- Methods of control.
- Probable or potential fire commands for the platoon, sections, and squads.
- How to respond if the enemy situation deviates from the plan.

A-23. Failure to have a detailed plan for direct fires results in the platoon's inability to effectively mass fires and generally manifests in the form of Stryker crews or squads engaging the enemy as individual elements rather than part of platoon plan.

A-24. Leaders must continue to apply planning procedures and considerations throughout execution. They must be able to adjust direct fires based on a continuously updated mission analysis, combining situational awareness with the latest available intelligence products and assessments. When necessary, they also must apply direct fire SOPs, which are covered in the following discussion.

STANDARD OPERATING PROCEDURES

A-25. A well-rehearsed direct fire SOP ensures quick, predictable actions by all members of the platoon. Leaders base the various elements of the SOP on the capabilities of their forces and on anticipated conditions and situations. SOP elements should include standing means for focusing fires, distributing their effects, orienting forces, and preventing fratricide. The platoon leader should adjust the direct fire SOP whenever changes to anticipated and actual METT-TC (I) become apparent. The direct fires SOP can be standardized to include TRP numbering conventions, labeling of target arrays, establishing 'floating' TRPs, (identified during offensive operations), sectors of fire, planned WCS, anticipated threat, and battle sight ranges.

A-26. If the platoon leader does not issue other instructions, the squads begin the engagement using the SOP. Subsequently, the platoon leader can use a fire command to refocus or redistribute fires. The following paragraphs discuss specific SOP provisions for orienting forces, focusing fires, distributing fires, orienting fires, shifting fires, and preventing fratricide.

Orienting Fires

A-27. A standard means of orienting friendly forces is to assign a principle direction of fire, using a TRP, to orient each element on a probable enemy position or likely avenue of approach. To provide all-around security, the SOP can supplement the principle direction of fire with sectors using a friendly-based quadrant. The following example SOP elements illustrate the use of these techniques:

- The left flank Stryker element or squad primary direction of fire is TRP 1 until otherwise specified and is responsible for left quadrants (overlapping with center).
- The center Stryker element or squad primary direction of fire is TRP 2 until otherwise specified and is responsible for center quadrants (overlapping with left and right).
- The right flank Stryker element or squad primary direction of fire is TRP 3 until otherwise specified and is responsible for right quadrant (overlapping with center).

- Platoons should establish SOPs for offensive fire commands that orient forces during contact front, left, right, and rear while moving (see fire commands).
- Platoons should establish SOPs for bringing vehicles out of defilade in the defense to engage targets.

Focusing Fires

A-28. TRPs are a common means of focusing fire in both offensive and defensive operations. One technique is to establish a standard respective position for TRPs in relation to friendly elements and then to consistently number the TRPs, such as from left to right. This allows leaders to determine and communicate the location of the TRPs quickly. Unless tied to specific terrain features (as in the defense), these floating TRPs may be designated by SOP with TRP 1 generally at a 45-degree angle to the left front, or 10 o'clock, TRP 2 at 12 o'clock, and TRP 3 at a 45-degree angle to the right front or 2 o'clock, and those TRPs advance as the platoon advances. This is useful for rapid general orientation or reporting. Also in the offense, platoons may designate TRPs on anticipated threat positions; for example, the platoon leader may designate a TRP on a templated enemy antiarmor position covering the route of advance, and task a specific Stryker to orient on it when it comes into view.

Distributing Fires

A-29. Platoons distribute fires by establishing engagement priorities and target arrays. Leaders designate engagement priorities by using the appropriate weapon system on select targets. Example is using the Strykers for enemy light armor personnel carriers (PCs), wheeled vehicles, and heavy weapons positions (Strykers engage PCs first, then other AT or heavy weapons). Then using the dismounted Infantry to engage personnel. Direct fire control measures aid in distributing fires as well. For example, one Stryker element may be tasked to engage enemy forces between TRP 1 and 2 while the other Stryker element engages between TRP 2 and 3. The target array technique can assist in distribution by assigning specific friendly elements to engage enemy elements of approximately similar capabilities. Used in either the offense or defense, a quadrant is another useful SOP item for distributing fires.

Shifting Fires

A-30. Leaders establish standards to designate the shifting of fires. For example, the support element shifts fires as directed or in accordance with established standards, shifting fire forward of the assault element as it moves across the objective or to the flanks of targets or areas. Additionally, leaders establish triggers for shifting fires (or ceasing) based on battlefield events such as the movement of enemy or friendly forces. One standard is the use of a minimum safe line when a friendly element, such as a breach force, is moving toward an area of indirect fires. As the element approaches the minimum safe line, observers call for fires shift (or cease), allowing the friendly force to move safely in the danger area. In the defense, designating secondary sectors of fire provide a means of shifting fires if adjacent elements are knocked out of action.

Avoiding Fratricide

A-31. A primary means of minimizing fratricide risk is to establish a standing WCS. The SOP also must dictate ways of identifying friendly Stryker vehicles, squads, and other dismounted elements. Techniques include marking positions, heat source for thermal identification, combat identification panels, restricted fire lines, IR light source or detonating a smoke grenade of a designated color at the appropriate time. Minimizing the risk of fratricide in the platoon can be accomplished through C2 systems; however, this does not supplant the platoon leader's responsibility to plan for fratricide prevention.

A-32. Finally, the SOP must address the most critical requirement of fratricide prevention maintaining situational awareness. It must direct subordinate leaders to inform the platoon leader, adjacent elements, and subordinates whenever a friendly force is moving or preparing to move. Leaders must be especially cognizant of the heightened risk of fratricide when friendly elements enter or exit friendly lines, or when security elements, engineers, or other elements operate forwards of, or to the rear of, defensive positions. This information must always be disseminated to all levels.

SURFACE DANGER AREAS

A-33. Stryker Infantry rifle platoon leaders must consider the SDZs of combat vehicle weapon systems operating within their units. This information is crucial for leaders to develop safe direct fire control plans. Application of SDZs prevents fratricide and maximizes direct fire upon the enemy.

A-34. Each weapon system has a unique SDZ, which is the minimum safe distance and angles considered when operating in close proximity to weapon systems. SDZs take into consideration a round's maximum distance, lateral dispersion, and backblast (if applicable). This information allows leaders to plan for safe and effective maneuver of forces. (See DA Pam 385-63 for more information on SDZs.) When working with tanks, see ATP 3-20.15 for SDZs.

DIRECT FIRE CONTROL

A-35. The platoon leader, section and squad leaders communicate to subordinates the manner, method, and time to initiate, shift, and mass fires, and when to disengage by using direct fire control measures. Leaders control fires so they can direct the engagement of enemy systems and gain the greatest effect. Leaders use IPOE and information collection to determine the best way to use direct fire control measures to mass the effects on the enemy and reduce the risk of fratricide. (See chapter 2, and ATP 2-01.3 and FM 3-55 [respectively] for more information.)

FIRE CONTROL PROCESS

A-36. To bring direct fire against an enemy force successfully, leaders must continuously apply the steps of the fire control process. At the heart of this process are two critical actions: rapid, accurate target acquisition and the massing of fire to achieve decisive effects on the target. *Target acquisition* is the detection, identification, and location of a target in sufficient detail to permit the employment of capabilities that create the required effects (JP 3-60). Massing entails focusing fires at critical points and distributing the fires for optimum effect.

A-37. Paragraphs A-38 through A-42 examine target acquisition and massing of fires using these basic steps of the fire control process (see ATP 3-21.11 for detailed description):

- Identify probable enemy locations and determine the enemy scheme of maneuver.
- Determine where and how to mass fires.
- Orient forces to speed target acquisition.
- Shift fires to refocus or redistribute.

Identify Probable Enemy Locations and Determine the Enemy Scheme of Maneuver

A-38. Leaders plan and execute direct fires based on their mission analysis. An essential part of this process is the analysis of the terrain and enemy force, which aids the leader in visualizing how the enemy will attack or defend a particular piece of terrain. A defending enemy's defensive positions or an attacking enemy's support positions are normally driven by intervisibility. Typically, there are limited points on a piece of terrain providing both good fields of fire and adequate cover for a defender. Similarly, an attacking enemy will have only a limited selection of avenues of approach providing adequate cover and concealment.

A-39. Combined with available terrain analysis products and intelligence products and assessments, an understanding of the effects of a specific piece of terrain on maneuver (see figure A-1 on page 326) will assist leaders in identifying probable enemy locations and likely avenues of approach both before and during the fight. Leaders may use all the following products or techniques in developing and updating the analysis:

- An enemy SITEMP based on the analysis of terrain and enemy.
- A spot or contact report of enemy locations and activities.
- Information collection within the assigned area.

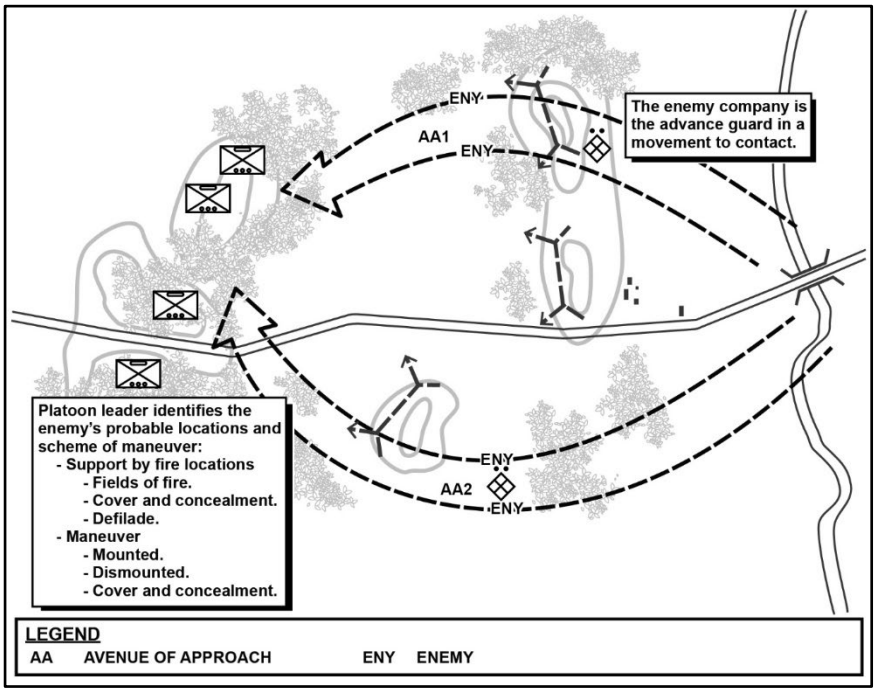


Figure A-1. Identifying probable enemy locations and determining enemy scheme of maneuver

Determine Where and How to Mass Fires

A-40. To achieve decisive effects, friendly forces must mass their fires. (See figure A-2.) Massing requires leaders to focus the fires of subordinate elements and to distribute the effects of the fires. Based on their mission analysis and their concept of operations, leaders identify points where they want to, or must, focus the unit's fires. Most often, these are locations they have identified as probable enemy positions or points along likely avenues of approach where the unit can mass fires. Because subordinate elements may not initially be oriented on the point where leaders want to mass fires, they may issue a fire command to focus the fires. At the same time, leaders must use direct fire control measures to distribute the fires of subordinate elements, which now are focused on the same point.

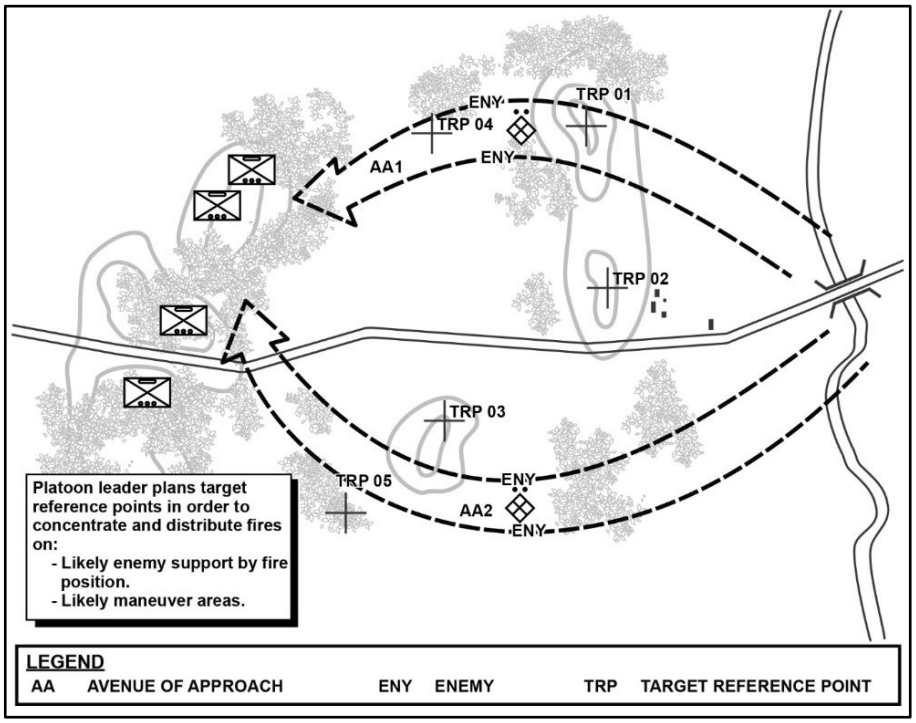


Figure A-2. Determining where and how to mass fires

Orient Forces to Speed Target Acquisition

A-41. To engage the enemy with direct fires, friendly forces must rapidly and accurately acquire enemy elements. (See figure A-3 on page 328.) Orienting friendly forces on probable enemy locations and on likely avenues of approach will speed target acquisition. Failure to orient subordinate elements will result in slower acquisition; this greatly increases the likelihood enemy forces will be able to engage first. The clock direction orientation method, which is prescribed in most unit tactical SOPs, is good for achieving all-around security and works well for dismounted Infantry. However, due to the spacing of Strykers, the clock method is not the most accurate way to orient friendly forces to the enemy. To achieve this critical orientation, leaders typically designate TRPs on or near probable enemy locations and avenues of approach; they orient subordinate elements using directions of fire or sectors of fire. Normally, Stryker gunners and dismounted Infantry scan the primary designated direction or sector, while other selected Infantry and crewmembers observe alternate sectors or areas to provide all-around security.

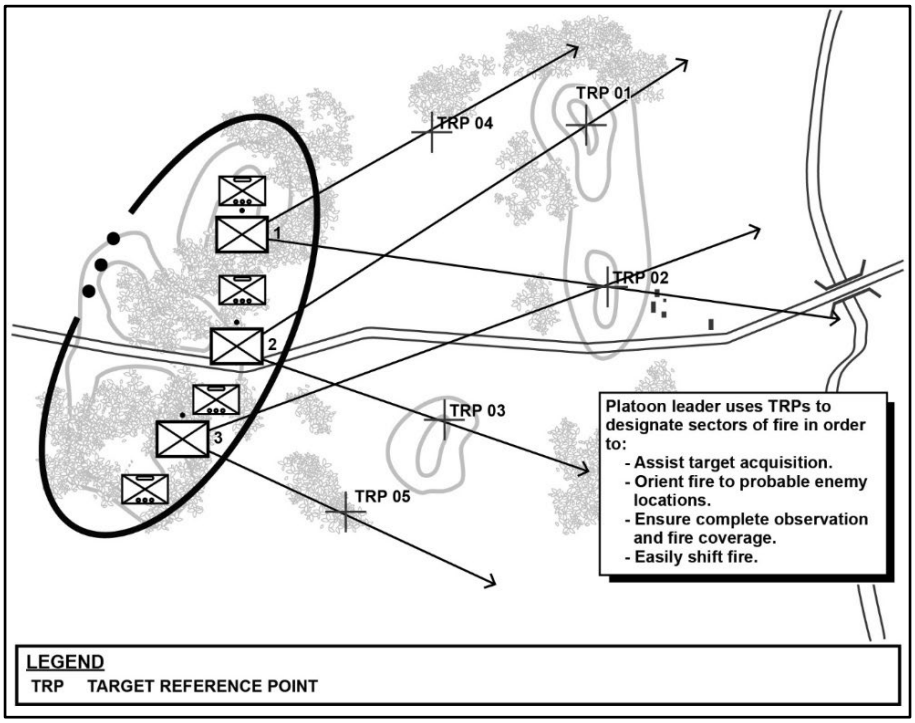


Figure A-3. Orient forces to speed target acquisition

Shift Fires to Refocus and Redistribute

A-42. As the engagement proceeds, leaders must shift fire to refocus and redistribute the effects based on their evolving mission analysis. Situational awareness becomes an essential part of the fire control process at this point. Leaders apply the same techniques and considerations, including fire control measures they used earlier to focus and distribute fires (see figure A-4). A variety of situations will dictate shifting of fires, including the following:

- Appearance of an enemy force posing a greater threat than the one currently being engaged.
- Extensive attrition of the enemy force being engaged, creating the possibility of target overkill.
- Attrition of friendly elements engaging the enemy force.
- Change in the ammunition status of the friendly elements engaging the enemy force.
- Maneuver of enemy or friendly forces resulting in terrain masking.
- Increased fratricide risk as a maneuvering friendly element closes with the enemy force being engaged.

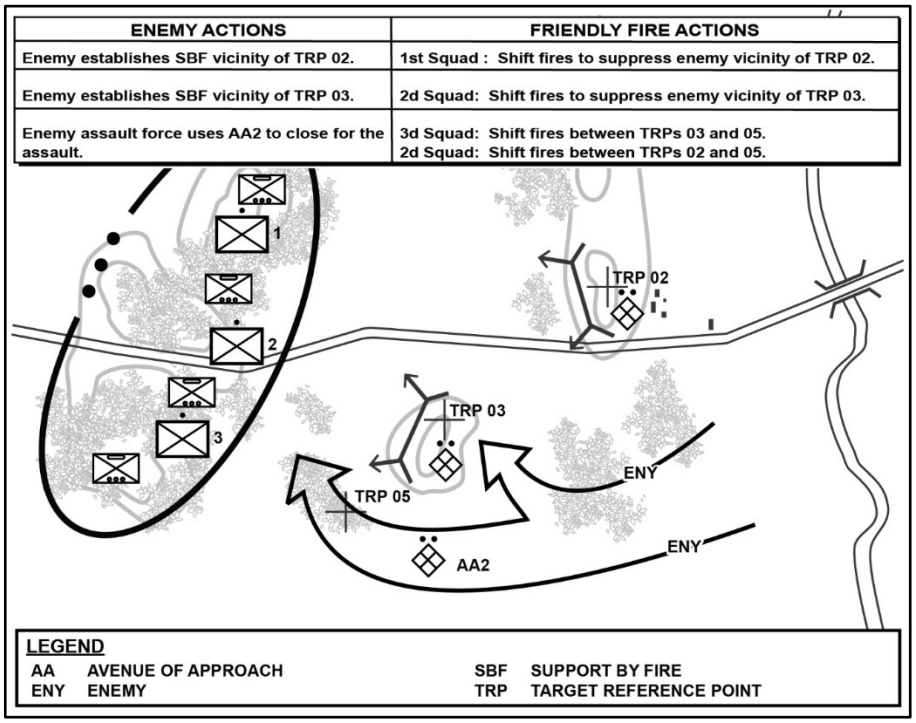


Figure A-4. Focus fires to refocus and redistribute

FIRE CONTROL MEASURES

A-43. Fire control measures are the framework on which the platoon leader builds the plan, and by which the platoon's leaders control direct fires (see table A-1 on page 330). Application of these concepts, procedures, and techniques assist the unit in acquiring the enemy, focusing fires on the enemy, and preventing fratricide and friendly fire. At the same time no single measure is sufficient to control fires. At platoon level fire control measures will be effective only if the entire unit has a common understanding of what they mean and how to employ them. Paragraphs A-44 through A-78 focus on the various fire control measures employed by the Stryker Infantry rifle platoon. Standard direct fire control measures are terrain-based, and threat based (see ATP 3-21.11 for more information).

Table A-1. Common fire control measures

Terrain-Based Fire Control Measures	*Threat-Based Fire Control Measures*
Target reference point	Rules of engagement
Engagement area	Weapons ready posture
Sector of fire	Weapons safety posture
Direction of fire	Weapons control status
Terrain-based quadrant	Engagement priorities
Friendly-based quadrant	Trigger
Maximum engagement line; restrictive fire line; final protective line	Engagement techniques; fire patterns; target array

Terrain-Based Fire Control Measures

A-44. Leaders use terrain-based fire control measures to focus and control fires on a particular point, line, or area rather than on a specific enemy element. The following paragraphs describe the tactics, techniques, and procedures associated with this type of control measure.

Target Reference Point

A-45. A *target reference point* is a predetermined point of reference, normally a permanent structure or terrain feature than can be used when describing a target location (JP 3-09.3). A TRP is an easily recognizable point on the ground (either natural or man-made) used to initiate, distribute, and control direct fire. In addition, when leaders designate TRPs as indirect fire targets, they can use the TRPs when calling for and adjusting indirect fires. Leaders designate TRPs at probable enemy locations and along likely avenues of approach. TRPs should also serve to delineate left or right limits. These points can be natural or artificial but should be fixed and relatively permanent. A TRP can be an established site (for example, a hill or a building), or an impromptu feature designated as a TRP on the spot (for example, a burning enemy vehicle or smoke generated by an artillery round). Friendly units can construct markers to serve as TRPs. (See figure A-5.) Ideally, TRPs should be visible in three observation modes (unaided, light intensifying, and thermal) so that all forces can see them, and constructed TRPs should have directional markings so only friendly forces can see the TRP. TRPs should have a numbering system so units don not confuse who established and owns the TRP. Units should have an established SOP that is clearly understood by all to avoid using the wrong TRP. Examples of TRPs include the following features and objects:

- Prominent hill mass.
- Distinctive building.
- Observable enemy position.
- Destroyed vehicle.
- Ground-burst illumination.
- Thermal panels or battlefield recognition markers.

- Reverse polarity markers or numbers.
- Engineer pickets with chemical light sticks (IR), VS-17 (daylight), and 9-volt battery (thermal) inside the U-shaped picket, with the U-shape toward friendly forces.
- Ammunition cans filled with sand and diesel or charcoal and lit on fire.
- Smoke round for immediate engagements only, which is the least preferred method.

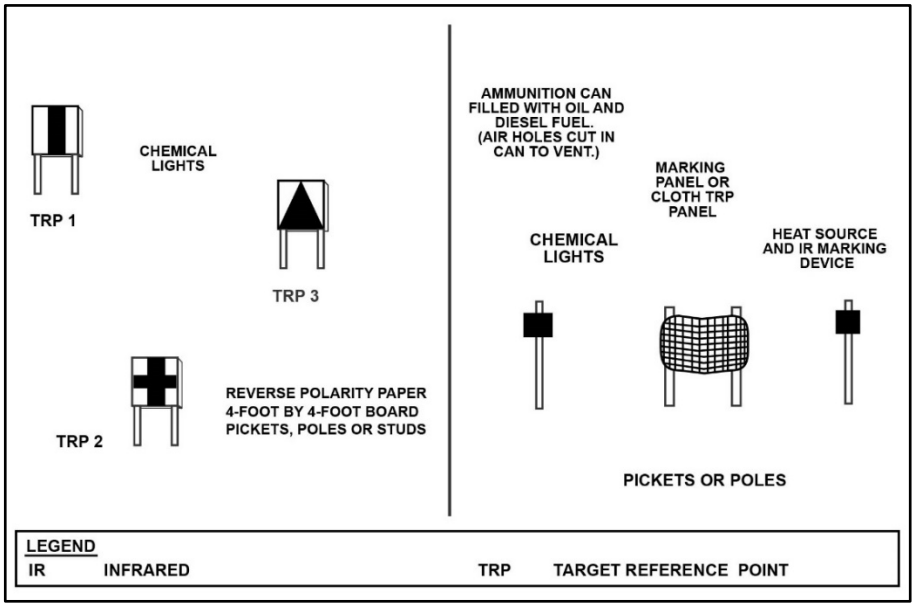


Figure A-5. Constructed target reference point, example

Engagement Area

A-46. An EA is where the leader intends to contain and destroy an enemy force. The size and shape of the EA is determined by the degree of relatively unobstructed intervisibility available to the unit's weapons systems in their firing positions and by the maximum range of those weapons. Typically, platoon leaders delineate responsibility within the EA by assigning each squad and Stryker element both primary and alternate sectors of fire. They may further refine the EA with additional measures such as a quadrant or a target array. The far side of the EA will generally be designated as the maximum engagement line. Other distinct lines within the EA may serve as trigger lines. Portions of the nearside boundary of the EA will typically be designated as the FPL (see chapter 4 section V for a detailed discussion).

Sector of Fire

A-47. A *sector of fire* is that area assigned to a unit or weapon system in which it will engage the enemy according to the established engagement priorities (FM 3-90). Platoon leaders assign primary and secondary sectors of fire to squad leaders, Stryker VCs, and key weapon systems. Squad leaders assign sectors of fire for individual

positions and ensure they have interlocking fire and are tied in with the platoon plan. When assigning primary and secondary sectors of fire, leaders ensure individual soldiers understand when to use primary sector or when to transition to secondary sector. Fire shifts to the secondary sector on order or when there are no targets in the primary sector, or when the movement of another friendly element needs covering. Leaders must also assign sectors of fire for alternate and supplementary positions. They may limit the sector of fire of an element or weapon to prevent accidental engagement of an adjacent unit. In assigning sectors of fire, platoon leaders and subordinate leaders consider the number and types of weapons available. Leaders consider acquisition system type and field of view in determining the width of a sector of fire. For example, while unaided vision has a wide field of view, its ability to detect and identify targets at range and in limited-visibility conditions is restricted. Conversely, most fire control acquisitions systems have greater detection and identification ranges than the unaided eye, but their field of view is narrow. Means of designating sectors of fire include the following:

- TRPs.
- Clock direction.
- Fire patterns.
- Terrain-based quadrants.
- Friendly-based quadrants.
- Azimuth or cardinal direction.

Direction of Fire

A-48. A direction of fire is an orientation or point used to assign responsibility for a particular area on the battlefield that must be covered by direct fire. Leaders designate directions of fire for the purpose of acquisition or engagement by subordinate elements, crew-served weapons, or individual Soldiers. Direction of fire is most employed when assigning sectors of fire would be difficult or impossible because of limited time, insufficient reference points, or when the width of the sector is narrow, such as a trail exiting the woods, a gap between two buildings, or other focused points. A principle direction of fire may also serve as the left or right limit to a sector of fire. Means of designating a direction of fire include the following:

- Leader description or orientation.
- Closest TRP.
- Clock direction.
- Azimuth or cardinal direction.
- Tracer on target.
- IR laser pointer.
- Grenadier obscuration round.

