



NEWSLETTER



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NOV 10

Urban Ops Fight in the COE

Observations, Insights, and Lessons

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Foreword

“Commanders of major operations should understand the potential effects that the urban environment may have on warfighting functions. They should also understand the possible effects that the urban environment may have on lower-level tactics to properly plan, prepare, and execute major operations that may include UO [urban operations].”

— FM 3-06, *Urban Operations*, October 2006

The U.S. Army is at a point when it must refocus its understanding and training for the next operational mission — full-spectrum operations. In future operations, Army forces will concurrently conduct combat operations (offensive and defensive) with stability operations (security and protection of the population and relief efforts), all in the same operational area. When you look at the potential for any future contingency, the operational area most likely will include urban areas/environments.

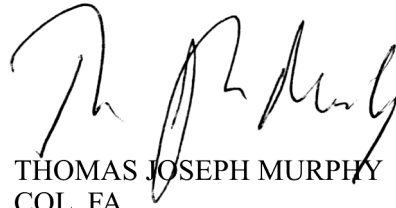
It was only a few months ago the Army conducted major combat operations in urban areas. We must not lose the lessons and insight gained from those battles. That is the intent of this newsletter.

This newsletter contains firsthand experiences and subjective lessons gained from fighting in an urban environment, under the larger operational context of a counterinsurgency. Many of the examples talk to defeating an enemy while protecting the local population and “key terrain” (e.g., critical infrastructure and areas with special religious and civic significance).

Key lessons in this newsletter are:

- Armor and mechanized forces are still viable forces in the urban environment. The shock effect of armor, combined with the mobility, communications, and lethality of the armor system, is critical to defeating the enemy.
- Armor and mechanized forces must operate with dismounted infantry for mutual protection in urban areas.
- Communications and radio network discipline are vital to conducting combat operations in urban areas.

- Training and battle drills must build the “muscle memory” that enables Soldiers to react correctly in the first minutes of the initial contact/engagement.
- Use all available fires in the urban fight; differing weapons and fire support means can complement each other in destroying an enemy.



THOMAS JOSEPH MURPHY
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Introduction

**George J. Mordica II, Chief, Analysis Division,
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This newsletter focuses on a review of post-Sept. 11 urban operations in a counterinsurgency (COIN) framework. U.S. forces have conducted these urban operations in Iraq under a complex COIN since the end of major combat operations in May 2003. As a result of that urban combat experience, many things have changed in how we now look at urban operations. The complexity of this COIN fight is based on the environmental components that represent any large nation with a destroyed government and infrastructure, non-nation state actors, and societal elements that play a part in the fight.

The slate of participants is constantly changing and shifting due to economic, political, popular, cultural, ethnic, tribal, religious, and criminal circumstances associated with the fight. Insurgents have their reasons for participating in the conflict, and the reasons are as varied as the groups themselves. The groups' commitment can be lessened by an information operations campaign that addresses their concerns. Some groups are influenced by the establishment of a government and police force that act in a grounded and unified fashion; some groups are influenced by religious and tribal leaders; and some groups are opposed to all strategies employed against them, with the exception of a fight carried to their hiding places.

Center for Army Lessons Learned (CALL) Newsletter 99-16, *Urban Combat Operations*, notes that urban operations are "a dirty business, but someone has to do it." This describes the bottom line to urban operations: No amount of artillery, aerial bombardment, or misery forced on the population caused by isolation, starvation, or lack of the basic necessities of life can alter the nature of this type of combat. Ground troops are always part of the solution, and in the COIN urban operations fight, this is a reality that must be planned for, executed, and sustained.

In 2002, CALL published Handbook No. 03-04, *Small-Unit Leader's Guide to Urban Operations*, which is still considered an excellent handbook on urban operations. CALL wanted to update this publication with more contemporary data and create the proper mindset for what the U.S. Army will face in the future. This newsletter places the urban fight in a perspective based on recent urban operations. The goal is to provide an educational and training guide for small-unit leaders to prepare them for success when facing complex problems in any future urban combat presented in full-spectrum operations. It is hoped this newsletter will lead to an updated small-unit leader's guide to urban operations in the future.

Doctrine as well as Soldiers, equipment, weapons, organizations, and leadership have changed as a result of contemporary urban operations. All of these elements of combat power must adapt to a new reality of the potential next fight, which includes the ability to deploy, support, and fight in a Third World nation; a developed rogue state; the pirate coast; or in a mountainous, underdeveloped, partially governed state.

The keys to success in all urban operations include using the right combination of resources and forces for each city in the urban operations area. Any urban operation must emphasize the collection and dissemination of actionable intelligence before, during, and after the commencement of operations. Success also relies on the stability operations necessary for maintaining the situation at the conclusion of combat operations.

Analysis from CALL indicates that other ingredients for success in contemporary urban operations include adaptive leadership at all levels by culturally knowledgeable and politically aware leaders. The Soldier must be well-trained and supported by battle staffs that are tactically sound and flexible enough to deal with adverse conditions and an ever-changing urban environment.

Urban operations are a small-unit fight where Soldiers must be situationally cognizant. Joint, interagency, intergovernment, and multinational (JIIM) operations are now the norm, but are conducted in support of small-unit operations. The implications of JIIM should be reflected in all future doctrine, organization, training, materiel, leadership and education, personnel, and facilities development.

Technology in many instances makes U.S. forces more effective in the urban environment, but technology does not eliminate the nastiness and uncertainty presented in an urban setting, and technology usually comes with a high price tag. If technology is used correctly, it can influence success in urban operations. But caution must be exercised; there are no “magic bullets” in this fight. Technology is only as good as the operators, planners, and execution of its employment and only after a thorough accounting of its successes and/or failures.

The small-unit leader is the one element that is irreplaceable in future urban operations. It is the U.S. Army’s responsibility to give that leader the best and most up-to-date doctrine and the contemporary tactics, techniques, and procedures and observations, insights, and lessons to further his education and help him prepare his Soldiers for the next urban combat fight in full-spectrum operations.

Chapter 1

Fighting in Built-up Areas

Eric Chevreuil

Reprinted from the November–December 2008 issue of *ARMOR*.

The M1 Abrams showed its muzzle at the corner of the street; its assigned position was the next intersection overlooking the metro station of “Doughboy city.” Friendly infantry elements were already on site, providing information, but they needed armored support badly. The street seemed clear of any threat other than the reported network of single barbed wires crisscrossing 2 feet above the roadway. The M1 roared forward, 1,500 horsepower spinning its steel tracks, and ground to a sudden halt, surprising both the crew and spectators. Eventually, on camera, the crew spent about an hour disentangling and cutting loose yards of wire and the metallic spokes that jammed the sprockets. Engineers 1 — Tank 0!

The place was the U.S. urban training facility in West Berlin, and the year, 1989. The good guys were a French AMX 30, a British Chieftain, an M1 Abrams, and an M88. The bad guys were the three allied engineer detachments tasked to design and implement antitank obstacles, any way they could imagine, and their resources were unlimited.

Many commanders have never commanded a tank, a platoon, or company at war or in military operations in urban areas, but Berlin was a good lab, a good place to confront the theory of manuals with reality. There, armored units had the unique opportunity to throw everything at their tanks in an effort to prove many field manuals wrong. The allied exercise was the culmination of experimentation — saved on video, shelved, and never seen again!

Personally, I seized that unique opportunity to train my tank platoon in a very different way, to have them experiment with both sides of the armored hull. Incendiary devices were thrown from roof tops at speeding tanks, smoke grenades linked by rope with spreading hooks dropped on turrets, blinding those inside. Simulated sniper fire “killed” the tank commander or the driver, or destroyed the driver’s periscopes; crews had to find a way out. We used small electrical sponge marker “cannons” from a training system to simulate mines, improvised explosive devices (IEDs), and rocket launchers. We set camouflage nets on fire with a simple incendiary bottle, fired a .50-caliber machine gun on an armored window, took a flak-jacket and a full backpack to the range and shredded everything with 5.56 and 7.62-mm bullets. Each time we reviewed the results, we came up with a “to do” and “not to do” list.

The “Doughboy city” exercises showed us that a simplistic combination of an obstacle and a trap could immobilize the most powerful tanks if the crew is not prepared for urban threats or just unaware of this type of warfare. Furthermore, the ability to train in an actual size mockup city, with its gas and metro stations, supermarket-like buildings, sewer systems, bell towers, wide and narrow streets, and high and low overpasses, was a blessing. One could order real cars and double-decker buses to crush, tires to burn, anything needed. And we recorded everything on day- and night-vision cameras.

Many issues were resolved, more than the length of this article will support; however, it does address issues related to the urban environment and the “traditional tank” strengths and weaknesses when fighting in built-up areas.

The Urban Environment

The urban environment is defined by its various physical zones, its multidimensional aspect, and its population.

Physical zones. The peripheral zone of a city (suburb, outer belt) is often modern and both industrialized and populated. Roadways are wide and straight, and many parks and open areas offer a high permeability. In offense, it is an area favorable for fast approach, observation, and infiltration. In defense, it is best used for observation, concealment, harassment, and canalization of the enemy. This is the “soft zone” of a city, offering good fighting ground for armored units.

The “hard zone,” usually referred to as “the historic center or the old town,” is a maze of small, narrow streets and old buildings interspersed with glass and steel high rises. It is often the historical political and commercial center of a town. It is a dense area favoring the defenders; it is the infantryman’s kingdom, the land of close-quarter combat, ambush, autonomy, and initiative — it is the urban terrain often referred to as “the tank trap.”

Multidimensional aspect. Contrary to conventional warfare in open battlefields, mostly taking advantage of surface infrastructure and three-dimension assets, urban operations make use of everything, including underground structures and waterways. Both friend and foe must map and list every single access, rate them, and plan offense or defense accordingly.

The surface road and railroad network. The main road network (MRoN) consists of freeways, highways, and other peripheral multilane, faster traffic boulevards. Like the main railroad network (MRaN) and its main multiple railroad lines, the MRoN avoids the downtown hard zone and links the soft peripheral zone to the outside. It marks the city’s umbilical cord — allowing quick and easy bypass of the city. Armed units remain organic.

The secondary road network or railroad network (SRoN and SRaN) is a pre-filter to the city center. Composed of wide two-way streets, or railroads and other tramway or subway structures, it links the soft zone to the hard zone. Attacking units are canalized and must split into mixed battle groups in this area, which favors the defenders.

Finally, the tertiary road network often makes the city center a spider web of short and narrow streets that do not facilitate armored or mechanized engagement. In these streets, the attacking forces will be targeted by small mobile hit-and-run forces, booby traps, and other antitank ambushes. This area is often the scene of the final confrontation between tanks and antitank forces.

The underground network. The underground network is a critical permeability factor that both attacker and defender must take into account, especially when fighting in a modern city. For example, Paris has about 1,000 miles of underground structures that are 5 feet high and taller; just think of it as a straight line linking Sacramento to San Diego! Imagine the subway, the tunnels, the underground roads and railroads, the basements, the sewers — it’s a mind-boggling headache for planners on both sides. Furthermore, in modern cities, these subterranean areas are often large commercial places with easy access for hiding large numbers of troops and vehicles.

In Stalingrad or Berlin, hospitals, headquarters, refugee settlements, factories, communications paths, and more were underground in existing infrastructure. Allegedly, Hitler ordered the flooding of everything underground in Berlin to slow Soviet advances.

Tomorrow, much like yesterday, it is more than possible that surprise and tactical advantage will literally pop up from below the surface. Underground infrastructure could be used to infiltrate and withdraw forces, “mine” the foundations of a building by piling up and detonating large quantities of explosives. Underground infrastructures might revive the Vietnam War “tunnel rat” concept, thus creating the need for highly specialized close quarter combat units.

The fluvial network. The fluvial network can add to the permeability of a city, but is mostly considered as an obstacle to cross, with bridges to hold, destroy, or protect. Often, these bridges are within the town boundaries, within the hard zone, and only the most recent are in the peripheral zone.

Along the French Loire river, between Tours and Ghien, one can find about 10 crossing points (100 tons/two-way traffic minimum) and about seven are in urbanized areas. If one chose to seize or destroy the bridges of Orleans, one must be ready to bomb, and possibly inflict major damage to that city of 170,000 souls, and prepare to accept heavy collateral damages.

In Baghdad, there are 13 main bridges across the river Tigris. Bridges could be painlessly destroyed from afar (smart weapons), but once the ground troops come to secure the city, they would end up with major obstacles to cross, likely under fire. The other alternative is the more traditional Remagen-type “bridgehead” of Special Forces, who are inserted by surprise to seize and hold objectives until heavier reinforcements arrive. A combination of these two options offers a third way of dealing with bridges. Therefore, the fluvial network would be a critical obstacle to bypass, if possible, or a critical asset to preserve or destroy, depending on the timing of the battle.

The third dimension. With the many high rises, bell towers, and other minarets, rooftop terraces, and uncountable windows that make the framework of a city, the antitank enemy coming from above will not always be airborne.

A simple burning or explosive device, antitank grenade, or missile fired from above through the thinner top armor of many older armored vehicles, could destroy or immobilize them. Stealthy snipers may target periscopes to blind the tanks or kill exposed crew members and accompanying infantry. A simple incendiary bomb or smoke screen might also blind and stop armored forces.

Tanks and other armored vehicles are blind and deaf when it comes to the third dimension, and without the guns, ears, and eyes of a support tank and the infantry, they are literally doomed, condemned to destruction.

Population. With 50 percent of the world’s population living in urbanized areas, it is likely that the human factor will have a critical impact on the issue of combat operations. The simplest case would be that of a city that has been evacuated. Collateral damage would be limited and moral restraints limited to the rule of wars toward the enemy. Means of massive destruction could be used without restriction to defeat the opponent.

When a population has been trapped (Berlin in 1945, Beyrouth in the ’90s, and now Baghdad), combat operations of civilized forces end up being greatly impaired by moral requirements, thus giving an edge to fanatics or other extremist forces that are not bound by any constraints, nor are they concerned with public opinion or polls. Protecting, evacuating, and feeding noncombatants, or providing medical help, ends up being a logistics headache disruptive of critical military operations.

On one hand, when humanitarian constraints are gone, military operations become quite simple. Depending on the goal, a city is either totally destroyed, populations included (Dresden, Tokyo, Hiroshima), or reduced, one street at a time, at a costly military and civilian price (Berlin, Warsaw, Beyrouth). On the other hand, caring for noncombatants may offer positive benefits such as gaining the sympathies of the population that may result in volunteered intelligence, supplemental forces, and labor. The anti-Nazi Soviet propaganda was the main motivation for the rise of most of the partisan groups that opened a second front in the rear of the German forces.

To safeguard the civilian population is also to safeguard oneself — at least in the eyes of the future historians. To alienate the local population means to throw it into the opponent's arms to increase rear insecurity, to lose a battle even before it begins. In this multi-zoned environment affecting communications and speed, the tank will be canalized and isolated, condemned to wide streets. It will have to preserve some sort of "range" in an environment where visibility and observation are limited. It will have to make the best of a hostile and multidimensional battlefield and survive a multiform and multidirectional threat.

The Tank in Built-up Areas

"Those who do not learn from the mistakes of history are condemned to repeat them," and those who forget the lessons of history are bound to make historical mistakes!

By the end of World War II, gigantic over-armored behemoths had been condemned by a new weapon, a light portable rocket launcher built around a tank killer — the shaped charge. It was born in Berlin, long after many famous armored battles had promoted heavier armor and bigger guns. Ferdinand Porsche's giant tank, "MAUS," suddenly became an obsolete monstrosity worthy only of the Russian museum it rests in today.

This major change in the race between the armor and the bullet did not mean the end of the "conventional" battle tank, but the end of the slow over-armored monsters of steel. The tank was originally designed to quickly bring its gun to the front and break through enemy positions under armored protection. It rapidly became the primary antitank weapon, but was never really designed for the specific requirements of military operations in urbanized terrain. However, from the squash head to the canister, and other "flechette" ammunition (developed at one point in Vietnam, abandoned for a while, and dug out again), composite and add-on armor, there are many historical and effective means to increase the urban lethality and protection of ordinary tanks.

If most traditional tanks lack urban capability, it is because they are generic battle tanks, as opposed to the few highly specialized machines, such as the latest Israeli Merkava, which has been urbanized with omnidirectional and movement-activated cameras, remote-controlled external machine guns, gun ports for rear protection, added body and turret kits, forward ram, extra belly armor, and mesh protection of optronics and engine openings. The urban battle ground is characterized by short distances of engagement and higher targets. The current main battle tank was never developed to deal with these two specific factors. The gun elevation is still limited on every known main battle tank. Unless the tank commander takes advantage of rubbles or wrecks to elevate the hull, thus increasing the main gun's elevation, there is not much that can be done against an enemy at close range and on higher ground in the hard zone of a city without using the external turret-mounted weapons. This is where tactics take over — a tank is never alone and must work within a self-supporting unit. The type of deployment and movement of the group should palliate the weaknesses of the individual!

I served 18 years with the AMX 30, and to my knowledge, the AMX 30 B2 was the only tank equipped with an “over-elevation” device. The automatic 20mm coaxial gun had its own mantel that provided a +40-degree elevation independently from the main gun. At a distance of 100 feet, the system allowed the crew to deal with targets located 80 feet high, while the main gun’s elevation, at the same distance, only allowed the engagement of targets up to 30 feet high. This example shows why in recent urban warfare anti-aircraft weapons and weapons systems have been extensively used against modern buildings (Russian-made twin or quad 14.5mm heavy machine guns or 30mm guns). Just imagine what a vintage Russian-made ZSU 23/4, a German Guepard, or even an M113 Vulcan could do for supporting infantry or tanks in urban areas!

The Traditional Main Battle Tank

The traditional polyvalent main battle tank will certainly remain the master of the soft zone in a city where long-range firing and observation are possible. But in the hard zone, highly adapted vehicles or tailored combat teams will be necessary to avoid heavy losses such as the 800 armored Russian vehicles that were destroyed in Berlin in 1945.

The common tank is composed of a hull and a turret, a main gun, and some secondary weapons, an engine compartment, and the tracks. Often, the armored vehicle is cluttered with tarps, camouflage nets, backpacks, and other necessities. Tools, fire extinguishers, and spares are often located in outside storage compartments. During battle, tank crews fight from inside with a somewhat limited vision. The driver can only see the front, basically fender to fender, and must be guided by the tank commander for any reverse movement. Only the tank commander has a 360-degree view of his position. The tank must rely on others to provide close protection, support, and guidance. Modern armored vehicles are better protected, heavily digitized and computerized, more flexible, and component based. Threat detection sensors, video cameras, and battlefield awareness systems are some of the recent changes that have made them more effective and improved their urban survivability.

Past weaknesses. Older generation tanks are still highly vulnerable to side, rear, top, or bottom attacks. The multidirectional aspect of the threats in urban areas makes it easier for an attacker to target these weak points. Modern tanks, such as the M1, Leclerc, Challenger, and Merkava have seriously improved their protection with a whole array of highly efficient add-ons, which adapt to the threat and conflict level.