Quadrants

A-49. Quadrants are subdivisions of an area created by superimposing an imaginary pair of perpendicular axes over the terrain to create four separate areas or sectors. Quadrants are established on the terrain, friendly forces, or on the enemy formation. The method of quadrant numbering is established in the unit SOP; however, care must be taken to avoid confusion when quadrants based on terrain, friendly forces, and enemy formations

are used simultaneously. This issue can become even more complex if multiple echelons designate quadrants.

Terrain-Based Quadrant

A-50. A terrain-based quadrant entails the use of a TRP, either existing or constructed, to designate the center point of the axes dividing the area into four quadrants. This technique can be employed in both the offense and defense. In either case, the platoon leader will designate the center of the quadrant by use of a known point or otherwise designating a TRP. In the defense, the platoon leader may physically establish the TRP, while in the offense, the platoon leader will have to plan that TRP by designating a fixed point on the objective prior to arriving. If there are no suitable TRPs, the platoon leader may use a ground burst illumination round, an obscurant marking round (smoke), or a fire ignited by incendiary or tracer rounds. The axes delineating the quadrants run parallel and perpendicular to the direction of movement. In the defense, platoon leaders designate the center of the quadrant using an existing or constructed TRP.

A-51. In examples shown in figure A-6, quadrants are marked using the letter Q and a number (Q1 to Q4); quadrant numbers are in the same relative positions as on military map sheets (from Q1 as the upper left-hand quadrant clockwise to Q4 as the lower left-hand quadrant).

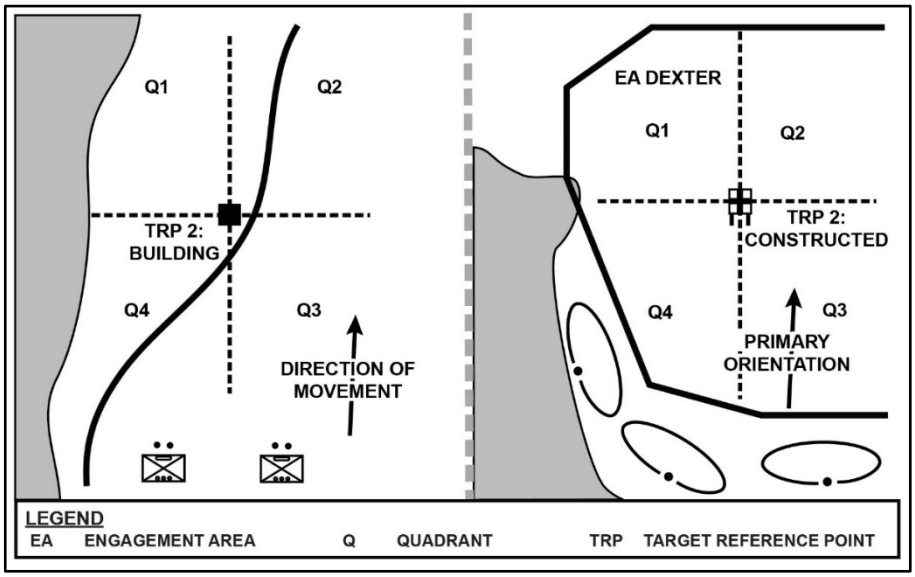


Figure A-6. Terrain-based quadrant

Friendly-Based Quadrant

A-52. The friendly-based quadrant technique entails superimposing quadrants over the unit's formation. The center point is based on the center of the formation, and axes run parallel and perpendicular to the general direction of travel. Much like floating TRPs the quadrant moves with the formation as it advances. For rapid orientation, the friendly quadrant technique may be better than the clock direction method; because different

elements of a large formation rarely are oriented in the same exact direction and the relative dispersion of friendly forces causes parallax to the target. The friendly-based quadrant is effective at designating sectors of scan and fire in 360 degrees around the platoon formation. However, the platoon may be designated to provide direct fire into a single portion of the company's quadrant, such as the A1 (front left) or B1 (rear left) in the offense. Figure A-7 illustrates use of friendly-based quadrants.

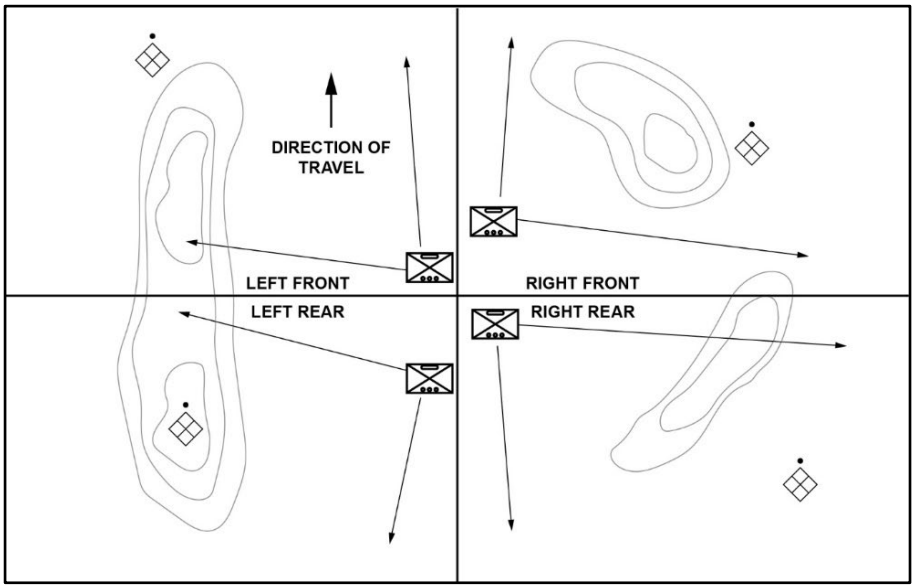


Figure A-7. Friendly-based quadrant

Maximum Engagement Line

A-53. Maximum engagement line is the linear depiction of the farthest limit of effective fire for a weapon or unit. This line is determined by both the weapons, unit's maximum effective range and by the effects of terrain. For example, slope, vegetation, structures, and other features provide cover and concealment preventing the weapon from engaging to the maximum effective range. A maximum engagement line serves several purposes. Platoon leaders can use it to prevent crews from engaging beyond the maximum effective range, to define criteria of the establishment of triggers, and to delineate the maximum extent of sectors on the assigned area sketch.

Restrictive Fire Line

A-54. A *restrictive fire line* is a specific boundary established between converging, friendly surface forces that prohibits fires or their effects from crossing (JP 3-09). The RFL is a linear fire control measure beyond which engagement is prohibited without coordination. In the offense, platoon leaders can designate an RFL to prevent a base-of-fire element from firing into the area where an assaulting element is maneuvering. This technique is particularly important when Strykers support the maneuver of Infantry squads. In the defense, platoon leaders may establish an RFL to prevent the unit from

engaging a friendly Infantry squad positioned in restricted terrain on the flank of an avenue of approach.

Final Protective Line

A-55. *Final protective line* is a selected line of fire where an enemy assault is to be checked by interlocking fire from all available weapons and obstacles (FM 3-90). The unit reinforces this line with protective obstacles and with FPFs whenever possible. Initiation of the FPFs is the signal for elements, crews, and individual Soldiers to shift fire to their assigned portion of the FPL. They spare no ammunition in repelling the enemy assault, a particular concern for heavy weapons systems and automatic weapons.

Threat-Based Fire Control Measures

A-56. Platoon leaders use threat-based fire control measures to focus and control fires by directing their units to engage a specific enemy element rather than to fire on a point or area. The following paragraphs describe the tactics, techniques, and procedures associated with this type of control measure.

Rules of Engagement

A-57. ROE specify the circumstances and limitations under which forces may engage; they include definitions of combatant and noncombatant elements and prescribe the treatment of noncombatants. Factors influencing ROE are national command policy, mission, commander's intent, the operating environment, and the law of armed conflict. ROE always recognize a Soldier's right of self-defense, but at the same time, they clearly define circumstances in which the Soldier may fire. ROE may provide limitations in terms of proportionality, the use of lethal force, a requirement for hostile acts or of hostile intent, positive identification, the caliber or effect of friendly weapons, or limitations on what infrastructure may be targeted.

Weapons Ready Posture

A-58. The weapons ready posture is a means by which leaders use their estimate of the situation to specify the ammunition and range for the most probable anticipated engagement. The ammunition selection is dependent on the target type, but the leader may adjust it based on engagement priorities, desired effects, and effective range. Range selection is dependent on the anticipated engagement range; it is affected by terrain intervisibility, weather, and light conditions. The platoon weapons ready posture affects the types and quantities of ammunition loaded in ready boxes, stowed in ready racks, and carried by Infantry squads. Examples of weapons ready posture include the following:

- For Strykers, weapons ready posture covers selected ammunition, rate of fire, designated target, and range.
- For Infantry squads, weapons ready posture is the selected ammunition and indexed range for individual and crew served weapons (for example, an M320 grenadier whose most likely engagement is to cover dead space at 200 meters), might load HE dual-purpose and set 200 meters on the quadrant sight.
- To prepare for an engagement in a wooded area where engagement ranges are extremely short, an antiarmor specialist might plan to engage with an M136 AT4-series rocket instead of a Javelin CCMS.

Note. The M3 MAAWS, when replacing the Javelin CCMS, may provide the platoon with a better antiarmor and antipersonnel capability against enemy personnel, field fortifications, and enemy vehicles in a wooded areas where engagement ranges are decreased.

Weapons Safety Posture

A-59. Weapons safety posture is an ammunition handling instruction enabling platoon leaders to control the safety of their units' weapons precisely. Subordinate leaders' supervision of the weapons safety posture, as well as Soldiers' adherence to it, minimizes the risk of accidental discharge and fratricide. Table A-2 outlines procedures and considerations for the platoon when using the four weapons safety postures, listed in ascending order of restrictiveness:

- Green—fully safe.
- Amber—substantially safe.
- Red—marginally safe.
- Black—not safe.

A-60. When setting and adjusting the weapons safety posture, platoon leaders must weigh the desire to prevent accidental discharges against the requirement for immediate action based on the enemy threat. When setting and adjusting the weapons safety status, the platoon leader must weigh the desire to prevent accidental discharges against the requirement for immediate action based on the enemy threat. If the threat of direct contact is high, for example, the platoon leader could establish the weapons safety status as, Black. If the requirement for action is less immediate, the decision to lower the status to Red or Green might be given. Additionally, the platoon leader can designate different weapons safety status for different elements of the unit. For example, when a Styker is in an attack position, with the VC/gunner ready to fire, the weapons posture is black, while the Infantry squads riding in the Stryker remain red (see table A-2).

Table A-2. Weapon safety posture

Weapons Safety Status	*Stryker Weapons and Ammunition*	*Infantry Squad Weapons and Ammunition*
Green	M2 and MK19: belt out of weapon, no round in chamber, bolt forward, weapon on safe.	Rifle and carbine: weapon clear, no ammunition present, weapon on safe. Machine gun: no ammunition present, chamber clear, weapon on safe. Grenade launcher: no round in weapon, weapon on safe.
Amber	M2 and MK19: belt in weapon, no round in chamber, bolt forward, weapon on safe.	Rifle and carbine: bolt forward, chamber empty, magazine in weapon, weapon on safe. Machine gun: belt in weapon, no round in chamber, bolt forward, weapon on safe. Grenade launcher: no round in weapon, weapon on safe.
Red	M2 and MK19: belt in weapon, round in chamber, bolt forward, weapon on safe.	Rifle and carbine: round in chamber, magazine in weapon, weapon on safe. Machine gun: belt in weapon, bolt to rear, weapon on safe. Grenade launcher: round in chamber, weapon on safe.
Black	Black status is initiated by the vehicle commander giving the command of execution in fire command. Weapon system mechanical and electrical safe is armed, firer's finger is on the trigger, ready to fire the weapon system. Once firing is complete, weapon is returned to red status.	Not Safe: All squad weapons systems: weapon is on fire, firer's finger on the trigger, and in the process of engaging the threat. Once firing is complete weapon is returned to red status.

Legend: M2–50 caliber machine gun, MK19–40-mm grenade machine gun, mm–millimeter

Weapons Control Status

A-61. The three levels of WCS outline the conditions, based on target identification criteria, under which friendly elements can engage. The commander sets and adjusts the WCS based on friendly and enemy disposition, and the clarity of the situation. The higher the probability of fratricide, the more restrictive the WCS. The three levels, in descending order of restrictiveness, are—

- WEAPONS HOLD—engage only if engaged or ordered to engage.
- WEAPONS TIGHT—engage only targets that are positively identified as enemy.
- WEAPONS FREE—engage any targets that are not positively identified as friendly (subject to the ROE and law of armed conflict).

A-62. As an example, the platoon leader may establish the WCS as WEAPONS HOLD, when friendly forces are conducting a passage of lines. By maintaining situational understanding of owned elements and adjacent friendly forces, however, the WCS may be lowered. In such a case, WEAPONS FREE status may be set when the platoon leader knows there are no friendly elements in the vicinity of the engagement. This permits elements to engage targets at extended ranges even though it is difficult to distinguish targets accurately at ranges beyond 2,000 meters under battlefield conditions. The WCS directly applies to the air threat as well. The platoon's higher headquarters may direct WCS specifically for engagement of aircraft based on the anticipated likelihood of aerial attack. The platoon leader must clearly differentiate between a general WCS and WCS specifically for air threat.

Engagement Priorities

A-63. An *engagement priority* identifies the order in which the unit engages enemy systems or functions (FM 3-90). This entails the sequential ordering of targets to be engaged and can serve one or more of the following critical fire control functions:

- Prioritize high-priority targets:
  - In conjunction with the planned concept of the operation, the platoon leader determines which target types provide the greatest payoff, and the platoon leader then can set these as a unit engagement priority.
  - A *priority target* is a target, based on either time or importance, on which deliver of fires takes precedence over all fires for the designated firing unit of element (FM 3-09).
  - For example, the platoon leader may decide that destroying enemy engineer assets is the best way to prevent the enemy from breaching an obstacle.
- Employ the best weapons for the target:
  - Establishing engagement priorities for specific friendly systems increases the effectiveness with which the unit employs its weapons.
  - As an example, the engagement priority for the platoon Strykers could be PCs and light armor first, then wheeled vehicles and Infantry squads, this would decrease the chance that the platoon's lighter systems will have to engage enemy armored vehicles.
- Distribute the unit's fires:
  - Establishing different priorities for similar friendly systems helps to prevent overkill and achieve distribution of fires.
  - For example, platoon leaders may designate the enemy's tanks as the initial priority for squad AT systems, while making the enemy's PCs the priority for the Strykers.
- Control direct fire:
  - When assigning priorities of fire, the platoon leader must make specific decisions linked to other engagement criteria.

- For example, if the priority of fires is breaching assets, but those assets all appear in one Stryker elements sector of fire, the platoon leader can choose to have all Strykers mass fires in that sector or direct the Stryker elements not engaging priority targets to engage other priority targets in another sector.
- The ability to shift fire via direct fire control measures is essential to enable massing.

Trigger Line

A-64. A *trigger line* is a phase line located on identifiable terrain used to initiate and mass fires into an engagement area at a predetermined range (FM 3-90). Platoon leaders can designate one trigger line for all weapon systems or separate trigger lines for each weapon or type of weapon system. Platoon leaders specify the engagement criteria for this situation. The criteria may be either time or event driven, such as when a certain number or certain types of vehicles cross the trigger line before initiating engagement. Platoon leaders can use a time-based fires delivery method or a geography-based fires delivery. Leaders may reserve the authority to initiate an engagement by signaling or giving the command to fire. The trigger line can be any natural or artificial linear feature, such as a road, ridgeline, or stream. It may be a line perpendicular to the unit's orientation, delineated by one or more reference points. When developing trigger lines, the platoon leader considers both weapons actual ranges, crew proficiency, the impact of terrain and maximum engagement lines.

Engagement Techniques

A-65. Engagement techniques are effects-oriented fire distribution measures. The following engagement techniques are common in platoon operations:

- Point fire.
- Area fire.
- Simultaneous.
- Alternating fire.
- Observed fire.
- Sequential fire.
- Time of suppression.
- Reconnaissance by fire.

A-66. Point fire entails concentrating the effects of a unit's fire against a specific, identified target such as a vehicle, machine gun bunker, or ATGM position. When leaders direct point fire, all unit weapons engage the target, firing until it is destroyed, or the required time of suppression has expired. Employing converging fires from dispersed positions makes point fire more effective because the target is engaged from multiple directions. The unit may initiate an engagement using point fire against the most dangerous threat, and revert to area fire against other, less threatening point targets. The platoon may also direct a subordinate element such as the Stryker element or the Infantry squads to employ point fire while the other elements continue to deliver area fires.

A-67. Area fire involves distributing the effects of a unit's fire over an area in which enemy positions are numerous or are not obvious. If the area is large, leaders assign

sectors of fire to subordinate elements using a terrain-based distribution method such as the quadrant technique. Typically, the primary purpose of the area fire is suppression; however, sustaining suppression requires judicious control of the rate of fire.

A-68. Units employ simultaneous fire to rapidly mass the effects of their fires or to gain fire superiority. For example, a unit may initiate an SBF operation with simultaneous fire, then revert to alternating or sequential fire to maintain suppression. Simultaneous fire is employed to negate the low probability of the hit and kill of certain antiarmor weapons. As an example, a Stryker Infantry rifle platoon may employ simultaneous fire with its weapons systems to ensure rapid destruction of the enemy that is engaging a friendly position. Simultaneous fire should be employed with a designated fire pattern to reduce the likelihood of overkill. Once a platoon establishes fire superiority, or has maximized the effects of massed fires, the platoon should transition to alternating fires.

A-69. Alternating fire consists of pairs of elements continuously engage the same point or area target one at a time. For example, a Stryker Infantry rifle company may alternate fires of two platoons; a Stryker platoon may alternate the fires of its squads and Strykers, or a Stryker platoon may alternate the fires of a pair of medium machine guns. Alternating fire permits the unit to maintain suppression for a longer duration than does volley fire; it also forces the enemy to acquire and engage alternating points of fire. Alternating fires is a good technique to maintain fires on an enemy force while allowing subordinate elements to take cover; displace to alternate, supplementary, or subsequent firing positions; or upload or cross-level ammunition under cover. The key to successful alternating fires is that it is executed under the leader's control.

A-70. Observed fire is usually used when a platoon is in protected positions with engagement ranges more than 2,500 meters. Observed fires can be employed by using vehicles with laser range finders to establish range for weapons systems without range finding capability or vehicles with inoperable laser range finders that are firing in degraded mode. The platoon leader directs one element to engage. The remaining elements observe fires and prepare to engage on order in case the engaging element consistently misses its targets, experiences a malfunction, or runs low on ammunition. Observed fire allows for mutual observation and assistance while protecting the location of the observing elements. In observed fire, the observing element announces the range, or applied corrections to the range allowing the engaging element to immediately apply effective fire.

A-71. Sequential fire entails the subordinate elements of a unit engaging the same point or area target one after another in an arranged sequence. Sequential fire also can help to prevent the waste of ammunition, as when a platoon waits to see the effects of the first Javelin CCMS before firing another. Additionally, sequential fire permits elements already have fired to pass on information they have learned from the engagement. An example would be a Soldier who missed an enemy armored fighting vehicle with M136 AT4-series fires passing range and lead information to the next Soldier preparing to engage the enemy armored fighting vehicle with an M136 AT4-series.

A-72. Time of suppression is the period, specified by the platoon leader, during which an enemy position or force is required to be suppressed. Suppression time is typically dependent on the time it will take a supported element to maneuver. Usually, a unit suppresses an enemy position using the sustained rate of fire of its automatic weapons. In planning for sustained suppression, a leader must consider several factors: the

estimated time of suppression, the size of the area being suppressed, the type of enemy force to be suppressed, range to the target, rates of fire, and available ammunition quantities.

A-73. *Reconnaissance by fire* is a technique in which a unit fires on a suspected enemy position (FM 3-90). This response permits platoon leaders and their subordinate leaders to make target acquisition and to mass fires against the enemy element. Typically, platoon leaders direct a subordinate element to conduct the reconnaissance by fire. For example, they may direct an overwatching Bradley fighting vehicle section and squads to conduct the reconnaissance by fire against a probable enemy position before initiating movement by a bounding element.

Fire Patterns

A-74. Fire patterns are a threat-based measure designed to distribute the fires of a unit simultaneously among multiple, similar targets. They are most often used by platoons to distribute fires across an enemy formation. Leaders designate and adjust fire patterns based on terrain and the anticipated enemy formation. (See figure A-8 on page 342.) The fire patterns are as follows (see ATP 3-21.8 for more information on dismounted Infantry fire patterns):

- Frontal fires.
- Cross fires.
- Depth fires.

A-75. Leaders may initiate frontal fire when targets are arrayed in front of the unit in a lateral configuration. Weapons systems engage targets to their respective fronts. For example, the left flank weapon engages the left-most target; the right flank weapon engages the right-most target. As weapons systems destroy targets, weapons shift fire toward the center of the enemy formation from near to far or far to near as appropriate. With a mounted element, the Strykers on the far left and right flanks initiate fire at the outer edge of the visible enemy and work inwards, while the Strykers in the middle start at the center of the visible enemy and work outwards.

A-76. Leaders initiate crossfire when targets are arrayed laterally across the unit's front in a manner that permits diagonal fires at the enemy's flank, or when obstructions prevent unit weapons from firing frontally. Right flank weapons engage the left-most targets; left flank weapons engage the right-most targets. Firing diagonally across an EA provides more flank shots, thus increasing the chance of kills; it reduces the possibility of the enemy detecting friendly elements should the enemy continue to move forward. As friendly elements destroy targets, weapons shift fire toward the center of the enemy formation. Like the frontal pattern, the Strykers on the left and right flanks engage the farthest visible target and work inwards, while the Strykers in the middle engage the opposite center and work outwards.

A-77. Leaders initiate depth fire when enemy targets disperse in-depth, perpendicular to the unit. Center weapons engage the closest targets; flank weapons engage deeper targets. As the unit destroys targets, weapons shift fire toward the center of the enemy formation.

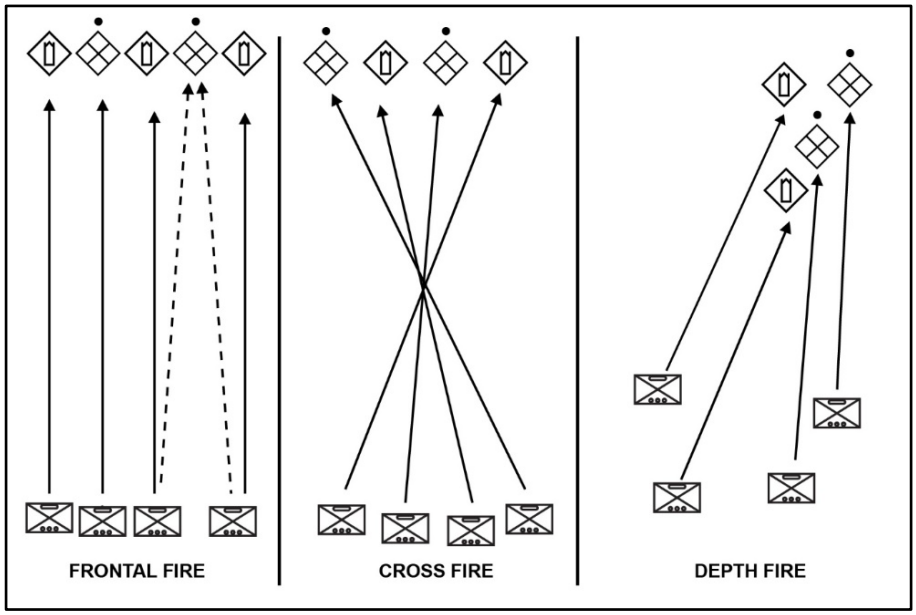


Figure A-8. Stryker fire patterns

Target Array

A-78. Target array enables leaders to distribute fires when an enemy force is concentrated, and terrain-based controls are inadequate. Forces create this threat-based distribution measure by superimposing a simple geometric pattern on the enemy formation. Unlike the quadrant, the leader may designate other options such as near/far, left/right, or near/far left/far right. Soldiers center the pattern on the center of the visible enemy formation, with the axes running parallel and perpendicular to the enemy's direction of travel. The target array fire control measure is effective against an enemy with a well-structured organization and standardized doctrine. The target array can be pre-planned in either the defense or offense at a point where the leader anticipates significant focused enemy contact may emerge. The leader may also designate a target array on any emerging threat without prior planning by simply designating the location and directing subordinate elements to engage targets within a directed portion of the array. The examples in figure A-9 illustrate the target array technique.

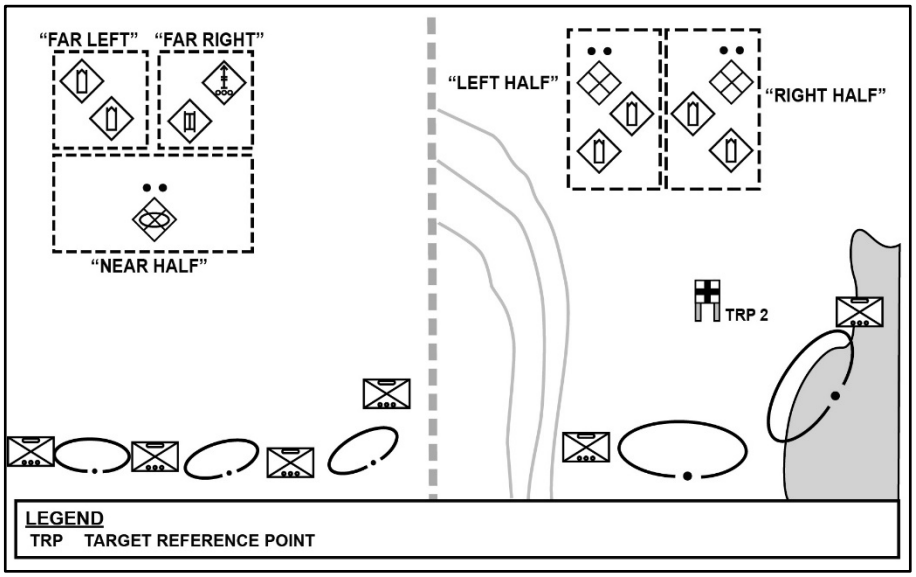


Figure A-9. Target array, example

FIRE COMMANDS

A-79. Fire commands are oral orders issued by leaders to focus and distribute fires as required to achieve decisive effects against the enemy. The nine elements of fire commands are: alert, weapon/ammunition, description (or target description), direction/elevation, range, method, control(s), execution, and termination. These nine elements provide all the firing information needed to complete the entire engagement process. They assist in target detection, correct and positive identification, facilitate fratricide prevention, and ensure the firing element's safety. Fire commands (for Soldiers, leaders, crews, teams, and small units) include these elements, which are discussed in paragraphs A-80 to A-88:

- Alert.
- Weapon or ammunition (optional).
- Description.
- Direction or elevation.
- Range (optional).
- Method.
- Control(s) (optional).
- Execution.
- Termination.

Alert

A-80. The alert specifies the elements directed to fire. It does not require leaders initiating the command to identify the unit. Examples of the alert element (call signs and code words based on unit SOP) include the following:

- GUIDONS (all subordinate elements).
- RED (1st squad only).

Weapons or Ammunition (Optional)

A-81. This element identifies the weapon and ammunition to be employed by the alerted elements. Leaders may designate the type and number of rounds to limit expenditure of ammunition. Examples of this element include the following:

- JAVELIN.
- TOP ATTACK or DIRECT ATTACK.

Target Description

A-82. Target description designates which enemy elements are to be engaged. Leaders may use the description to focus fires or achieve distribution. Examples of target description include the following:

- TROOPS IN TRENCH.
- BUNKER.
- ARMORED PERSONNEL CARRIER.

Direction

A-83. This element identifies the location of the target. There are several ways to designate the location of target, including the following:

- Closest TRP. Example: TRP 13.
- Clock direction. Example: ONE O'CLOCK.
- Terrain quadrant. Example: QUADRANT ONE.
- Friendly quadrant. Example: LEFT FRONT.
- Target array. Example: NEAR/FAR.
- Tracer on target. Example: ON MY TRACER.
- Laser pointer. Example: ON MY POINTER.

Range (Optional)

A-84. The range element identifies the distance to the target. Announcing range is not necessary for systems ranging finder-equipped or employing command-guided or self-guided munitions. For systems requiring manual range settings, leaders have a variety of means for determining range, including the following-

- Predetermined ranges to TRPs or phase lines.
- Handheld range finders.
- Stadia method.
- Mil reticle.

Method

A-85. Method describes to the firer the way or method the target(s) are engaged. Leaders use this element when presented with multiple targets to identify which target to engage first. For collective fire commands, this can also indicate the fire pattern used to engage the threats. Multiple methods may be used in one fire command:

- RED 1-1: ENGAGE ARMOR.
- WHITE 1-1: ENGAGE PC.
- BLUE 1: ENGAGE TROOPS.

Control (Optional)

A-86. The platoon leader may use this optional element to direct desired target effects, distribution methods, or engagement techniques. Provides the leader the ability to manage ammunition, friendly exposure to the threat, reinforce the ROE, or provide conditions that are met before engaging the threat. Multiple controls may be used within the fire command, as necessary. Controls in a collective fire command can delegate the authority to give the command of execution to an authorized subordinate leader. Subordinate leaders may include the control element to supplement the platoon leader's instructions and achieve distribution. Examples of information specified in the control element include the following:

- Target array. Example: FRONT HALF.
- Fire pattern. Example: FRONTAL.
- Terrain quadrant. Example: QUADRANT ONE.
- Engagement priorities. Example: M320/SHOULDER-LAUNCHED MUNITIONS ENGAGE BUNKERS; MACHINE GUNS ENGAGE TROOPS.
- Engagement technique. Example: VOLLEY.
- Target effect. Example: AREA.

Execution

A-87. The execution element specifies when fires will be initiated. The platoon leader may wish to engage immediately, delay initiation, or delegate authority to engage. Examples of this element include the following:

- FIRE.
- AT MY COMMAND.
- AT YOUR COMMAND.
- AT PHASE LINE ORANGE.

Termination

A-88. Termination is the ninth element of the fire command. It informs the Soldiers to stop firing all weapons and systems in their control. All fire commands are terminated. This command may be given by any Soldier or crewmember for any reason, but typically safety.

A-89. The leader that issued the fire command is required to terminate the fire command at the completion of every engagement, regardless of another Soldier or crewmember

announcing it. All fire commands, regardless of type or who issued them, are terminated by the announcement of CEASE FIRE (see figure A-10 for an example fire command). Some examples include the following:

- CEASE FIRE.
- CEASE FIRE SHIFT.
- Platoon leader issues fire command to initiate an ambush, a squad leader may tell a crew served weapon to CEASE FIRE prior to the assault.
- A Stryker VC may issue fire command, CEASE FIRE.

Combined Command

A-90. Stryker Infantry rifle platoons have multiple weapons systems and capabilities to control during offensive and defensive operations. Platoon leaders and subordinate leaders may be required to issue combined or multiple fire commands while controlling the Strykers and Infantry.

Element	Company	Platoon	Squad	Crew
Alert	GUIDONS, GUIDONS, GUIDONS, THIS IS BLACK SIX	RED THIS IS RED 1	FIRST SQUAD	GUNNER
Weapon / Ammunition		MISSILE	JAVELIN	JAVELIN
Target Description	ARMOR AND LIGHT ARMOR MOVING INTO EA COLORADO	MULTIPLE ARMOR MOVING INTO SECTOR	MULTIPLE ARMOR	TANKS
Direction / Elevation	VICINITY TRPS W05 AND S10	VICINITY TRP S10	VICINITY TRP S10	VICINITY TRP S10
Range			BRAVO - FIVE HUNDRED	
Method	RED ENGAGE ARMOR, WHITE ENGAGE PC, BLUE OBSERVE FIRES	ARMOR TARGETS FIRST, ALPHA ELEMENT NEAR, BRAVO ELEMENT FAR	BRAVO - NEAR ARMOR, CHARLIE - FAR ARMOR, ALPHA - OBSERVE	FAR ARMOR FIRST
Controls	ENGAGE UPON CROSSING PHASE LINE DENVER, WAIT FOR ROUNDS COMPLETE ON AB6900	WAIT FOR ROUNDS COMPLETE ON AB6900	STAND BY FOR ROUNDS COMPLETE ON AB6900	STAND BY
Execution	ROUNDS COMPLETE, ENGAGE UPON CONTACT	ROUNDS COMPLETE, ENGAGE UPON CONTACT	FIRE AND ADJUST	FIRE AND ADJUST
Termination	CEASE FIRE	CEASE FIRE	CEASE FIRE	CEASE FIRE

Figure A-10. Fire command, example

SECTION II – DA FORM 5517 (STANDARD RANGE CARDS) AND SECTOR SKETCHES

A-91. Standard Range Cards are used to record firing data for individual or crew-served weapons. Sector sketches are used to record a unit's positioning of its weapons and direct fire control measures.

STANDARD RANGE CARDS

A-92. A Standard Range Card is a sketch or diagram of terrain that a direct-fire weapon covers by fire. The Standard Range Card shows possible target areas and terrain features plotted in relation to a firing position. Range card information is used to plan and control fire, to rapidly detect and engage targets, and to orient replacement personnel or units.

DESCRIPTION AND PREPARATION

A-93. The Stryker VC normally prepares Standard Range Cards for the vehicle. One is prepared for each primary, alternate, and supplemental position designated in the defense. The VC also prepares one for any static position (such as an AA) where enemy contact is possible. Range cards help leaders plan and control fires, assist crew target acquisition during limited visibility, and help platoon or squad replacements orient and move into position. The VC should have no problem maintaining sector orientation during good visibility. However, the VC may not be able to detect lateral limits when visibility is poor. If the VC becomes disoriented and cannot find reference points or sector limit markers, Standard Range Card data can be used to locate the limits. The VC learns the terrain in the sector, makes the Standard Range Cards, and continually makes updates. To prepare the Standard Range Card, the VC must know the sectors of fire, TRPs, dead spaces, maximum engagement lines, and weapons reference points. The VC prepares two copies. The assignment of alternate and supplementary firing positions requires two copies for each. The VC keeps one copy of each Standard Range Card with the vehicle and gives the other copies to the platoon leader to assist in preparing the platoon sector sketch.

TARGET AREAS AND TERRAIN FEATURES

A-94. Standard Range Cards show possible target areas and terrain features plotted with a firing position. The process of walking and sketching the terrain to create a Standard Range Card allows the individual Soldier to become more familiar with their sector of fire. Soldiers should continually assess the area and, if necessary, update the Standard Range Card. The Standard Range Card is an aid for replacement personnel or platoons or squads to move into the position and orient on their sector of fire. To prepare a Standard Range Card, the individual Soldier or Stryker VC/gunner must understand sectors of fire, TRPs, dead spaces, maximum engagement lines, and weapon reference points:

Sectors of fire

A-95. A sector of fire is a piece of the battlefield for which a gunner is responsible.

Target Reference Points

A-96. Leaders designate natural or man-made features as reference points. A Soldier uses these reference points for target acquisition and range determination.

Dead Space

A-97. Dead space is an area that cannot be observed or covered by direct-fire systems within the sector of fire.

Maximum Engagement Line

A-98. The maximum engagement line is the depth of the area and is normally limited to the maximum effective engagement range of the weapons systems.

Weapons Reference Point

A-99. The weapons reference point is an easily recognizable terrain feature on the map used to assist leaders in plotting the Stryker, squad, or weapon position.

Note. Although the maximum engagement line is typically limited to the maximum effective engagement range of the weapons systems, it can be less if objects prevent the Soldier from engaging targets at maximum effective ranges of their assigned weapon.

DATA SECTION

A-100. The VC/gunner completes the position identification, date, weapon, and circle value according to STP 7-11B1-SM-TG:

- Number—start with left and right limits, then list TRPs and reference points in numerical order.
- Direction and deflection—the direction is in degrees and taken from a lensatic compass.
- Elevation:
  - The gun elevation reading (for example, for a medium machine gun) is shown in tens or hundreds of mils.
  - The smallest increment of measure on the elevation scale is tens of mils. Any number other than zero (0) is preceded by a plus (+) or minus (–) symbol to show whether the gun needs to be elevated or depressed.
  - Range must be indexed to have an accurate elevation reading.
- Range—this is the distance, in meters, from position to TRPs.
- Ammunition—list types of ammunition used.
- Description—list the name of the object.
- Remarks:
  - Enter the weapons reference point data.
  - As a minimum, weapons reference point data include a description of what the weapons reference point is, a six-digit or eight-digit grid coordinate of the weapons reference point, the magnetic azimuth, and the distance from the weapons reference point to the position.

DIGITAL RANGE CARD OVERLAY

A-101. A Standard Range Card (as shown in figure A-11) can be shown on a digital overlay with the aid of Stryker equipped appliqué and integrated command, control, and communications technology. The overlay should complement, not replace, the Standard Range Card (see FM 3-22.3).

A-102. The mouse or keyboard is used in the digital map or overlay process to draw lines that represent the left and right limits for primary and secondary sectors of fire. Digital reference points can then be added for maximum engagement lines and TRPs, reference points, and weapon reference points.

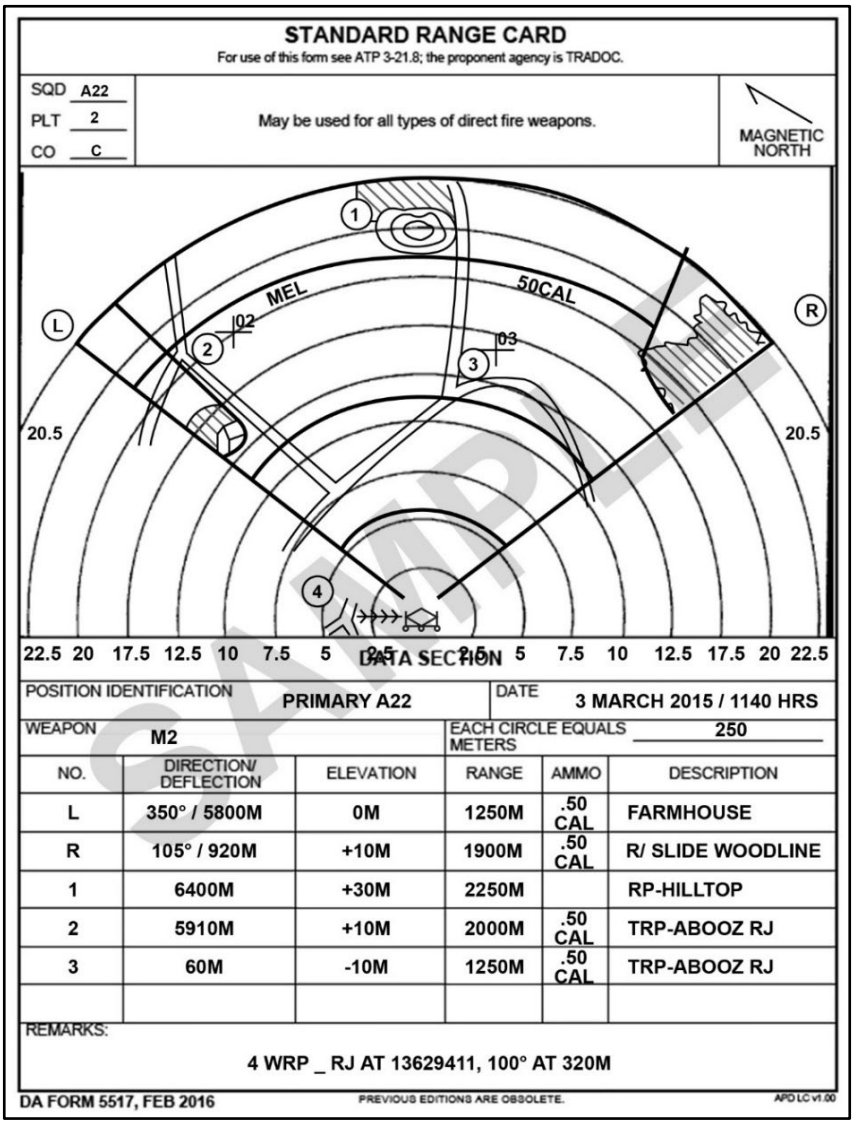


Figure A-11. DA Form 5517 (Standard Range Card)

SECTOR SKETCHES

A-103. Individual Soldiers in squads and Stryker gunners prepare Standard Range Cards. Squad and platoon leaders prepare sector sketches. Stryker element leaders may have to prepare sector sketches if they are assigned separate positions. Platoon leaders review their squads, and if applicable other Stryker elements sector sketches and ensure the sketches are accurate and meet their requirements. If they find gaps or other flaws, platoon leaders adjust weapons locations within the sector. Once platoon leaders approve the sector sketches, they prepare a consolidated report for the company commander and incorporate this into a consolidated platoon sector sketch. The platoon leader or platoon sergeant physically prepares the platoon sector sketch. The sector sketch can be on acetate taped to a map or it can be a hand drawn sketch. Accurate and detailed sketches aid in direct fire planning, and in direct fire control and distribution.

SQUAD SECTOR SKETCHES

A-104. The squad leaders and section leaders make two copies of their sector sketches; one copy goes to the platoon leader; the other remains at the position. The squad leaders sector sketches (see figure A-12) are as close to scale as possible, showing:

- Main terrain features in the sector and the range to each.
- Each primary position.
- EA or primary and secondary sectors of fire covering each position.
- Medium machine gun FPL or principal direction of fire.
- Squad automatic weapon FPLs or principal direction of fire.
- Type of weapon in each position.
- Reference points and TRPs in the sector.
- OP locations.
- Dead space.
- Obstacles.
- Maximum engagement lines for all weapon systems.
- Maximum engagement lines for shoulder fired weapons.
- Indirect fire targets.

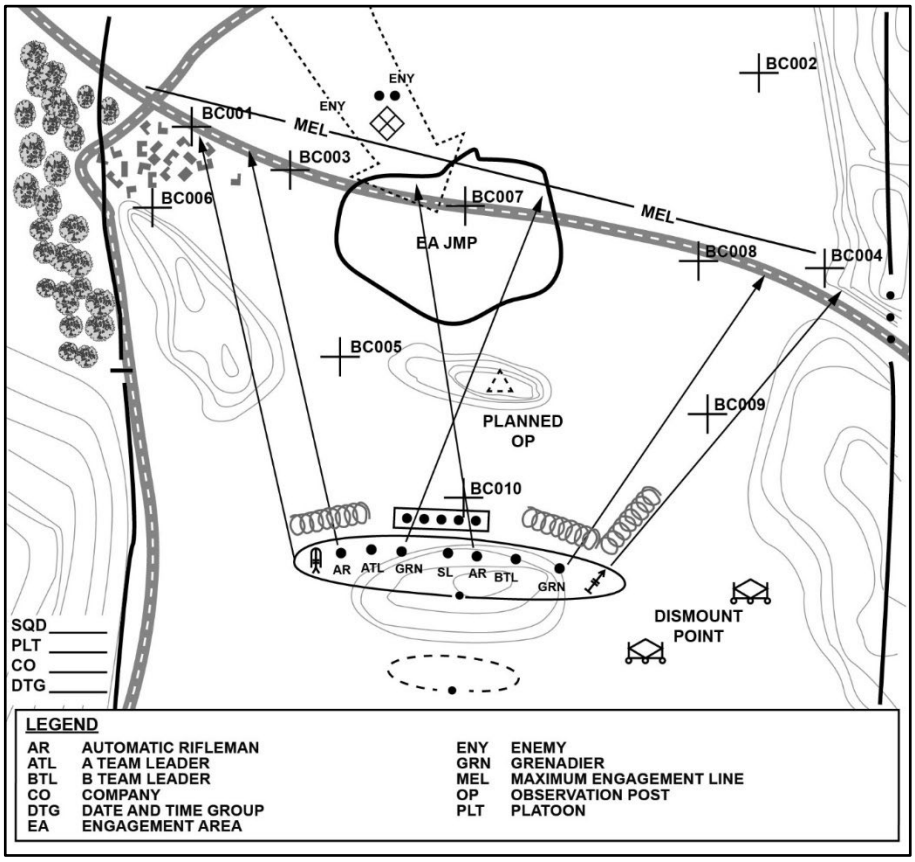


Figure A-12. Squad sector sketch

PLATOON SECTOR SKETCH

A-105. Squad leaders prepare their sketches and submit them to the platoon leader. The platoon leader combines all sector sketches (and possibly separate Standard Range Cards) to prepare a platoon sector sketch, which is drawn as close to scale as possible and includes a target list for direct and indirect fires. (See figure A-13 on page 352.) Unit SOP determines the sector sketch requirements. At a minimum, the platoon sector sketch should show:

- Primary and secondary sectors of fire or EAs.
- Primary, alternate, and supplementary Stryker and squad positions.
- Remount points.
- Javelin CCMS, medium machine gun, and squad automatic weapons positions with principal directions of fire.
- Medium machine gun and squad automatic weapons FPLs or principal direction of fire.
- Maximum engagement lines.
- OPs.
- TRPs.

- Mines and other obstacles.
- Indirect fire target locations and locations of FPF.
- Position and area of flanking unit vehicles.
- Priority engagement by weapon system and crew.
- Other relevant direct fire control measures.

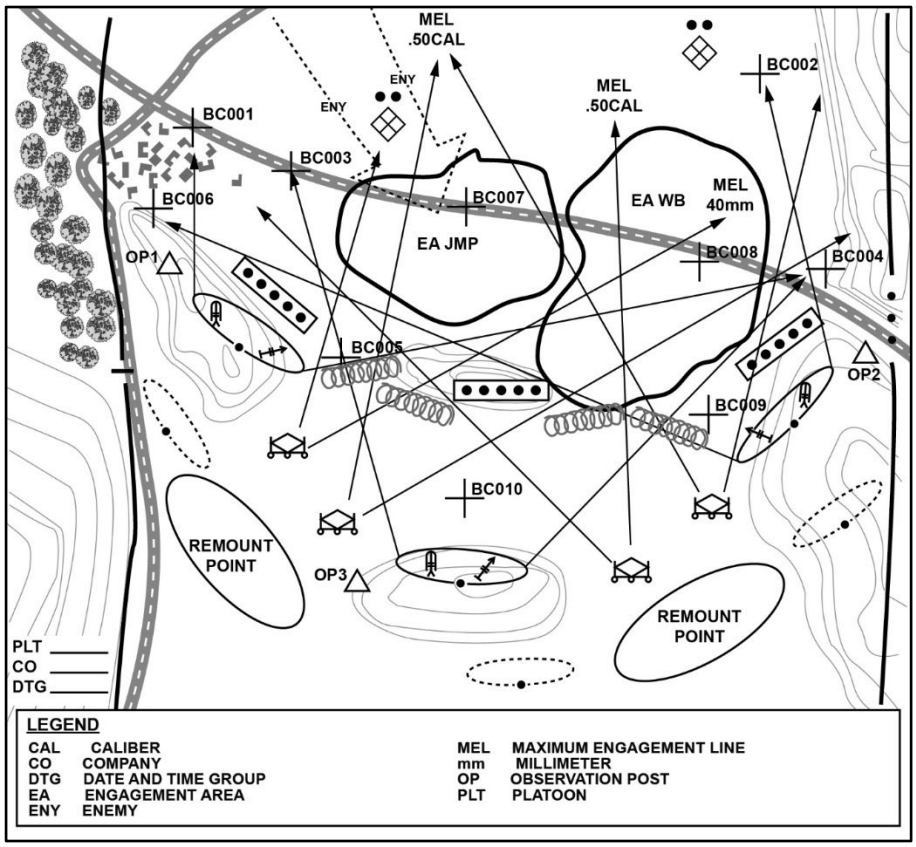


Figure A-13. Platoon sector sketch

COORDINATION WITH ADJACENT UNITS

A-106. Platoon leaders coordinate with adjacent platoons. Squad leaders coordinate with adjacent squads so that all positions and all platoon and squads are mutually supporting. The platoon leader must ensure that this coordination takes place. Coordination is usually initiated from left to right. Gaps between positions are covered by fire as a minimum. Contact points are established to ensure friendly forces meet at some specific point on the ground to tie in their flanks. In many cases, the exchange of sector sketches will accomplish most of this. Typical information that is exchanged includes:

- Locations of primary, alternate, and supplementary positions; sectors of fire for Strykers, medium machine guns, and Javelins.
- Location of dead space between platoons and how it is to be covered.

- Agreement on which unit owns responsibility for areas that split both, such as roads or trails.
- Agreement about how to hand-off targets moving into or out of adjacent unit sectors.
- Location of OPs.
- Location and types of obstacles and how to cover them.
- Patrols (size, type, time of departure and return, and routes).
- Call signs and frequencies.
- Anticipated routes, SBF positions, or other locations.

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Appendix B
Fire Support Planning

Fire support planning is the continual process of selecting targets on which fires are prearranged to support a phase of the scheme of maneuver. Fire support planning is accomplished concurrently with maneuver planning at all echelons. Leaders conduct fire support planning to suppress, isolate, obscure, neutralize, destroy, deceive, or disrupt known, likely, or suspected targets, and to support the actions of the maneuver forces. Fires are planned for all phases of an operation. This appendix addresses the lethal fires coming from SBCT organic indirect fires, Army artillery and aviation assets, and joint and multinational artillery and aviation assets in support of the Stryker Infantry rifle platoon. (See ATP 3-21.11 and ADP 3-19 for additional information.)

SECTION I – FIRE SUPPORT

B-1. *Fire support* is fires that directly support land, maritime, amphibious, space, cyberspace, and special operations forces to engage enemy forces, combat formations, and facilities in pursuit of tactical and operational objectives (JP 3-09). *Fire support planning* is the continuous process of analyzing, allocating, integrating, synchronizing, and scheduling fires to describe how the effects of fires facilitate supported force actions (FM 3-09). Fire support planning starts as soon as the leader receives a mission. Once initiated, fire support planning continues through the operation's completion. The primary aim of fire planning is to develop how fire is to be massed, distributed, and controlled to best support the leader's concept of operations.

SCHEME OF FIRES

B-2. Fire planning begins with the scheme of fires. This essential component of the concept of operations complements the leader's scheme of maneuver detailing the leader's plan for direct and indirect preparatory and supporting fires. Fire planning requires a detailed knowledge of weapon characteristics and logistical capabilities of those providing the support. Although leaders may be augmented with personnel to assist in planning and controlling attached or supporting assets, the responsibility for planning and execution of fires lies with the leader. Leaders do not wait to receive the higher headquarters' plan to begin their own fire planning but begin as soon as possible to integrate fires into concept of operations and concept of operations of the higher headquarters.

FIRE SUPPORT TEAMS

B-3. The *fire support team* is a field artillery team provided for each maneuver company or troop and selected units to plan and coordinate all supporting fires available to the unit, including mortars, FA, naval surface fire support, and close air support integration (JP 3-09.3). Company fire support team headquarters personnel and platoon

FOs provide support to subordinate platoons to plan and coordinate all available supporting fires, including mortars, FA, naval surface fire support, Army aviation attack, and CAS integration. One FO is attached to each Stryker platoon. The fire support team provides the platoon with fire support coordination, targeting, input for terminal attack control, and assessment capabilities. FOs are trained to adjust ground or naval gunfire and pass back battlefield information. Effective fires require qualified forward air controllers (FACs) and observers to call for and adjust fires on located targets. FOs, FACs, forward air controller (airborne) [FAC(A)], naval gunfire spotter teams, joint fires observers, and joint terminal attack controllers (JTACs) train together and work effectively as a team to request, plan, coordinate, and place accurate fires on targets that create the desired effects. (See ATP 3 21.11 for additional information.)

Fire Support Officer

B-4. The *fire support officer* is the operational to tactical level field artillery officer responsible for advising the supported commander or assisting fire support coordinator on fires functions and fire support (FM 3-09). The company FSO extracts information from the battalion's fire support plan to develop the company's fire support plan per the commander's intent and concept of the operation.

Forward Observer

B-5. The *forward observer* is an individual operating with front line troops trained to adjust ground or naval gunfire and pass back battlefield information (JP 3-09). Platoon FOs are equipped with target acquisition devices that assist in accurately locating targets and the communications equipment needed to call for fire and conduct terminal guidance operations. An FO is the primary fire support observer in the platoon and is frequently collocated with the platoon leader. They provide target refinement, nominate targets to the company fire plan (limited fire planning), advise the platoon leader on all indirect fire support matters; prepare, maintain, and use situation maps, designate targets for precision-guided munitions, report combat information, execute planned fires, and request or adjust fires for their supported platoons.

B-6. The platoon leader and the platoon FO should be together during planning and mission execution. This ensures close synchronization of the scheme of maneuver and fire support plan. A *fire support plan* is a plan that addresses each means of fire support available and describes how Army indirect fires, joint fire support, and target acquisition are integrated into operations to facilitate success (FM 3-09). To ensure that indirect fire can be called on a specific target, platoon leaders and FOs plan and select platoon priority targets and have them approved by the FSO and commander. Any Soldier can perform this function if the Soldier understands the mission and has the communications capability and training. Additional responsibilities of the FO include—

- Keeping the platoon leader informed of the capabilities and limitations of all fire support assets that may be made available to the platoon and advises the platoon leader on all fire support matters.
- Keeping the fire support plan current and adjusting the fire support plan as required when intelligence and spot reports are received.

- Fully understanding the responsibility within the observation plan and providing refinement or submitting key targets for inclusion in the company fire plan.
- Preparing, maintaining, and using situation maps.
- Establishing and maintaining digital and voice communications.
- Using target coordinate mensuration tools.
- Providing target information for army attack aviation and CAS execution, and naval surface fire support if available.
- Understanding the purpose and location of target, observers (primary and alternate), trigger lines, communications, and the unit providing the fires.
- Understanding the requirement to apply the law of armed conflict and ROE when employing fire support.
- Reporting.