Optics. The periscopes and other optical devices are traditionally fragile. They can be targeted by snipers, damaged by shrapnel, occluded by dust, mud, or splashed water. I remember reading that during the Iran-Iraq conflict, 50- to 70-percent of tank optics were damaged daily. Nowadays, bulletproof glass, metallic deflectors, and mesh wire highly contribute to the survivability of optical systems.

Outside clutter. Personal equipment, tarps, camouflage nets, fire extinguishers, and various “jerry cans” are vulnerable to small-arms fire. Clutter that might pile up on the tank during long movements to contact can be kept during open terrain operations (as long as it does not interfere with the tank’s operation), but must be cleared for military operations in urban areas.

Gun elevation. The main gun elevation is limited. Main battle tanks have been designed to find and destroy targets from within their combat range all the way out to 4,000 meters, not to crawl wall-to-wall in a compartmentalized terrain with a line of sight ranging from a couple of feet out to hundreds of yards. The average -10/+25-degree elevation could be a limitation for the

urbanized terrain. Crews can palliate this potential technical restriction with the use of remote-controlled superstructure weapons that are powerful enough for suppressive or most destructive fire. For heavier caliber tank platoon tactics, promote self-supporting tank movements at every level; only one tank moves forward when efficiently supported by the main gun and under observation of at least one supporting tank.

Traversing the turret. The horizontal movement of the turret can be impaired by walls, light poles, signs, and even manmade traps. The tank crew can avoid such problems by carefully planning a movement and final position, or by destroying the potential obstacles by fire or movement (using the tank to knock down obstacles).

Superstructure equipment. Cupolas, night-vision devices, sensors, antennas, and other external weapons systems may also be vulnerable. They can be sensitive to blast, shrapnel, falling debris, and shocks. They may also be impaired by attackers using low-tech weapons and techniques. Again, tactics and good judgment have been designed to remedy this threat; tanks should not be used as bulldozers and move through buildings, unless required for survival or an operation. A tank should not move without support!

Limited mobility. In urban areas, the movement of tanks is limited to the width of the streets. Fall-back positions are a luxury and street width may prevent the viable progression of two self-supporting tanks abreast. Furthermore, crashing through walls for infiltration or to take evasive action is not recommended because of possible damage to superstructure devices. Finally, antitank obstacles may immobilize them in the open, making them vulnerable to 360-degree and multidimensional attack. Again, tactics, support, and common sense can prevent or minimize such threats.

Vision. At short distances in compartmentalized terrain, the common tank is literally nearsighted. Its optical system was designed to look, target, and shoot far and forward. This handicap can be greatly increased by dust, smoke, and other artificial visual impairments. Modern technology has highly minimized these old shortcomings and digital video, thermal imagery, and battlefield awareness systems now complement the eyes of the crew members and observations of the supporting tank(s).

Camouflage. Tanks are usually camouflaged with paint befitting of the nature of the open battlefields they were originally committed to; however, for long, sustained combat in urbanized areas, the camouflage should be adapted.

Assets and possible improvements. Protection, mobility, and firepower are the common assets of any main battle tank. Survivability, rusticity, fuel efficiency, reliability, and interchangeability are other sought after qualities. Possible improvements include:

- Removing flammable material from the tank's superstructure (bags, nets, various oil, and grease); the tank should be invulnerable to any incendiary devices.
- Installing urban combat adapted add-on armor designed to defeat and/or deflect shaped charges, blasts, and grenades. Add on armor should also fit the turret roof.
- Installing mesh over any opening, including exhaust pipes and bullet-proof grills in front of optics.

- Storing critical hardware spares (periscopes, radio antennas), tools, and supplies inside the tank so the crew does not have to risk exposure for access.
- Adapting camouflage schemes to the urban environment of engagement.
- Attaching in place and securing tow cables to the front and rear of the hull for quick access and use under fire.
- Studying the efficiency of various ammunitions against urban targets or threats. In self-defense, for speed, the crew quickly fires whatever type of ammunition is already loaded, whether or not it is adapted to the threat; the correct ammunition is loaded and fired afterward. The following ammunitions are recommended against specific targets/ threats:
 - Armor-piercing discarding sabot fin-stabilized (APDSFS), high-velocity sabot, used against tanks and armored vehicles, bunkers, helicopters, and in self-defense.
 - Antitank (shaped charge), used against tanks and armored vehicles, and bunkers, and in self-defense.
 - Explosive, used against armored and soft vehicles, houses, buildings, and exposed infantry, and in self-defense.
 - Squash head, used against tanks, armored vehicles, bunkers, and in self-defense.
 - Canister (depending on load). Flechette canister is used against infantry, snipers, helicopters, soft targets (building or vehicle), for close-quarter protection of another tank being climbed over by enemy troops, and in self-defense against threatening armor or missile post; explosive canister is used against soft targets; chemical canister is used against exposed infantry or crews and buildings; and flash bang canister is used against ambushes, missile posts, and snipers.
 - Smoke is used against buildings, open areas, soft targets and vehicles, and as a incendiary device for self-defense.
 - Coaxial is used against armored vehicles, soft targets, exposed infantry, and missile or sniper position; and a .30-caliber machine gun can be used to protect another tank being climbed over by enemy infantry.

The crew. The tank is an exhausting place to conduct combat: extreme confinement, noise, constant chatter over single or multiple radio networks, smoke, smell, a permanent 360-degree and multidimensional need for battlefield awareness, a constant state of alertness, battlefield stress, and a feeling of deafness and “blindness” are factors that can take their toll.

The tank will always be a prime target, and as early as World War II, infantrymen knew their chances of survival were actually higher in wooded areas or behind rubble rather than behind some “reassuring” armor. While a regular foot soldier can actually take a breather almost

anywhere and anytime, unseen and protected by some artificial or natural shelter, the tank and its crew are, whether idling and safe in the rear or fully committed on the battlefield, deaf and literally blind, the encased crew relying on radio transmissions and the restricted field of view of periscopes.

During urban combat, the line of contact can be anywhere, front, rear, and sides, up and under. Therefore, armored units should not be committed for too long before being relieved and sent to a secure area for necessary resupply, maintenance, and rest. The crew should be cross trained and every member should be able to correctly perform the tasks of the others. Not only is cross training a combat multiplier, it is a matter of survival, and every soldier should know how to perform every task from standard to emergency maintenance and recovery procedures, driving, firing, maintaining all weapons systems, radio procedures, and tactical basics.

The tank commander, regardless of rank, becomes a tank commander the first time he sits in the turret. Rank and responsibilities do not provide any added protection, but do require mastering more skills (platoon/company levels). Company and platoon leaders should be the best tank commanders in the field, during maintenance, and at the firing range. Again, they do not have to do it all, but must know how to do it all. Crew members should all be potential tank commanders — the crew should be a family and the tank its home.

Camouflage and protection. The urban environment offers many opportunities for good camouflage and increased protection. Tanks may use the urban infrastructure to hide from view, avoid being targeted, or infiltrate an area. Malls and supermarkets may have crossed underground infrastructures in which to park or avoid being seen; covered parking lots, garages, parks, and stadiums may facilitate the camouflage and protection of an armored vehicle or provide alternate concealed firing positions or infiltration paths. Echoes would also make it more difficult to locate a moving tank, and multiple residual fires would make thermal detection more difficult.

At the same time, however, cities can become a deadly trap for tanks unless they are accompanied, guided, and protected by infantry forces knowledgeable of their capabilities and the need to communicate with crews. Dead angles, street corners, upper floors, and infiltration routes should be scouted beforehand and given a green light before committing a tank. For example: could a tank cross a specific wall without destroying its superstructure equipment; could a tank climb stairs or a wall; enter a certain street and use its main gun; control this intersection without being exposed; push through an certain obstacle; turn around; or can that bridge sustain 50 tons? These are just a few of the questions that accompanying troops should be able to answer before leading tanks to locations that could be deadly traps.

In the 1980s, every French tank battalion had a company of armor personnel carrier-mounted mechanized infantry specialized in supporting armored units, which could be used organically, as a company, or split into platoons attached to the various tank companies. Tank units and mechanized units were living, training, and working together all the time. Their “mechanized” were all from the armor branch and not “punished” infantrymen transferred from another branch of service. They lived by, and for, the tanks they knew and supported. Unfortunately, budget restrictions eventually killed that concept, and tomorrow, the fate of a tank in an urban area may depend on a soldier with little or no knowledge of tank capabilities.

Liaisons. Liaisons include radio, vocal, and visual. If radio communications are not jammed, they may be impaired by the compartmentalization of the urban terrain and by damage to antennas and other exterior communications devices. The crews need to master the basic tactics

adapted to urban combat and act independently without radio liaison, if necessary. Initial briefing must include accurate intelligence, detailed limits, well defined objectives, alternate eventualities, and courses of actions encompassing events such as mechanical problems, loss of radio communications, new situation, fall-back line or position, meeting point, and alternate communications plan. The role of the accompanying infantry would be critical to palliate the eventual loss of electronic transmission. The existence of an external interphone device allows the foot soldier to communicate with the crew under the protection of armor, while avoiding the need for the tank commander to exit the shelter of his turret to communicate.

The tank is quasi-blind and its field of vision is limited to the size of its periscopes, the magnification of its sights, the rotation of its turret, the range of elevation of its main armament, and, of course, the distance from any view-obstructing obstacle. This is why the traditional main battle tank is more comfortable maneuvering in open terrain and engaging targets at the 1,000 to 4,000 meter range rather than dueling at close range in inner city streets. If direct hits, shrapnel, debris, smoke, or fluids reduce an already poor visibility, damage the firing sights, or impair the driver's ability to negotiate obstacles, the crew will have to rely on the few spares that are onboard, resort to rotating periscopes of similar types from one area to another, and engage enemies within the combat range of the selected ammunition. If the driver's periscopes have been hit and damaged, critical optics must be replaced.

Repair and salvaging. Everything that can be repaired should be repaired and everything that can be salvaged should be salvaged! Armored combat in urban terrain is tough on equipment; accordingly, prior to any engagement within city limits, procedures for recovery, destruction, and salvaging should be in place. At every level, from crew to battalion, imagination and resourcefulness are necessary to keep the maximum number of tanks in fighting condition. A thorough "cannibalization policy" will permit damaged vehicles to receive immediate maintenance.

A damaged tank may crawl its way back to a "cannibalization center" where crew members help themselves with necessary replacement hardware from piles of salvaged tank parts such as periscopes, road wheels, sprockets, tracks, antennas, and tools. Couriers might take orders, then pick up and deliver parts across the front; only major mechanical issues or repairs would require the use of a recovery tank.

The on-site destruction of a tank should be the last resort to prevent it from falling into enemy hands. Still, afterwards, whatever can be salvaged from the wreck should be salvaged. Crew members might also participate in this salvaging as a "shared" components mission; available gunners, drivers, or commanders might be centralized and dispatched on request, regardless of the original unit of attachment.

Logistics. The ability to efficiently support armored units is a key requirement in military operations in urbanized zones. Main battle tanks are gas guzzlers and cannot sustain day-long operations without filling up. Furthermore, regular maintenance is necessary to avoid major mechanical breakdowns, and an ammunition shortage is likely since fighting tanks go through munitions faster than they do fuel.

The safe setting of an after-dark refueling/resupplying area for tank units operating in a forest or the suburbs of a city is fairly easy. Refueling and resupplying a tank unit fighting its way through the hard zone of a city is a bit more complex; the streets are partially cluttered with debris, fires are burning, and enemies could pop up anywhere at any time.

Ideally, entire armored units could be simultaneously relieved and moved to a safe place away from combat zones; however, this is not a likely scenario because a well-orchestrated in-place relief is impossible in an urbanized zone during combat. Delivering fuel and ammunitions to individual tanks could also be considered, but is not a realistic approach because of exposure and the amount of time it takes for crews to reload ammunitions and pump fuel from barrels.

The most realistic scenario is to deal with one tank or platoon at a time. Vehicles can be guided to a safe rear resupply point nearby. Ideally, fuel and ammunition should be transported by armored and tracked vehicles that can reach tanks anywhere, regardless of the conditions of the roadways; and infantry should provide close protection.

The Purpose of Victory

Caen, Stalingrad, Dresden, Moscow, Tokyo, Berlin, Nagasaki, Saigon, Beyrouth, Belfast, Budapest, Panama, Baghdad...

From close-quarter combat to nuclear weapons, resistance to terrorism, scorched earth to aerial bombing, every possible means of warfare — tanks, artillery, helicopters, and airplanes — have been used to conquer cities, destroy their economic hubs, or annihilate the will of their citizens.

It is common knowledge that about 70 percent of World War II battles took place in urbanized areas, and about 40 percent of those on the Eastern front. What was true 60 years ago remains true today. Areas, such as the Ruhr, the Donbas of Silesia and of Ural, the California coast, and the north of France, compose urban sprawls, which are 20 to 100 miles long and inhabited by 500 to 10,000 people per square mile. In Europe, there is an average of one 50,000-inhabitant city in every 40 miles. If war were to break out again in the European theater, it is a safe assumption that most of the fighting will occur in urbanized terrain and the tank will, once again, spearhead these battles.

The recent war in Iraq has once again proven that as long as cities are not pacified, wars drag on and casualty numbers increase. On the other hand, as shown in Afghanistan, controlling the cities and not the countryside fails to bring an end to violence. Cities are the high payoff objectives of wars, the prime targets armed forces cannot afford to lose. Without winning the cities, the war is lost; however, occupying cities and not controlling the countryside fails to achieve victory as well. It seems wars cannot be won with or without the cities!

For the purpose of victory, armies must prepare generic armored vehicles, crews, and tactics for this ever-changing environment, which is cursorily studied due to a lack of expensive realistic training infrastructure and the budget flexibility needed for the purchase of specialized weapons systems. Furthermore, at the human level, the emphasis during training for military operations in urban areas should emphasize initiative, decentralization, and inter-branch cooperation — skills that may seem outdated in these modern times where conflicts are micromanaged by poll-driven politicians from their capital cities.

Chapter 2

Armor in Urban Terrain: The Critical Enabler

MG Peter W. Chiarelli, MAJ Patrick R. Michaelis, and MAJ Geoffrey A. Norman

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“...tanks and mechanized Infantry face problems in confines of urban areas that place them at a severe disadvantage when operating alone. Only together can these forces accomplish their mission with minimal casualties...”¹

Task Force (TF) Baghdad’s adaptation to fighting in the urban canyons of Al Tharwa (Sadr City) and the cemeteries of An Najaf has been both remarkable and significant. It has proven the reality of urban combat — we can win and we can win decisively.

The new fight brings to light a cautionary message to the force — be wary of eliminating or reducing the option of heavy armor; it has proven decisive and has been the critical enabler that allowed TF Baghdad to win every fight, every day. The enemy we fight in streets and crypts is not connected by a vast suite of electronics packages; instead, they use proven kinetic techniques, such as the rocket-propelled grenade (RPG), the command-detonated improvised explosive device (IED), the mortar, and the AK47 in an asymmetric fashion, using the concrete valleys of the cityscape to their advantage.

This evolution in warfare is not a side note in history; it is a foreshadowing of operations to come. The mass migration of humanity to cities and the inability of third-world nations to keep abreast of basic city services relative to growth, breeds discontent. It is a harvesting ground for fundamentalist ideologues.

This article should serve as a note of concern to the force. Eliminating or reducing heavy armor systems from inventory will remove valuable assets that prove decisive when moving from a maneuver war to a street war.

Al Tharwa: The Sadr City Box

During the April-June and August-October 2004 Shia uprising of Muqtada Al Sadr’s militia in Al Tharwa (Sadr City) and An Najaf, it became clear that the ultimate task organization of choice depended on the enemy threat. Patterns of employment of the combined arms team that both solidified and challenged existing doctrine were also made clear.

The grid-like pattern of Al Tharwa presented an interesting tactical challenge to the soldiers and leaders of 2d Battalion, 5th (2-5) Cavalry Regiment (TF Lancer), 1st Brigade Combat Team, 1st Cavalry Division, Fort Hood, Texas. As Muqtada’s militia began actively attacking coalition forces, TF Lancer worked rapidly to defeat the insurgent uprising while protecting its soldiers.

As its primary avenue of approach, the enemy chose side street alleys, which Bradley Fighting Vehicles (BFVs) and M1A2 system enhancement package (SEP) tanks could not negotiate due to sheer width and obstacles such as disabled civilian vehicles and air-conditioning units. As these

vehicles progressed throughout the city, the militia would attack their flanks, seeking to disable them with IEDs, RPGs, and AK47s.

U.S. Army Field Manual (FM) 3-06.11, *Combined Arms Operations In Urban Terrain*, Appendix C, states: “If isolated or unsupported by infantry, armored vehicles are vulnerable to enemy hunter/killer teams firing light and medium anti-armor weapons. Because of the abundance of cover and concealment in urban terrain, armored vehicle gunners may not be able to easily identify enemy targets unless the commander exposes himself to fire by opening his hatch or by infantrymen directing the gunner to the target.”²

Initially, following standard doctrine, the task force moved throughout the city in column or staggered-column formations, assigning typical 360-degree sectors of fire to cover all enemy avenues of approach. However, with the vertical firing platforms of rooftops and the coordinated attacks on both flanks through use of alleys, the task force had to rapidly adapt to the emerging enemy threat.

The task force quickly learned to move throughout the city in protected mode (buttoned up) and maximize the capability of the dual sights provided by the M1A2SEP, equipped with the gunner’s primary sight and the commander’s independent thermal viewer (CITV), and the M2/3A3 improved Bradley acquisition subsystem (IBAS) with the commander’s independent viewer (CIV). As shown in Figure 2-1, their refined movement-to-contact formation resulted in a rolling battleship of armored vehicles in a “box” formation, moving in a deliberate, methodical progression through the main streets of Al Tharwa, maximizing the protection of the armor packages.³ Success relied on the skill of the driver, the armor package of the M1A2 and the latest generation M2/3A3 and the dual sight capability afforded by the vehicle upgrades.

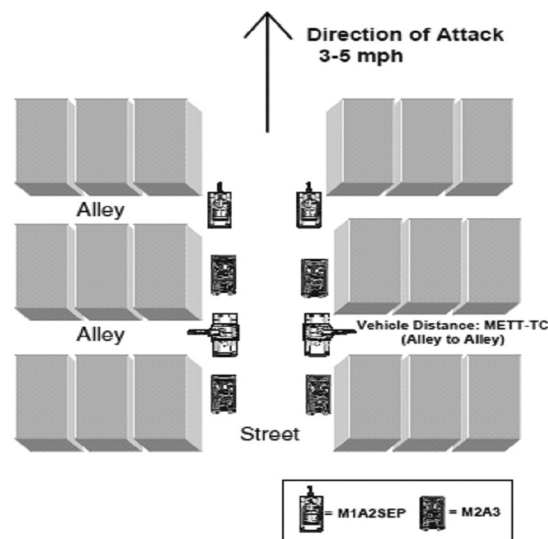


Figure 2-1

Moving buttoned up in a pure mechanized/armor formation, the combat patrol would reposition at the release point into a rectangular formation of at least six armored vehicles. Moving vehicles parallel to each other created an artificial set of interior lines to protect the exposed flank of

the opposite vehicle and allow a full three-dimensional, 360-degree coverage of the constantly shifting battlespace.