RISK ESTIMATE DISTANCE

B-7. Risk-estimate distance is what FOs, JTACs, or any Soldier uses to determine safe distances from friendly indirect fire. They will pass the phrase DANGER CLOSE, during a fire mission, with the method of engagement or the CAS attack brief remarks. DANGER CLOSE alerts FDCs, ground commanders, and aircrew of the proximity of the closest friendly troops to the intended point of weapon impact. DANGER CLOSE is a warning of the proximity of friendly forces and possibility of an increased risk to them. (See ATP 3-09.32 for risk-estimate distance.)

TACTICAL USES OF PLANNED FIRES

B-8. Fires are used for many different tactical reasons. They include:

- Preparatory fire, delivered before an attack to weaken the enemy position (see ADP 3-90 for more information).
  - *Preparation fire* is a brief, intense bombardment on selected targets or a prolonged effort over time covering a large number of targets (FM 3-09).
  - Preparation fire includes electronic attack and should be synchronized with other electronic warfare activities.
- Supporting fires (covering fires) enable the friendly maneuver element to move by destroying, neutralizing, or suppressing enemy fires, positions, and observers.
- *Final protective fire* is an immediately available, prearranged barrier of fire designed to impede enemy movement across defensive lines or areas (JP 3-09.3).
- *Suppression* is temporary or transient degradation by an opposing force of the performance of a weapons system below the level needed to fulfill its mission objectives (JP 3-01).
- *Suppression* in the context of the computed effects of field artillery fires, renders a target ineffective for a short period of time producing at least 3-percent casualties or materiel damage (FM 3-09).
- *Obscuration* is the employment of materials into the environment that degrade optical, electro-optical, or both optical and electro-optical capabilities within select portions of the electromagnetic spectrum to deny acquisition by or deceive an enemy or adversary (ATP 3-11.50).

- Counterfire (indirect fires only) is fire to destroy or neutralize enemy artillery/mortars.
  - These missions normally are controlled at higher level headquarters.
  - Counterfire radars are positioned to maintain radar coverage to ensure continuous coverage during rapid movement forward.
- Harassing fire is observed or predicted (unobserved) fire intended to disrupt enemy troop and vehicle movement, disturb their rest, and lower their morale.
- Illumination:
  - Illumination can expose enemy formations at night.
  - Illumination must be accurate so as not to reveal friendly positions.

ECHELONMENT OF FIRES

B-9. Echelonment of fires is the schedule of fire ranging from the highest caliber munitions to the lowest caliber munitions. The purpose of echeloning fires is to maintain constant fires on the enemy while using the optimum delivery system. As distances between friendly and enemy forces close, echeloning of fires is the principle of reducing the caliber of fires employed, reducing the associated risk. Leaders use risk estimate distance, SDZs, and minimum safe distance as per ATP 3-09.32, to manage associated risks. In the defense, triggers are tied to the progress of the enemy as it moves through the assigned area, enabling the leader to engage the enemy throughout the depth of the assigned area. In the offense, triggers are tied to the progress of the maneuver element as it moves toward the objective protecting the force and facilitating momentum up to the objective.

PLANNING AND INTEGRATION OF FIRES

B-10. Fire support planning and integration is focused on using the timely and effective delivery of fires to support the actions of the maneuvering element. Fire support planning also involves the identification of command and support relationships, as well as the positioning and integration of fire support systems. During planning, the fire support planner, with the guidance of the commander, identifies the types of targets to attack and specify the fire support asset(s) to attack each target. Fire support planning determines the FO control options to ensure fire support integration into the scheme of maneuver and timely execution.

FIRE SUPPORT PLANNING IN THE DEFENSE

B-11. In the defense, fires are generally planned in three locations—in front of the unit positions, on the position's FPFs, and behind positions. To develop a defensive fire plan, the platoon leader within the company defense—

- Redefines designation of unit point or area targets and other control measures, such as TRPs, to coordinate the fire when more than one subordinate is firing into the same EA or sector.
- Identifies likely enemy SBF positions or other areas where the enemy will likely mass.
- Identifies FPFs, targets to support displacement, and targets on behind positions.

- Masses fires on choke points and key terrain (for example, obstacles, water crossings, and dead space) to canalize, slow, and block the enemy's movements.
- Ensures fires are integrated into the obstacle plan.
- Considers the use of obscurants to support the obstacle plan.
- Refines and bases fire plans on the commander's guidance for fires and allocation of resources.
- Identifies requirements for positioning primary and alternate observers forward of friendly maneuver forces and ensures that extraction guidelines are established and understood.
- Develops alternate plans in case these FOs are forced to withdraw prior to execution of fire support tasks.
- Determines the time needed for all fire support systems to be ready based on the scheme of maneuver and ensures that these times are met.
- Determines how and recommend when to shift the priority of fires and what will be the trigger to shift the priority of fires.
- Plans for the use of obscurants during periods of limited visibility to degrade enemy night vision capabilities.
- Receives target information from subordinates (normally provided on sector sketches or individual weapon Standard Range Cards).
- Reviews target information to ensure fires are equally distributed across the entire unit's assigned area and sufficient control measures are established.
- Completes the unit's fire plan and gives sector sketch to the higher headquarters.

B-12. In the defense, the EA is the place where the platoon leader intends to destroy an enemy force using the massed fires of all available weapons. The success of engagements depends on how the platoon leader can integrate the obstacle and indirect fire plans with the direct fire plan in the EA to achieve the unit's purpose. Completing the steps of EA development is not a lengthy process, EA development can occur rapidly without an elaborate decision-making process (see chapter 4 EA development).

Final Protective Line and Final Protective Fire

B-13. FPL is a line of fire selected where an enemy assault is to be checked by interlocking fire from all available weapons and obstacles. The defending unit reinforces this line with protective obstacles and with FPFs whenever possible. The FPL consists of all available measures, to include protective obstacles, direct fires, and indirect fires.

B-14. The FPFs target the highest type of priority targets and takes precedence over all other fire targets. The FPFs differ from a standard priority target in that fire is conducted at the maximum rate until the mortars are ordered to stop, or until ammunition is depleted. If possible, the FPFs should be registered. In the fire support plan, an FPF is continuous artillery or mortar fires—

- Fired on a predetermined target.
- Fired at the maximum rate of fire until the firing unit is requested to stop, ammunition is exhausted, or the firing unit is forced to move.
- Allocated FA FPF, normally from the SBCT to the battalion level, which may allocate to the company and platoon level.

- Allocated mortar platoon FPF, normally from battalion to the company and platoon level.
- Authorized to shoot at the lowest maneuver commander's level in whose area the FPF is placed or that commander's authorized representative.

B-15. The risk estimate distance for a given delivery system (see ATP 3-09.32) is a factor in how close the FPF can be placed in front of friendly front lines. Closer FPFs are easier to integrate into direct-fire FPLs. The high rate of fire achievable by mortars creates effective barriers of fire. The normal allocation of FPFs is identical to the allocation of priority targets (one for each battery or platoon and one for each mortar platoon). While firing FPFs, mortar sections are not normally allowed to cease fire and displace. Due to counter mortar fires, they must take precautions to avoid or withstand counter mortar fire when firing an FPF.

B-16. If Soldiers are in well-prepared defensive positions with OHC, FPFs can be adjusted close to the friendly positions, just beyond bursting range. If the threat situation warrants it (for example, in the event the friendly position is over run), the unit leader can call for artillery fires right on the unit's position using proximity or time fuzes for airbursts. Table B-1 shows indirect fire mortar weapon system characteristics being used when planning the FPF.

Table B-1. Final protective fire data planning

Size	*Number of Mortars or Guns**	*Approximate Width (meters)**	*Approximate Depth (meters)*
120mm	4	280	70
120mm	2	140	70
155mm	3	150	50
155mm	6	300	50
Legend: mm—millimeter *measurements are approximate			

Priority of Target versus Final Protective Fire

B-17. FPF differ from standard priority target in that an FPF is fired at the maximum rate of fire until mortars are ordered to stop or until all ammunition is expended while a priority target simply fires the planned number of rounds for that mission, for example, a battery three (three rounds per gun in a six-gun battery). Firing units lay the guns on the priority target when not actively firing another mission.

Defensive Echelonment

B-18. In the defense the company FSO will plan how to echelon fires and hand off select targets to the platoon FO. In defensive missions, echeloning fires are scheduled based on their optimum ranges to maintain continuous fires on the enemy, disrupting the formation and maneuver. Echelonment of fires in the defense places the enemy under increasing volumes of fire as they approach a defensive position. Aircraft and long-range indirect fire rockets and artillery deliver deep supporting fires. Close supporting fires, such as FPFs, are integrated closely with direct fire weapons such as Stryker and squad weapons, tank support, and antiarmor weapon systems.

FIRE SUPPORT PLANNING IN THE OFFENSE

B-19. Offensive fire planning follows the same methodology as defensive fire planning within constraints of the situation. The presence of a friendly element requires a baseline of fire support planning and control throughout the entire mission (specifically, movement and maneuver) to ensure indirect fire support is effective and efficient.

B-20. Leaders must plan how they will engage known or suspected enemy targets, where friendly suppressive fire may be needed, and how they will control their units' fires against both planned targets and targets of opportunity. Fire planning should include a thorough analysis of the type of threat expected. This will aid the supporting friendly element in tailoring the weapon and ammunition requirements to suit the situation.

B-21. Offensive fire planning supports four phases: planning and preparation, approach to the objective, actions on the objective, and follow through. The degree of completeness and centralization of offensive fire planning depends on the time available to prepare the offensive. Fires are planned in four locations on the battlefield short of the LD/LC, LD/LC to the objective, on the objective, and beyond the objective. Table B-2 on page 362 lists planning considerations for each of the four locations.

Table B-2. Planning considerations

Phase	*Plan Fires to:*
1) Planning and Preparation (Short of the LD/LC)	• Support unit in AA. • Support unit's movement to the LD/LC. • Disrupt enemy reconnaissance forces. • Disrupt enemy defensive preparations. • Disrupt enemy spoiling attacks.
2) Approach to the Objective (LD/LC to the Objective)	• Begin echeloning fires for maneuver units. • Suppress and obscure for friendly breaching operations. • Suppress and obscure enemy security forces throughout movement. • Provide priority of fires to lead element. • Screen/guard exposed flanks.
3) Actions on the Objective (On the Objective)	• Fires to block enemy reinforcements. • Fires to suppress enemy direct fire weapons. • Suppress and obscure point of penetration. • Suppress and obscure enemy observation of friendly forces. • Fix targeted forces for engagement with direct fire weapons. • Isolate the objective.
4) Follow Through (Beyond the Objective)	• Disrupt movement of enemy reinforcements during the assault. • Block avenues of enemy approach. • Disrupt enemy withdraw. • Screen friendly forces from enemy counterattacks during the assault. • Consolidate objective after the assault. • Disrupt enemy counterattack. • Prepare a hasty defense.
Legend: AA—assembly area; LC—line of contact; LD—line of departure	

Preparation Fires and Supporting Fires

B-22. During offensive fire planning the platoon leader should plan preparation fires and supporting fires (mortars, FA). Preparation fires are a brief, intense bombardment on selected targets or a prolonged effort over time covering a large number of targets. The scheme of fires has artillery and mortars in support of an attack to neutralize, suppress or destroy enemy positions on the objective until the last possible moment. When this indirect fire ceases, the enemy should be stunned and ineffective for a few moments. Leaders take full advantage of this period by executing any or all the following actions discussed in paragraphs B-23 to B26.

Maintaining Fire Superiority

B-23. Soldiers use main weapons systems on Strykers. Dismounted small-arms fire from local and internal SBF is continued as long as possible.

Maneuver Elements

B-24. Assaulting troops must try to fire as they advance. Troops must observe fire discipline, as in many cases fire control orders will be selective. They must arrive at the objective with ammunition.

Audacity

B-25. The ground and vegetation do not prohibit movement. Leading Stryker elements and Infantry squads should move quickly toward the enemy positions to minimize exposure.

Strykers

B-26. Strykers are used as direct fire support and continued close support.

Leaders Responsibility

B-27. When planning fires for the offense, leaders verify the fire element's task organization and ensure their plans coordinate measures for the attack, site exploitation, pursuit, and contingency plans. Leaders develop or confirm with the responsible level authority supporting systems are positioned and repositioned to ensure continuous fires throughout the operation. Mutual support of fire systems promotes responsive support and provides the commanders of maneuver units freedom of action during each critical event of the engagement or battle.

Offensive Echelonment

B-28. When planning echelonment of fire in the offense, weapons are scheduled based on the point of a predetermined safe distance away from maneuvering friendly troops. When scheduled, fires provide protection for friendly forces as they move to and assault an objective. They also allow friendly forces to get in close with minimal casualties and prevent the defending enemy from observing and engaging the assault by forcing the enemy to take cover. Platoon leaders need to understand danger close distances for indirect fire systems used. Platoon leaders use risk estimate distance, SDZs, and minimum safe distance to manage associated risks. The overall objective of offensive scheduled fires is to allow the friendly force to continue the advance unimpeded.

TARGET EFFECTS

B-29. There exists a diverse variety of munitions and weapon systems, direct and indirect, to support close offensive missions. To integrate direct and indirect fire support, the leader must understand the mission, commander's intent, concept of operations, and critical tasks to be accomplished. Leaders plan fires to focus on enemy capabilities and systems being neutralized. Critical tasks include the following:

- When using indirect fire, the FDC relies on target description from the observer, who—
  - Identifies the target: tanks, armored PCs, trucks, or troops in the open.
  - Identifies if target is in the open, in the woods, in bunkers, trenches, with or without OHC.
- FDC selects correct fuze combination and type of round to achieve desired effect and resupplies.
- Leaders understand the capabilities of Army attack aviation in the direct support role.

B-30. Not only must indirect fire support planners determine what enemy targets to hit, and when, but also must decide how to attack each enemy target. Leaders should consider all the aspects of target effects when planning fires. Although this section is specific to mortars, paragraphs B-31 to B-36 discuss concepts that generally apply to most indirect fires (see ATP 3-09.32 for more information).

High-Explosive Ammunition

B-31. When mortar rounds impact, they throw fragments in a pattern never truly circular, and may even travel irregular, based on the round's angle of fall, the slope of the terrain, and type soil. However, for planning purposes, each mortar HE round is considered to have a circular lethal bursting area. (Figure B-1 shows a scale representation of the lethal bursting areas of mortar rounds if equipped.)

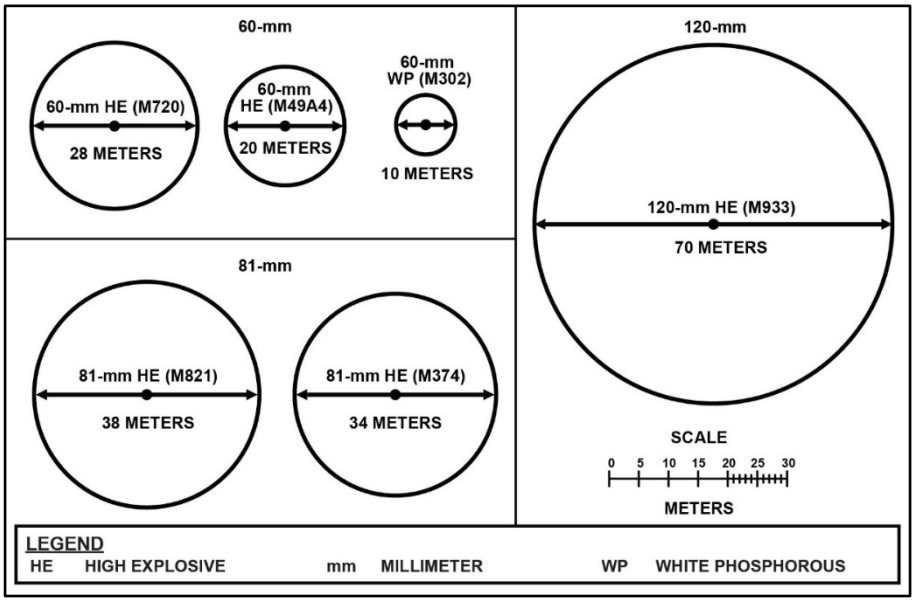


Figure B-1. Mortar bursting area for U.S. mortar rounds

Fuze Setting

B-32. The decision concerning what fuze setting to use depends on the position of the enemy. Exposed enemy troops standing up are best engaged with impact or near surface burst fuze settings. The round explodes on, or near, the ground. Shell fragments travel outward perpendicular to the long axis of the standing target. (See figure B-2.)

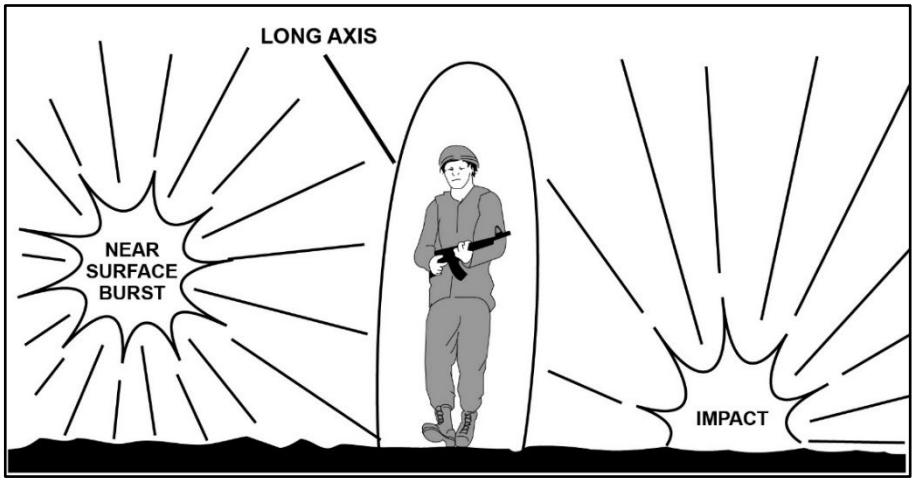


Figure B-2. Standing targets

B-33. If exposed enemy troops are lying prone, the proximity fuze setting is most effective. The rounds explode high above the ground, and fragments coming downward are traveling once again perpendicular to the long axis of the targets. (See figure B-3.)

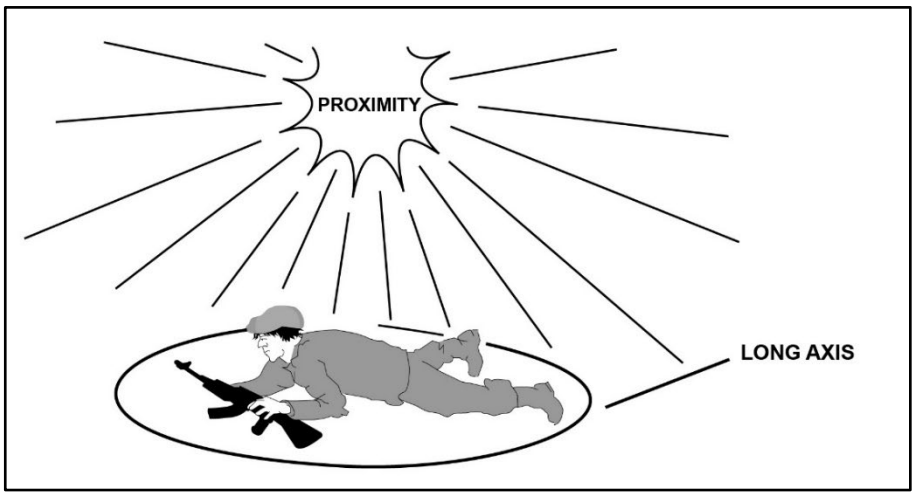


Figure B-3. Prone targets

B-34. The proximity setting is the most effective if the enemy is in open fighting positions without OHC. Even proximity settings will not always produce effects if the positions are deep. (See figure B-4 on page 366.)

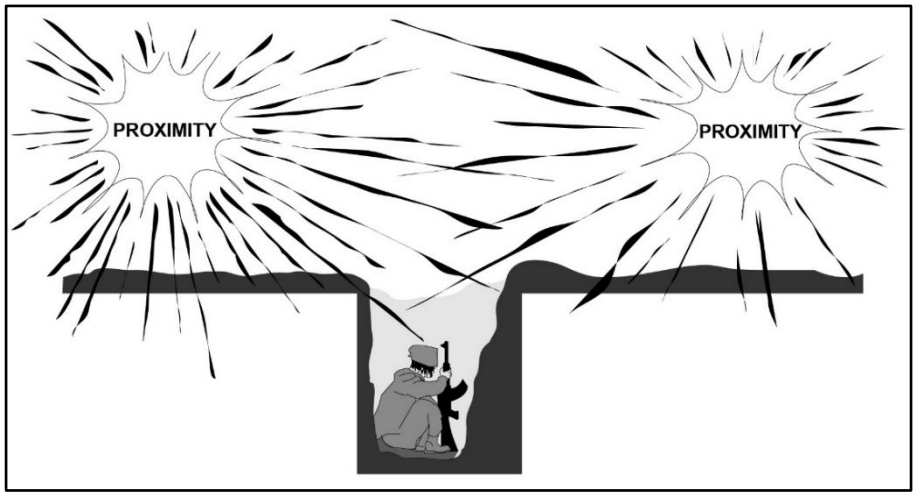


Figure B-4. Targets in open fighting positions

B-35. The delay fuze setting is most effective when the enemy is below triple canopy jungle or in fighting positions with over-head cover. Heavy mortars can destroy a bunker, or enemy troops beneath jungle canopy with a hit or near miss. (See figure B-5.)

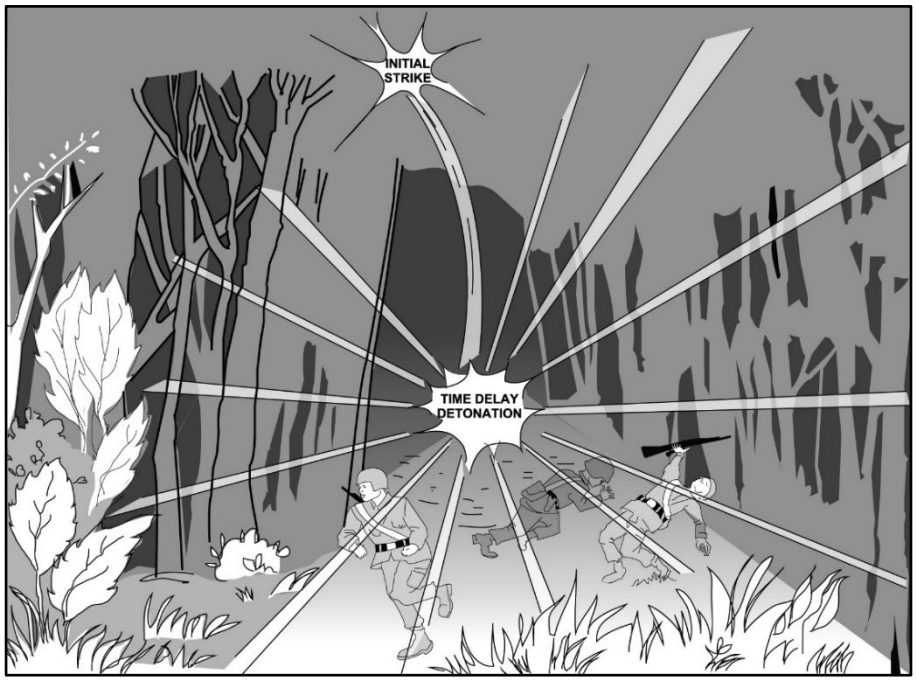


Figure B-5. Targets in triple canopy jungle

Suppressive Effect of High Explosive Mortar Rounds

B-36. Suppression from mortar fire is not easily measured as a target effect as the psychological impact on enemy soldiers cannot be determined. Inexperienced or surprised Soldiers are more easily suppressed than experienced, warned Soldiers. Soldiers in the open are much more easily suppressed than those with OHC. Suppression is most effective when mortar fires first fall; as they continue, their suppressive effects lessen. HE rounds normally produce the greatest psychological impact. This can be amplified by mixing rounds. For instance, a mixture of HE and WP can have a profound psychological effect on the enemy. The figure B-6 on page 368 describes suppressive effects of 120-mm, 60-mm and 81-mm mortars. If working with a unit equipped with light and medium mortars, the following suppressive effects apply:

- The impact of a 60-mm mortar round within 20 meters of a target will likely suppress or damage it.
- If a 60-mm mortar round lands within 35 meters of a target, there is a 50-percent chance it will be suppressed and beyond 50 meters, little suppression takes place.
- If an 81-mm mortar round lands within 30 meters of a target, the target, the target will likely be suppressed or damaged.
- If an 81-mm mortar round lands within 75 meters of a target, there is a 50-percent chance the target will be suppressed and beyond 125 meters, little suppression takes place.
- If a 120-mm mortar round (proximity-fuzed) lands within 65 meters of target, the target will likely be suppressed, if not hit.
  - Within 125 meters of a target, there is a 50-percent chance the target will be suppressed.
  - Beyond 200 meters, little suppression takes place.

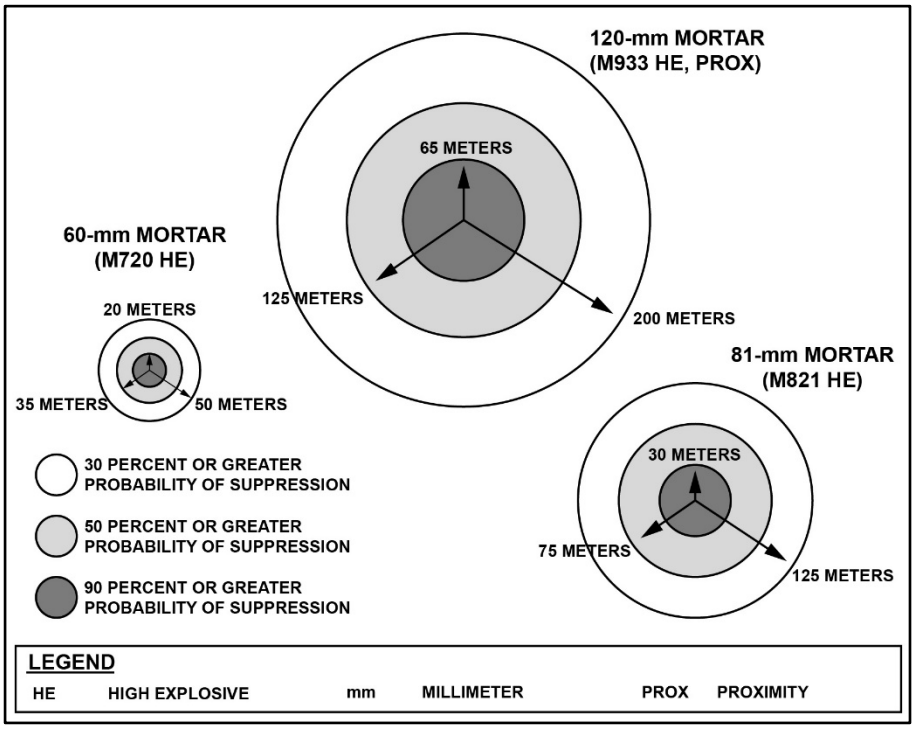


Figure B-6. Suppressive effects of common U.S. mortar rounds

Obscurants and White Phosphorous

B-37. Illumination and obscuration missions are important functions for mortar platoons or sections. Atmospheric stability, wind velocity, and wind direction are the most important factors when planning target effects for obscurants and WP mortar rounds. The terrain in the target area also affects obscurants and WP rounds.