The commander's independent sight systems offset the protective measure of vehicles moving through the city with hatches fully closed. The second sight afforded another field of view, allowing the gunner to primarily observe enemy alleys. Instead of the commander being relegated to what the gunner was observing, or struggling to gain situational awareness through vision blocks, he became an integral part of the vehicle and patrol team by providing coverage of secondary enemy avenues of approach, oriented forward of the vehicle or toward the opposite flank vehicle's immediate rooftops, providing high-angle coverage. See Figure 2-2.

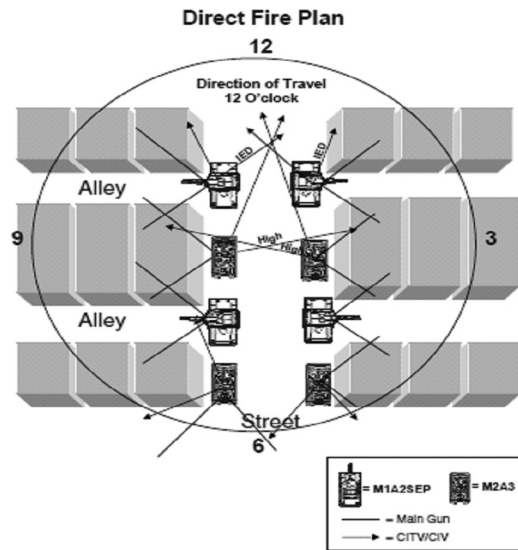


Figure 2-2

Moving block by block, the patrol would travel at extremely slow speeds to allow for acquisition of targets in the alleyways and proper handoff to subsequent vehicle gunners. Although not quite a 'steady platform' for the Bradley, the standard engagement was less than 200 meters — the proximity to targets allowed for successful coax engagements. The CIV and CITV were used to scan opposite rooftops or forward and to the flanks of the gunner's primary sector to allow immediate target handoff.

Drivers keyed off the front left vehicle for rate of movement and worked as integral members of the team to identify targets, maintain proper dispersion, and move to predetermined locations. At short halts, drivers would establish a point of domination by immediately moving to over watch the closest ally, which was the most likely enemy avenue of approach.

“Armored forces can deliver devastating fires, are fully protected against antipersonnel mines, fragments, and small arms, and have excellent mobility along unblocked routes.”⁴

The success of the box in attriting enemy forces in Al Tharwa was causal to the armor packages of the M1-series tank and latest generation Bradley. This capability allowed absorption of the enemy's primary weapons system (IED), and protected infantry dismounts that spent many hours traveling in the backs of Bradleys, enslaved to the squad leader display to maintain situational awareness. This same technique, used with lighter skinned vehicles, would not have been effective in achieving the task force's objectives during movement to contact due to asymmetric advantages the enemy retains by fighting on their turf.

As always, the enemy has a vote and began adapting to the successful employment of the Sadr City box. They began to move increasingly toward using IEDs to disable vehicles and subsequently cause a catastrophic kill by using RPGs and mortars. This prompted the task force to adopt a heavier stance in the lead elements, stressing the use of the M1A2SEP to lead each combat patrol. The tank, with its armor package, could take the brunt of the effect of IEDs laid throughout the route. In some cases, crews could identify detonation wires running from hidden IEDs through global positioning systems (GPS) and CITV. Once identified, the crews could 'disable' the IED by destroying the detonation wires with direct fire or by directly firing at the IED's point of placement. Stripping all unnecessary equipment from the bustle rack and moving buttoned up allowed follow-on Bradleys to service targets that succeeded in climbing on top of tanks or getting within their deadspace.

Because of the close range of engagements in the city, the primary weapons system on both the tank and Bradley became the coax, normally zeroed at about 200 meters. Recon by fire of suspected IED locations was authorized, but leaders always remained cognizant of collateral damage through positive identification of targets. Because of the desire to minimize collateral damage, a check in the system for using 25mm and 120mm was developed by the task force, which forced company commanders to clear fires for 25mm and battalion commanders to clear fires for 120mm.

“Armored vehicles can move mounted infantrymen rapidly to points where, together, they can dominate and isolate the cordoned area.”⁵

In war, bad things happen. The enemy objective in both Al Tharwa and An Najaf was to disable a vehicle and exploit it for an information operations success. Moving through the streets of Baghdad, it was inevitable that a vehicle would become disabled, leading to specific battle drills within the task force. The remaining vehicles in the box would move to provide a wall of steel around the disabled vehicle; infantrymen would dismount from the backs of the M2s to cover dead space, either by tying into the adjacent vehicles or occupying by force a strongpoint position. M88s, escorted by a quick reaction force (QRF) patrol, would move rapidly to the disabled vehicle and begin extraction. The screen established by the initial patrol would protect the M88 crew as they extracted the vehicle.

“Decentralized armor support greatly increases a small infantry unit's combat power. However, dispersed vehicles cannot be easily and quickly concentrated.”⁶

An Najaf: The Combined Arms Patrol

In An Najaf, the terrain dictated different tactics while fighting the same enemy. What remained constant was the overwhelming domination of the armor/mechanized combination as *the* enabler to support the decisiveness of the mission.

In August, elements from the 2d Brigade Combat Team (Blackjack) and the 3d Brigade Combat Team (Grey Wolf), 1st Cavalry Division, rapidly moved south of Baghdad to An Najaf and fought the Muqtada’s militia on different terrain. Task Force 1st Battalion, 5th (1-5) Cavalry Regiment, 2d Brigade Combat Team, 1st Cavalry Division, faced unique challenges as narrow parallel trails through the cemetery and old city of An Najaf forced units to attack with multiple, section-sized elements along adjacent trails, which were often separated from mutual support.

A combined arms section became the preferred maneuver element. The section normally included a tank and Bradley attacking abreast, trailed by an M1114. The tank often advanced slightly ahead of the Bradley to absorb the initial energy of enemy ambushes. These ambushes and enemy engagements ranged from IEDs, mines, and RPGs, to mortars and snipers. The Bradleys would protect the flank and elevated shots against the tank, and the M1114 provided local and rear security for lead vehicles using its M240 machine gun (MG). Dismounted soldiers from the Bradley and M1114 would disperse to the flanks of the section to eliminate enemy attempting to get into blind spots of the armored systems. Due to the restrictiveness of the cemetery’s tombstones, mausoleums, and support buildings, maintaining visual contact with friendly forces was extremely difficult, requiring crews to maintain voice contact to keep vehicles and dismounted movement synchronized. Situational awareness was also critical in the clearance of fires, as both 120mm mortar and 155mm artillery were employed. See Figure 2-3.

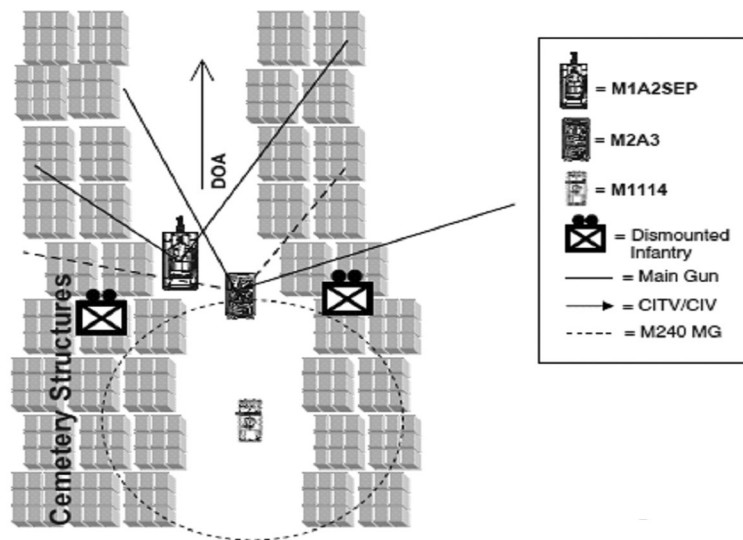


Figure 2-3

At times, narrow trails forced the tank to move to a flank, based on traversing limitations, and allow the Bradley to engage and service targets. To mitigate risk to the tank, the infantry would move to the tank’s flank to prevent the enemy from mounting from the rear. If infantry were committed or unavailable, a sniper was emplaced to over watch the tank, providing the same

protection and early warning. The final option was to use the M2A3's CIV to cover the tank's position.

Like units in Al Tharwa, Task Force 1-5 Cavalry generally fought buttoned up. The propensity for Muqtada's militia to engage through sniper fire or by dropping hand grenades on crews from above, forced this tactic. This tactic also allowed over watch vehicles to engage targets that moved within the vehicle's dead space to its immediate front.

Without the armor protection afforded by the tank and latest generation Bradley, Task Force 1-5 Cavalry's ability to achieve decisive success in An Najaf would have been characterized by higher casualties and a longer campaign. Used in conjunction with a combined arms dismounted infantry team, the tank and Bradley, having devastating effects on Muqtada militia largely attributed to the protection afforded by their armor packages, forced the enemy's hand and led to capitulation by Muqtada al Sadr.

“Due to the length of the tank main gun, the turret will not rotate if a solid object is encountered.”⁷

Southern An Najaf: The Lane Attack

Task Force 2d Battalion, 7th (2-7) Cavalry Regiment, attached to the 39th Brigade Combat Team, 1st Cavalry Division, was assigned to the southern sector of An Najaf, which was characterized by a narrow, residential grid-like road network that, unlike Task Force 2-5 Cavalry in Al Tharwa, prevented full lateral traversing of the M1A2SEP's main gun.

C Company, Task Force 3d Battalion, 8th (3-8) Cavalry Regiment, 3d Brigade Combat Team, 1st Cavalry Division, attached to Task Force 2-7 Cavalry, developed the 'lane attack' approach to application of armor in urban environments that characterized the unit's area of operations. To maximize the capabilities of the armor packages and the independent sights, the unit created section level *lanes* or directions of attack. Vehicles would move to “points of domination” (the intersections) to maximize the ability to traverse the turret and use the CIV. The first tank would orient low, forward, and to an unprotected flank. The second tank would be two blocks back, clearing forward and high over the lead tank. The CIV would cover an unprotected flank and rear. One block over, on a parallel street, would be a second section-level direction of attack that would be occupied by a wing tank section. This lateral dispersion of forces in extremely canalized terrain created a set of interior lines that afforded lateral security. Up to two platoons would be put on line, along four lanes, with infantry (in M1114s) in a reserve role behind the center echelon tank sections. See Figure 2-4.

“Because of the complex terrain, defending forces can rapidly occupy and defend from a position of strength.”⁸

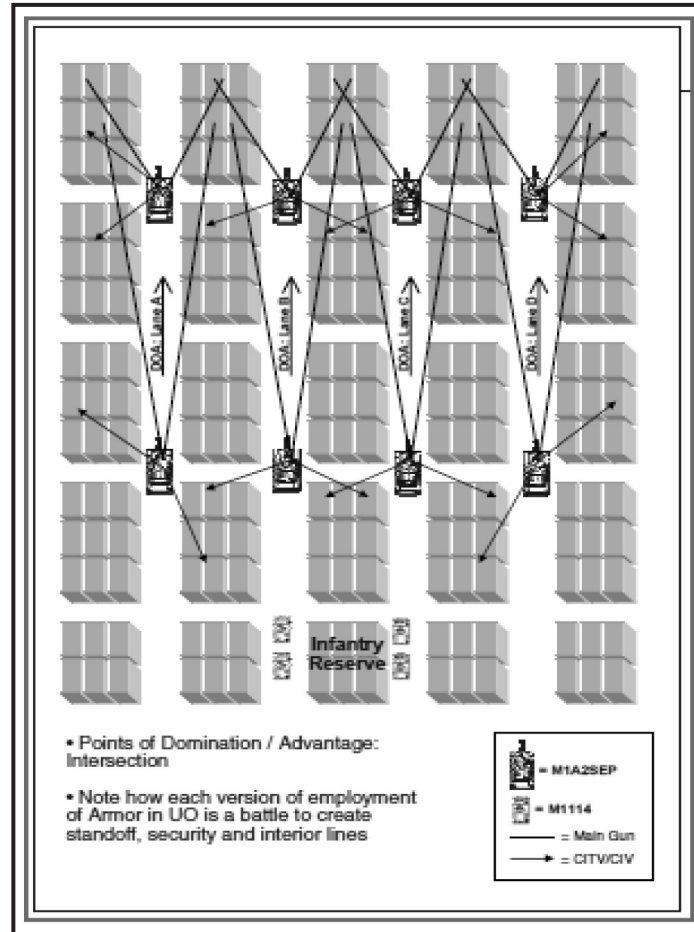


Figure 2-4

Observation and Examination

Whether fighting enemy forces on home turf, on a commercial or residential grid pattern such as in Al Tharwa or southern An Najaf, or on irregular patterns of the cemetery or old city of northern An Najaf, leaders can benefit by observing and examining these three separate units and their invaluable successes:

Adaptable leadership. Throughout each experience, our leaders consistently and rapidly adapted to enemy tactics and maintained the initiative. Although there are similar doctrinal threads in the employment of the combined arms team in each instance, it is the development and implementation of an emerging set of tactics and techniques in direct relation to enemy employment that led to its defeat.

Confidence in equipment. Current armor packages, the M1A2 SEP and the latest generation M2/3A3 (with enablers) can take the brunt of enemy weapons systems. They can survive first contact, which is critical to tactical success. However, there is a small risk associated with employment of current armor packages — enemy forces will exploit what they perceive as weaknesses. Units must take this into consideration when occupying or creating a positional advantage.

Independent sights. We no longer have the standoff envisioned in fighting a war on the plains of Europe. Instead, we fight a dirty, close fight against an asymmetric threat that uses crude weapons. It drives units to move through the urban landscape buttoned up. The CITV and the CIV give back to the vehicle and unit commanders capabilities lost by operating in this posture. Units must train to conduct entire operations with hatches closed.

Points of domination. Vehicles, sections, and units move to and occupy positional points of domination (or advantage), normally an intersection, where they can best take advantage of the capabilities afforded by the M1A2 and latest generation M2/3A3 armor package (with enablers), the dual sights, and weapons systems.

Create standoff. Create reaction time to allow servicing of targets. In some cases, that ‘standoff’ is a function of location (see points of domination). In other cases, it is a function of speed. Slowing movement allows time for acquisition, drawing out enemy forces, and servicing targets in the close confines of the urban landscape.

Create interior lines. Offensive and defensive box formations create conditions to maximize the capability of the dual sights by eliminating the need to secure a flank, which is protected by the vehicle to the unobserved flank. This further offsets the enemy’s propensity to execute simultaneous attacks from multiple surface and elevated avenues of approach.

We must continue the debate about the relevancy of armor. It would be wise to listen to some of our own doctrine when examining future combat systems. The trend is clear; the hardest place to fight and win — in the city — will dominate future U.S. Army operations. We cannot rely solely on a suite of electronics packages to offset the brunt of an enemy attack, which will be characterized by crude but effective weapons and an inherent terrain advantage due to the complexity of the city fight. The solution is good planning, the resolve of leadership, and the confidence that the equipment they fight in will protect our soldiers. The critical enabler is lethal and survivable M1 and M2/3 armored packages, coupled with increased situational awareness afforded by an independent commander’s sight. These systems must remain in our inventory for immediate employment by deployed forces. Our tanks and Bradleys must not diminish in numbers but become more capable through continuous upgrades that protect our soldiers and allow them to dominate the unseen, often unnoticed enemy force that lurks in the shadows of alleys.

Endnotes

1. U.S. Army Field Manual (FM) 3-06.11, *Combined Arms Operations in Urban Terrain*, U.S. Government Printing Office, Washington, D.C., 28 February 2002, Appendix C.
2. Ibid.
3. The box formation is not new to the first team. In 1993, then Major General Wesley Clark introduced and trained the box formation as the division commander. He contended it offered the same advantages in the open terrain of the National Training Center in fighting an enemy that were used the wadis and IV lines to engage attacking forces from a position of advantage.
4. FM 3-06.11, Appendix C.
5. Ibid.
6. Ibid.

7. Ibid.

8. U.S. Army Field Manual (FM) 3-06, *Urban Operations*, U.S. Government Printing Office, Washington, D.C., 1 June 2003, p. 6-5.

Chapter 3

The Battle of An Nasiriyah: The Tank and Mechanized Infantry Team in Urban Operations

Capt. Steven M. Sutey, U.S. Marine Corps

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On 23 March 2003, the 2d Marine Expeditionary Brigade (MEB) attacked to seize a corridor through the Iraqi city of An Nasiriyah to create a second axis of advance for the 1st Marine Division as it attacked north toward Baghdad.¹ Intelligence estimations forecasted an attack in name only; multiple sources predicted a jubilant welcome by the local population and the mass capitulation of Iraqi forces near the city. In spite of these optimistic intelligence reports, An Nasiriyah became a fiercely contested urban battleground, making 23 March one of the bloodiest days in Iraq. This article examines the battle at the battalion and company levels to identify the relationship between key moments in the fight. While this brief account cannot begin to provide the necessary critical analysis of the battle, it is however intended to provoke professional discussion and encourage further study of this complex and confusing urban operation.

An Nasiriyah is a sprawling city of more than 250,000 residents occupying approximately 10 square kilometers in southern Iraq. The city's core is wedged between the Euphrates River to its south and the narrower Saddam Canal to its north. A modern four-lane highway, Highway 7, runs north through the eastern portion of the city toward Al Kut and provides one of only two improved crossing sites of the Euphrates River in southeastern Iraq. The other site is in a less populated area several miles west of the city where Highway 1 crosses the river and heads north to Baghdad.

First Marine Expeditionary Force (I MEF) planners identified the strategic importance of An Nasiriyah, but wanted to avoid urban combat in the early stages of the war by sending its 1st Marine Division across the Euphrates River at the Highway 1 Bridge as it advanced from the Rumaylah oil fields toward Baghdad. The division commander, on the other hand, believed that limiting the division to a single axis of advance would create a chokepoint at the western bridge and slow down his rate of advance. Seizing a corridor through An Nasiriyah would open up a second axis and allow the general to protect the right flank of his main effort by fixing the Baghdad infantry division in their defensive positions around Kut with one of his regimental combat teams (RCT).²

The 2d MEB was a latecomer to the An Nasiriyah mission. Originally comprised of just two infantry battalions and tasked with rear security in southern Iraq, the brigade commander championed for a more active part in the invasion for his Camp Lejeune-based Marines. Changes to the war plan in the months immediately preceding the invasion gave the 2d MEB a more prominent role in support of the 1st Marine Division's advance near An Nasiriyah. Re-designated Task Force (TF) Tarawa, the MEB was now to travel north and conduct a relief in place with the U.S. Army's 3d Infantry Division (3ID) at the western Euphrates Bridge.³ The job of securing the eastern crossing sites remained a "be prepared to mission," which the task force commander was eager to execute.