B-38. The bursting WP round provides a screening, incendiary, marking, and casualty-producing effect. It produces a localized, instantaneous obscurant cloud by scattering burning WP particles.

B-39. The WP round is used mainly to produce immediate, close point obscuration. It can be used to screen the enemy's field of fire for short periods, which allows the unit to maneuver. When using WP as an obscurant the unit should take into consideration wind direction and dissipation time of the round. The 120-mm WP round from the heavy mortar is sufficient to produce a long-lasting, wide-area obscurant for screening.

B-40. WP rounds generally should not be used solely to produce casualties due to the law of armed conflict principle of humanity, which forbids the infliction of suffering, injury, or destruction unnecessary to accomplish a legitimate military purpose. Unnecessary suffering would be implicated because of the persistent burning WP causes in the wounds. Generally, more casualties can be produced by firing HE ammunition than by firing WP. A few WP rounds mixed into a fire mission of HE rounds for a valid

purpose (that is target marking) may increase the suppressive effect of the fire because of the significant psychological effect a WP burst may have on exposed troops.

Illumination

B-41. Illumination rounds can be used to disclose enemy formations, to signal, or to mark targets. There are illumination rounds available for all mortars. The medium and heavy mortars can provide excellent illumination over wide areas. The 120-mm mortar illumination round provides 1 million candlepower for 60 seconds. The M320 grenades, as well as all mortars have the capability to deliver IR illumination rounds in addition to the more common white light.

Special Illumination Techniques

B-42. Illumination is always planned for attacks to be conducted in limited visibility. The following are three mortar special illumination techniques:

- An illumination round fired extremely high over a general area will not always alert an enemy force that it is being observed, but it will provide enough illumination to optimize the use of night vision devices.
- An illumination round fired to burn on the ground will prevent observation beyond the flare into the shadow.
  - This is one method of countering enemy use of night vision devices.
  - A friendly force could move behind the flare with greater security.
- An illumination round fired to burn on the ground can be used to mark targets during day or night.
  - Illumination rounds have an advantage over WP as target markers during high winds.
  - The obscurant cloud from a WP round will be blown quickly downwind.
  - The obscurants from the burning illumination round will continue to originate from the same point, regardless of the wind.
- By requesting a range spread, the observer can spread illumination through the depth of a target.
- By requesting a lateral spread, the observer can spread illumination across the width of the target.
- Using a range and lateral spread, the observer can combine the effects to spread illumination across the width and depth of a target.
- If there is insufficient light, the observer can use coordinated illumination to adjust HE missions.
- The observer requests continuous illumination if there is a need to maintain illumination.

Considerations When Using Thermal Sights

B-43. Although illumination rounds may aid target acquisition when friendly forces are using image intensification devices (such as night vision devices), this is not so when thermal sights are used. As the illumination flares burn out and land on the ground, they remain as a distinct hot spot seen through thermal sights for several minutes. This may cause confusion, especially if the flare canisters are between the enemy and friendly

forces. WP rounds also can cause these hot spots which can make target identification difficult for gunners using thermal sights (for example, Javelin CCMS).

SECTION II – FIRE SUPPORT ASSETS

B-44. Mortars and FA are the main indirect fire support available to the Stryker Infantry platoon. During large-scale combat operations, rotary wing attack aircraft and joint or coalition CAS are typically planned at the BCT level, and sorties may be allocated to the battalion for refined planning to shape combat operations. On a limited basis, if assets are available, they may be requested for the platoon. This section discusses the considerations, and procedures for employing all the indirect fire assets (tables B-3 and B-4 show indirect capabilities).

Table B-3. Mortar capabilities

WEAPON	*MUNITION AVAILABLE*	*MAX RANGE*	*MIN RATE (rounds per minute)*	*BURST RADIUS (meters)*	*SUSTAINED RATE (rounds per minute)*
60-mm	HE, WP, Illum	3500 m (HE)	70 m (HE)	30 for 4 minutes	30
81-mm	HE WP, Illum	5600 m (HE)	70 m (HE)	25 for 2 minutes	38
120-mm	HE, Smoke, Illum	6600 m (HE)	180 m (HE)	15 for 1 minute	60

Legend: HE–high explosive; Illum–illumination; m–meter; mm–millimeter; WP–white phosphorous

Table B-4. Field artillery capabilities

ARTILLERY	AMMUNITION	RANGE (METERS)			RATES OF FIRE (ROUNDS PER MINUTE)	
	Projectile	Maximum	DPICM	RAP	Sustained	Maximum
105-mm M119-series	HE, HC, WP, Illum APICM	11,500 with charge 7. 14,000 with charge	12,000	19,500	Three for 30 minutes	Every 3 minutes
155-mm M109A5	HE, HC, WP, Illum APICM, DPICM, M825, smoke, SCATMINE	18,000 or 22,000 with M795 HE, M825 smoke	18,000 or 28,200 with M864	30,100	2	Every 3 minutes
155-mm M109 A5/A6		18,000 or 21,7000 with M795 HE, M825 smoke, M982 Excalibur: Block Ia-1 –24 km Block Ia-2 –37+km Block Ib– 40+km	17,900 or 28,100 with M864 base bleed	30,000	Zones 3-7: one round per minute Zone 8: one round per minute until limited by tube temperature sensor	Every 3 minutes
155-mm M777-series		22,200 with M201A1 modular charge 8S or 22,500 with M232 modular charge Zone 5: 24,500 with M982 Excalibur block 1-1a	N/A		Two according to thermal warming device	Every 2 minutes

Note. Excalibur is not authorized for the M109A5. Fuzes for ammunition are PD, VT, MT, ET, MTSQ, and delay
See ATP 3-09.32, Fire Multi-Service Tactics, Techniques, and Procedures for the Joint Application of Firepower, Appendix I for a detailed discussion of “danger close.”

Legend: APICM—antipersonnel improved conventional munitions; DPICM—dual purpose improved conventional munitions; ET—electronic time; HC—hexachloroethane smoke; HE—high explosive; Illum—illumination; mm–millimeter; MT mechanical time; MTSQ—mechanical time superquick; N/A—not available; PD—point detonating; RAP—rocket assisted projectile; SCATMINE—scatterable mine; VT—variable time; WP—white phosphorous

MORTAR AND ARTILLERY CALL FOR FIRE

B-45. *Call for fire* is a standardized request for fire containing data necessary for obtaining the required fire on a target (FM 3-09) (see figure B-7). The ability for mortars and artillery to engage targets from reverse-slopes and areas of defilade is a tremendous advantage, especially in adverse terrain. As with other operations, employing indirect fires in adverse terrain and climate does have its challenges. (See ATP 3-21.90, ATP 3-09.30, and FM 3-09 for additional information.) Unique challenges include—

- Target location error (TLE) when using analog tools, such as map, binoculars, and compass.
- Requirements to frequently displace firing units for survivability.
- Deconflicting the battlefield geometry:
  - Ground and air clearance.
  - Gun-target lines.
- Unpredictable weather conditions affecting accuracy of rounds.
- Targets located on peaks and steep terrain making round adjustments difficult.
- Intervening crests requiring placement of observers on dominating heights for overwatch.
- Limited terrain suitable for firing positions to cover a particular movement.
- Mortar and artillery locations ideal for range and coverage unsuitable due to intervening adverse terrain features.
- Locations that are tactically positioned, but in an area that has difficult or limited access.
- Shifting mortar and artillery assets to alternate locations requiring significant time and logistical efforts.

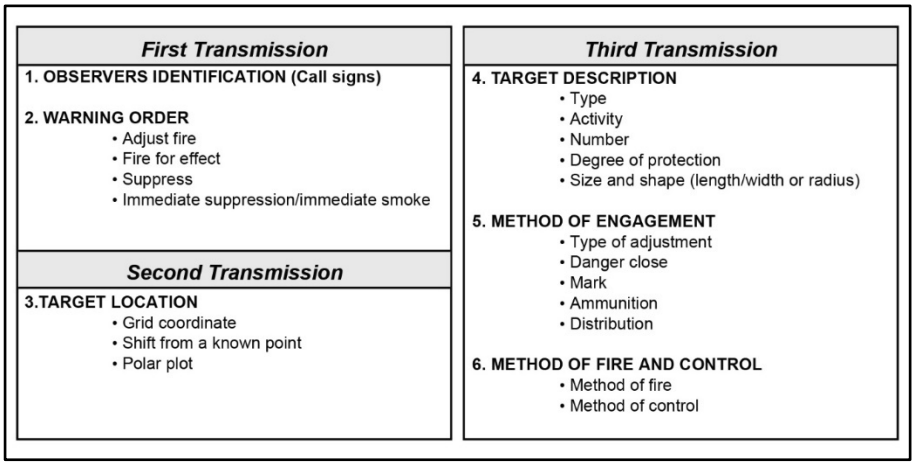


Figure B-7. Mortar and artillery call for fire format

INITIAL CALL FOR FIRE

B-46. The six elements of a call for fire include: observer identification, WARNORD, target location, target description, method of engagement, and method of fire and control. Regardless of the method of target location used, the call for fire is normally

sent in three transmissions, consisting of six elements, with a break and read back after each transmission. Send the information for each transmission as it is determined, rather than waiting until a complete call for fire has been prepared (see ATP 3-09.30 for detailed description). The transmissions and elements are organized in the following sequence:

- Observer identification and WARNORD.
- Target location.
- Target description, method of engagement, and method of fire and control.

OBSERVER IDENTIFICATION AND WARNING ORDER

B-47. Observer identification tells the FDC who is calling. The WARNORD clears the net for the fire mission and tells the FDC the type of mission, size of element, and the method of locating the target. For example, the observer says, STEEL 1–THIS IS RED 1 –followed by type of mission (ADJUST FIRE, FIRE FOR EFFECT, SUPPRESS)—OVER. The types of indirect fire missions are discussed in paragraphs B-48 to B-52.

Adjust Fire

B-48. This is used when the observer is uncertain of the exact target location. The firing unit will shoot one round, and the observer will make corrections. The observer announces, ADJUST FIRE.

Fire for Effect

B-49. The observer can bypass adjustments and initiate a fire for effect when the observer is positive of the target location. The observer should also be sure the rounds of the first volley have the desired effect on the target so little or no adjustment is required. The observer announces, FIRE FOR EFFECT.

Suppress

B-50. The word SUPPRESS is used to quickly bring fire on a preplanned target when unable to observe. This is a simplified call for fire and is sent in one transmission. Example: STEEL 1—THIS IS RED 1—SUPPRESS GRID ND1234567890 1—OVER.

Immediate Suppression

B-51. Immediate suppression is used to bring fire quickly on a planned target or a target of opportunity that is firing at a friendly unit or aircraft. For example, the observer says, STEEL 1—THIS IS RED 2—IMMEDIATE SUPPRESSION GRID ND1234567890—OVER.

Immediate Smoke

B-52. This is used to place smoke quickly on a planned target or a target of opportunity that is firing at a friendly unit. For example, STEEL 1—THIS IS RED 4—IMMEDIATE SMOKE GRID ND1234567890—OVER.

TARGET LOCATION

B-53. The third element of the call for fire is target location. There are five methods of establishing target location. They are grid, laser grid, polar plot, laser polar and shift from known point. When utilizing precision targeting devices to establish location, it is required to transmit the TLE in the target location portion of the call for fire request.

Grid

B-54. The observer sends the most accurate target location possible. The minimum acceptable standard is a six-digit grid when calling for fire on a map spotted target location. Send a minimum eight- or ten-digit grid location for registration points or other points for which greater accuracy is required. Altitude is included immediately after the grid. The observer-target direction is normally sent after the entire initial call for fire, since the FDC does not need the direction to locate the target.

B-55. The observer announces GRID. For example, ADJUST FIRE, GRID ND1234567890, OVER.

Laser Grid

B-56. A laser grid mission is the same as a grid mission with the following exceptions:

- A target grid can be sent to a greater level of precision (eight- or ten-digit grid depending on observer or OP location error).
- In an adjust fire mission, corrections are sent in the form of a grid to the burst location.

B-57. The observer announces LASER GRID, for example FIRE FOR EFFECT, LASER GRID, OVER. After the read back by the FDC, the FO announces the grid and altitude as normal, followed by the TLE if known. For example, GRID ND1234567890, ALTITUDE 390, TLE 2.9 OVER.

Polar Plot

B-58. In a polar plot mission, the word polar in the WARNORD alerts the FDC that the target will be located with respect to the observer's position. The FDC must know the observer's location. The observer then sends the direction and distance. A vertical shift tells the FDC how far, in meters, the target is located above or below the observer's location. Vertical shift may also be described by a vertical angle in mils, relative to the observer's location.

B-59. The observer announces POLAR. For example, ADJUST FIRE POLAR, OVER.

Laser Polar

B-60. Laser polar differs from a polar mission in that laser data is sent to the nearest one mil for direction (instead of the normal 10 mils) vertical angle and the nearest 10 meters for distance.

B-61. The observer announces LASER POLAR. For example, ADJUST FIRE, LASER POLAR, OVER.

Shift from a Known Point

B-62. In a shift from a known point mission, the target will be in relation to a preexisting known point or recorded target. In the WARNORD, identify the point or target from which to shift. (The observer and the FDC must know the location of the point or recorded target.) The observer then sends the observer-target direction. Normally, mils are the preferred unit of measure for a shift. However, the FDC can accept degrees or cardinal directions, whichever the observer specifies. The corrections are sent next and include:

- Lateral shift in meters (how far left or right the target is) from the known point.
- Range shift (how much farther [ADD] or close [DROP] the target is in relation to the known point, to the nearest 100 meters).
- Vertical shift (how much the altitude of the target is above [UP] or below [DOWN] the altitude of the known point, expressed to the nearest 5 meters). Vertical shift is usually only significant if it is greater than or equal to 35 meters.

B-63. The observer announces SHIFT, followed by the designation of the known point or by the target number. For example, ADJUST FIRE, SHIFT KNOWN POINT AB0001, OVER.

TARGET DESCRIPTION

B-64. The observer must describe the target in enough detail that the FDC can determine the most appropriate amount and type of ammunition to use. The FDC selects different ammunition for different types of targets. The observer should be brief but accurate. The description should contain the following:

- What the target is (troops, equipment, supply depot, trucks).
- What the target is doing (digging in at a BP).
- The number of elements in the target (squad, platoon, three trucks, six tanks).
- The degree of protection (in the open, in foxholes, in bunkers with overhead protection).
- The target size and shape if these are significant:
  - For a rectangular target, give the length and width (in meters) and the altitude in mils.
  - For example, 400 BY 300, ALTITUDE 2,800.
  - For a circular target, the observer gives the radius. For example, RADIUS 200.
  - For a linear target, the observer gives the length and attitude.

METHOD OF ENGAGEMENT

B-65. The observer may indicate how to attack the target. This element consists of the type of adjustment, trajectory, ammunition, and distribution. DANGER CLOSE and MARK are included as appropriate. For a smoke mission, the observer would request “smoke in effect” here. The observer may control the pattern of bursts in the target area, this is distribution. This pattern of bursts is called a sheaf and can be used on a specific target. (See ATP 3-09.30 observed fires for more information on converged and open sheafs.)

Type of Adjustment

B-66. Two types of adjustment may be employed: area and precision. Unless precision is specified, area fire will be used. Use area fire to attack an area target. Since many area targets are mobile, the adjustment should be as quick as possible, consistent with accuracy, to keep the target from escaping. Conduct precision fire with one weapon on a point target to obtain registration corrections or to destroy the target.

Danger Close

B-67. DANGER CLOSE is declared prior to engagement when the target is (or rounds will impact) within 600 meters of any friendly troops for mortars and artillery, 750 meters. DANGER CLOSE and risk estimate distances are different in meaning. Risk estimate distances can be referenced in ATP 3-09.32.

Trajectory

B-68. The trajectory is the path traced by the center of gravity of the projectile from the origin to the level point. High-angle fire is the delivery of fire at elevations greater than the elevation of maximum range of the charge. Range decreases as the angle of elevation increases (see TC 3-09.81). Mortars fire only high angle. Low angle is standard without request.

Ammunition

B-69. The observer may request any type of ammunition during the adjustment or the fire for effect phase of the mission. Use an HE projectile with a mechanical time super quick fuze for normal adjustment. If that is what the observer desires, it is not necessary to request it in the call for fire. If the observer does not request a shell fuze, for the fire for effect phase, the fire direction officer determines the shell fuze combination. The unit SOP may designate a standard shell fuze combination.

Distribution

B-70. Unless otherwise requested, the artillery computer system determines individual weapon aiming points to distribute the bursts for best coverage of a type of target. The observer may control the pattern of bursts in the target area. This pattern of bursts is called a sheaf. (See ATP 3-09.30 observed fires for more information on converged and open sheafs.)

Method of Fire and Control

B-71. The method of fire and control element indicates the desired manner of attacking the target, whether the observer wants to control the time or delivery of fire, and whether the target can be observed. The most common methods of control are at my command and time on target which are especially useful in massing fires. The at my command and time on target missions are designed to achieve surprise and maximize the effects of the initial volley on a target. When used by the observer, these methods of control can reduce the sporadic engagement of the target, which can be the result of rounds fired when ready. (See figure B-8 for call for fire flow chart.)

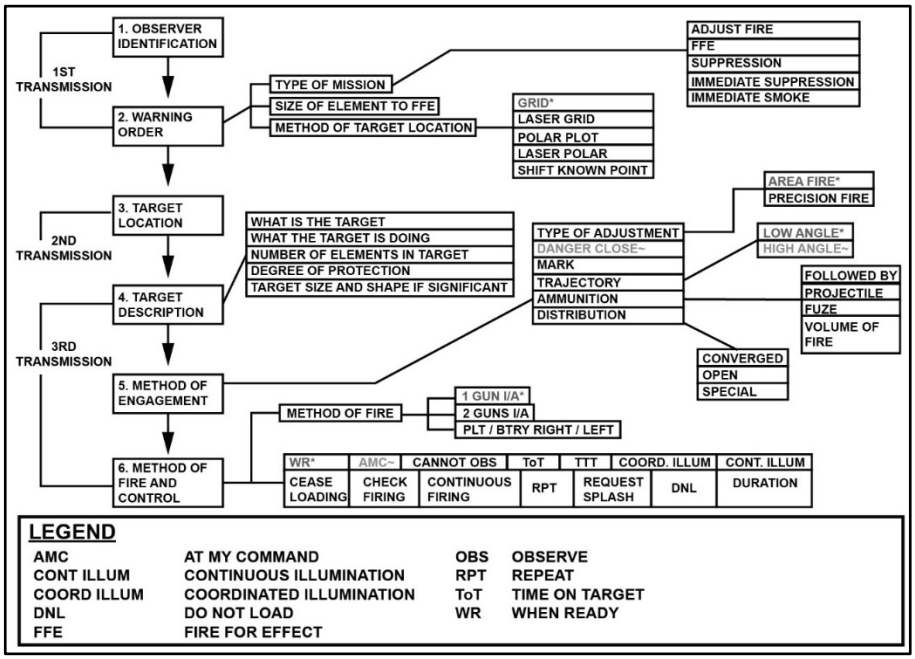


Figure B-8. Call for fire flow chart mortars and artillery

MORTARS

B-72. Mortars are high-angle, relatively short-range, high rate-of-fire, area fire weapons. Their mobility makes them well suited for close support of maneuver and can rapidly be brought into action. The mortar platoon is the battalion commander's most responsive fire support asset. The Stryker battalion has 120-mm and 81-mm mortars. Typically, the battalion commander employs the mortar platoon in support of the battalion's main effort or uses it to offset the lack of FA. The Stryker company has 120-mm and 60-mm mortars. The battalion and company mortars provide immediate indirect fire support. The platoon receives the majority of indirect fire support from mortars. Mortars are ideal weapons for attacking targets on reverse slopes, in gullies, in ditches, in built up areas, and in other areas that are difficult to reach with low-angle fire (see ATP 3-21.11 and ATP 3-21.21 for more information).

MORTAR CAPABILITIES

B-73. Mortars can suppress enemy forces and enhance the platoon's mobility which allows the platoon to gain a tactical advantage over enemy forces. Mortars provide the platoon with responsive, organic indirect fire support at a higher rate of fire than FA units. Although the Stryker Infantry platoon does not have organic mortars, they can request support from the company 60-mm and 120-mm mortar section. When identified as the main effort, the Stryker platoon leader may be able to leverage 81-mm and 120-mm mortars at the battalion level. Additional employment considerations include the following:

- Mortars provide the maneuver leader with immediately available and responsive indirect fires in support of combat missions, and they reinforce direct fires during close combat.
- Mortars are integrated with FA assets in an echelonment of fires.
- In the offense, mortars establish conditions for the maneuver elements in conducting their combat missions by:
  - Assisting in suppressing and fixing the enemy and providing close support fires during the assault.
  - Providing obscurants for screening and friendly movements.
  - Using heavy mortars to penetrate buildings and destroy enemy field fortifications.
- In the defense, mortars can—
  - Force the enemy in armored vehicles to button up.
  - Obscure their ability to employ supporting fires.
  - Deny use of defilade terrain.
  - Break up enemy concentrations and formations.
  - Separate enemy dismounted Infantry from their armored PCs and accompanying tanks.
  - Destroy synchronization, reduce enemy mobility, and canalize enemy units into EAs.

MUNITIONS

B-74. Mortars employ a wide variety of munitions to support the maneuver platoon which include but are not limited to the following:

- High-explosive ammunition is used against enemy personnel and light materiel targets and PCs with a variety of fuze combinations.
- Illumination ammunition is used for battlefield illumination and signaling with both IR and light Illum cartridges.
- Smoke cartridges with WP filler are used for screening and spotting.

FIELD ARTILLERY

B-75. *Field artillery* is equipment, supplies, ammunition, and personnel involved in the use of cannon, rocket, or surface-to-surface missile launchers (FM 3-09). FA is the maneuver commander's principal means for providing indirect fire support to the maneuver forces, if allocated. The mission of the FA is to destroy, defeat, or disrupt the enemy with integrated fires to enable maneuver commanders to dominate in large scale combat operations. FA elements within maneuver organizations serve as the integrating center for all elements of fire support. FA delivery systems include cannons, rockets, and missiles. These systems can provide fires under all weather conditions and in all types of terrain. They can shift and mass fires rapidly without having to displace. (See ATP 3-21.21 and FM 3-09.)

B-76. The Stryker platoon must know how to use artillery support to its best advantage. Artillery often offers the best way to impede and disrupt enemy formations and suppress enemy positions. It can provide immediate, responsive, and accurate fires with a wide variety of munitions. Stryker platoons may have artillery support when designated the

main effort and should understand the capabilities within the SBCT. (See ATP 3-21.21 and ATP 3-09.70.)

ARTILLERY CAPABILITIES

B-77. In support of the platoon, FA elements can—

- Provide fires in all weather conditions and types of terrain.
- Shift and mass fires rapidly.
- Support the operations in depth with long-range fires.
- Provide a variety of conventional shell and fuze combinations.
- Provide continuous fires by careful positioning and timely displacement.
- Accurately engage stationary point targets with 155-mm M982A1 (also called Excalibur) guided munitions.

B-78. Limitations of FA support include high dud rates for some munitions, observer-induced TLE, its limited capability against moving targets and its vulnerability to detection and counterbattery fires due to its firing signature. (See ATP 3-09.70.)

MUNITIONS

B-79. FA employs a wide variety of munitions that the platoon can tailor to engage different types of targets. These include, but are not limited to the following:

- HE is best against personnel, field fortifications, and light armored vehicles.
- Smoke is best for obscuring the enemy's vision and screening friendly Soldiers.
- Illumination includes both white light and IR illumination. Ideally, these illuminate the enemy, not friendly forces.
- White or red phosphorous effectively screens friendly Soldiers or actions, mark's locations, obscures enemy vision, and burns obstacles and equipment.
- Precision munitions such as M982A1 guided munitions best used on point targets that require a high degree of accuracy, especially in urban areas where collateral damage is a concern.
- Improved conventional munitions are best against personnel targets.
- Dual-purpose improved conventional munitions are best against personnel and light armored vehicles in the open.
- M864 and M483 do not meet DOD cluster munitions policy of less than 1 percent unexploded ordnance.
- Antipersonnel improved conventional munitions.
- Area denial artillery munitions.
- Remote antiarmor mine system.

AIR GROUND OPERATIONS

B-80. *Air-ground operations* are the simultaneous or synchronized employment of ground forces with aviation maneuver and fires to seize, retain, and exploit the initiative (FM 3-04). Employing the combined and complimentary effects of air and ground maneuver and fires through air-ground operations presents the enemy with multiple dilemmas and ensures that aviation assets are positioned to support ground maneuver. Air ground operations increase the overall combat power, mission effectiveness, agility, flexibility, and survivability. Air-ground operations ensure that all members of the

combined arms team, whether on the ground or in the air, work toward common and mutually supporting objectives to meet the higher commander's intent.

ARMY AVIATION

B-81. Army aviation attack and reconnaissance units use maneuver to concentrate and sustain combat power at critical times and places to find, fix, and destroy enemy forces. During the planning process, Army aviation attack and reconnaissance units are integrated into the unit's scheme of maneuver to ensure responsiveness, synergy, and agility during actions on the objective or upon contact with the enemy. Pre-mission development of control measures provides a foundation for the successful integration of Army aviation into Infantry operations.

B-82. In large scale combat operations, army attack aviation is typically planned at the BCT in support of BCT or battalion tactical maneuver. Attack aviation elements will typically be employed at the company level to achieve massed effects at the decisive point by integrating the air scheme of maneuver (such as air routes and air BPs) with the ground scheme of maneuver and scheme of fires. The Stryker platoon should be aware of aviation units operating adjacent to or forward of their positions or providing fires from an over-the-shoulder position and understand that aviation units in the area will always slow the responsiveness of indirect fire systems, and leaders should be prepared to deconflict indirect fires with aviation support by way of time, altitude, boundaries, or other control measures.

B-83. Integrating attack aviation into tactical maneuver is contingent upon the use of commonly understood graphics and planning considerations. Among these control measures are engagement criteria; the triggers and conditions for execution; fire support coordination measures, such as TRPs, EAs, and airspace coordinating measures, such as aerial ingress and egress routes and restricted operations zones.

ARMY AVIATION ATTACK CALL FOR FIRE

B-84. The more platoons are decentralized in their operations, the more likely they are to receive, or utilize, supporting army attack aviation. Platoons must be prepared to contact and request fires from supporting aviation. Army aviation attack targets are planned on probable enemy locations. Army aviation attack call for fire is a coordinated attack by Army aviation attack against enemy forces in close proximity to friendly units (see figure B-9 for Army attack aviation call for fire).

B-85. Army aviation attack call for fire is not synonymous with CAS flown by joint and multinational aircraft. Terminal control from ground units or controllers is not required due to aircraft capabilities and enhanced situational understanding of the aircrew. Depending on the enemy situation and the higher commander's intent for aviation employment, Army aviation attack may be on station during times when contact is most likely to occur. Air-ground integration ensures frequencies are known and markings are standardized to prevent fratricide.

B-86. Coordination between ground maneuver units and aviation attack units maximizes the capabilities of the combined arms team while minimizing the risk of fratricide and friendly fire. To ensure adequate air-ground integration, the following major problem areas should be addressed:

- Ensure aircrews understand ground tactical plan and unit commander's intent.
- Ensure adequate common control measures are used to allow both air and ground unit's maximum freedom of maneuver.
- Ensure aircrews and ground forces understand methods of differentiating between enemy and friendly forces on the ground.

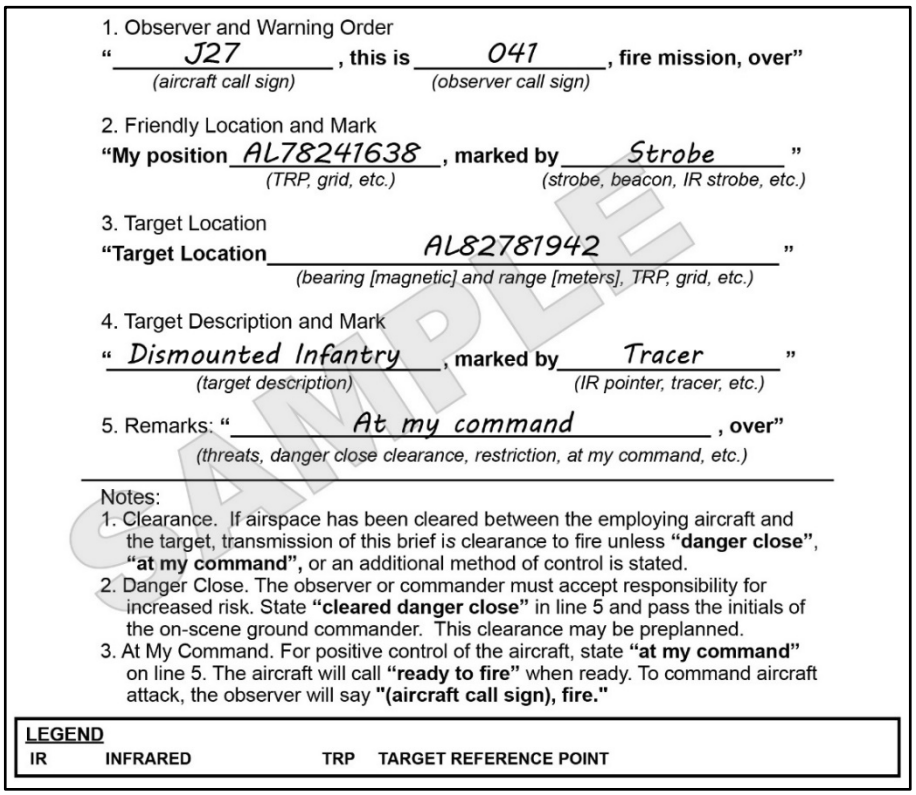


Figure B-9. Army aviation attack request call for fire

CLOSE AIR SUPPORT

B-87. CAS distributed to Stryker Infantry battalions may be further distributed to companies. CAS can be employed to blunt an enemy attack; to support the momentum of the ground attack; to help set conditions for operations as part of the overall counterfire fight; to disrupt, delay and destroy enemy second echelon forces and reserves; and to provide cover for friendly movements. The effectiveness of CAS is related directly to the degree of local air superiority attained. Until air superiority is achieved, competing demands between CAS and counterair operations may limit sorties apportioned for the CAS role. CAS is the primary support given to committed Stryker Infantry battalion and SBCT by joint or coalition aircraft.

Mission

B-88. *Close air support* is air action by aircraft against hostile targets that are in close proximity to friendly forces and that require detailed integration of each air mission with the fire and movement of those forces (JP 3-09.3). Based on threats and the availability of other means of fire support or supporting arms, synchronizing CAS in time, space, and purpose with supported ground forces may be the most detailed and continuous integration task performed by commanders and staffs.

Planned Close Air Support

B-89. BCT tactical planners, in coordination with Stryker Infantry battalions submit CAS requests in conjunction with the joint air tasking cycle (normally a 72- to 96-hour air tasking order planning cycle). These requests for CAS normally do not include detailed timing information because of the lead time involved. Preplanned CAS requests involve any information about planned subordinate schemes of maneuver, even general information, which can be used in the apportionment, allocation, and distribution cycle. As requests mature in the process, they gain specificity in terms of weaponizing and timing. CAS is retained by the BCT or allocated to Stryker battalion for execution.

Immediate Close Air Support

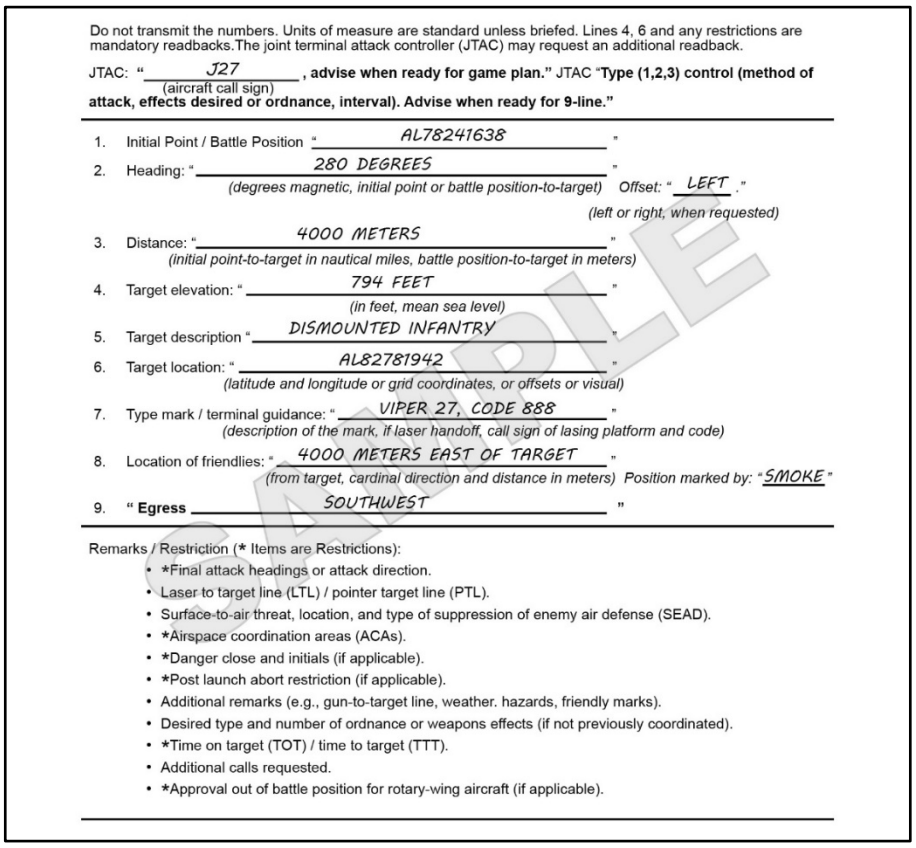
B-90. Immediate requests are used for air support mission requirements identified too late to be included in the current air tasking order. Those requests initiated below battalion level and without access to a JTAC and the joint air request net. are forwarded to the battalion main command post by the most rapid means available. At battalion level, the commander, FSO, air liaison officer, and battalion operations staff officer consider each request. Immediate CAS requests are transmitted by the tactical air control party over the joint air request net directly to the air support operations center who is the primary control agency of the theatre air control system for execution of air operations in direct support of land operations. Immediate CAS requests may be generated in support of operations still in the planning process or in support of ongoing combat operations.

Executing Close Air Support

B-91. Units having a reasonable expectation of utilizing CAS will need to have a qualified JTAC available. In certain circumstances where CAS is needed and a JTAC, FAC, or FAC(A), is not available, aircrews bear increased responsibility for the detailed integration required to minimize fratricide normally done by a JTAC, FAC or FAC(A). Joint fires observers also support CAS by providing targeting data to JTACs, FACs, and FAC(A)s, but they cannot perform terminal attack control of CAS missions and do not replace a trained and certified JTAC, FAC, or FAC(A). In these rare circumstances, the aircrews providing CAS assist the ground movement commander to the greatest extent possible to bring fires to bear.

B-92. The flow and prosecution of CAS targets normally begins with a check-in briefing between the aircrew and the JTAC or the FAC (see ATP 3-09.32 for information on check-in brief). The JTAC will give a ground situation update followed by a game plan, then a 9-line CAS brief (see figure B-10 for game plan 9-line CAS brief). The ground

commander or designated representative should state in the first transmission to the aircrew that they are not a JTAC, FAC, or joint fires observer. A game plan is a concise situational awareness-enhancing tool to inform all players of the flow of the CAS mission. At a minimum, the game plan will contain the type of control and method of attack. The type of terminal attack control and method of attack are separate and independent constructs. The method of attack is broken down into two categories: bomb on target and bomb on coordinate. The method of attack conveys the JTAC's/FAC's intent for the aircraft prosecution of the target; either the aircraft will be required to acquire the target (bomb on target) or not (bomb on coordinate). These two categories define how the aircraft will acquire the target or mark the target. Any type of control can be utilized with either method of attack, or no type of control is attached to one method of attack (see JP 3-09.3).



Do not transmit the numbers. Units of measure are standard unless briefed. Lines 4, 6 and any restrictions are mandatory readbacks.The joint terminal attack controller (JTAC) may request an additional readback.

JTAC: "J27 (aircraft call sign), **advise when ready for game plan."** JTAC "**Type (1,2,3) control (method of attack, effects desired or ordnance, interval). Advise when ready for 9-line."**

1. Initial Point / Battle Position "AL78241638"
2. Heading: "280 DEGREES" *(degrees magnetic, initial point or battle position-to-target)* Offset: "LEFT," *(left or right, when requested)*
3. Distance: "4000 METERS" *(initial point-to-target in nautical miles, battle position-to-target in meters)*
4. Target elevation: "794 FEET" *(in feet, mean sea level)*
5. Target description "DISMOUNTED INFANTRY"
6. Target location: "AL82781942" *(latitude and longitude or grid coordinates, or offsets or visual)*
7. Type mark / terminal guidance: "VIPER 27, CODE 888" *(description of the mark, if laser handoff, call sign of lasing platform and code)*
8. Location of friendlies: "4000 METERS EAST OF TARGET" *(from target, cardinal direction and distance in meters)* Position marked by: "SMOKE"
9. **"Egress** SOUTHWEST"

Remarks / Restriction (***** Items are Restrictions):

- *Final attack headings or attack direction.
- Laser to target line (LTL) / pointer target line (PTL).
- Surface-to-air threat, location, and type of suppression of enemy air defense (SEAD).
- *Airspace coordination areas (ACAs).
- *Danger close and initials (if applicable).
- *Post launch abort restriction (if applicable).
- Additional remarks (e.g., gun-to-target line, weather. hazards, friendly marks).
- Desired type and number of ordnance or weapons effects (if not previously coordinated).
- *Time on target (TOT) / time to target (TTT).
- Additional calls requested.
- *Approval out of battle position for rotary-wing aircraft (if applicable).

SAMPLE

Figure B-10. Game plan and 9-line close air support brief

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Appendix C

Battle and Crew Drills

Stryker Infantry rifle platoons, squads, and mounted elements undergo extensive training to conduct combat operations in all operational environments. In preparation for these operations, drills are performed to provide standard actions that link Soldier and collective tasks at platoon level and below. Drills are limited to situations requiring instantaneous response; therefore, Soldiers must execute drills instinctively, which results from continual practice. Drills provide platoons, squads, and crews with standard procedures essential for building precision and lethality. They identify key actions that leaders and Soldiers must perform quickly. They provide for a smooth transition from one activity to another (for example, from movement to offensive action to defensive action). Drills must be understood by each Soldier and leader, and continually practiced by the platoon.

While this publication does not include all battle and crew drills, the remaining drills can be found in the Combined Arms Training Strategies within the Army Training Network, Digital Training Management System, and the Central Army Registry (see websites under references section for link to Army's definitive sources for Army training).

SECTION I – BATTLE DRILLS

C-1. A *battle drill* is rehearsed and well understood actions made in response to common battlefield occurrences (ADP 3-90). Battle drills are collective actions where Soldiers and leaders rapidly process information, make decisions, and execute without a deliberate decision-making process. Battle drills are the actions of individual Soldiers and small units, typically conducted after first meeting the enemy. They require minimal leader orders to accomplish and are initiated on a cue, such as an enemy action or a leader's order, and are a trained response to that cue. Battle drills are designed to be quickly executed without the application of a deliberate decision-making process.

OVERVIEW

C-2. Battle drills are tasks (individual and collective) designed to teach a Soldier or small unit to react and survive in common combat situations. A platoon, squad, team, or crew performs these actions when initiated by a predetermined cue (verbal or visual). Battle drills are performed instinctively; they require minimal leader direction and have little to no notice. When initiated they are considered vital to the success of the combat operation or critical to preserving life (see FM 7-0). A drill has the following advantages:

- It is based on unit missions and the specific tasks, standards, and performance measures required to support mission proficiency.
- It builds from simple to complex but focuses on the basics.
- It links how-to-train and how-to-fight at the small-unit level.
- It provides an agenda for continuous coaching and analyzing.
- It develops leaders and builds teamwork and cohesion under stress.
- It enhances the chance for individual and unit survival on the battlefield.

SELECTED BATTLE DRILLS

C-3. This section identifies essential battle drills that a Stryker Infantry rifle platoon, squad, and mounted element must train on to ensure success. (See the Army Training Network or the Central Army Registry to view selected battle drills.) They include the following:

- React to Direct Fire Contact While Mounted–Stryker Infantry Platoon (drill 07-PLT-D9601).
- React to Direct Fire Contact While Dismounted–Platoon (drill 07 PLT-D9501).
- React to Direct Fire Contact While Dismounted–Squad (drill 07 SQD-D9501).
- React to Indirect Fire While Mounted–Stryker Infantry Platoon (drill 07-PLT-D9604).
- React to Indirect Fire While Dismounted–Platoon (drill 07-PLT-D9504).
- React to Indirect Fire While Dismounted–Squad (drill 07-SQD-D9504).
- Break Contact–Stryker Infantry Platoon (drill 07-PLT-D9605).
- Break Contact–Platoon (drill 07-PLT-D9505).
- Break Contact–Squad (drill 07-SQD-D9505).
- React to Air Attack While Mounted–Stryker Infantry Platoon (drill 07-PLT-D9617).
- React to Aircraft While Dismounted–Platoon (drill 07-PLT-D8015).
- React to Ambush (Dismounted)–Platoon (drill 07-PLT-D9502).
- React to Ambush (Dismounted)–Squad (drill 07-SQD-D9502).
- Conduct a Platoon Assault (drill 07-PLT-D9514).
- Conduct a Squad Assault (drill 07-SQD-D9515).
- Dismount a Stryker Vehicle–Platoon (drill 07-PLT-D9631).
- Dismount a Vehicle Under Direct Fire–Squad (drill 07-SQD-D9506).
- Mount a Stryker Vehicle–Platoon (drill 07-PLT-D9632).
- Change Formation While Mounted–Stryker Infantry Platoon (drill 07-PLT-D9635).
- Execute Action Right, Left or Rear While Mounted–Stryker Infantry Platoon (drill 07-PLT-D9637).
- Breach of a Mined Wire Obstacle–Platoon (drill 07-PLT-D9412).
- Establish Security at the Halt–Platoon (drill 07-PLT-D9508).
- Enter a Trench to Secure a Foothold–Platoon (drill 07-PLT-D9510).
- Conduct a Hasty Attack–Platoon (drill 07-PLT-D9511).
- React to Nuclear Attack–Platoon (drill 07-PLT-D9483).
- React to a Chemical Agent Attack (drill 03-PLT-D0071).

- Knock Out a Bunker–Squad (drill 07-SQD-D9406).
- Enter and Clear a Room–Squad (drill 07-SQD-D9509).

SECTION II – CREW DRILLS

C-4. A crew drill is a collective action that the crew of a weapon or piece of equipment must perform to successfully use the weapon or equipment in combat or to preserve life. This action is a trained response to a given stimulus, or initiated cue, such as a simple leader's order or the status of the weapon or piece of equipment. It requires minimal leader orders to accomplish and is standard throughout the Army.

OVERVIEW

C-5. Stryker Infantry crew drills describe how crews execute collective action and equipment malfunction drills. A platoon's ability to conduct crew drills often depends on Soldiers, leaders, squads, and mounted elements executing actions quickly. All Soldiers and their leaders must know their immediate reaction to an equipment malfunction as well as follow-up actions such as mount, dismount, and CASEVAC drills.

SELECTED CREW DRILLS

C-6. This section identifies essential crew drills that a Stryker crew must train on to ensure success. (See the Army Training Network or the Central Army Registry to view selected battle drills.) They include:

- Extract Injured Personnel from a Stryker–Crew (drill 07-CW-D9455).
- Extinguish a Fire on a Stryker–Crew (drill 07-CW-D9420).
- Destroy a Stryker–Crew (drill 07-CW-D9450).
- React to a CBRN Attack in an Infantry Carrier Vehicle–Crew (drill 07-CW-D9453).
- Mount a Machine Gun, Caliber .50 HB, M2, on the Stryker Remote Weapon Station–Crew (drill 07-CW-D9446).
- Dismount a Machine Gun, Caliber .50 HB, M2, from the Stryker Remote Weapon Station–Crew (drill 07-CW-D9445).
- Mount a MK19, 40MM Grenade Machine Gun on the Stryker Remote Weapon Station–Crew (drill 07-CW-D9448).
- Dismount a MK19, 40-mm Grenade Machine Gun from the Stryker Remote Weapon Station–Crew (drill 07-CW-D9447).
- React to an Obstacle–Crew (drill 17-CW-D8008).
- React to Air Attack–Crew (drill 17-CW-D8018).
- React to ATGM Fire While Mounted–Section (drill 07-SEC-D9401).

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Appendix D

Vehicle, Weapon, and Equipment Capabilities

The Stryker Infantry carrier vehicle (ICV) is a platform that provides protection, mobility, and firepower by carrying Infantry to the point of deployment. The SBCT Infantry rifle platoon is equipped with four Stryker vehicles in various configurations. While individual specifications can vary based on which platform variant a unit has, the overall purpose and employment of the platform remains largely unchanged. This appendix addresses vehicle characteristics, protection, and armament capabilities of the Stryker ICV. Refer to the appropriate technical manuals for additional information.

STRYKER PLATFORMS

D-1. The most common platform configuration is four Stryker ICVs equipped with RWSs; two mounted M2 .50-caliber and two MK19 40-mm grenade mounted machine guns. An additional platform configuration is two Stryker ICVs equipped with medium caliber weapon systems 30-mm and two Stryker ICVs equipped with a CROWS-J and either a M2 .50-caliber or MK19 40-mm grenade machine gun.

STRYKER ICV

D-2. The common Stryker ICV platform is an eight-wheeled, lightly armored vehicle. The Stryker ICV is four-wheeled drive with selectable eight-wheeled drive that has—

- A sprint capability of 50 meters in 9 seconds.
- A sustained maximum speed of greater than 75 miles per hour.
- A cruising range of 360 miles or more on paved roads at 40 miles per hour (280 for those with a double V-hull [DVH]).
- Run-flat tires.
- Central tire inflation system.
- A capacity to carry a nine-man Infantry squad.

PROTECTION

D-3. The Stryker ICV has several levels of protection depending on what armor and systems have been added. Furthermore, its reduced audible and thermal signature and speed reduce the chances of unintended contact with enemy forces. Most Stryker ICVs are the M1256 variant which features a DVH. The DVH provides additional crew protection against mines and improvised explosive devices at a cost of increased weight and a reduced cruising range. Future modifications may include reactive and active armor systems. Currently, the ICV has the following protection features:

- Basic high-hard steel body armor that protects against small arms fire.
- Spall liner that protects Soldiers and equipment from fragments of the inner hull breaking off when hit by a projectile.
- Ceramic applique armor that protects against small arms and artillery fires.

ARMAMENT

D-4. The Stryker ICV is capable of mounting either the M2HB .50-caliber machine gun or the MK19 40-mm grenade machine gun. The platform provides enhanced stabilization, but at a reduced maximum elevation which causes the machine guns to have different maximum effective ranges than when ground mounted.

Note. While remote operation allows gunners to fire weapon systems while protected by the vehicle's armor, gunners must still expose themselves when reloading or correcting malfunctions.

M2 .50-Caliber Machine Gun

D-5. The M2 provides lethal direct fires against lightly armored and unarmored vehicles. The M2 has the following capabilities:

- Maximum range: 6,700 meters.
- Maximum effective range: 1,800 meters.
- Cyclic rate of fire: 450-600 rounds per minute.

MK19 40-mm Grenade Machine Gun

D-6. The MK19 is a direct fire grenade launcher that is highly capable against unarmored vehicles and groups of dismounted forces. The MK19 has the following capabilities:

- Maximum range: 2,200 meters.
- Maximum effective range: 1,500 meters.
- Cyclic rate of fire: 325 to 375 rounds per minute.

Note. The range of the MK19 40-mm grenade machine gun is reduced when used on a Stryker RWS compared to ground mounting due to limitations imposed by the maximum range of movement of the sight servo assembly in relation to the weapon station platform's elevation angle.

M6 Smoke Grenade Launchers

D-7. The RWS M6 smoke grenade launcher is a heavy-duty aluminum smoke discharger with four smoke grenade tubes that provides obscuration and counters weapon threats by blocking visual and thermal images to protect the crew and dismounted Infantry squad. The RWS M6 smoke grenade launcher has the following capabilities:

- Total smoke grenade tubes: 16 each.
- Detonating range: 30 meters.

- Obscuration cloud: 6 to 7 meters high.
- Covering arc: 45 degrees (120 mils) per launcher.

CHARACTERISTICS

D-8. The Stryker ICV is equipped with a M1151 RWS. The RWS is a remotely operated weapon mount that provides the crew with the ability to place accurate direct fires without exposing the gunner. The RWS is mounted on the top right side of the vehicle and is operated from inside the vehicle. Remote operation occurs through a computerized fire control unit with control grip. A stabilization system enables the operator to track and engage targets while on the move. The tracking and control capabilities of the RWS provide a high first-round hit probability against stationary and moving targets. The RWS equipped Stryker ICV has the following characteristics:

- Both day and night operation modes.
- Traverses a full 360 degrees under power.
- Powered traverse and elevation rate of 80 degrees per second.
- Maximum elevation of +60 degrees.
- Maximum depression of –20 degrees.
- Folds flat for air or rail transport.
- Integrated fire control unit color display for operator interface.
- Smoke grenade launchers for local concealment.
- Thermal imaging module that provides visual images for both day and night operations.
- Video imaging module that provides a color day camera for clear and easier target identification.
- Small tactical optical rifle-mounted micro-laser rangefinder mounted above the thermal imaging module accurately—
  - Determines the range to a target from 25 to 10,000 meters.
  - Provides visible and IR aiming lasers to 600 meters on low power, 800 meters during the day, and 2,000 meters at night on high power.

XM1304 STRYKER ICV–30MM

D-9. The XM1304 Stryker ICV, DVHA1, (ICVA1 30mm) uses the same chassis as the Stryker ICVA1 but includes a remotely operated turret. It remains a four-wheeled drive with selectable eight-wheel drive that has—

- A sprint capability of 50 meters in 9 seconds.
- A sustained maximum speed of greater than 60 miles per hour.
- A cruising range of 275 miles or more on paved roads at 40 miles per hour.
- Run-flat tires.
- Central tire inflation system.

ARMAMENT

D-10. The Stryker ICVA1 30-mm turret is equipped with the XM813 30 by 173-mm chain gun and an M240 7.62-mm coaxially mounted medium machine gun.

Note. The remote operation allows gunners to fire weapon systems while protected by the vehicle's armor.

XM-813 30-mm Chain Gun

D-11. XM-813 30-mm chain gun provides lethal direct fires against lightly armored vehicles. The specifications are—

- Maximum range: 5,000 meters.
- Maximum effective range: 2,300 meters.
- Cyclic rate of fire:
  - Single shot, 50.
  - Burst, 120.
  - Automatic, 200 rounds per minute.

Note. Cyclic rate of fire is 120 rounds per minute maximum while programing airburst munitions.

M240 7.62-mm Machine Gun

D-12. The M240 7.62-mm coaxial machine gun provides lethal direct fires against unarmored vehicles and dismounted forces. The specifications are—

- Maximum range: 2,200 meters.
- Maximum effective range:
  - 900 meters point.
  - 1,100 meters area.
- Cyclic rate of fire: 850 to 950 rounds per minute.

M6 Smoke Grenade Launchers

D-13. The Stryker ICV-30-mm has the same four M6 smoke grenade launchers found on the ICV. These provide immediate obscuration to the front and sides of the Stryker ICV.

- Total smoke grenade tubes: 16 each.
- Maximum effective range: 1,500 meters.
- Cyclic rate of fire: 325 to 375 rounds per minute.

CHARACTERISTICS

D-14. The ICV-30-mm turret is remotely operated and provides the ICV-30-mm with the ability to place accurate direct fires without exposing the gunner. It increases the weight of the vehicle by approximately 4,372 pounds, but greatly increases engagement range and armor penetration. The ICV-30-mm turret is mounted on the top of the vehicle with the center of mass shifted towards the rear and is operated from the interior of the chassis. Remote operation occurs through a computerized fire control unit with either a commander's control handle or squad leaders control grip. A stabilization system enables the operator to track and engage targets while on the move. The tracking and control capabilities of the ICV-30-mm provide a high first-round hit probability against stationary and moving targets. The ICV-30-mm turret has the following characteristics:

- Both day and night operation modes.
- Traverses a full 360 degrees under power.
- Maximum elevation and azimuth speed of 60 degrees per second.
- Maximum elevation of +47 degrees.
- Maximum depression of –10 degrees.
- Integrated fire control unit color display for operator interface.
- Smoke grenade launchers for local concealment.
- Thermal imaging module that provides visual images for both day and night operations.
- Video imaging module that provides a color day camera for clear and easier target identification.
- Includes Class 1 eye-safe laser range finder measuring range between 50 to 6,500 meters with an accuracy of ± 3meters.