TF Tarawa made an early morning crossing into Iraq on 21 March and moved unimpeded between 3ID and the 1st Marine Division to the Jalibah airfield south of An Nasiriyah. Bolstered by an additional infantry battalion, TF Tarawa now had a full RCT as its ground combat element. Still, RCT-2 was not as robust as its 1st Marine Division counterparts. The Marine Corps assigned the majority of its armored vehicles to the three RCTs headed for Baghdad, leaving RCT-2 with only enough amphibious assault vehicles (AAVs) to transport one battalion into battle. The remaining two battalions traveled across the desert in unarmored 7-ton trucks. A platoon of light armored vehicles (LAV-25) and a company of M1 Abrams tanks from a Fort Knox-based Marine Corps reserve unit rounded out the task force. The RCT-2 commander attached the tank company and AAVs to his first battalion, 1st Battalion, 2d Marine Regiment (1/2). The remaining two battalions, 2d Battalion, 8th Marine Regiment (2/8) and 3d Battalion, 2d Marine Regiment (3/2), became motorized units.⁴

The TF commander accounted for this lack of armor in his plan. The LAV platoon and one motorized battalion were to rapidly move north and conduct the relief-in-place mission with 3ID. The mechanized battalion and remaining motorized battalion would defend in sector south of the city to prevent interference with the forward passage of the 1st Marine Division. In the event the “be prepared to mission” was executed, the mechanized battalion would attack to secure the two eastern bridges then defend north of the city. The motorized battalions would then seize the Highway 7 corridor and pass forward RCT-1 through An Nasiriyah.⁵

The 2d MEB received its mission on the evening of 22 March. The RCT-2 commander and his operations officer arrived at TF Tarawa’s headquarters around 2030 hours to receive an update on the relief in place, which was scheduled for 0430 hours the next morning. “We got the bridges,” the 2d MEB commander announced, referring to the eastern Nasiriyah spans.⁶

The “be prepared to mission” was now real; TF Tarawa became the MEF main effort at 0600 hours the next day with orders to seize a corridor through the city between 0700 and 1000 hours local time and pass forward RCT-1.⁷ The RCT-2 operations officer issued a verbal order over the radio to move 1/2 and 2/8 forward in preparation for the morning’s attack and then sped along Highway 1 with his commander to coordinate the relief in place between 3/2 and 3ID at the western bridge. These instructions seemed to confirm the earlier relief-in-place and defense-in-sector missions; however, the mission to attack and seize the corridor between 0700 and 1000 hours was never relayed to the battalion commanders.

RCT-2’s mechanized battalion reached its predetermined location by 0600 hours on 23 March and received permission to move forward a few kilometers to a better position. With the tank company in the lead, 1/2 encountered unexpected resistance in the form of sporadic mortar and small-arms fire as it advanced. Still under the impression that the mission was to defend in sector, the tank company engaged several machine gun positions and adjusted indirect fire while the rifle companies cleared potential ambush sites along either side of Highway 7. In the midst of the fighting, a high mobility multipurpose wheeled vehicle (HMMWV) sped south along the highway and came to a halt in the middle of 1/2’s tanks.

Sometime before dawn on 23 March, a small convoy of HMMWVs, 5-ton trucks, and heavy expanded mobility tactical trucks (HEMTTs) passed forward of the Marines defending along Highway 7. The 507th Maintenance Company, a U.S. Army Patriot missile repair unit, made a critical navigation error and continued north along Highway 7 through An Nasiriyah. Realizing their mistake only after crossing the Saddam Canal, the convoy turned around and headed back the way they came. This time, the Iraqis were ready for them. The ensuing ambush killed 11 of

the 33 soldiers in the convoy and wounded at least 9. An additional seven soldiers were taken prisoner when they surrendered to Iraqi forces.⁸ The HMMWV now halted at 1/2's position belonged to the unit's panicked commander who fled the ambush scene in search of help. It was now approximately 0730 hours, 30 minutes after the attack to seize the corridor was meant to begin.

Realizing that U.S. soldiers to his front were in need of help, the tank company commander relayed the bizarre situation to the battalion commander and then led his company north in search of survivors. The tanks located the remnants of the 507th Maintenance Company and, using rotary-wing close air support (CAS) to suppress the enemy, loaded ten soldiers into two AAVs and returned to 1/2's lines. The rescue was a success, but the mission took precious time and the tanks, already low on fuel, needed to refuel. Still unaware of the mission to seize the bridges, the battalion commander ordered the tanks to the rear.

The rescue operation was complete at approximately 1000 hours, the no-later than time for TF Tarawa to seize the eastern corridor through An Nasiriyah. RCT-2's mechanized battalion was still defending in sector more than 10 kilometers south of the Euphrates River and elements of RCT-1 were beginning to arrive on the scene expecting to pass through the city. The 2d MEB commander, impatient with the delay, flew forward to confer with the RCT-2 commander and the 1/2 Battalion commander in person. The disconnect between the MEB and RCT staffs was readily apparent; the RCT-2 commander thought the battalion commander was doing a fine job adhering to his systematic plan of clearing the highway south of the city — the MEB commander thought otherwise. Pulling the battalion commander aside and addressing him personally, the MEB commander expressed the urgency of the situation: "I need you to get up there and seize the bridges by 1500 hours today. I don't need you clearing houses."⁹

The general wanted the bridges secured and he wanted it done fast. Further emphasizing the need for immediate action, the regimental executive officer contacted the 1/2 Battalion commander over the radio and told him that a company from 2d Light Armored Reconnaissance (2d LAR, the vanguard for RCT-1) was headed his way and would take the bridges if his battalion did not. The frustrated 1/2 Battalion commander got on his net and addressed his company commanders: "If we don't take those bridges now, regiment will give our mission to LAR...it will be a cold day in hell before I allow regiment to send a LAR company to assume our mission, especially when Barbarian 6 (the LAR battalion commander) has had no time to plan or prep for this task like we have! Now press hard for those damn bridges."¹⁰

The Marines of 1/2 had indeed prepared for this moment months in advance. Their battalion commander's original plan intended to maximize the shock value of armor by having the attached company of tanks lead the assault. One mechanized company would hold the Euphrates River Bridge from the far bank of the river while the remainder of the battalion executed a sharp right turn and then continued on to the Saddam Canal bridge using the less populated area east of the city's core. This maneuver avoided the stretch of Highway 7 that ran straight through the city, a danger area dubbed "ambush alley" by task force planners long before the 507th Maintenance Company's incident. The plan looked perfect on a map, but the morning's attack was far from perfect.

The 1/2 Battalion's tank company was refueling far to the rear when the 2d MEB commander ordered them to commence the attack. Problems with the single pump at the refueling station required the tanks to gravity feed, a process that would take more than an hour to refuel each tank. The general made it clear that there was no time to wait, the assault must commence

immediately. The 1/2 Battalion commander mustered a platoon of tanks to lead the assault while his anti-armor forces engaged a handful of T-55s south of the Euphrates River bridge. The platoon was far less than the 14 tanks originally planned for, but the shortage was not deemed critical enough to delay the attack any further. The 1/2 Battalion commenced its assault around noon, with the tank platoon in the lead, followed by the mechanized columns from A, B, and C companies.

The old axiom that no plan survives first contact proved to be more than a hackneyed maxim in the battle of An Nasiriyah. The 1/2 Battalion's lead element made it across the Euphrates River bridge without incident and assaulted along the eastern portion of the city. The tanks and B Company began to fan out into some open terrain when their attack was brought to an abrupt halt. The maneuver space that appeared so appealing on maps and satellite imagery was in fact a drainage area for the city's sewage. Three tanks, three B Company AAVs, two anti-armor vehicles, and the battalion commander's AAV quickly broke through the deceptively thin layer of earth on top of the sewage and became mired in the disgusting mess. A tank retriever also got stuck as it tried unsuccessfully to extract the immobilized vehicles.

Back at the Euphrates River Bridge, A Company occupied the northern side of the bridge under heavy, but inaccurate, rocket-propelled grenade (RPG) and small-arms fire as C Company moved forward. C Company was meant to follow B Company to the east and secure the Saddam Canal bridge while the tanks and B Company supported by fire. However, as C Company crested the Euphrates River Bridge, there was no sign of B Company or the command element. Unable to locate B Company, C Company's commander incorrectly assumed that the lead element had skipped the maneuver to the east and attacked straight up Highway 7 to the northern bridge. With two mechanized companies bunched up in an increasingly contested piece of terrain, C Company's commander decided to deviate from the original plan and advance through "ambush alley" and take the northern bridge by the most direct route.¹¹ Although in keeping with the commander's intent to rapidly secure the bridges, this decision would have unfortunate consequences for the men of C Company.

C Company's AAVs raced through ambush alley at over 40 mph, making it difficult for Iraqi gunners to target the boxy amphibious vehicles. Their speed also made it difficult for vehicle crews to provide accurate suppressive fires from the 40mm grenade launchers and .50-caliber machine guns mounted in the AAVs' "up gun" turret system. The company almost reached their objective unscathed; however, as the last vehicle approached the Saddam Canal, an RPG pierced the thin armor, damaging the vehicle and severely wounding the Marines inside.¹² The AAV limped across the bridge and came to a rest on the far side of the canal. C Company had accomplished its mission, but now had casualties that required urgent medical attention.

These initial casualties were just the beginning of the company's problems. An Nasiriyah's defenders, expecting an airborne or helicopter assault to seize the bridges, built an engagement area north of the Saddam Canal to trap invaders. C Company, unsupported by heavy armor, halted in the preplanned kill zone. Within minutes of their arrival, mortar and artillery fire bracketed the mechanized company while small-arms fire poured in from all sides. The company's organic 60mm mortar section immediately began suppressing the enemy, but the fires from its three small mortar tubes were no match for the Iraqi gunners.

Communications troubles limited the fire support team's (FiST) ability to respond with 81mm mortars or artillery. The company was also without a forward air controller (FAC) to direct CAS; the FiST leader forgot to pick up A Company's FAC during the initial excitement at the

Euphrates River Bridge.¹³ The lopsided indirect fire exchange began to exact a heavy toll on C Company within minutes of crossing the Saddam Canal. An exploding mortar round knocked out one of the 60mm mortars, killing the platoon sergeant, severely wounding the FiST leader, and forcing the remaining two tubes to displace. The team's artillery forward observer was also killed as he directed counter-battery fires from the 155-mm howitzer battery supporting the task force. C Company was in desperate need of support, if it was to hold the Saddam Canal Bridge.

As work continued back at B Company's position to free the stuck vehicles, the 1/2 Battalion commander ordered the company commander to take whatever elements he could and head for the canal bridge. The battalion commander and his operations officer, unable to communicate with either the forward command post (CP) or the main CP south of the city, moved with B Company to a position that afforded better control of the deteriorating situation. The battalion's radios were alive with chatter as the battle developed, but many key personnel, including most of the battalion staff, could not communicate due to line-of-sight obstructions and electromagnetic interference from nearby high-tension power lines. C Company managed to get a brief transmission through to the battalion commander to inform him the canal bridge was secure. Unfortunately, the battalion air officer, fire support coordinator, and B Company commander and his forward air controller did not monitor the transmission. These key personnel were still operating under the assumption that B Company was the lead element and C Company was somewhere to the rear.

The wounded piled up at C Company's casualty collection point north of the Saddam Canal. The C Company commander determined that evacuating the casualties by helicopter was too risky due to the heavy volume of enemy fire, but without immediate surgical attention, several of the casualties would likely die. One AAV crew took matters into their own hands and sped south through ambush alley to evacuate four urgent casualties. This first AAV took advantage of the element of surprise and reached an aid station south of the Euphrates River Bridge without incident. Subsequent attempts were not so fortunate. More casualties were loaded into AAVs and prepared to race back through ambush alley. In the confusion of battle, some Marines mistook these actions as a signal that the company was withdrawing and joined the column. A total of five AAVs lined up on Highway 7 and pointed south. Unable to reach the vehicles by radio to halt their movement, the company commander watched in disbelief as nearly half his remaining combat power headed away from the fight.

As the column of AAVs lined up on Highway 7, a pair of Pennsylvania Air National Guard A-10 attack aircraft circled above An Nasiriyah. The battalion air officer, still experiencing communications difficulties and unable to request air support, managed to raise the B Company FAC and told him to transmit a request for immediate air support over an uncovered emergency frequency. The two A-10s responded to the FAC's request and quickly established visual contact with B Company in the eastern portion of the city. The A-10s also reported a large concentration of vehicles north of the Saddam Canal and requested permission to engage. The FAC still believed that B Company was the lead element for the battalion and interpreted the report as enemy activity. The FAC was in no position to observe the attacking aircraft, much less their target of choice. Unable to communicate with both the fire support center and the battalion commander, the FAC decided to use type III control and cleared the A-10s to attack. Type III is the least restrictive control method for CAS and is not commonly used by the Marine Corps. Before the battle, the 1/2 Battalion commander specifically forbade the use of type III CAS without his approval due to the high risk of fratricide.

The A-10s made several strafing runs on C Company. The Marine Corps traditionally marks its vehicles with large orange panels to aid in identification from the air, but these were replaced before the war with more modern thermal imagery panels. The A-10s lacked the technology to observe the thermal panels and were unable to identify the AAVs as friendly vehicles from the air. Thinking the column of AAVs headed south into the city was an enemy counterattack; the A-10s rolled in again and fired three Maverick missiles at the vehicles.

The five AAVs came under simultaneous attack by a torrent of enemy mortars, RPGs, and missiles from the A-10s as they crossed the Saddam Canal Bridge. The lead vehicle was damaged, but managed to limp through the city before it was destroyed by several direct RPG hits within sight of A Company's lines at the southern bridge. The second vehicle in the column became a catastrophic kill almost as soon as it started moving, only the driver and vehicle commander survived. A third AAV became a mobility kill and stranded its passengers in the middle of ambush alley. The remaining two vehicles rescued a few of the survivors and managed to make it back safely to the protection of A Company's position. Several official investigations into the friendly fire incident conducted after the battle were unable to identify conclusively the effects of the A-10 attack due to the simultaneous engagement of C Company by the enemy.¹⁴ Whatever the causes, the results were indisputable at the time: the attempt to evacuate C Company's casualties was a disaster. The company commander was left with little more than a platoon to maintain the tenuous foothold north of the canal and dozens of his men were dead, wounded, or missing.

The tank company commander sensed the precarious nature of the situation after witnessing the surviving AAVs off load their casualties. Refueled at this point and supporting the heavily engaged A Company at the Euphrates River Bridge, the tank company commander led two M1s forward to reinforce the northern bridge. The tide started to turn in C Company's favor with the arrival of the tanks north of the canal. The main gun and coaxial machine gun fire from the two tanks quickly silenced enemy gun positions and relieved the pressure on the small force. The A Company commander, satisfied that the southern bridge was secure and eager to reinforce his peer to the north, violated his orders to remain at the Euphrates River Bridge until relieved by 2/8 Battalion and moved out. Supported with tanks, rotary wing CAS, and indirect fire, Company A sped through ambush alley without incident. The remainder of the battalion joined them a short while later and by 1430 hours, the majority of 1/2 Battalion was consolidated north of the Saddam Canal.

The motorized 2/8 re-secured the Euphrates River Bridge after a brief firefight, and by nightfall on 23 March, the eastern bridges of An Nasiriyah were firmly in the hands of the Marines. With RCT-2's third battalion, 3/2, still in possession of the Highway 1 bridge west of the city, TF Tarawa held only three pieces of key terrain; the problem of ambush alley persisted and the mission to seize a corridor through An Nasiriyah remained unfinished. That night, RCT-1's armored reconnaissance battalion negotiated the route under cover of darkness and established a defensive perimeter 10 miles north of the city, awaiting the remainder of the regiment. The following night, a mechanized battalion from RCT-1 seized the stretch of highway between the bridges and finally secured the contested route through the city. RCT-1 was forward of TF Tarawa and on its way to Kut by dawn.

TF Tarawa began the tedious task of clearing the city on 25 March. Although some resistance remained, the battle for An Nasiriyah was over. In the final accounting, 33 Americans lost their lives during the operation; more than half of whom belonged to C Company, 1st Battalion, 2nd Marines.

The battle of An Nasiriyah is one of the few modern examples of U.S. forces engaged in large-scale urban operations in a non-permissive environment. Although well documented, most of the existing work focuses on individual participants and lacks objectivity. The shortage of impartial commentary on the interplay of key events and decisions during the battle detracts from the valuable lessons An Nasiriyah has to offer.¹⁵ The controversies of the day stem from the complexity, confusion, and disorder inherent in urban combat. A determined enemy, the timeless elements of friction, and the fog of war also contributed greatly to the events of the battle. The attack to seize a corridor through An Nasiriyah was far from a textbook operation, but it is precisely this quality that makes knowledge of the battle so valuable to the military professional.

Endnotes

1. A Marine expeditionary brigade (MEB) is a scalable crisis response force. Larger than the Marine expeditionary units (MEUs) that regularly deploy aboard naval ships, and smaller than the Marine expeditionary force, a MEB is ideally suited for independent missions requiring self-sustainment for up to 60 days. The assistant division commander commands the MEB and its usual ground combat element is a reinforced infantry regiment.
2. A regimental combat team (RCT) is a task organized infantry regiment. In addition to its three organic infantry battalions, an RCT usually adds a company each of tanks, amphibious assault vehicles (enough to transport the entire regiment), and engineers. Additional assets are added or substituted as required. An artillery battalion normally provides direct support to an RCT.
3. Richard S. Lowry, *Marines in the Garden of Eden*, Berkley Caliber, New York, 2006, p. 7.
4. The organic 2d Battalion from RCT-2 was deployed with a Marine expeditionary unit during the planning and execution of Operation Iraqi Freedom. To provide the 2d MEB with a complete RCT, the 2d Battalion from the 8th Marine Regiment was attached to RCT-2. This commingling of battalions is not uncommon in the Marine Corps.
5. Karl C. Rohr, "Fighting through the Fog of War," *Marine Corps Gazette*, available on line at <http://www.mca-marines.org/Gazette/2006/06rohr.html>, June 2006.
6. Michael R. Gordon and General Bernard E. Trainor, *Cobra II*, Pantheon Books, New York, 2006, p. 235.
7. Lowery, p. 120.
8. United States Army, "Attack on the 507th Maintenance Company, 23 March 2003, An Nasiriyah, Iraq," Department of the Army, Washington, DC, 2003, p. 3.
9. Gordon, p. 242.
10. Personal email from LTC Grabowski (1/2 Battalion commander) to Richard Lowry as cited in *Marines in the Garden of Eden*, p. 154.
11. Company commanders of 1st Battalion, 2d Marines, "The Battle of An Nasiriyah," *Marine Corps Gazette*, September 2003, p40.
12. Enhanced appliqué armor kits are available for the AAVs to augment the armor protection provided by the vehicle's thin aluminum hull. TF Tarawa's AAVs were not equipped with these kits during the battle.
13. Gordon, p. 246.
14. United States Central Command, "Investigation of Suspected Friendly Fire Incident near An Nasiriyah, Iraq, 23 March 03," Central Command Headquarters, MacDill Air Force Base, 2004.
15. The author's own objectivity bears mention at this point. As a minor participant with RCT-1 during the battle, the author has firsthand knowledge of some events as they unfolded or as they were interpreted at the time. Throughout the article, the author attempted to avoid bias by balancing personal experiences with additional primary and secondary sources to achieve a more accurate picture of events. That said, bias is an inherent part of every piece of written work and must be considered when contemplating this article.