COMMON REMOTELY OPERATED WEAPON STATION–JAVELIN

D-15. The M153 CROWS-J is a remotely operated weapon mount turret that provides the Stryker ICV with the ability to place accurate direct and AT fires without exposing the gunner.

ARMAMENT

D-16. The M153 CROWS-J is capable of mounting either the M2HB .50-caliber machine gun or the MK19 40-mm grenade launcher and the FGM-148 Javelin ATGM. The platform provides enhanced stabilization, but at a reduced maximum elevation which causes the machine guns to have different maximum effective ranges than when ground mounted.

Note. While remote operation allows gunners to fire weapon systems while protected by the vehicles' armor, gunners must still expose themselves when reloading or correcting malfunctions.

FGM-148 Javelin ATGM Launcher

D-17. The FGM-148 Javelin ATGM is a fire-and-forget missile system that can engage targets at close and medium ranges. It provides the ICV greater survivability during a chance encounter with light to medium enemy armored vehicles. The FGM-148 Javelin ATGM has the following capabilities:

- Minimum range: 75 meters.
- Maximum range: 2,500 meters.

M2 .50-Caliber Machine Gun

D-18. The M2 provides lethal direct fires against lightly armored and unarmored vehicles. The M2 has the following capabilities:

- Maximum range: 6,700 meters.
- Maximum effective range: 1,800 meters.

- Cyclic rate of fire: 450 to 600 rounds per minute.

MK19 40-mm Grenade Machine Gun

D-19. The MK19 is a direct fire grenade launcher that is highly capable against unarmored vehicles and groups of dismounted forces. The MK19 has the following capabilities:

- Maximum range: 2,200 meters.
- Maximum effective range: 1,500 meters.
- Cyclic rate of fire: 325 to 375 rounds per minute.

Note. The range of the MK19 40-mm grenade machine gun is reduced when used on a Stryker RWS compared to ground mounting due to limitations imposed by the maximum range of movement of the sight servo assembly in relation to the weapon station platform's elevation angle.

M6 Smoke Grenade Launchers

D-20. The RWS M6 smoke grenade launcher is a heavy-duty aluminum smoke discharger with four smoke grenade tubes that provides obscuration and counters weapon threats by blocking visual and thermal images to protect the crew and dismounted Infantry squad. The RWS M6 smoke grenade launcher has the following capabilities:

- Total smoke grenade tubes: 16 each.
- Detonating range: 30 meters.
- Obscuration cloud: 6 to 7 meters high.
- Covering arc: 45 degrees (120 mils) per launcher.

CHARACTERISTICS

D-21. The M153 CROWS-J shares many characteristics with the M151 RWS. It is mounted on the top right side of the vehicle and is operated from the interior of the chassis. Remote operation occurs through the same fire control unit and control grip as the M151 RWS to enable cross training and familiarity. A stabilization system enables the operator to track and engage targets while on the move. The tracking and control capabilities of the CROWS-J provide a high first-round hit probability against stationary and moving targets. The M153 CROWS-J has the same characteristics as the M151 RWS, except a powered traverse and elevation rate of 60 degrees per second (20 degrees per second slower than RWS).

Glossary

The glossary lists acronyms and terms with Army or joint definitions. Where Army and joint definitions differ, (Army) precedes the definition. Terms for which ATP 3-21.9 is the proponent are marked with an asterisk (*). The proponent publication for other terms is listed in parentheses after the definition.

SECTION I – ACRONYMS AND ABBREVIATIONS

1SG	first sergeant
AA	assembly area
ABF	attack by fire
ADP	Army doctrine publication
AT	antitank
ATGM	antitank guided missile
ATP	Army techniques publication
BAS	battalion aid station
BHL	battle handover line
BII	basic issue items
BCT	brigade combat team
BP	battle position
C2	command and control
CAS	close air support
CASEVAC	casualty evacuation
CBRN	chemical, biological, radiological, and nuclear
CCMS	close combat missile system
CCP	casualty collection point
CJCSM	Chairman of the Joint Chiefs of Staff Manual
CLS	combat lifesaver
COA	course of action
CROWS	Common Remotely Operated Weapon Station
CROWS-J	Common Remotely Operated Weapon Station-Javelin
C-UAS	counter-unmanned aircraft system
DA	Department of the Army

DD	Department of Defense
DLIC	detachment left in contact
DOD	Department of Defense
DVH	double V-hull
DP	dismount point
EA	engagement area
EMCON	emission control
EW	electromagnetic warfare
FA	field artillery
FAC	forward air controller
FAC(A)	forward air controller (airborne)
FDC	fire direction center
FM	field manual, frequency modulation
FMT	field maintenance team
FO	forward observer
FPF	final protective fire
FPL	final protective line
FRAGORD	fragmentary order
FSC	forward support company
FSO	fire support officer
GPS	Global Positioning System
GTA	graphic training aid
HE	high explosive
HOPE-LW	higher, operational, planning, enemy, light/weather
ICV	Infantry carrier vehicle
IPOE	intelligence preparation of the operational environment
IR	infrared
JP	joint publication
JTAC	joint terminal attack controller
LC	line of contact
LD	line of departure
LOA	limit of advance
LOGPAC	logistics package
LSS	low, slow, and small
MAAWS	multi-role, antiarmor, antipersonnel weapon system
MCOO	modified combined obstacle overlay

MCP	maintenance collection point
MCRP	Marine Corps reference publication
MCTP	Marine Corps tactical publication
MCWP	Marine Corps warfighting publication
MEDEVAC	medical evacuation
METT-TC (I)	mission, enemy, terrain and weather, troops and support available, time available, civil considerations, and informational considerations
mm	millimeter
MOPP	mission-oriented protective posture
MTF	medical treatment facility
NAI	named area of interest
OAKOC	observation and fields of fire, avenues of approach, key terrain, obstacles, and cover and concealment
OHC	overhead cover
OP	observation post
OPORD	operation order
PACE	primary, alternate, contingency, and emergency
PC	personnel carrier
PCC	precombat check
PCI	precombat inspection
PIR	priority intelligence requirement
PLD	probable line of deployment
PMCS	preventive maintenance checks and services
POB	point of breach
REDCON	readiness condition
RFL	restrictive fire line
RM	risk management
ROE	rules of engagement
RTO	radiotelephone operator
RWS	remote weapon station
S-2	battalion or brigade intelligence staff officer
SBCT	Stryker brigade combat team
SBF	support by fire
SDM	squad-designated marksman
SDZ	surface danger zone

SITEMP	situation template
SITREP	situation report
SOP	standard operating procedure
sUAS	small unmanned aircraft system
TCCC	tactical combat casualty care
TLE	target location error
TLP	troop leading procedures
TM	technical manual
TRP	target reference point
UAS	unmanned aircraft system
VC	vehicle commander
WARNORD	warning order
WCS	weapons control status
WP	white phosphorous
XO	executive officer

SECTION II – TERMS

actions on contact

A process to help leaders understand what is happening and to take action. (FM 3-90)

aerial delivery

The air transport of cargo, equipment and/or personnel to a desired location on the ground by aircraft. (ATP 4-48)

air-ground operations

The simultaneous or synchronized employment of ground forces with aviation maneuver and fires to seize, retain, and exploit the initiative. (FM 3-04)

air movement

Air transport of units, personnel, supplies, and equipment, including airdrops and air landings. (JP 3-36)

alternate position

A defensive position that the commander assigns to a unit or weapon system for occupation when the primary position becomes untenable or unsuitable for carrying out the assigned task. (FM 3-90)

ambush

A variation of attack from concealed positions against a moving or temporarily halted enemy. (FM 3-90)

approach march

The advance of a combat unit when direct contact with the enemy is intended. (FM 3-90)

area defense

A type of defensive operation that concentrates on denying enemy forces access to designated terrain for a specific time rather than destroying the enemy outright. (ADP 3-90)

area of interest

That area of concern to the commander, including the area of influence, areas adjacent to it, and extending into enemy territory. (JP 3-0)

area of operations

An operational area defined by a commander for the land or maritime force commander to accomplish their missions and protect their forces. (JP 3-0)

area reconnaissance

A form of reconnaissance operation that focuses on obtaining detailed information about the terrain or enemy activity within a prescribed area. (FM 3-90)

area security

A type of security operation conducted to protect friendly forces, lines of communications, installation routes and actions within a specific area. (FM 3-90)

assault

(Army) A short and violent well-ordered attack against a local objective. (FM 3-90)

assault position

A covered and concealed position short of the objective from which final preparations are made to assault the objective. (ADP 3-90)

assembly area

An area a unit occupies to prepare for an operation. (FM 3-90)

attack

A type of offensive operation that defeats enemy forces, seizes terrain, or secures terrain. (FM 3-90)

attack position

(Army) The last position an attacking force occupies or passes through before crossing the line of departure. (ADP 3-90)

avenue of approach

(Army) A path used by an attacking force leading to its objective or to key terrain. Avenues of approach exist in all domains. (ADP 3-90)

backbrief

A briefing by subordinates to the commander to review how subordinates intend to accomplish their mission. (FM 6-0)

basic load

The quantity of supplies required to be on hand within, and moved by a unit or formation, expressed according to the wartime organization of the unit or formation and maintained at the prescribed levels. (JP 4-09)

battle drill

Rehearsed and well understood actions made in response to common battlefield occurrences. (ADP 3-90)

battle handover

A coordinated mission between two units that transfers responsibility for fighting an enemy force from one unit to another. (FM 3-90)

battle position

A defensive location oriented on a likely enemy avenue of approach. (ADP 3-90)

block

An obstacle effect that integrates fire planning and obstacle effort to stop an attacker along a specific avenue of approach or prevent the attacking force from passing through an engagement area. (FM 3-90)

bounding overwatch

A movement technique used when contact with enemy forces is expected. (FM 3-90)

branch

The contingency options built into the base plan used for changing the mission, orientation, or direction of movement of a force to aid success of the operation based on anticipated events, opportunities, or disruptions caused by enemy actions and reactions. (JP 5-0)

breach

A tactical mission task in which a unit breaks through or establishes a passage through an enemy obstacle. (FM 3-90)

breach area

A defined area where a breach occurs. (ATP 3-90.4)

bypass criteria

Measures established by higher echelon headquarters that specify the conditions and size under which enemy units and contact may be avoided. (FM 3-90)

call for fire

A standardized request for fire containing data necessary for obtaining the required fire on a target. (FM 3-09)

casualty evacuation

The movement of casualties aboard nonmedical vehicles or aircraft without en route medical care. (ATP 4-02.13)

chemical, biological, radiological, and nuclear environment

An operational environment that includes chemical, biological, radiological, or nuclear threats and hazards and their potential resulting effects. (JP 3-11)

close air support

Air action by aircraft against hostile targets that are in close proximity to friendly forces and that require detailed integration of each air mission with the fire and movement of those forces. (JP 3-09.3)

close combat

Warfare carried out on land in a direct-fire fight, supported by direct and indirect fires and other assets. (ADP 3-0)

column formation

A movement formation with elements arranged one behind another. (FM 3-90)

combat lifesaver

A nonmedical Soldier trained to provide enhanced first aid as a secondary mission. (FM 4-02)

combat load

The minimum mission-essential equipment and supplies as determined by the commander responsible for carrying out the mission, required for Soldiers to fight and survive immediate combat operations. (ATP 3-21.71)

combat outpost

A reinforced observation post capable of conducting limited combat operations. (FM 3-90)

combat patrol

A patrol that provides security and harasses, destroys, or captures enemy troops, equipment, or installations. (ATP 3-21.8)

combat power

The total means of destructive and disruptive force that a military unit/formation can apply against an enemy at a given time. (JP 3-0)

combined arms

The synchronized and simultaneous application of arms to achieve an effect greater than if each element was used separately or sequentially. (ADP 3-0)

commander's intent

A clear and concise expression of the purpose of an operation and the desired objectives and military end state. (JP 3-0)

concept of operations

(Army) A statement that directs the manner in which subordinate units cooperate to accomplish the mission and establishes the sequence of actions the force will use to achieve the end state. (ADP 5-0)

confirmation brief

A brief subordinate leaders give to the higher commander immediately after the operation order is given to confirm understanding. (ADP 5-0)

consolidate

To organize and strengthen a captured position to use it against the enemy. (FM 3-90)

constraint

A restriction placed on the command by a higher command. (FM 5-0)

contact point

In land warfare, a point on the terrain, easily identifiable, where two or more units are required to make contact. (JP 3-50)

contain

A tactical mission task in which a unit stops, holds, or surrounds an enemy force. (FM 3-90)

control measure

A means of regulating forces or warfighting functions. (ADP 6-0)

coordination point

A point that indicates a specific location for the coordination of tactical actions between adjacent units. (FM 3-90)

cordon and search

A variation of movement to contact where a friendly force isolates and searches a target area. (FM 3-90)

counterattack

A variation of attack by a defending force against an attacking enemy force. (FM 3-90)

countermobility

(Army) A set of combined arms activities that use or enhance the effects of natural and man-made obstacles to prevent the enemy freedom of movement and maneuver. (ATP 3-90.8)

cover

(Army) A type of security operation done independent of the main body to protect them by fighting to gain time while preventing enemy ground observation of and direct fire against the main body. (ADP 3-90)

cyberspace operations

The employment of cyberspace capabilities where the primary purpose is to achieve objectives in or through cyberspace. (JP 3-0)

deception means

Methods, resources, and techniques that can be used to convey information to the deception target. (JP 3-13.4)

decisive point

Key terrain, key event, critical factor, or function that, when acted upon, enables commanders to gain a marked advantage over an enemy or contribute materially to achieving success. (JP 5-0)

decisive terrain

Key terrain whose seizure and retention is mandatory for successful mission accomplishment. (ADP 3-90)

defeat in detail

Concentrating overwhelming combat power against separate parts of a force rather than defeating the entire force at once. (ADP 3-90)

defensive operation

An operation to defeat an enemy attack, gain time, economize forces, and develop conditions favorable for offensive or stability operation. (ADP 3-0)

delay

When a force under pressure trades space for time by slowing down the enemy's momentum and inflicting maximum damage on enemy forces without becoming decisively engaged. (ADP 3-90)

deliberate operation

An operation in which the tactical situation allows the development and coordination of detailed plans, including multiple branches and sequels. (ADP 3-90)

demonstration

(Army) A variation of tactical deception used as a show of force in an area where a unit does not seek a decision and attempts to mislead an adversary. (FM 3-90)

deny

A task to hinder or prevent the enemy from using terrain, space, personnel, supplies, or facilities. (ATP 3-21.20)

destroy

A tactical mission task that physically renders an enemy force combat-ineffective until reconstituted. (FM 3-90)

detachment left in contact

An element left in contact as part of the previously designated security force while the main body conducts its withdrawal. (FM 3-90)

directed obstacle

(Army) An obstacle directed by a higher commander as a specified task to a subordinate unit. (ATP 3-90.8)

disengage

A tactical mission task in which a unit breaks contact with an enemy to conduct another mission or to avoid becoming decisively engaged. (FM 3-90)

disengagement criteria

Protocols that specify those circumstances where a friendly force must break contact with the direct fire and observed indirect fire to avoid becoming decisively engaged or to preserve friendly combat power. (FM 3-90)

dismounted movement

A movement of troops and equipment mainly by foot, with limited support by vehicles. (FM 3-90)

disrupt

An obstacle effect that focuses fire planning and obstacle effort to cause the enemy to break up its formation and tempo, interrupt its timetable, commit breaching assets prematurely, and attack in a piecemeal effort. (FM 3-90)

domain

A physically defined portion of an operational environment requiring a unique set of warfighting capabilities and skills. (FM 3-0)

echelon formation

A movement formation with elements arranged on an angle to the left or to the right of the direction of attack (echelon left, echelon right). (FM 3-90)

electromagnetic protection

Division of electromagnetic warfare involving actions taken to protect personnel, facilities, and equipment from any effects of friendly or enemy use of the electromagnetic spectrum that degrade, neutralize, or destroy friendly combat capability. (JP 3-85)

electromagnetic warfare

Military action involving the use of electromagnetic and directed energy to control the electromagnetic spectrum or to attack the enemy. (JP 3-85)

emission control

The selective and controlled use of electromagnetic, acoustic, or other emitters to optimize command and control capabilities while minimizing, for operations security: a. detection by enemy sensors, b. mutual interference among friendly systems, and/or c. enemy interference with the ability to execute a military deception plan. (JP 3-85)

enabling operation

An operation that sets the friendly conditions required for mission accomplishment. (FM 3-90)

engagement area

An area where the commander masses effects to contain and destroy an enemy force. (FM 3-90)

engagement criteria

Protocols that specify those circumstances for initiating engagement with an enemy force. (FM 3-90)

engagement priority

Identifies the order in which the unit engages enemy systems or functions. (FM 3-90)

envelopment

A form of maneuver in which an attacking force avoids an enemy's principal defense by attacking along an assailable flank. (FM 3-90)

essential task

(Army) A specified or implied task that must be executed to accomplish the mission. (FM 5-0)

exploitation

(Army) A type of offensive operation following a successful attack to disorganize the enemy in depth. (FM 3-90)

far side objective

A defined location oriented on the terrain or on an enemy force that an assaulting force seizes to eliminate enemy direct fires to prevent the enemy from interfering with the reduction of obstacles and allows follow-on forces to move securely through created lanes. (ATP 3-90.4)

feint

A variation of tactical deception that makes contact solely to deceive the adversary as to the location, time of attack or both. (FM 3-90)

field artillery

(Army) Equipment, supplies, ammunition, and personnel involved in the use of cannon, rocket, or surface-to-surface missile launchers. (FM 3-09)

final coordination line

A phase line close to the enemy position used to coordinate the lifting or shifting of supporting fires with the final deployment of maneuver elements. (ADP 3-90)

final protective fire

An immediately available, prearranged barrier of fire designed to impede enemy movement across defensive lines or areas. (JP 3-09.3)

final protective line

A selected line of fire where an enemy assault is to be checked by interlocking fire from all available weapons and obstacles. (FM 3-90)

fire support officer

Is the operational to tactical level field artillery officer responsible for advising the supported commander or assisting fire support coordinator on fires functions and fire support. (FM 3-09)

fires

The use of weapon systems or other actions to create specific lethal or nonlethal effects on a target. (JP 3-09)

fire support

Fires that directly support land, maritime, amphibious, space, cyberspace, and special operations forces to engage enemy forces, combat formations, and facilities in pursuit of tactical and operational objectives. (JP 3-09)

fire support plan

A plan that addresses each means of fire support available and describes how Army indirect fires, joint fire support, and target acquisition are integrated into operations to facilitate success. (FM 3-09)

fire support planning

The continuous process of analyzing, allocating, integrating, synchronizing, and scheduling fires to describe how the effects of fires facilitate supported force actions. (FM 3-09)

fire support team

A field artillery team provided for each maneuver company/troop and selected units to plan and coordinate all supporting fires available to the unit, including mortars, field artillery, naval surface fire support, and close air support integration. (JP 3-09.3)

fix

1. A tactical mission task in which a unit prevents the enemy from moving from a specific location for a specific period. 2. An obstacle effect that focuses fire planning and obstacle effort to slow an attacker's movement within a specified area, normally an engagement area. (FM 3-90)

fixing force

A force designated to supplement the striking force by preventing the enemy from moving from a specific area for a specific time. (ADP 3-90)

follow and assume

A tactical mission task in which a committed force follows and supports a lead force conducting an offensive operation and continues mission if lead force cannot continue. (FM 3-90)

follow and support

A tactical mission task in which a committed force follows and supports a lead force conducting an offensive operation. (FM 3-90)

forced march

A march longer or faster than usual or in adverse conditions. (FM 3-90)

forward boundary

A boundary that delineates the forward edge of a unit's area of operation. (FM 3-90)

forward edge of the battle area

The foremost limits of a series of areas in which ground combat units are deployed to coordinate fire support, the positioning of forces, or the maneuver of units, excluding areas in which covering or screening forces are operating. (JP 3-09.3)

forward line of own troops

A line that indicates the most forward positions of friendly forces in any kind of military operation at a specific time. (FM 3-90)

forward observer

An individual operating with front line troops trained to adjust ground or naval gunfire and pass back battlefield information. (JP 3-09)

forward passage of lines

Occurs when a unit passes through another unit's positions while moving toward the enemy. (ADP 3-90)

fragmentary order

An abbreviated operation order issued as needed to change or modify an order or to execute a branch or sequel. (JP 5-0)

fratricide

The unintentional killing or wounding of friendly or neutral personnel by friendly firepower. (ADP 3-37)

frontal attack

A form of maneuver in which an attacking force seeks to destroy a weaker enemy force or fix a larger enemy force in place over a broad front. (FM 3-90)

gap

A ravine, mountain pass, river, or other terrain feature that presents an obstacle that may be bridged. (ATP 3-90.4)

guard

A type of security operation done to protect the main body by fighting to gain time while preventing enemy ground observation of and direct fire against the main body. (ADP 3-90)

hasty breach

The creation of lanes through enemy minefields by expedient methods such as blasting with demolitions, pushing rollers or disabled vehicles through the minefields when the time factor does not permit detailed reconnaissance, deliberate breaching, or bypassing the obstacle. (JP 3-15)

hasty operation

An operation in which a commander directs immediately available forces, using fragmentary orders, to perform tasks with minimal preparation, trading planning and preparation time for speed of execution. (ADP 3-90)

human dimension

Encompasses people and the interaction between individuals and groups, how they understand information and events, make decisions, generate will, and act within an operational environment. (FM 3-0)

implied task

A task that must be performed to accomplish a specified task or mission but is not stated in the higher headquarters' order. (FM 5-0)

infiltration

A form of maneuver in which an attacking force conducts undetected movement through or into an area occupied by enemy forces. (FM 3-90)

information dimension

The content and data that individuals, groups, and information systems communicate and exchange, as well as the analytics and technical processes used to exchange information within an operational environment. (FM 3-0)

informational considerations

Those aspects of the human, information, and physical dimensions that affect how humans and automated systems derive meaning from, use, act upon, and are impacted by information. (FM 3-0)

key terrain

(Army) An identifiable characteristic whose seizure or retention affords a marked advantage to either combatant. (ADP 3-90)

lane

(Army) A route through, over, or around an enemy or friendly obstacle that provides passage of a force. (ATP 3-90.4)

large-scale combat operations

Extensive joint combat operations in terms of scope and size of forces committed, conducted as a campaign aimed at achieving operational and strategic objectives. (ADP 3-0)

lateral boundary

A boundary defining the left or right limit of a unit's assigned area. (FM 3-90)

leadership

The activity of influencing people by providing purpose, direction, and motivation to accomplish the mission and improve the organization. (ADP 6-22)

limit of advance

A phase line used to control forward progress of the attack. (ADP 3-90)

line formation

A movement formation in which elements move abreast of each other. (FM 3-90)

linkup

A type of enabling operation that involves the meeting of friendly ground forces, which occurs in a variety of circumstances. (FM 3-90)

local security

The low-level security activities conducted near a unit to prevent surprise by the enemy. (ADP 3-90)

main battle area

The area where the commander intends to deploy the bulk of their unit to defeat an attacking enemy. (FM 3-90)

main body

The principal part of a tactical command or formation. It does not include detached elements of the command, such as advance guards, flank guards, and covering forces. (ADP 3-90)

main effort

A designated subordinate unit whose mission at a given point in time is most critical to overall mission success. (ADP 3-0)

maneuver

(Army) Movement in conjunction with fires. (ADP 3-0)

medical evacuation

The timely and effective movement of the wounded, injured, or ill to and between medical treatment facilities on dedicated and properly marked medical platforms with en route care provided by medical personnel. (ATP 4-02.2)

meeting engagement

A combat action that occurs when a moving force engages an enemy at an unexpected time and place. (FM 3-90)

mission

The essential task or tasks, together with the purpose, that clearly indicates the action to be taken and the reason for the action. (JP 3-0)

mission command

(Army) The Army's approach to command and control that empowers subordinate decision making and decentralized execution appropriate to the situation. (ADP 6-0)

mission orders

Directives that emphasize to subordinates the results to be attained, not how they are to achieve them. (ADP 6-0)

mission statement

A short sentence or paragraph that describes the organization's essential task(s), purpose, and action containing the elements of who, what, when, where, and why. (JP 5-0)

mobile defense

A type of defensive operation that concentrates on the destruction or defeat of the enemy through a decisive attack by a striking force. (ADP 3-90)

modified combined obstacle overlay

A joint intelligence preparation of the operational environment product used to portray the militarily significant aspects of the operational environment, such as obstacles restricting military movement, key geography, and military objectives. (JP 2-0)

mounted movement

The movement of troops and equipment by combat and tactical vehicles. (FM 3-90)

movement

The positioning of combat power to establish the conditions for maneuver. (ADP 3-90)

movement formation

An ordered arrangement of forces for a specific purpose and describes the general configuration of a unit on the ground. (ADP 3-90)

movement to contact

(Army) A type of offensive operation designed to establish or regain contact to develop the situation. (FM 3-90)

multidomain operations

The combined arms employment of joint and Army capabilities to create and exploit relative advantages to achieve objectives, defeat enemy forces, and consolidate gains on behalf of joint force commanders. (FM 3-0)

neutralize

A tactical mission task in which a unit renders the enemy incapable of interfering with an operation. (FM 3-90)

nontactical movement

A movement in which troops and vehicles are arranged to expedite their movement and conserve time and energy when no enemy ground interference is anticipated. (FM 3-90)

obscuration

The employment of materials into the environment that degrade optical and/or electro-optical capabilities within select portions of the electromagnetic spectrum in order to deny acquisition by or deceive an enemy or adversary. (ATP 3-11.50)

observation post

A position from which observations are made or fires are directed and adjusted. (FM 3-90)

obstacle

Any barrier designed or employed to disrupt, fix, turn, or block the movement and maneuver, and to impose additional losses in personnel, time, and equipment. (JP 3-15)

occupy

A tactical mission task in which a unit moves into an area to control it without enemy opposition. (FM 3-90)

offensive operation

An operation to defeat or destroy enemy forces and gain control of terrain, resources, and population centers. (ADP 3-0)

operation order

A directive issued by a commander to subordinate commanders for the purpose of effecting the coordinated execution of an operation. (JP 5-0)

operational environment

The aggregate of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander. (JP 3-0)

operations in depth

The simultaneous application of combat power throughout an area of operations. (ADP 3-90)

operations process

The major command and control activities performed during operations: planning, preparing, executing, and continuously assessing the operation. (ADP 5-0)

operations security

An activity that identifies and controls critical information and indicators of friendly force actions. (JP 3-55)

overwatch

A task that positions an element to support the movement of another element with immediate fire. (ATP 3-21.10)

passage of lines

An operation in which a force moves forward or rearward through another force's combat positions with the intention of moving into or out of contact with the enemy. (JP 3-18)

patrol

A detachment sent out by a larger unit to conduct a specific mission that operates semi-independently and return to the main body upon completion of mission. (ATP 3-21.8)

penetration

A form of maneuver in which a force attacks on a narrow front. (FM 3-90)

physical dimension

The material characteristics and capabilities, both natural and manufactured, within an operational environment. (FM 3-0)

physical security

That part of security concerned with physical measures designed to safeguard personnel; to prevent unauthorized access to equipment, installations, material, and documents; and to safeguard them against espionage, sabotage, damage, and theft. (JP 3-0)

point of breach

The location at an obstacle where the creation of a lane is being attempted. (ATP 3-90.4)

point of penetration

(Army) Point of penetration is the location, identified on the ground, where the commanders concentrates their efforts to seize a foothold on the far side objective. (ATP 3-90.4)

preparation fire

A brief, intense bombardment on selected targets or a prolonged effort over time covering a large number of targets. (FM 3-09)

primary position

The position that covers the enemy's most likely avenue of approach into the assigned area. (FM 3-90)

priority target

A target, based on either time or importance, on which delivery of fires takes precedence over all the fires for the designated firing unit or element. (FM 3-09)

probable line of deployment

A phase line that designates the location where the commander intends to deploy the unit into assault formation before beginning the assault. (ADP 3-90)

proof

The verification that a lane is free of mines or explosive hazards and that the width and trafficability at the point of breach are suitable for the passing force. (ATP 3-90.4)

protection

Preservation of the effectiveness and survivability of mission-related military and nonmilitary personnel, equipment, facilities, information, and infrastructure deployed or located within or outside the boundaries of a given operational area. (JP 3-0)

pursuit

A type of offensive operation designed to catch or cut off a hostile force attempting to escape, with the aim of destroying it. (FM 3-90)

quartering party

A group dispatched to a new assigned area in advance of the main body. (FM 3-90)

raid

(Army) A variation of attack to temporarily seize an objective with a planned withdrawal. (FM 3-90)

rear boundary

A boundary that delineates the rearward limits of a unit's assigned area. (FM 3-90)

rearward passage of lines

Occurs when a unit passes through another unit's positions while moving away from the enemy. (ADP 3-90)

reconnaissance

A mission undertaken to obtain information about the activities and resources of an enemy or adversary, or to secure data concerning the meteorological, hydrographic, geographic, or other characteristics of a particular area, by visual observation or other detection methods. (JP 2-0)

reconnaissance by fire

A technique in which a unit fires on a suspected enemy position. (FM 3-90)

reconnaissance objective

The most important result desired from that specific reconnaissance effort. (FM 3-90)

reduce

A tactical mission task in which a unit destroys an encircled or bypassed enemy force. (FM 3-90)

reduction

The creation of lanes through a minefield or obstacle to enable passage of the attacking ground force. (JP 3-15)

reduction area

A number of adjacent points of breach that are under the control of the breaching commander. (ATP 3-90.4)

rehearsal

A session in which the commander and staff or unit practices expected actions to improve performance during execution. (ADP 5-0)

reorganization

All measures taken by the commander to maintain unit combat effectiveness or return it to a specified level of combat capability. (ATP 3-94.4)

reserve

(Army) That portion of a body of troops that is withheld from action at the beginning of an engagement to be available for a decisive movement. (ADP 3-90)

reserved obstacle

(Army) Obstacles of any type, for which the commander restricts execution authority. (ATP 3-90.8)

restrictive fire line

A specific boundary established between converging, friendly surface forces that prohibits fires or their effects from crossing. (JP 3-09)

retirement

When a force out of contact moves away from the enemy. (ADP 3-90)

retrograde

(Army) A type defensive operation that involves organized movement away from the enemy. (ADP 3-90)

retrograde movement

Any movement to the rear or away from the enemy. (FM 3-90)

risk management

The process to identify, assess, and mitigate risks and make decisions that balance risk cost with mission benefits (JP 3-0).