Chapter 4

Sadr City: The Armor Pure Assault in Urban Terrain

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Baghdad, Kut, and An Najaf were scenes of concerted attacks by the Mahdi army throughout Iraq on 4 April 2004. On that afternoon, elements of the Mahdi army engaged multiple elements of 2d Battalion, 5th Cavalry Regiment (2-5 CAV), 1st Cavalry Division, nearly simultaneously throughout Sadr City in northern Baghdad. Twenty soldiers from Comanche Red Platoon, 2-5 CAV, had become isolated in the northern central portion of Sadr City, and available vehicle assets prohibited the unit's exfiltration. Soldiers from C Troop, 2d Battalion, 37th Armor (Crusaders), attached to the 2d Armored Cavalry Regiment (ACR), conducted a hasty attack into Sadr City to relieve the isolated infantry platoon.

The Crusaders had been operating in Sadr City since October of 2003 when an ambush in the city killed and wounded a number of troopers from 2d Squadron, 2d Armored Cavalry Regiment (2/2 ACR). From October 2003 to April 2004, constant operations in Sadr City had familiarized the 2d Battalion, 37th Armor (2-37 AR) with the local terrain, which proved vital during the attack.

The 2/2 ACR redeployed to Fort Polk, Louisiana, in March, and the Crusaders began to work for 2-5 CAV (Lancer), which had assumed responsibility for Sadr City. The Crusaders carried out two major combat operations to relieve Comanche Red, which led to a 3-kilometer fight out of Sadr City to evacuate the platoon and their casualties.

The Initial Attack by Crusader Blue Platoon

Crusader's third platoon, with four M1A1 tanks, stood by as a quick reaction force (QRF), on order from the commander of 2-5 CAV, as a result of perceived higher tensions in Sadr City.

At approximately 1630 hours, following Lancer's decisive contact throughout Sadr City, Lancer Main called Crusader X-ray and informed Crusader to ready the QRF immediately and send it northeast of routes DELTA and COPPER to relieve Comanche Red, which had suffered casualties and was isolated and in continued contact.

Crusader Blue left its operations base at the Martyrs' Monument within 10 minutes and proceeded northeast along route AEROS and then northwest along route FLORIDA to begin its attack northeast up DELTA to relieve Comanche Red. Crusader Blue turned northeast on DELTA and had initial contact just north of the district advisory council (DAC). Crusader Blue fought for several minutes traveling northeast up DELTA toward route GOLD and received several rocket-propelled grenade (RPG) rounds from the buildings on the eastern side of DELTA, none of which hit the tanks. Small-arms fire was very intense however and came from both sides of the street. All four Crusader Blue tanks engaged the enemy on both sides of the road with coax, .50-caliber, and M240 loader's machine guns, M4 carbines, and M9 pistols. Many of these attackers were dressed in Iraqi police uniforms, and third platoon substantially reduced the attackers' numbers.

Blue 1 ordered the platoon to continue to fight north. After fighting past route GOLD, RPG and small-arms fire continued, and about 500 meters northeast of GOLD on DELTA, Crusader Blue suffered three casualties. Blue 2 decided to move off of DELTA to get to a position where he could assess the casualties. He turned southwest off of DELTA between route GOLD and the Sadr Bureau, then traveled southeast to route CHARLIE. Crusader Blue followed his move. Blue 1 ordered his platoon to follow his move back to route DELTA and continue the attack. At the same time, Crusader 5 informed Crusader Blue that they should move their casualties to a hasty casualty collection point (CCP) at the intersection of routes AEROS and COPPER. Blue 1 brought his tank back to DELTA and turned northeast, but the remainder of the platoon continued to the hasty CCP. Blue 1L informed Blue 1 that the other tanks in the platoon had not followed. Blue 1 immediately ordered the tanks to consolidate at the DAC and continue their attack.

The platoon's other three tanks moved to the CCP to conduct casualty procedures. After the casualty exchange and receiving several hundred rounds of 7.62mm ammunition from Crusader White in an up-armored high mobility, multipurpose wheeled vehicle (HMMWV) platoon, the three Crusader Blue tanks returned to the DAC and consolidated with the unit. As the C Troop commander, I was at Camp Cuervo, battalion headquarters, during this operation and immediately returned to the Martyrs' Monument to ready the three remaining tanks to join Crusader Blue to form a larger element with which to conduct a subsequent company attack.

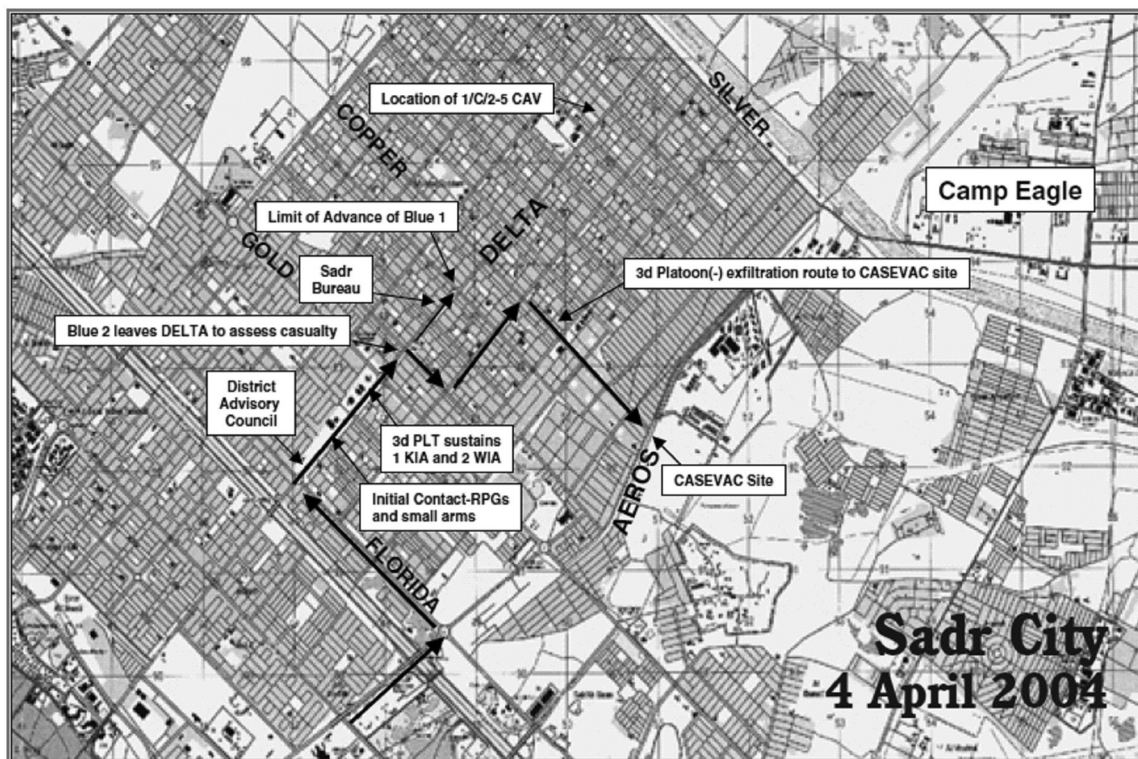


Figure 4-1

Crusader Attacks

On arrival at Martyrs' Monument, I mounted my tank with my crew and proceeded to the DAC using the same route as Crusader Blue. A section of two tanks from Crusader Red also arrived, bringing the company's strength to seven tanks. Both radios on my tank were not working, so I jumped to Blue 1's tank, which had communications on both company and battalion nets. Blue 1 became my loader and Blue 1L went to my tank. I knew Comanche Red had been isolated for almost an hour and wanted to start the attack immediately. After Blue 1 explained the situation, the company was organized into a staggered combat column, which I led on the left and Red 1 led on the right. I organized the platoon sergeants to follow with their tanks to bring up the rear of the six-tank staggered combat column. Crusader Blue 3 remained at the DAC to secure the site, which had a number of 2-5 CAV soldiers there with one of their HMMWVs destroyed. I called Lancer 6 and gave him my capabilities concerning vehicles, weapons, and ammunition and requested permission to attack. Lancer 6 gave the order to attack northeast up route DELTA. We attacked immediately.

We came under intense small-arms contact 300 meters north of the DAC from both sides of the road, just as Crusader Blue had experienced earlier. We fired coax and .50-caliber to kill and suppress the enemy and continued to move. Two to three hundred meters south of route GOLD, we received RPG fire, and small-arms fire began to accurately hit our tanks. Red 1G returned fire with 120mm high explosive antitank (HEAT) rounds at RPG positions on the southeast side of DELTA, 500 meters to our front.

The hydraulic servo valve (Delta P) went out on my tank and I was forced to fight in emergency mode, which meant stopping to stabilize the main gun and coax machine gun for the gunner. Given the constricted terrain and better position for command and control at the front, I was not willing to send another tank to assume the lead of the left file. After we passed GOLD, fire intensified with the company receiving more than a dozen RPGs, none of which hit. All of them seemed to hit short and the overwhelming majority of them came from ground level. There was an attempted top attack on my tank from the southeast that missed long.

The enemy primarily concentrated on using alleyways, shop windows, and low roofs of one-story buildings to assault. They were very persistent and were very difficult to suppress. Many of them had good tactical patience and waited until we were within 150 meters to fire. Their fires were more effective, but their close proximity meant they usually could not escape down alleyways or through shops before we engaged with either .50-caliber or coax fire. We fired three HEAT rounds during this portion of the fight. They almost always engaged from the front flanks in the more open terrain southwest of the Sadr Bureau.

This changed as we approached the Meredi market area and the large traffic circle with the large al-Sadr mural north of the Sadr Bureau. In this area, there are a large number of kiosks and commercial stands that encroach on the street, providing cover and concealment for the enemy. I fought open hatch the whole way and ordered Red 1 to do the same, as we were very vulnerable from the flanks as we approached the market and could not traverse our turrets well there. Blue 2 also went open hatch because he was ordered to bypass on the left and establish a support-by-fire (SBF) position on the company's left flank to facilitate left flank security as we inclined to the right up DELTA toward the mural.

The dense shop stands forced our company into a file on the northeast side of DELTA as we proceeded to the northeast. The market area was the scene of very heavy fighting with coax,

.50-caliber, M4 carbines from turrets, M240 loader machine guns, and M9 pistols. We received heavy small-arms fire and engaged and destroyed the enemy as close as 20 meters on our flanks as we broke out of the market to the northeast. Blue 2's SBF allowed Red 1 to take the lead from the right and I followed through the canalized section of DELTA at the Meredi market. Blue 2, Red 4, Blue 4, and Crusader 6G followed in file until we could break out to the northeast and resume a staggered combat column.

During this time, we received confirmation of Comanche Red's location in a section of buildings northwest of DELTA. I coordinated with Comanche Red 1 on the battalion command net for our arrival and he updated me on the situation. We coordinated nonstandard casualty evacuation, which would be done on our tank turrets, and prepared his platoon for our arrival. We continued the attack to Comanche Red's position under intense fire. The sun had started to go down when we began the Meredi market fighting and it was very near end evening nautical twilight (EENT) when we arrived at Comanche Red's location. The fight through the market near the Al Thawra Iraqi police station was brutal and very close to a great number of barriers and burning barricades.

The company attack from the DAC to Comanche Red's location was four kilometers and it took us over an hour and a half to fight. My primary concern was to preserve my force and remain focused on killing the enemy and clearing the route for any additional casualty evacuation or recovery efforts. Comanche Red 1 confirmed that none of his four wounded were urgent. Additionally, DELTA had very poor trafficability with dozens of burning roadblocks and roadblocks consisting of large metal objects such as air conditioners and refrigerators. These obstructions caused us to set multiple SBFs along the route to allow either Red 1 or me to maneuver on the obstacle and attempt to reduce it with our tracks. The roads and alleyways that ran perpendicular to DELTA all had to be cleared by gunners before the column could advance because we identified early that the primary RPG threat was to the flanks.

On arriving at Comanche Red's location, I set far side security with four tanks and two of my tanks provided center sector and rear security. Fire at this location remained intense for several minutes. The enemy assailed us from windows and rooftops. Our most effective weapons were carbines and loader's M240 machine guns in the center and to the south. I dismounted and ran down the alleyway where Comanche Red Platoon was defending.

I assessed the situation and informed Comanche Red 1 to account for his men and equipment, and I would load the casualties onto my tank and lead the way out. My tank was also in closest proximity to the alleyway where they had established a platoon defense. Contact remained constant and intense to the northeast. After I dismounted my tank to coordinate with Comanche Red, Blue 1 reappointed our defense, relocating Blue 4 to cover an exposed alley across the street on DELTA from the alleyway in which Comanche Red was defending. Blue 4 killed many enemies in this alley that had been firing down the alley at Comanche Red and me.

Gunners on the forward four tanks killed at least 15 enemy soldiers, all at ranges under 100 meters. Blue 1 and I engaged attackers in the south with carbines as close as 20 to 30 meters, while the infantry platoon readied to load on our tanks. Duke 6 arrived with his tank and distributed ammo to our tanks as we were going black on both 7.62mm and .50-caliber ammo. I remained on the ground and went back to the infantry platoon and supervised as casualties were loaded onto my tank. Comanche Red had three HMMWVs; one had been destroyed and burnt to its frame.

The enemy continued to attack from the north as we were stationary. They attacked three times using cars or vans, all of which were destroyed and their occupants killed. The enemy attempted drive-by shootings with their lights off, but they did not drive quickly and were easy targets for coax engagements. Civilian cars blocked Comanche Red's path from the alleyway. They had to use their HMMWVs to push these cars out of the alley way, which took a long time. It took us about 30 minutes at this location to develop and brief the plan, conduct casualty evacuation, and clear the alleyway to get the HMMWVs. We were in contact with the enemy the entire time.

After we accounted for all friendly personnel and equipment, we continued to attack northeast up DELTA to turn south east down SILVER to return with casualties to Camp War Eagle. Route SILVER is very narrow, so I ordered the company to close to a file and follow. I attacked with Blue 2, Red 1, and Red 4 behind me. Two of the 2-5 CAV HMMWVs followed the four lead tanks. Blue 4, the third 2-5 CAV HMMWV, and then Crusader 6G was in the rear. Contact on SILVER was as intense as it was on DELTA. On the northeast (left, given direction of attack) of SILVER is a canal with generally open fields of fire. To the southwest (right) there are a row of houses and shops. We had heavy contact at the intermittent shops, but little from the houses.

B Troop, 2-37 AR (Battlecat) had set a defensive position at the intersection of routes SILVER and AEROS, which was to our front, so we could only engage with coax once we were fairly close to their position. Carbine engagements from tank commanders' hatches on the right side of the tank turrets proved most effective. The first five tanks and two HMMWVs fought all the way to Camp War Eagle using this method.

The infantry fought amazingly with multiple tires shot out on their HMMWVs. It was a great help to have the infantry on the turrets; they easily and effectively engaged the enemy. The last HMMWV broke down and Crusader 6G pushed the HMMWV with his tank at speeds of about five miles per hour for two kilometers to Camp War Eagle. About two-thirds of this distance was along SILVER where contact persisted. Crusader 6G engaged enemy on roofs and in alleyways with his M9, M16, M203, and .50 caliber, while commanding the tank and instructing the driver on how to safely push the HMMWV. Blue 4 returned to provide security to Crusader 6G and Duke 6 followed our march element to provide rear security.

When we arrived at Camp War Eagle, we downloaded the casualties from Comanche Red and entered Camp War Eagle to refuel and rearm. We also received some equipment that White 1 had brought to us, including more night-vision devices and a .50-caliber machine gun to replace the one that had been destroyed during the fight. I proceeded to the tactical operations center and debriefed Lancer 6 as my men refueled and rearmed. I then conducted adjacent unit coordination with Comanche Blue Platoon for a subsequent mission to move in and secure the Al Thawra Iraqi police station. This would begin the sixth day of constant intense night defenses of Iraqi police stations in Sadr City.

The Power of Experience

The company attack, relief of Comanche Red, and attack to Camp War Eagle lasted over three hours. We were in constant contact the entire time. There were many salient lessons learned from this attack:

Reconnaissance by fire is very effective against strong dismounted opposition in urban terrain. The Mahdi army fought very courageously and demonstrated good tactical patience waiting to engage until we were within effective range of their weapons systems. However, the

Mahdi army was not disciplined once engagements began. They rarely waited for flank shots with their RPGs, electing instead to fire at our oblique fronts so that they still had time to escape. Their positions offered little or no mutual support and they had a tendency to break contact or relocate when we conducted recon by fire. This was especially critical at the Meredi market where both main gun and coax machine gun fire flushed many of the enemy out of the cover and concealment they took in the dense market stands. The enemy usually tried to exfiltrate away down alleyways, but often had to run from positions of concealment to these exfiltration routes, so it was easy for us to anticipate where to kill the enemy. Tanks in second positions of the combat column could cover these exfiltration routes as lead tanks flushed these enemy elements out of concealment and cover.

During military operations in urban terrain (MOUT), tank units without infantry support need to fight open hatch. Naturally, there are terrain considerations in Iraq that would affect this, but even when surrounded by buildings three or four stories tall, it proves to be most effective, as you can fire rifles and carbines out of your turret hatches without exposing the loader and tank commander. The enemy fought primarily from ground level. We killed a number of enemy on rooftops, but constant fire from our coax machine guns and .50-caliber machine guns kept them from putting together cohesive attacks from two- and three-story building rooftops. Reflexive fire from loaders and tank commanders with carbines accounted for a substantial number of enemy casualties on rooftops at ranges under 50 meters. During this and subsequent battles, the enemy fired almost constantly from the hip. They all fired on automatic and did not appear to aim their shots. Our loaders and commanders were exposed from the shoulders up, but could deliver very accurate fires at close range and showed the discipline to do so. The close proximity of light poles, vending stands and buildings severely limited our ability to traverse the turret. The only way to cover our exposed flanks in this congested terrain was to fight out of hatch. Tank commanders and loaders were somewhat protected from the most common threat, which was ground-level fire. Tank units unsupported by infantry in MOUT need to assume the risk of tank destroying systems in constricted terrain. Tank commanders and loaders can also positively identify enemy and noncombatants if they can see them from the turret, thus limiting unnecessary deaths.

Once battle is joined, Mahdi army elements demonstrated incredible commitment to recover their casualties and equipment. Once we inflicted casualties on the enemy, continuous coverage of the location where their soldiers were down proved key. Mahdi army soldiers would often try to assist their comrades and expose themselves to our fire when they tried to conduct casualty evacuation or recover weapons. This is specifically effective at night because the enemy often fought in squad-sized elements. If a crew only identified a few enemy troops, there were very likely more troops close by in cover or concealment.

Mahdi army elements are inexperienced with the RPG. There was a very high dud rate on our tanks and many of the near misses were duds as well. One RPG dud bent the lip of the turret ring on my tank, but that was all. Who knows whether they failed to properly arm the RPG or if it was just poor ammunition. I saw three RPGs launched at my tank that initially appeared to be coming right at the front of the tank, but they all dropped short, one skipped under the tank, one exploded short, and one failed to explode as it skipped into our right track and deflected across the line of march of my right file of tanks.

Mahdi army elements set many burning roadblocks that had to be destroyed immediately. After contact, Mahdi army personnel continued to roll tires and combustible objects into roadblocks. Red 1's gunner killed at least one enemy improving a roadblock just 400 meters

north of the DAC at the outset of our company attack. Construction or maintenance of such roadblocks during combat operations in a hostile combat environment constitutes hostile enemy intent. After the initial fusillade of RPGs from behind the thermal concealment of roadblocks, I ordered my company to destroy any enemy who was building or reinforcing obstacles, whether or not they had observable weapons. Reconnaissance by fire at these locations is critical.

Mahdi army elements are intimidated by 120mm main gun engagements. As soon as we began destroying the enemy with 120mm main guns, the enemy broke and ran. These engagements were often at short ranges where the concussive effect of the cannon was lethal, even if the enemy was not directly hit by the rounds. This proved to be the case during the nights of continuous Iraqi police station defenses.

120mm HEAT is better than .50-caliber for limiting collateral damage. Commanders at all levels need to understand this. Tanks engaged snipers firing from windows with .50-calibers, and dust was flying from windows, six windows down from the point of impact. This was particularly true of tanks firing armor piercing incendiary (API).

We need .50-caliber ball with tracer. API was penetrating too far and there was too much of a risk of killing innocents. HEAT causes a great deal more structural damage, but dissipates after one or two rooms, killing everybody at the point of impact. We need to think of collateral damage more in terms of innocent civilians being killed, rather than reconstructing buildings used by the enemy. Using 120mm HEAT has more of a decisive tactical advantage and limits unnecessary deaths.

All tanks require two radios. Leaders need to be able to fight from any tank with dual-net capability. We have driven our tanks a fleet average of over 4,000 kilometers during this tour and maintenance is always intensive. The mileage requirements during a year of combat operations in Iraq are eight times the average annual mileage allotment. Tanks will be down for maintenance at a higher rate than usual. The decentralized nature of combat in urban terrain requires several units to operate on the battalion command net. Tanks need the ability to have one radio on the most relevant command net for combat action and one for internal coordination. This would not be expensive and would facilitate command and control.

Air ground integration (AGI) during company-level attacks is critical. Lancer Battalion (and particularly Lancer 3B) did a great job with AGI. Comanche Red was isolated, had casualties, and insufficient vehicles to exfiltrate. The intelligence received from the aero scouts on the battalion command net was essential for gauging whether we could remain force oriented in our attack northeast up DELTA. If it appeared that Comanche Red was in danger of being overrun, we would have to bypass very stiff resistance at great risk to relieve them immediately. Although Comanche Red was unable to move from its position, it was very defensible, and the aero scouts told me they did not appear to be in danger of being overrun, despite continued contact at very close quarters.

Communications net selection in MOUT must remain flexible. We fought the entire attack on the company command net. This was necessary as the compartmentalized terrain caused us to change formations frequently, making it impossible to keep platoons in set piece formations without fragmenting the attack's tempo. Also, given the proximity of the enemy with RPGs, we all needed to hear crews calling out new threats, if we could not kill the enemy immediately. There was not time for relaying information from platoon net to company.

The company executive officer listened to one net at our command post and determined what we needed to continue combat. This allowed me to take consolidated reports on company command regarding battle damage, as well as make class V requests without having to stop fighting. Crews cannot crowd this net. Tank crews fought and reported, but always cleared the net, just in case I had something critical. The tempo of close quarters urban fighting is too fast to relay traffic from wing tanks to platoon leaders/platoon sergeants and then to the commander or XO.

The battalion staff must constantly update maneuver commanders on the fluid friendly situation in urban terrain. Lancer Battalion's staff gave us advanced warning of each of the three times we gained visual contact with friendly forces in Sadr City. Lancer 3B told me when a Bradley QRF would be visible in the vicinity of Route GOLD, which enabled me to warn my unit that we would have friendly vehicles and potentially dismounted infantry to our right flank as we attacked northeast up DELTA. Lancer told us precisely where Comanche Red was isolated so we could adjust our fire-control measures to mitigate the risk of friendly fire casualties. We inflicted no friendly fire casualties and sustained none despite the intensity of this three-hour fight.

Commanders must constantly update their crews on rules of engagement (ROE) as the fight develops. Many of the situations we faced demanded the subjective decision to fire or not to fire. There was a large volume of civilians in the battlespace as this combat zone was a densely populated urban area. It is not always intuitive when to shoot or not shoot, and commanders need to assume the responsibility of ordering which targets are engaged and which ones are not.

The commander must constantly update fire-control measures in urban terrain. Frequent formation changes, shaped by both the enemy and terrain, forced the commander to constantly reapportion fires to facilitate security. Tanks at the front of the march column must concentrate on the front, but threats from alleyways meant tanks had to handoff as they passed alleyways to ensure the enemy did not use them to assail our flanks. In these concealed locations, the enemy detected us as we passed, but usually did not engage lead tanks. The enemy moved to attack after our forward element passed, meaning the trailing tanks took the brunt of flank attacks. The enemy remained focused on approaching tanks and failed to realize the threat imposed by tanks that had already passed. The loaders and tank commanders on tanks that had already passed by the enemy took the enemy by fire as the enemy exposed their flanks to these tanks.

Commanders and platoon leaders should lead from the front of attack formation even when in file or column when fighting in urban terrain. Doctrine places leaders in the middle of the formation to facilitate command and control in most cases. But in urban terrain, where combat is all close quarters and only leader tanks have the ability to talk to higher headquarters, these tanks are the logical choices to lead from the front. This technique also inspires confidence in the men. This is especially the case during unplanned operations, such as quick reaction force missions during which subordinates may have a limited understanding of the situation as it evolves. During six task force attacks in An Najaf and Kufa in subsequent months, this also facilitated better adjacent unit coordination with sister companies and troops, as leader tanks with two radios could drop to the adjacent unit net or contact the adjacent unit on battalion command to establish that we had gained visual contact with them or audio contact of their fight.

Combat in urban terrain is very fast. Besides, the enemy gets to vote much quicker and it is not often possible to fight in accordance with the plan. A unit can accomplish any mission if everyone understands the task, purpose, and desired end state. Flexibility is the key to success. Commanders must cultivate a command climate where the most junior enlisted soldiers

feel comfortable reporting on the company net. Given the tempo of the close quarters fight, commanders must also trust subordinates and empower them to act within the constraints of the commander's intent even before reporting to the commander what actions the element is taking. A challenge for commanders and leaders in the urban armored fight is to develop innovative techniques and ensure that soldiers understand them. Commanders must explain the necessity for adaptation to subordinates so that they clearly understand how the commander wants to fight.

This article is dedicated to the heroic actions and memory of three Crusaders: Staff Sergeant Mike Mitchell, Specialist Nick Zimmer, and First Lieutenant Ken Ballard.

Chapter 5

Task Force Iron Dukes Campaign for Najaf

LTC Pat White

Reprinted from the November–December 2004 issue of *ARMOR*.

On 22 April 2004, Task Force (TF) 2d Battalion, 37th Armor, 1st Brigade, 1st Armored Division, the 'Iron Dukes,' assumed mission from 3d Brigade, 1st Infantry Division, in the holy city of An Najaf, Iraq. The enemy, known as Muqtada's militia, controlled An Najaf and neighboring Al Kufa. The mission statement appeared simple: destroy the militia and restore order to An Najaf/Kufa to allow transition of authority to a legitimate Iraqi government; and, on order, transfer security responsibilities to Iraqi security forces (ISF).

When the fighting stopped and the smoke cleared on 4 June 2004, TF Iron Dukes had battled nonstop for five weeks and broken the enemy's will to fight, destroying over 600 militia and wounding countless others, capturing or destroying all types and calibers of weapons, successfully detaining two top aides to Muqtada al-Sadr, and seizing weapons caches in the holy cemetery and Sahla Mosque.

For the Iron Dukes, the road to An Najaf began on 28 May 2003. The Iron Dukes were cross attached to the 'Dragoons,' 2d Armored Cavalry Regiment (ACR). The Dukes accepted attachment of one light cavalry troop and one detached tank company. For the next 10 months, the Dukes would perform combat missions, peacekeeping missions, and recruit and train 500 Iraqi police and an Iraqi civil defense corps battalion in southern Baghdad.

Between 4 April and 10 April 2004, the Dukes fought in Sadr City, Baghdad, under tactical control of 1st Brigade, 1st Cavalry, followed by fights in Al-Kut on 10 April and Ad-Diwaniyah on 17 April. These actions successfully prepared the Iron Dukes for one of the most intense urban battles since the Iraq ground war in 2003.

The fighting in Najaf began on 28 April 2004. Available combat potential for the fight included: two M1A1 Abrams integrated management (AIMS) organic tank companies, comprised of companies Aggressor and Crusader; two light cavalry troops, made up of Apache Troop, 1st Squadron, and Iron Troop, 3d Squadron; one Paladin battery with fire-finder radar, Assassin, 2d Battalion, 3d Field Artillery; one military police (MP) company (minus), Warbear, 2175th Battalion, Missouri National Guard; one MP platoon, Renegade, 66th MP Company, Fort Lewis, Washington; one light combat engineer company (CEC), 84th CEC, 2d ACR; one psychological operations team; two civil affairs teams; an electronic warfare platoon; and an organic headquarters and headquarters company.

The task force organized forces into four maneuver teams, as shown in Figure 5-1. These forces were arrayed across the battlespace in three forward operating bases (FOBs), separated by approximately 40 kilometers. Headquarters and Headquarters Company (minus) operated from FOB Duke, a dusty patch of ground in the middle of the desert. One tank team and the Paladin battery were located at FOB Hotel on the northern outskirts of An Najaf. The rest of the task force collocated with an El Salvadorian battalion in the heart of An Najaf at FOB Baker/Golf. The task force also integrated into operations aerial scout weapons teams (OH-58D Kiowa Warriors), an AC-130 gun ship, F-16 Fighting Falcons, unmanned aerial vehicles, Iraqi

counterterrorism forces, and an Operational Detachment A team (ODA) already operating in An Najaf.

Task Force Iron Dukes

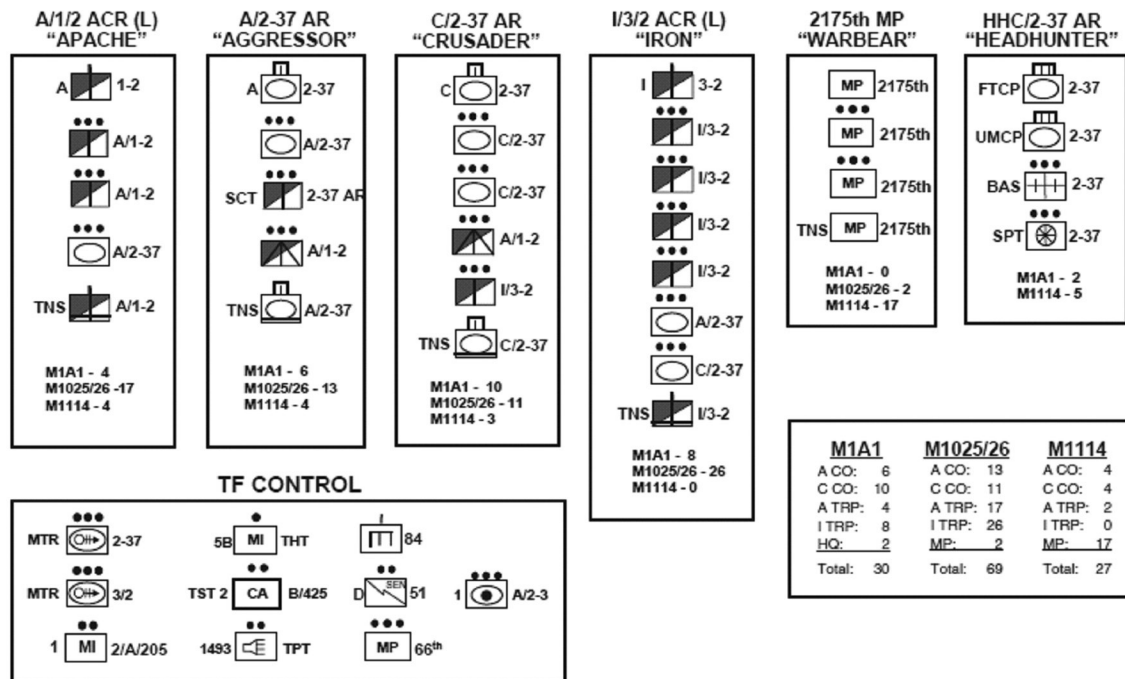


Figure 5-1

The enemy was made up of trained and untrained militia. The trained militia members were organized into four companies. Two companies were employed as defensive companies and controlled key terrain around the Ali Shrine and Kufa mosque, while two companies were employed as attack companies throughout Kufa and Najaf.

The untrained militia roamed the streets and executed ‘opportunity attacks’ on coalition patrols and Iraqi citizens. Additionally, throughout the city, Sadr lieutenants resided with personal security detachments, and almost every mosque and school was being used as a cache for weapons or mortar firing points.

Again, the mission statement appeared simple. In reality, the task force would be challenged daily, balancing application of force with the complexities of the battlefield. First and foremost, consideration had to be given to collateral damage on holy sites, including the Imam Ali Shrine, which is a religious symbol for over 5 million Shi’ite worldwide and headquarters for Ayatollah Sistani, Cleric Muqtada al-Sadr, 500 or more militia fighters; and the Kufa Mosque, which is second in religious significance only to the Ali Shrine and is the stronghold of the militia with more than 600 fighters.

To the north of the Ali Shrine lies the largest Shia burial ground in the world. This area was infested with insurgents from the Ali Shrine and Kufa, and was used as a weapons cache, and as the task force would later learn, a sensitive site requiring precision fires.

This article shares lessons learned and methods developed during the fight in Najaf/Kufa. Although, the fight will never be labeled a modern 72 Easting, or spearhead into Iraq by the 3d Infantry Division, the intensity, tempo, and constraints have application for future employment of armor forces in urban terrain.

Tempo and Campaigning

Understand the complexity of the battlefield. In the case of Najaf and Kufa, considering political backlash from damaging holy sites and creating unnecessary collateral damage was paramount in all planning and execution. Soldiers were well aware of the cascading effects a hole in the golden dome or a city block razed during counter fire would have on the Shia population; in essence, defeating the campaign's purpose. From the onset, these constraints became a leader challenge and commanders executed to perfection. Soldiers adapted engagement techniques and chose appropriate weapons systems to destroy the threat, with little or no damage to significant holy sites. The staff identified holy sites during the military decision making process and planned around them by using precision fires, nonlethal fires, or bypassing the site.

Have a plan. On this complex battlefield, tempo is probably the most important factor a staff and commander consider when developing the campaign plan. Do not be overzealous; realize you will lose equipment, soldiers to wounded in action, and energy as you continue to fight, day after day. Take the end state, and shape your plan. In Najaf, we focused on three areas, and integrated these areas into continuous attacks.

We concentrated first on the militia — keep up the pressure, stay flexible, and remain unpredictable. We focused secondly on Madhi leaders — target them and choose the right time to attack, such as at a time when the enemy is depending on public leadership. The task force conducted spoiling attacks on Fridays (prayer day) to disrupt al-Sadr's movement between Najaf and Kufa. On two such occasions, Sadr was forced to send his second in charge to speak at Friday prayers in Kufa, and on one occasion, the task force captured his personal aide. Even when unsuccessful in capturing high-value targets, the fact the task force disrupted enemy movement and communications became crucial for follow-on missions. For example, about two weeks into the campaign, the task force began targeting Muqtada and his top three lieutenants. Our end state was capture, but in the process, we found that we directly affected the enemy's ability to coordinate, communicate, and maintain the initiative, which allowed the task force freedom of maneuver throughout the area of operation. Finally, we concentrated on weapons caches. We specifically targeted enemy supply lines and ammunition caches.

In effect, these three areas caused the militia to fight in multiple directions, and forced him to choose priorities. By forcing the enemy to make choices, we gained the initiative, forcing the enemy to consolidate his forces to protect his high payoff targets, allowing the task force to focus on destroying the militia. If a commander fails to campaign, the task force can easily become mired in reactive mode and lose focus on the end state.

Watch your soldiers and equipment. We have the best soldiers in the world, and they are 'can do' all the time. Rely on platoon leaders and platoon sergeants to gauge soldier effectiveness. We started hard and aggressive, and within a week, we were losing the attention-to-detail battle. We began pacing operations so that a troop/company had a 12-hour period in which to rest and refit. The campaign plan took this timeline into consideration, and allowed the company/troop to execute company-level offensive operations as well as task force operations. The task force

chaplain and medical platoon are also excellent sources for determining the effect of continuous operations on soldiers.

The battalion maintenance office and battalion maintenance technician are important in predicting Class IX needs and surging mechanics. Over the first three weeks, task force tanks began chewing up track, hubs, and road arms. The task force XO sent up a red flare and we received phenomenal support from 1st Armored Division and theater assets.

Precision Engagement, Lethal Fires, and Shaping the Battlefield

The most precise weapons system in the task force was the M1A1 main battle tank. The coaxial-mounted M240 machine gun is precision at its best. Outrange the enemy RPG gunner and you can conduct precision recon-by-fire in urban terrain while minimizing collateral damage. The tank also has the most accurate and deadly system available — the 120mm main gun. Tank commanders learned early on that firing a multipurpose antitank (MPAT) round, a high-explosive antitank (HEAT) round or an obstacle-reducing (OR) round immediately silenced enemy massed formations due to tremendous psychological effects. A tank can fire a main gun round through a window and destroy the enemy while damaging only one room, minimizing collateral damage. Tanks can also create entry points for scouts or infantry by firing a main gun round into the wall of a school or directly into the side of a building. OR and MPAT rounds are effective in destroying hasty obstacles, and the task force even used the MPAT round to suppress enemy dismounts on the street.

The task force relied on main gun after experiencing the effects of the tank commander's .50-caliber in close urban terrain. Armor piercing incendiary (API) .50-caliber rounds are devastating and accurate, but cause a significant amount of collateral damage. The API round will pass through four to five buildings without slowing down. The round demolishes concrete structures and sets flammable materials, such as palm and date trees, ablaze. During one fight, an RPG gunner was hiding behind an Alaska barrier, which is concrete, reinforced with rebar, and 12 feet high, and instead of using a main gun round, he shot 50 rounds of API into the base of the Alaska barrier, killing the RPG gunner and clearing the area.

During rehearsals, commanders focused on weapons system employment, integrating fire control measures, such as main gun tight from target reference point (TRP) 1 to 2, and .50-cal tight TRP 3. You still have the loader's M240 for suppressive fires down alleyways, and each loader and tank commander carried M4s on top of the turret, which we used multiple times in killing or suppressing an enemy rifleman or intercepting an RPG approaching the tank from an adjacent alleyway.