route reconnaissance

A form of reconnaissance operation to obtain detailed information of a specified route and all terrain from which the enemy could influence movement along that route. (FM 3-90)

scheme of fires

The detailed, logical sequence of targets and fire support events to find and engage targets to support the commander's objectives. (JP 3-09)

screen

A type of security operation that primarily provides early warning to the protected force. (ADP 3-90)

search and attack

A variation of a movement to contact where a friendly force conducts coordinated attacks to defeat a distributed enemy force. (FM 3-90)

sector

An operational area assigned to a unit in the defense that has rear and lateral boundaries and interlocking fires. (FM 3-0)

sector of fire

That area assigned to a unit or weapon system in which it will engage the enemy according to the established engagement priorities. (FM 3-90)

secure

A tactical mission task in which a unit prevents the enemy from damaging or destroying a force, facility, or geographical location. (FM 3-90)

security area

That area occupied by a unit's security elements and includes the areas of influence of those security elements. (ADP 3-90)

security objective

The most important entity to protect during that specific security effort. (FM 3-90)

security operations

Those operations performed by commanders to provide early and accurate warning of enemy operations, to provide the forces being protected with time and maneuver space within which to react to the enemy, and to develop the situation to allow commanders to effectively use their protected forces. (ADP 3-90)

seize

(Army) A tactical mission task in which a unit takes possession of a designated area by using overwhelming force. (FM 3-90)

sequel

The subsequent operation or phase based on the possible outcomes of the current operation or phase. (JP 5-0)

situational obstacle

An obstacle that a unit plans and possibly prepares prior to starting an operation, but does not execute unless specific criteria are met. (ATP 3-90.8)

situational understanding

The product of applying analysis and judgment to relevant information to determine the relationships among the operational and mission variables. (ADP 6-0)

specified task

(Army) A task specifically assigned to a unit by its higher headquarters. (FM 5-0)

spoiling attack

A variation of an attack employed against an enemy preparing for an attack. (FM 3-90)

stability operation

An operation conducted outside the United States in coordination with other instruments of national power to establish or maintain a secure environment and provide essential governmental services, emergency infrastructure reconstruction, and humanitarian relief. (ADP 3-0)

standard operating procedure

A set of instructions applicable to those features of operations that lend themselves to a definite or standardized procedure without loss of effectiveness. (JP 3-31)

stay-behind operation

An operation in which a unit remains in position to conduct a specified mission while the remainder of the force withdraws or retires from an area. (FM 3-90)

striking force

A dedicated counterattack force in a mobile defense constituted with the bulk of available combat power. (ADP 3-90)

strong point

A heavily fortified battle position tied to a natural or reinforcing obstacle to create an anchor for the defense or to deny the enemy decisive or key terrain. (ADP 3-90)

subsequent position

A position that a unit expects to move to during the course of battle. (FM 3-90)

supplementary position

A defensive position located within a unit's assigned area that provides the best sectors of fire and defensive terrain along an avenue of approach that is not the primary avenue where the enemy is expected to attack. (FM 3-90)

support by fire position

The general position from which a unit performs the tactical mission task of support by fire. (ADP 3-90)

supporting effort

A designated subordinate unit with a mission that supports the success of the main effort. (ADP 3-0)

suppress

A tactical mission task in which a unit temporarily degrades a force or weapon system from accomplishing its mission. (FM 3-90)

suppression

(joint) Temporary or transient degradation by an opposing force of the performance of a weapons system below the level needed to fulfill its mission objectives. (JP 3-01)

(Army) In the context of the computed effects of field artillery fires, renders a target ineffective for a short period of time producing suppression of enemy air defenses at least 3-percent casualties or materiel damage. (FM 3-09)

surveillance

The systematic observation of aerospace, cyberspace, surface, or subsurface areas, places, persons, or things by visual, aural, electronic, photographic, or other means. (JP 3-0)

survivability

(Army) A quality or capability of military forces which permits them to avoid or withstand hostile actions or environmental conditions while retaining the ability to fulfill their primary mission. (ATP 3-37.34)

survivability operations

(Army) Those protection activities that alter the physical environment by providing or improving cover, camouflage, and concealment. (ATP 3-37.34)

sustainment

The provision of logistics, financial management, personnel services, and health service support necessary to maintain operations until successful mission completion (ADP 4-0)

tactical assembly area

An area that is generally out of the reach of light artillery and the location where units make final preparations (pre-combat checks and inspections) and rest, prior to moving to the line of departure. (JP 3-35)

tactical deception

A friendly activity that causes enemy commanders to take action or cause inaction detrimental to their objectives. (FM 3-90)

tactical movement

A movement in which troops and vehicles are arranged to protect combat forces during movement when a threat of enemy interference is possible (FM 3-90).

tactical road march

A rapid movement used to relocate units within an assigned area to prepare for combat operations. (FM 3-90)

tactics

(Army) The employment, ordered arrangement, and directed actions of forces in relation to each other. (ADP 3-90)

target acquisition

The detection, identification, and location of a target in sufficient detail to permit the effective employment of capabilities that create the required effects. (JP 3-60)

target reference point

A predetermined point of reference, normally a permanent structure or terrain feature that can be used when describing a target location. (JP 3-09.3)

task

A clearly defined action or activity specifically assigned by an appropriate authority to an individual or organization, or derived during mission analysis, that must be accomplished. (JP 1, Vol 1)

tempo

The relative speed and rhythm of military operations over time with respect to the enemy. (ADP 3-0)

threat

Any combination of actors, entities, or forces that have the capability and intent to harm United States forces, United States national interests, or the homeland. (ADP 3-0)

traveling

A movement technique used when speed is necessary and contact with enemy forces is not likely. (FM 3-90)

traveling overwatch

A movement technique used when contact with enemy forces is possible. (FM 3-90)

trigger line

A phase line located on identifiable terrain used to initiate and mass fires into an engagement area at a predetermined range. (FM 3-90)

troop leading procedures

A dynamic process used by small-unit leaders to analyze a mission, develop a plan, and prepare for an operation. (ADP 5-0)

troop movement

The movement of Soldiers and units from one place to another by any available means. (FM 3-90)

turn

An obstacle effect that integrates fire planning and obstacle effort to divert an enemy formation from one avenue of approach to an adjacent avenue of approach or into an engagement area. (FM 3-90)

turning movement

(Army) A form of maneuver in which the attacking force seeks to avoid the enemy’s principal defensive positions by attacking to the rear of their current positions forcing them to move or divert forces to meet the threat. (FM 3-90)

unity of effort

Coordination and cooperation toward common objectives, even if the participants are not necessarily part of the same command or organization that is the product of successful unified action. (JP 1, Vol 2)

vee formation

A movement formation with two elements abreast and one or more elements trailing. (FM 3-90)

warning order

A preliminary notice of an order or action that is to follow. (JP 5-0)

wedge formation

A movement formation with one lead element and the trail elements are paired off abreast of each other on the flanks. (FM 3-90)

weapons control status

An air and missile defense control measure declared for a particular area and time by an area air defense commander, or delegated subordinate commander, based on the rules of engagement that establish the conditions under which fighters and surface air defense weapons are permitted to engage threats. (JP 3-01)

withdraw

To disengage from an enemy force and move in a direction away from the enemy. (ADP 3-90)

zone reconnaissance

A form of reconnaissance operation that involves a directed effort to obtain detailed information on all routes, obstacles, terrain, and enemy forces within a zone defined by boundaries. (FM 3-90)

References

All websites accessed on 2 May 2025.

REQUIRED PUBLICATIONS

These documents must be available to intended users of this publication.

DOD Dictionary of Military and Associated Terms. February 2025.

FM 1-02.1. *Operational Terms*. 28 February 2024.

FM 1-02.2. *Military Symbols*. 23 January 2025.

RELATED PUBLICATIONS

These documents are cited in this publication.

JOINT AND DEPARTMENT OF DEFENSE PUBLICATIONS

Most joint publications are available online at https://www.jcs.mil/Doctrine. Most Department of Defense publications are available online: https://wwww.esd.whs.mil/dd.

DOD Directive 2310.01E. *DoD Detainee Program*. 15 March 2022.

DOD Directive 2311.01. *DoD Law of War Program*. 2 July 2020.

DOD Directive 3115.09. *DoD Intelligence Interrogations, Detainee Debriefings, and Tactical Questioning*. 11 October 2012.

JP 1 Volume 1. *Joint Warfighting*. 27 August 2023.

JP 1 Volume 2. *The Joint Force*. 19 June 2020.

JP 2-0. *Joint Intelligence*. 26 May 2022.

JP 3-0. *Joint Campaigns and Operations*. 18 June 2022.

JP 3-01. *Countering Air and Missile Threats*. 6 April 2023.

JP 3-04. *Information in Joint Operations*. 14 September 2022.

JP 3-09. *Joint Fire Support*. 10 April 2019.

JP 3-09.3. *Joint Close Air Support*. 10 June 2019.

JP 3-11. *Operations in Chemical, Biological, Radiological, and Nuclear Environments*. 29 September 2024.

JP 3-13.4. *Military Deception*. 14 February 2017.

JP 3-15. *Barriers, Obstacles, and Mines in Joint Operations*. 26 May 2022.

JP 3-18. *Joint Forcible Entry Operations*. 11 May 2017.

JP 3-31. *Joint Land Operations*. 3 October 2019.

JP 3-35. *Joint Deployment and Redeployment Operations*. 31 March 2022.

JP 3-36. *Joint Air Mobility and Sealift Operations*. 4 January 2021.

JP 3-50. *Personnel Recovery*. 14 August 2023.

JP 3-55. *Joint Operations Security*. 20 February 2025.

JP 3-60. *Joint Targeting*. 20 September 2024.

JP 3-85. *Joint Electromagnetic Spectrum Operations*. 22 May 2020.

JP 4-09. *Distribution Operations*. 14 March 2019.

JP 5-0. *Joint Planning*. 1 December 2020.

ARMY PUBLICATIONS

Most Army publications are available online: https://armypubs.army.mil.

Most drills are available online: https://rdl.train.army.mil.

ADP 3-0. *Operations*. 21 March 2025.

ADP 3-07. *Stability*. 31 July 2019.

ADP 3-19. *Fires*. 31 July 2019.

ADP 3-28. *Defense Support of Civil Authorities*. 31 July 2019.

ADP 3-37. *Protection*. 10 January 2024.

ADP 3-90. *Offense and Defense*. 31 July 2019.

ADP 4-0. *Sustainment*. 31 July 2019.

ADP 5-0. *The Operations Process*. 31 July 2019.

ADP 6-0. *Mission Command: Command and Control of Army Forces*. 31 July 2019.

ADP 6-22. *Army Leadership and the Profession*. 31 July 2019.

ATP 2-01.3. *Intelligence Preparation of the Operational Environment*. 1 March 2019.

ATP 3-01.8. *Techniques for Combined Arms for Air Defense*. 29 July 2016.

ATP 3-01.60. *Counter-Rocket, Artillery, and Mortar Operations.* 10 May 2013.

ATP 3-01.81. *Counter-Unmanned Aircraft System Techniques (C-UAS)*. 11 August 2023.

ATP 3-06. *Urban Operations*. 21 July 2022.

ATP 3-06.1/MCRP 3-20.4/NTTP 3-01.04/AFTTP 3-2.29. *Multi-Service Tactics, Techniques, and Procedures for Aviation Urban Operations*. 22 February 2022.

ATP 3-06.11. *Brigade Combat Team Urban Operations.* 27 September 2024.

ATP 3-09.30. *Observed Fires*. 28 September 2017.

ATP 3-09.32/MCRP 3-31.6/NTTP 3-09.2/AFTTP 3-2.6. *Multi-service Tactics, Techniques, and Procedures for Joint Application of Firepower*. 29 November 2023.

ATP 3-09.70. *Paladin Operations*. 25 September 2015.

ATP 3-11.32/MCWP 10-10E.11/NTTP 3-11.27/AFTTP 3-2.46. *Multi-service Tactics, Techniques, and Procedures for Chemical, Biological, and Nuclear Protection*. 24 January 2024.

ATP 3-11.33/MCRP 10-10E.12/NTTP 3-11.26/AFTTP 3-2.60. *(U) Multi-Service Tactics, Techniques and Procedures for Chemical, Biological, Radiological, and Nuclear Contamination Mitigation*. 24 January 2024.

ATP 3-11.50. *Battlefield Obscuration*. 15 May 2014.

ATP 3-12.3. *Electromagnetic Warfare Techniques*. 30 January 2023.

ATP 3-20.15/MCRP 3-10B.1. *Tank Platoon*. 3 July 2019.

ATP 3-21.8. *Infantry Rifle Platoon and Squad*. 11 January 2024.

ATP 3-21.10. *Infantry Rife Company*. 14 May 2018.

ATP 3-21.11. *Stryker Brigade Combat Team Infantry Rifle Company*. 25 November 2020.

ATP 3-21.18. *Foot Marches*. 13 April 2022.

ATP 3-21.20. *Infantry Battalion*. 28 December 2017.

ATP 3-21.21. *SBCT Infantry Battalion*. 22 March 2016.

ATP 3-21.50. *Infantry Small-Unit Mountain and Cold Weather Operations*. 27 August 2020.

ATP 3-21.51. *Subterranean Operations*. 1 November 2019.

ATP 3-21.71. *Mechanized Infantry Platoon and Squad.* 15 October 2024.

ATP 3-21.90/MCTP 3-01D. *Tactical Employment of Mortars*. 9 October 2019.

ATP 3-28.1/MCRP 3-30.6/NTTP 3-57.2/AFTTP 3-2.67/CGTTP 3-57.1. *Multi-Service Tactics, Techniques, and Procedures for Defense Support of Civil Authorities (DSCA)*. 11 February 2021.

ATP 3-34.81/MCWP 3-17.4. *Engineer Reconnaissance*. 1 March 2016.

ATP 3-37.34/MCTP 3-34C. *Survivability Operations*. 16 April 2018.

ATP 3-90.4/MCTP 3-34A (MCWP 3-17.8). *Combined Arms Mobility*. 10 June 2022.

ATP 3-90.8/MCTP 3-34B. *(U) Combined Arms Countermobility*. 30 November 2021.

ATP 3-90.97. *Mountain Warfare and Cold Weather Operations*. 29 April 2016.

ATP 3-90.98/MCTP 12-10C. *Jungle Operations*. 24 September 2020.

ATP 3-90.99/MCTP 12-10D. *Desert Operations*. 7 April 2021.

ATP 3-94.4. *Reconstitution Operations*. 5 May 2021.

ATP 4-02.2. *Medical Evacuation*. 12 July 2019.

ATP 4-02.4. *Medical Platoon*. 12 May 2021.

ATP 4-02.13. *Casualty Evacuation*. 30 June 2021.

ATP 4-14. *Expeditionary Railway Center Operations*. 22 June 2022.

ATP 4-31/MCRP 3-40E.1. *Ground Equipment Battle Damage Assessment, Repair and Recovery*. 1 April 2025.

ATP 4-48. *Aerial Delivery*. 28 August 2023.

ATP 4-90. *Brigade Support Battalion*. 18 June 2020.

ATP 5-19. *Risk Management*. 9 November 2021.

ATP 6-02.53. *Techniques for Tactical Radio Operations*. 13 February 2020.

DA Pam 385-63. *Range Safety*. 16 April 2014.

DA Pam 750-8. *The Army Maintenance Management System (TAMMS) Users Manual*. 22 August 2005.

Drill 03-PLT-D0071. *React to a Chemical Agent Attack*. 30 September 2021.

Drill 07-CW-D9420. *Extinguish a Fire on a Stryker–Crew*. 31 March 2025.

Drill 07-CW-D9445. *Dismount a Machine Gun, Caliber .50 HB, M2, from the Stryker Remote Weapon Station–Crew*. 12 January 2024.

Drill 07-CW-D9446. *Mount a Machine Gun, Caliber .50 HB, M2, on the Stryker Remote Weapon Station–Crew*. 19 January 2024.

Drill 07-CW-D9447. *Dismount a MK 19, 40-mm Grenade Machine Gun from the Stryker Remote Weapon Station–Crew*. 12 January 2024.

Drill 07-CW-D9448. *Mount a MK19, 40MM Grenade Machine Gun on the Stryker Remote Weapon Station–Crew*. 19 January 2024.

Drill 07-CW-D9450. *Destroy a Stryker–Crew*. 30 November 2022.

Drill 07-CW-D9453. *React to a CBRN Attack in a Stryker–Crew*. 21 November 2023.

Drill 07-CW-D9455. *Extract Injured Personnel from a Stryker–Crew*. 29 August 2022.

Drill 07-PLT-D8015. *React to Unmanned Aircraft System While Dismounted– Platoon*. 14 April 2025.

Drill 07-PLT-D9412. *Breach of a Mined Wire Obstacle–Platoon*. 30 August 2022.

Drill 07-PLT-D9483. *React to Nuclear Attack–Platoon*. 19 January 2024.

Drill 07 PLT-D9501. *React to Direct Fire Contact While Dismounted–Platoon*. 26 July 2022.

Drill 07-PLT-D9502. *React to Ambush (Dismounted)–Platoon*. 26 July 2022.

Drill 07-PLT-D9504. *React to Indirect Fire While Dismounted–Platoon*. 26 July 2022.

Drill 07-PLT-D9505. *Break Contact–Platoon*. 26 July 2022.

Drill 07-PLT-D9508. *Establish Security at the Halt–Platoon*. 24 March 2025.

Drill 07-PLT-D9510. *Enter a Trench to Secure a Foothold–Platoon*. 30 August 2022.

Drill 07-PLT-D9511. *Conduct a Hasty Attack–Platoon*. 11 July 2022.

Drill 07-PLT-D9514. *Conduct a Platoon Assault*. 30 August 2022.

Drill 07-PLT-D9601. *React to Direct Fire Contact While Mounted–Stryker Infantry Platoon*. 15 November 2022.

Drill 07-PLT-D9604. *React to Indirect Fire While Mounted–Stryker Infantry Platoon*. 15 November 2022.

Drill 07-PLT-D9605. *Break Contact–Stryker Infantry Platoon*. 15 November 2022.

Drill 07-PLT-D9617. *React to Air Attack While Mounted–Stryker Infantry Platoon*. 15 November 2022.

Drill 07-PLT-D9631. *Dismount a Stryker Vehicle–Platoon*. 24 October 2022.

Drill 07-PLT-D9632. *Mount a Stryker Vehicle–Platoon*. 24 October 2022.

Drill 07-PLT-D9635. *Change Formation While Mounted–Stryker Infantry Platoon*. 15 November 2022.

Drill 07-PLT-D9637. *Execute Action Right, Left or Rear While Mounted–Stryker Infantry Platoon*. 26 October 2022.

Drill 07-SEC-D9401. *React to ATGM Fire While Mounted–Section*. 30 October 2024.

Drill 07-SQD-D9406. *Knock Out a Bunker–Squad*. 7 April 2025.

Drill 07 SQD-D9501. *React to Direct Fire Contact While Dismounted–Squad*. 26 July 2022.

Drill 07-SQD-D9502. *React to Ambush (Dismounted)–Squad*. 26 July 2022.

Drill 07-SQD-D9504. *React to Indirect Fire While Dismounted–Squad*. 26 July 2022.

Drill 07-SQD-D9505. *Break Contact–Squad*. 26 July 2022.

Drill 07-SQD-D9506. *Dismount a Vehicle Under Direct Fire–Squad*. 11 December 2023.

Drill 07-SQD-D9509. *Enter and Clear a Room–Squad*. 11 July 2022.

Drill 07-SQD-D9515. *Conduct a Squad Assault*. 11 July 2022.

Drill 17-CW-D8008. *React to an Obstacle–Crew*. 28 March 2022.

Drill 17-CW-D8018. *React to Air Attack–Crew*. 4 August 2022.

FM 3-0. *Operations*. 21 March 2025.

FM 3-04. *Army Aviation*. 27 March 2025.

FM 3-09. *Fire Support and Field Artillery Operations*. 12 August 2024.

FM 3-11. *Chemical, Biological, Radiological, and Nuclear Operations*. 10 April 2025.

FM 3-12. *Cyberspace Operations and Electromagnetic Warfare.* 24 August 2021.

FM 3-13. *Information Operations*. 6 December 2016.

FM 3-22.3. *Stryker Gunnery*. 9 March 2006.

FM 3-34. *Engineer Operations*. 18 December 2020.

FM 3-55. *Information Collection*. 3 May 2013.

FM 3-63. *Detainee Operations*. 2 January 2020.

FM 3-90. *Tactics*. 1 May 2023.

FM 3-96. *Brigade Combat Team*. 19 January 2021.

FM 4-0. *Sustainment Operations*. 14 August 2024.

FM 4-02. *Army Health System*. 17 November 2020.

FM 5-0. *Planning and Orders Production*. 4 November 2024.

FM 6-0. *Commander and Staff Organization and Operations*. 16 May 2022.

FM 6-27/MCTP 11-10C. T*he Commander's Handbook on the Law of Land Warfare*. 7 August 2019.

FM 7-0. *Training*. 14 June 2021.

GTA 07-10-003. *Infantry Reference Card for Small Unit Leaders (Troop Leading Procedures).* 1 November 2021.

GTA 08-01-004. *MEDEVAC Request Card*. 31 July 2016.

STP 7-11B1-SM-TG. *Soldier's Manual and Trainer's Guide, MOS 11B, Infantry, Skill Level 1*. 21 September 2020.

TC 3-09.81. *Field Artillery Manual Cannon Gunnery*. 13 April 2016.

TC 3-21.60. *Visual Signals*. 17 March 2017.

TC 3-22.37. *Javelin—Close Combat Missile System, Medium*. 13 August 2013.

TC 3-22.84. *M3 Multi-Role, Anti-Armor Anti-Personnel Weapon System*. 18 July 2019.

TC 3-22.240. *Medium Machine Gun*. 28 April 2017.

OTHER PUBLICATIONS

Most joint chiefs of staff memos available at https://www.jcs.mil/Library/CJCS-Manuals/

CJCSM 5120.01C. *Joint Doctrine Development and Revision Process.* 20 June 2023.

WEBSITES

Army Training Network. https://atn.army.mil

Central Army Registry. https://atiam.train.army.mil/catalog/dashboard

Digital Training Management System. https://dtms.army.mil

PRESCRIBED FORMS

This section contains no entries.

REFERENCED FORMS

Unless otherwise indicated, DA forms are available online: https://armypubs.army.mil.

DD forms are available online: https://www.esd.whs.mil/Directives/forms.

DA Form 1156. *Casualty Feeder Card*.

DA Form 2028. *Recommended Changes to Publications and Blank Forms*.

DA Form 2404. *Equipment Inspection and Maintenance Worksheet*.

DA Form 2408-4. *Weapon Record Data*.

DA Form 4137. *Evidence/Property Custody Document*.

DA Form 5517. *Standard Range Card*.

DA Form 5988-E. *Equipment Maintenance and Inspection Worksheet*.

DD Form 1380. *Tactical Combat Casualty Care (TCCC) Card*.

DD Form 2745. *Enemy Prisoner of War (EPW) Capture Tag.*

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24 June 2025

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