Snipers are critical in the urban fight. This is common sense, but a tank battalion does not have snipers, so we developed our own by using soldiers that were 'long shooters' or we integrated trained snipers from an attached light cavalry troop. In Najaf and Kufa, we could not position snipers in town unless the area was cleared and supporting forces were available for extraction. Our method was to move into an area, clear a building, drop the team, and continue forward movement. The sniper team was assigned specific targets and time on station. Snipers were very effective in destroying RPG gunners along the walls of the mosque or in the minarets.

Use every combat system available. During the Dukes' five week fight in Najaf/Kufa, the task force employed AC-130 gunships, Kiowa Warriors with Hellfire missiles, and Copperhead, as well as variable time (VT) and time fuse delayed (TFD) 155-mm and 120mm. Each had a

specific purpose built into the plan. AC-130 fires were deadly for clearing bunkers, destroying RPG gunners in the palm groves, and in canalizing the enemy. After the first few engagements, the enemy decided it was not wise to stay outside while the sound of the AC-130 circled overhead. We used this advantage in either driving the enemy back inside to allow us closer maneuver, or keeping him off station while an unmanned aerial systems (UAS) located a strongpoint, passed grid location, and then called in the AC-130 to destroy his strongpoint.

The Kiowa Warrior has a fantastic weapons platform. When resourced with Hellfire, a commander can engage those hard-to reach targets. Additionally, an armed UAS becomes the weapon of choice when engaging an enemy moving around urban terrain. During one of the task force's last battles, an enemy mortar man, using a pickup truck with an 82mm mortar in the back, was conducting attacks on FOB Golf. The UAS was brought in; it identified, followed, and when conditions were right, destroyed the mortar, mortar man, and truck, with absolutely no collateral damage.

Paladin fires were critical to our success. We fired all types of munitions. Later in the campaign, the enemy developed his own methods to counter traditional 'fire for effect' high explosive rounds. The enemy would remain inside buildings or along the roofs of sensitive targets. On occasion, we would engage enemy on rooftops or engage an enemy mortar man near a built-up area with VT. In one instance, there were enemy RPG gunners and riflemen across the river inside a second-story building preventing a troop from maneuvering into a support-by-fire (SBF) position. Six TFD rounds later, the troop established the SBF and the mission continued with the enemy destroyed.

Early in the campaign we used Copperhead with OH-58D to destroy bunkers along narrow streets and in palm groves. The system works, with practice, and allows the maneuver commander freedom of movement along lateral routes. The task force also had an opportunity to employ an Iraqi counterterrorism force, which was impressive. The enemy believed the coalition would not enter mosques because their information operations campaign had convinced them of such. The enemy's information was correct! The coalition did not enter the mosque — the Iraqi counterterrorism force did, destroying five enemy riflemen and locating and confiscating a cache of mortars, RPGs, AK47s, and hand grenades.

The impact of nonlethal fires is integral to any campaign. The task force was well armed with a tactical psychological team (TPT), two civil affairs (CA) teams, two attack/bomb dog teams, a Prophet system, engineers, and several media sources. For example, the task force would target neighborhoods identified by electronic warfare assets that indicated local people were undecided on coalition support. We would move in and project a positive message with the TPT, followed by CA teams, who developed projects on the ground. We also sent in the TPT and CA teams during the 'mitigation phase' of operations to assess public sentiment and collect information on collateral damage.

The bomb/attack dog teams were used on every operation involving suspected arms caches or mortar firing positions, and the engineers were critical in building force protection around FOBs, Iraqi police stations, and other highly sensitive targets. The task force also used the engineers to recover jersey barriers employed by the enemy along trench lines and to fill in enemy trench lines and fighting positions.

The media should be treated like family because they target the international community and keep higher echelons of command happy. The information provided before and immediately

following the operation determined how successful the story got out. Normally, the task force commander briefly described the operation, concept and target, and placed the reporters in a vehicle (M1114 or M113), which trailed one of the companies. After the fight, a quick recap of what happened, maybe an interview for clarification, and the story is done. In some instances, commanders need to ‘go live’ during a fight, to ensure the press does not make assumptions. In all cases, treating the press with dignity and respect paid huge dividends.

Combat Leaders

Lead by example. In urban terrain, commanders discover that to visualize the battlefield, they absolutely have to be in the middle of the fight. A commander can best gauge intensity and tempo by being in the middle of the decisive effort and the company’s main effort. This has implications, and subordinate commanders will need a while to become familiar with this course of action, but it was successfully employed in Najaf.

Never be without communications. Commanders have a need to dismount in urban terrain — yes, even tank battalion commanders. Get caught without communications while on the ground and you instantly lose situational understanding and the information passed on the command net between cross-talking company commanders.

Rule one: The command net is the command net. This takes practice. The main function of the command net is to facilitate commanders’ crosstalk. The tactical operations center (TOC) monitors and passes necessary intelligence updates or announces combat multipliers arriving, but it should not be used for the battalion XO, battalion S3, and battalion commander to carry on conversations about the fight.

Rule two: During the fight, the visible commander on the battlefield helps steady the force. This is not as obvious as one might think — based on personal experience, it is a learned skill. It is much harder for a commander to be present and commanding during the fight, than when executing simulations or training at combat training centers. Commanders must be mentally prepared before the fight, visualize where they want to be to influence the fight, then adjust fire if the fight shifts.

Confidence and demeanor. Never doubt yourself, your commanders, or your soldiers. Maintain confidence in your equipment and the ability of your entire team to keep combat systems in the fight. We train on intent, and we succeed by sticking to what works. A leader who micromanages in battle will produce disastrous results. Let your subordinate commanders develop and execute their plan in conjunction with your commanders intent; no matter how much you want to, do not tell a subordinate how to “suck the egg.”

Know your subordinates’ abilities — can do; can’t do (but really can). This is something that is developed over time. Commanders already have an 80-percent solution on how subordinate commanders react under stress. The battlefield reveals how they react to success or to losing a soldier. Learn and apply this knowledge in future fights. An aggressive commander may push too far when success is achieved quickly in his sector, not seeing the entire battlefield. A commander may even hesitate if he loses a soldier or vehicle, not understanding the impact of this delay on adjacent units. Most of these issues should be addressed in the task force combined-arms rehearsal, but the task force commander will ultimately make his decisions based on an intimate understanding of his subordinates’ capabilities and limitations.

The three most important lessons learned in the fight for Najaf will be applicable in future battles. Commanders and staffs must first develop a campaign plan, taking into consideration a realistic timeline for achieving the end state, then visualizing the pace or tempo required to sustain the fight. Consideration must be given to combat potential, applied in a deliberate fashion, and integrated into the campaign's end state. Additionally, the U.S. Army's combat systems are unbeatable. Every system applies precision and becomes deadly when properly employed with a little ingenuity. Finally, combat leaders bring everything together. Technically and tactically proficient commanders and Soldiers win the day, but they are not tireless, and they will make mistakes. A commander must constantly gauge the effectiveness of his soldiers and leaders, a knowledge gained through experience and trust.

The fight for Najaf was an intense and bloody affair. The five week battle again validated that our soldiers and leaders are the best in the world, we have the best equipment, and doctrine is just that, doctrine! Most importantly, the Najaf fight proved armor remains relevant and is a lethal force in urban terrain.

Chapter 6

The Fight for Kufa: Task Force 2-37 Armor Defeats al-Sadr's Militia

MAJ Todd E. Walsh

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As coalition forces entered their second year of the war in Iraq, the 'Iron Dukes' from Task Force 2d Battalion, 37th Armor (TF 2-37), attached to the 2d Armored Cavalry Regiment (ACR), headed toward the holy city of Najaf and its smaller sister city, Kufa, to suppress the widespread April Mahdi militia uprisings. Najaf and Kufa had become a base of power and influence for Muqtada al-Sadr and his militia.

Al-Sadr, a radical Shi'a cleric who derives his legitimacy from his martyred father, was intent on driving a wedge between Iraq's interim governing council, coalition forces, and the large Iraqi Shi'ite population. His militia, or Mahdi army, had initiated the uprisings across Iraq during the first week of April 2004 to hinder coalition and Iraqi security efforts and jeopardize regional stability needed for the forthcoming transitional government. Al-Sadr's center of influence lay in the old town of Najaf, near the revered Imam Ali Shrine, and his militia had spread to Kufa in an attempt to control its inhabitants and key bridges to the two cities. Located roughly 150 kilometers south of Baghdad along the Euphrates River, the cities of Najaf and Kufa are separated by only a few kilometers of suburban sprawl and industrial park, the locale where Task Force 2-37 was positioned to protect coalition provisional authorities and to better strike the enemy.

On 22 April, in a brilliant feint by the 2d ACR, using the 3d ACR in a limited attack on the eastern bank of the Euphrates just east of Kufa, TF 2-37 moved under the cover of darkness, without incident from a distracted enemy, into forward operating bases (FOB) Hotel, Golf, and Baker to relieve exiting Spanish forces. That evening, the task force moved 29 M1A1 Abrams integrated management (AIM) tanks, 62 M966/1026-series gun trucks, 33 M1114 up-armored high-mobility, multipurpose wheeled vehicles (HMMWVs), 2 M1117 armored security vehicles, 6 M109 Paladins, 4 M1064 120mm mortar carriers, 2 towed 120mm mortars, and various combat support vehicles into the Najaf-Kufa city limits. Before the enemy could react to the infiltration of forces between the two cities, the Iron Dukes had forward positioned the task force in a lodgment that would eventually bring about the defeat of al-Sadr's militia — five bloody weeks later.

Over the next several weeks, the task force, composed of two tank companies, two light-wheeled ground cavalry troops, one up armored military police company, one motorized combat engineer company, and a Paladin battery, deliberately expanded its zone of influence in Najaf and Kufa. The two tank companies and two light-wheeled ground cavalry troops were all task organized into tank and cavalry teams on arrival, giving the task force commander numerous tactical options for future missions.

Initially, it was tough going, with every patrol or logistics convoy subject to ambush whenever they left an FOB. Quick reaction forces, composed of a tank section or platoon, were released when contact was made, to further develop the situation. It became readily apparent that the enemy favored certain areas in the city to initiate attacks, and after identifying enemy-oriented named areas of interest, the task force took steps to target enemy cells.

Patrols did not continue movement after an ambush; the ambushed patrol or convoy had to get out of the kill zone and establish a base of fire, while maintaining contact with the enemy until a reaction force arrived to hunt down and destroy remnants. Sometimes this would take hours and would develop into a sustained firefight once the ambushers were either reinforced or cornered. The Iron Dukes had the time and tactical patience for a systematic and deliberate approach in dealing with the enemy after every ambush. This finally brought the task force freedom of movement along main supply routes into and out of the city, as the enemy's outlying forces were attrited. As the task force expanded its battlespace, a number of operations were undertaken to apply continued pressure to al-Sadr's militia and political organizations. These operations were designed as limited attacks to gain intelligence, draw out enemy forces, and attrit as much of the enemy as possible.

A number of company- and task force-level operations were conducted throughout May in a successful effort to disrupt Mahdi militia command and control, isolate his remaining forces, and prevent his ability to reinforce and resupply. Attempts were also made to target several key lieutenants in al-Sadr's organization; some of these attempts were very successful. Elements of the task force captured al-Sadr's deputy and his chief political advisor in two separate raids, further limiting al-Sadr's control over his forces and his ability to make direct coordination with followers spread throughout Najaf and Kufa. Intelligence sources reported confusion among al-Sadr's inner circle of lieutenants, many of whom had fled the area or had gone to ground. This set the conditions for the task force to fully isolate Kufa and any Mahdi militia therein from the rest of al-Sadr's army. Kufa operations were deemed less sensitive than conducting offensive operations in old-town Najaf, near the Imam Ali Shrine.

By the end of May, al-Sadr's remaining forces were split and isolated in the old town of Najaf and in a loose defensive perimeter around the Kufa Mosque. During the last week in May, rumors of talks between al-Sadr, Ayatollah Sistani, and local tribal leaders were ongoing in an effort to bring about a peaceful solution to the Mahdi militia problem. The constant pressure was working. Intelligence sources also confirmed that much of Najaf and Kufa's 750,000 inhabitants were fed up with the fighting and wanted an end to hostilities and called for the departure of the Mahdi army. With this backdrop, the task force began planning and executing a series of final attacks into the heart of Kufa to destroy remaining militia and seize weapons caches, keeping constant pressure on al-Sadr's organization to force a favorable political solution.

At 2200 hours on 30 May, TF 2-37 initiated Operation Smackdown, the first in a series of attacks into Kufa that would take place over the next 96 hours. The initial attack, which included Team Apache, A Company, 1st Battalion, 2d ACR; Team Iron, I Company, 3d Battalion, 2d ACR; and Team Crusader, C Company, 2-37 Armor, was a limited attack or probe to gauge Mahdi militia defensive positions around the Kufa Mosque.

The task force conducted the near-simultaneous and coordinated maneuver of its teams in a force-oriented zone reconnaissance directed toward the Kufa Mosque from the north, west, and south. Limits of advance were established 500 to 800 meters from the mosque, along the enemy's suspected perimeter defensive positions. Company/teams had to maintain full situational awareness of adjacent-unit progress and location during the reconnaissance to mitigate the risk of fratricide and prevent enemy infiltration in between and behind friendly units.

Crusader made contact as they entered the western side of Kufa, and Iron made contact as they conducted reconnaissance from the south along a more rural approach. Fighting continued for over an hour, with multiple rocket-propelled grenade (RPG) and small arms engagements from

alleyways and overgrown palm groves. Shortly before midnight on the eve of Memorial Day and just before elements of the task force were to withdraw from contact, two M1A1 Iron Duke crewmen were killed in action. A tank platoon leader from Team Crusader, and the other, a tank loader in Team Iron, died courageously while engaging the enemy and gaining vital intelligence for the task force. This intelligence would be used to take the fight to the enemy deeper into Kufa in the upcoming operations. The Iron Dukes confirmed 22 enemy fighters killed in action, as well as the composition and disposition of the Mahdi militia's outlying defenses and observation posts.

At 1800 hours on 1 June, the Iron Dukes initiated the second Kufa force-oriented zone reconnaissance of Operation Smackdown. The purpose of this follow-on operation was to further reduce the offensive capabilities of al-Sadr's militia within Kufa. Key tasks were to destroy enemy fighting positions that made up the enemy's perimeter defense around the Kufa Mosque and destroy al-Sadr's militia within western Kufa. In addition, the task force planned an information operation to mitigate any hostile reaction to the attack. This second attack, conducted in the late afternoon and timed to take advantage of daylight, included Team Aggressor, A Company, 2-37 Armor; Team Iron, I Company, 3d Battalion, 2d ACR; and Team Crusader, C Company, 2-37 Armor. This was another limited action designed to penetrate farther into the Mahdi militia defensive positions around the Kufa Mosque — with limits of advance as close as 350 meters from the mosque compound. This time, however, the task force offset the attacks, but still coordinated the maneuver of its teams to achieve a desired effect on the enemy.

Both Aggressor and Iron attacked from the south, covering the rural farmland and palm grove expanse south of Kufa, with Aggressor in the west and Iron in the east. The intent was to draw the enemy south away from Crusader's axis of advance through zone five, allowing Crusader the element of surprise and unimpeded movement to Phase Line (PL) Ginger.

Movement for Aggressor and Iron was canalized and slow, and all vehicles, including tanks, had to restrict maneuver to the roads. Aggressor had sporadic contact as they maneuvered to their support-by-fire position, and Iron's advance went unopposed. As the two teams approached their limits of advance, Crusader was launched into the attack. Heavy fighting ensued when Crusader reached PL Ginger, with the enemy resisting from positions around an abandoned police station and cemetery in the vicinity of target reference point (TRP) 003. Crusader tanks received machine gun and RPG fire from the Kufa Mosque outer wall, but continued their attack to limit of advance (LOA) Janie. The enemy also made several desperate attempts to reinforce his cemetery position, but was met with lethal precision tank fires, which quickly eliminated any elements that closed on the position in the crossfire.

The Iron Dukes confirmed another 40 enemy fighters killed in action, as well as the composition and disposition of the Mahdi militia's inner defenses around the Kufa Mosque. Within 36 hours, the task force would launch the culminating attack of Operation Smackdown, while maintaining the initiative and keeping pressure on al-Sadr's organization. If effective, the continued destruction of the enemy would allow coalition-backed mediators to meet any al-Sadr peace gesture from a position of power.

At 0630 hours on 3 June, the Iron Dukes initiated the final Kufa attack of Operation Smackdown. The purpose of this follow-on operation was to completely reduce the offensive capabilities of al-Sadr's militia within Kufa. Key tasks included destroying reinforced enemy fighting positions that made up the enemy's perimeter defense around the Kufa Mosque and destroying militia mortar positions in an occupied schoolyard just 300 meters northwest of the mosque.

For several days, forward operating bases Golf and Baker had been on the receiving end of enemy heavy mortar (120mm), but could not respond with counter fire due to the proximity of noncombatants to the enemy mortar firing positions. The task of eliminating the enemy's indirect threat in Objective Oakland was given to Iron Troop. Due to restricted urban terrain around the schoolyard and the need for Iron to get quickly onto the objective with surprise, the task force commander decided to have only two teams participate in the attack with the remaining combat power left available in reserve. Unlike the preceding operation, Crusader Troop would attack first along its axis of advance through zone five up to LOA Janie. This would put Crusader in a support-by-fire position (the anvil) to draw the enemy away from Objective Oakland and allow Iron Troop (the hammer) to attack from the north and seize its objective before the enemy has time to react and reposition.

Crusader started its attack shortly after 0630 hours and proceeded 500 meters into western Kufa before it made contact with the enemy. Contact was light and Crusader continued the attack to PL Ginger without losing momentum. At 0645 hours, Iron Troop began its attack from command post (CP) 54 to 60 to 40. Iron Troop led with a tank platoon along this axis of attack followed closely by its organic cavalry. As the lead tanks approached CP 40, six subsurface daisy chain mines were detonated in the road, followed by enfilading small-arms fire from several large buildings to the southeast. Undeterred, Iron's tanks continued the attack toward Objective Oakland to set the outer cordon and provide the scouts needed security outside the schoolyard. As the tanks rolled up to and around the schoolyard complex, Iron's cavalry and mortar section attacked to seize the three large school buildings inside the compound.

Fighting broke out immediately within the school and room to room clearing became necessary. With mounted inner cordon scouts fixing and suppressing enemy on the second floor of the largest building, the clearing team closed in on the remaining enemy. Ten Mahdi militiamen died where they fought inside the schoolyard, leaving one 120mm and two 82mm mortars open for capture with a large stockpile of rounds. The enemy heavy mortar threat had been eliminated.

As Iron cleared the objective, Crusader reported movement of a platoon of militia toward the schoolyard from the south. Furthermore, the enemy, as reported by Iron's tanks, attempted another envelopment from the north with an additional platoon of dismounts.

As captured equipment was loaded from the schoolyard onto Iron Troop's trucks, the outer cordon of tanks and cavalry begin contact with the enveloping enemy dismount force. The outer cordon had set deliberate positions at key inner city road intersections covering most dismounted avenues of approach into the schoolyard. Crusader disrupted the enemy's ability to effectively reposition forces in mass with precision tank fires, allowing Iron's outer cordon to destroy enemy counterattacking forces as they were piecemealed into the fight. This fight continued for about 45 minutes until enemy action had tapered off to just a couple of small groups of dismounts attempting to work the periphery, but were unwilling to make any concerted attack. Once Iron's clearing team had loaded up their trucks with captured ammo and equipment, the task force commander gave the order to withdraw starting with Iron and then Crusader. The Iron Dukes confirmed another 41 enemy fighters killed in action, as well as the destruction of all Mahdi militia inner defenses outside of the Kufa Mosque.

Within 24 hours, the task force received word that the governor of Najaf had entered into serious deliberations with al-Sadr representatives over the terms of ceasefire and conditions for standing down the Mahdi army. Different sources speculate that the Mahdi army had been severely attrited in Najaf and Kufa during the preceding weeks with estimated casualties as high as 1,000

enemy fighters killed in action. There is no doubt that the constant pressure applied to the enemy by Task Force 2-37 Armor's force of arms, the discipline of its troopers in battle, and the ultimate sacrifice of those Iron Dukes who fell fighting the enemy, singularly contributed to the defeat of al-Sadr's militia in Najaf and Kufa. This measure of force led directly to the current stability enjoyed by the Najaf and Kufa inhabitants today.

This article is dedicated to the lasting memory of Lieutenant Ken Ballard and Specialist Nicholas Zimmer — Iron Dukes to the end.

Chapter 7

Battle of Fallujah, November 2004

CPT Daniel Kilgore

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As a platoon leader in A Company, Task Force 2-7 Cavalry, I participated in the battle of Fallujah in November 2004. My story encompasses the triumph, tragedy, and cumulative effects of this battle on the 35 Soldiers of 1st Platoon. Fallujah became a breeding ground for the growing insurgency in the fall of 2003, its streets consistently taking the lives of the Soldiers and Marines who ventured in. Following the massacre of four contractors in March 2004, a major operation was ordered to quell this insurgent stronghold. This, however, did not go through due to the well laid defenses of the insurgent opposition. Over the course of the following eight months, Fallujah turned into the safe haven, housing notable figures such as Abu-Musab al-Zarqawi and many of his commanders. After the USMC's success in the Battle of An-Najaf against Al-Sadr's Mahdi Army in August 2004, notably due to select 1st Cavalry Division task forces, it was a natural result for the 1st Marine Expeditionary Force to specifically ask for 2-7 CAV in the assault into Fallujah in November 2004.

Alpha Company, 2-7 CAV had the highest of morale following its success in the Battle of Najaf, resulting in numerous awards for valor. I stepped into Alpha Company at the end of the battle, following two platoon leaders' dismissals. Having to reestablish the validity of an officer in the Soldiers' minds, as well as fight the daily fight, did not prove as easy as the vignettes from my Military Science classes. As I gained the trust of the NCOs and Soldiers over the ensuing three months, we saw our battalion moving toward the realization that we would be soon assaulting Fallujah. All I had known previously of the city were stories that had filtered back to me while at Fort Benning of four Blackwater contractors being mutilated and hung on a bridge in the city. I had no idea that a few months later I would be among the first Americans to stand on that bridge since that fateful event.

The first rumors about Operation Phantom Fury started reaching us toward the end of September 2004. We were doing our daily 14-hour plus patrols around the rural Taji area. The next thing we knew, our battalion went to fire Bradley gunnery, and my Soldiers were starting to talk about the possibility of another battle. My most memorable time during our week at gunnery was talking with about 10 of my Soldiers. Looking back, my tone of anticipation to fulfill my childhood dreams of combat was ridiculous to this audience of veterans of the recent conflict in Najaf. One of my squad leaders came up to me later, and we had a good discussion about our Soldiers' reactions to my high level of eagerness. All of those Soldiers knew they would have to fight; that boyhood luster of war that these 19 year olds felt when they first arrived in country was replaced with a deep understanding of the moral, mental, and physical risks that combat held.

After gunnery, we continued our patrolling for a short time as our orders changed multiple times and the timeline to travel to Camp Fallujah moved left and right. Soon we received our official warning order as well as a few new Soldiers including a new platoon sergeant, who hit the ground running. He helped me and the squad leaders get a great handle on all our requirements and assignments of key positions. He put together all the needed logistics and operational requirements for the upcoming battle within days of taking over. This took so much of a burden

off me. If he hadn't been there, I would have been bogged down with this along with the planning the company leadership was conducting.

The initial intelligence reports we received about the enemy situation in Fallujah were quite overwhelming. An estimated 3,000 anti-Iraqi forces (AIF) were said to be operating in the city. This number included multitudes of foreign fighters, disloyal Iraqi Security Forces, well-trained fighters from around Iraq, and disenfranchised local Iraqis who were just tired of the occupation. We expected the enemy to use complex ambushes using debris for obstacles in combination with improvised explosive devices (IEDs) and direct fire ambushes. The risk was also high for well-trained snipers to be operating in Fallujah like the unit had seen in Najaf.

My company's mission was for Team Apache (the initial main effort) to attack to destroy enemy forces in zone to a major route within the city to enable the attack of Task Force 3/1. Team Cougar, the tank company to the east, would also attack south to protect our flank. Subsequently, Team Apache would attack to seize our main objective, and then Team Cougar would attack to another objective to facilitate the destruction of the enemy by Regimental Combat Team-1 (RCT-1). The rules of engagement (ROE) briefed by the chain of command were to engage anything in the city that appeared to be a threat. This ROE allowed the troops in the fight to use their own discretion, freeing Soldiers from any hesitancy in engaging targets (it would prove to be very beneficial, as the insurgents were unafraid to fake surrender or death, and then attempt to kill those Soldiers or Marines nearest them).

We arrived in Camp Fallujah on 3 November and knew we would have to wait a while before we began our upcoming operation. The ensuing days were again filled with a constantly changing timeline as to when we were to enter the city. We filled the days with platoon and individual equipment preparation, close quarters combat (CQC) flow drills, and further mission planning. My company commander issued the PLs the final order, and we all were soon locked down from outside communication as D-day was set for 8 November.

From the imagery my commander gave me, I had trouble visualizing the narrow, winding streets around the cemetery in the north of the city through which my platoon was to maneuver. Thankfully, our S-2 obtained UAV footage of our entire route as well as our first objective. This footage highlighted the difficulty we would face in maneuvering through the streets in the northern sector of the city.

The insurgents only attacked once during our time in the camp. They fired a rocket from just on the other side of the camp walls, and it exploded right near one of our cement bunkers. It was unfortunate that a Soldier happened to be sleeping in it, probably the safest place he could have been, when a small piece of shrapnel flew into the bunker and killed him.

On 7 November, Task Force 2-7 moved from Camp Fallujah to our tactical assembly area just a few kilometers north of Fallujah. We staged our vehicles in a company coil and waited while targets within the city were serviced with indirect fire and close air support. At this time, we started receiving attachments: some Special Operations snipers, our joint tactical air controllers (JTACs), and embedded media personnel. We waited for at least 16 hours here, watching hundreds of explosions, as the Air Force and artillery batteries destroyed possible strongholds and vehicle-borne IEDs.

Once the Marines from TF 3-1 breached the minefield in the vicinity of the train station just north of the city, our assault commenced. Once we were to our respective north-south avenues

of approach, we turned south and moved along our routes. Unfortunately, 1st Platoon was tasked with moving along a route circumventing the cemetery and winding through a tight neighborhood. With the destroyed vehicles and scattered debris as well as narrow, winding streets, it took us at least an hour to move less than a kilometer in our Bradley fighting vehicles (BFV). I ended up leading our formation because of the trouble the other vehicles had with the navigation in this restrictive urban terrain. While waiting for my Bravo Section to catch up to us, I was scanning through my BFV's Commander's Independent Viewer and spotted a three-man RPG team 75 meters away attempting to maneuver on my section. Our thermal sights and 25mm HE rounds quickly ended the threat, the company's first contact with the enemy in Fallujah.

Our vehicles finally made it to our first objective with minimal contact and pushed on to our primary objective. On our way to it, our CO stopped us at a major intersection, as we had to wait for another unit to get into its position. During this six-hour wait, as the sun rose, the enemy came out in droves. At least eight different RPG teams began firing from all around our positions, and we started the game of cat and mouse — our BFVs firing as they ran between the alleyways and roof tops.

Our primary objective was a school and, as a result, had an open play yard surrounded by open hallways with doors of the classrooms facing the inside. The battalion S-2 templated that this school-complex would be a command and control center for the enemy. As a result, we were expecting a knock-down-drag out, door-to-door fight. Instead the insurgents had retrograded, and again we faced almost no resistance. The only contact at our primary objective was when one of my SAW gunners spotted two insurgents on a rooftop of the objective and quickly killed them. When we finished clearing the schoolhouse, we still had two more buildings on our objective to clear; however, we were unable to move to them because of a big wall that separated the main school from the other buildings. Luckily, a tank from our sister platoon was on the other side and crashed a hole through it so we could pass. After clearing the last building, again with no contact, we set up a quick defense, orienting our fires south, and the majority of the platoon quickly went into priorities of work and went to sleep. It was difficult for us to try to stay awake after 36 hours of continuous operations.

Alpha Company's 2nd Platoon found one insurgent in its last building on the objective. This large open-air building held more than 80 rounds of 82mm mortar rounds, explosive making materials, and multiple RPGs. Just outside the building, 2nd Platoon found a fairly new BMW. Upon further inspection from the outside of the vehicle, the Soldiers discovered the doors were lined with wires on the inside. When we had our attached USMC combat engineers inspect it, they found more than 200 pounds of explosives in the trunk. Although there was no resistance on the objective, we realized then that the building was definitely used at one point as an insurgent facilitation and cache site.

Once the company's defense was set, we started to receive accurate mortar fire every 10-20 minutes. One round even penetrated the roof of the building we were in and lodged in the cement floor unexploded. Half my platoon would probably have been killed if it had exploded.

Shortly thereafter, my battalion commander and S-3 came to our objective to gain a view of the situation on the ground. I met up with them and escorted them to my company commander's vehicle, which we had positioned in the center of the objective a couple hundred meters away from a large water tower (which we soon determined was an enemy target reference point). With them came embedded media personnel, and I was immediately snatched for a quick interview at the side of my commander's vehicle. Only a few sentences into the discussion, a mortar round

landed 30 meters in front of me with the reporter in between me and the explosion. This was another close call; the reporter caught the shrapnel from the blast, shielding me from any harm. After he was treated and evacuated out of the city, I focused on surveying the platoon's and company's positions. I went to the two-story building located at the southeast of the objective. I met up there with the JTACs and snipers who had set up their positions. They were conducting counter-sniper operations, but they kept complaining about their fields of fire being disrupted by the large trees in a park to our south. I spoke with the NCO in charge, and we spotted a building two blocks to the east that was three stories high. We were currently in the periphery of the city, and there were not many buildings that were over two stories. This building would afford them excellent visibility and fields of fire to the south.

I went back to my company commander, and we talked about how this could give us some more stand-off from the insurgents who loved to maneuver in close during dawn and dusk. He told me to take my Soldiers and clear the building. The snipers and combat controllers could ride in the BFVs up to the building. I maneuvered with two squads dismounted, with our BFVs in support, then cleared the building's three floors. When we were finished I called back to my platoon sergeant, and he started loading up the snipers to transport them. When they were loading up, an RPG impacted near them injuring one of the snipers and a Marine captain who was an LNO with our TF. Both had to be evacuated due to their injuries.

Once the rest of the snipers and combat controllers came to the building, they prepared their positions while we defended the bottom floor. We stayed there the rest of the night, listening to their sniper rifles engaging targets.

Early the next morning, we moved out from our objective as we had completed the battle handover to the Marines from Task Force 3/1. We drove back to our task force assembly area, refueled, and refit ourselves for our follow-on mission. Our CO, in the meantime, received our new order. For the next mission, we pushed further south up to right behind where Comanche Company was and headed west. We cleared these main routes and cleared the two main bridges connecting the city across the Euphrates. We brought with us numerous Explosive Ordnance Disposal (EOD) Soldiers and a Special Operations representative to reconnoiter for IEDs emplaced along these bridges.

We encountered a small contingent of enemy fighters while we were in the middle of inspecting the "Brooklyn Bridge," the now infamous bridge where the Blackwater employees' mangled bodies were hung after they were dragged through the streets of Fallujah just months before. With two of our squads and a Bradley section, we quickly neutralized the enemy. We then headed south to the "George Washington Bridge." Here, 1st Platoon again inspected for possible IEDs. Our company then set up an area defense in two tall buildings adjacent to the bridge to settle down for the night and get some rest.

"It is the secret of the guerrilla force that, to be successful, they must hold the initiative, attack selected targets at a time of their own choosing and avoid battle when the odds are against them."

— Sir Robert Thompson, Malaya, 1966

Our next mission was to come back to a main north-south running route and continue the push south. We spent the next 30 hours sitting on this road while Comanche Company, in front of us, was pushing further south as well. After sitting in our vehicles for a few hours more (having been ordered not to dismount), we conducted survivability drills and moved around to avoid being decisively engaged. However, this soon became insignificant as the insurgents easily maneuvered on us, firing mortar rounds and numerous RPG rounds from narrow alleyways and windows.

Early the next morning, we pushed further south, and as our lead platoon turned west again, we found ourselves in the middle of a complex ambush with intersecting fields of fire. My platoon sergeant's BFV was hit in the driver's side, with the driver just narrowly escaping the round that flew a few inches underneath him and into the engine block. All the while, every vehicle in my platoon started to engage multiple targets as they kept presenting themselves in alleyways and in windows. Meanwhile, as my CO's vehicle turned, an insurgent fired an RPG into the rear of his BFV. He had two JTACs and our attached PSYOPs team in the troop compartment. The round went through an interpreter (killing him instantly), tore through the team leader's left arm, and flew underneath my CO's feet in the turret, all while spraying spall and shrapnel into everyone in the vehicle. All we heard over the radio was "5 this is 6, I'm hit." I quickly scanned ahead and saw where his vehicle was and watched for anyone to react. I saw the driver pop out of his hatch and open the troop door and stumble back at the sight. My section of BFVs moved around his vehicle and dismounted two squads for security as we began to pull the casualties out.

The CO's driver was pulling out the most seriously injured when my medic and another Soldier arrived and began to triage and move them, all while hundreds of rounds were being exchanged with the enemy all around them. It is a miracle no one else was wounded as we transported the casualties in the middle of the enemy's kill zone. If we hadn't had both our rifle squads on the ground engaging targets and also the BFV sections firing their 25mm HE in support, we would have certainly had many more casualties. Once we moved the casualties into a BFV, we evacuated them to a linkup point with the battalion's medic section.

Because my platoon sergeant's BFV was barely running and the CO's vehicle was also severely damaged, the battalion had us move back to the TF assembly area. Here, we refitted and refueled again, and within a few hours, we were back in the city waiting for the company ahead of us to conduct another movement to contact. We then moved only one to two blocks in 24 hours.

The next morning, after seeing insurgents dodging in and out of alleyways and trading fire with them all night, I had had enough. Although the previous guidance was not to dismount, the current situation with our large BFVs being static made the decision to dismount a clear one. The worst thing a mechanized unit can do is be static in an urban environment (even doing survivability drills, we were still relatively in the same location, as it is hard to hide a Bradley in the middle of a four-lane road). One of my section leaders called me and said he saw insurgents running back and forth from a car parked in an alley, and it looked like they had a cache inside it. I requested that we dismount and received permission from the XO who was filling in for our CO at the time. We were parked next to a mosque from where we had received fire throughout the night, and I decided to start clearing buildings beginning with the house next to it. We set up a support by fire with my Bradley section, dismounted, and cleared the house. Here we found three sleeping, military-aged males with IED-making materials. We quickly detained them and sent them out to my platoon sergeant. We then moved into and cleared the mosque. From the second floor, we spotted the car that my section leader had reported earlier and fired 40mm rounds into it. Multiple secondary explosions occurred and hundreds of rounds cooked off from the resulting fire. It was such a large amount of explosions that my platoon sergeant, who couldn't see us due

to a wall in front of the mosque, called me on the net and asked how many insurgents we were in contact with.

The platoon continued our clearance of buildings heading back north. We went through two more buildings and found more insurgents, all of them sleeping with their weapons and equipment stashed in hiding positions. The last house we cleared as a platoon should have been a foreshadowing to us as we captured two middle-aged men, one of whom was frantically making a phone call on his cellular phone. Within minutes, my platoon sergeant, still on the main road, called me on the net and said he had an insurgent running into a small house on the east side of the road. He said to send a squad, and he would take it to where he could overwatch its clearance of the building. I had two squads handling over 20 detainees in total and sent my 3rd Squad.

Third Squad cleared the first building and, for reasons unknown, decided to keep moving east along a side road, clearing more houses without support from the BFVs and not keeping radio contact with them. I next heard a large barrage of fire and then received the call from the squad leader over the net, yelling for help. I took my 2nd Squad, and we ran as fast as we could to where we heard the fire. As we ran up to the side street, my BFV turned in front of us and pulled up to four Soldiers lying in the middle of the street. Third Squad had gone into the third house down the street. The first room was an open kitchen with a doorway leading into the rest of the house. The Alpha team leader entered this doorway, throwing a grenade into the room first. The next thing he knew, there were at least eight insurgents who opened fire with their automatic AK-47s and kicked his grenade back at him. He only got a few rounds off by the time he was cut down by their fire through the thin walls and hit by his own grenade. Although taking two rounds in the arm and serious leg injuries, the TL continued firing from lying in the doorway. Another Soldier pulled him from the doorway and started to pull him out of the house into the courtyard. As he was pulling his TL into the street, this Soldier was shot by a sniper who was in a two-story building across the street. Meanwhile, another Soldier moved toward the side of the house and threw a grenade at 10 insurgents who were reinforcing from the rear of the building. With this grenade and fire from his rifle, he neutralized the reinforcements. He came back to the front of the house and, with the M249 gunner, placed suppressive fire into the house's doorways so the rest of their squad could retrograde from the overwhelming fire of the enemy.

As the rest of the squad moved out into the street and into the adjacent house's walled courtyard, the M249 gunner took three rounds from the enemy snipers that were located in the building across the street. The specialist dragged him into the street where the two other wounded Soldiers were lying. Having just been wounded by an insurgent grenade himself, he then lay down next to his fellow brothers and opened fire. He fired magazine after magazine (taking them from his fallen comrades as he ran out) and all his M203 grenades into the building with the snipers across the street. As I ran up to the situation, seeing my Soldiers in a crossfire, I immediately had 2nd Squad open fire into the building with the snipers. It was interesting to see that some Soldiers did not immediately take action, as they were so shocked to see many of their comrades wounded ahead of them. The squad leader and I had to yell at a few Soldiers to get them to take action.

My Bradley gunner, who was parked adjacent to all of this, could not gain communications with us via FM. He opened his hatch and came out on to the turret silhouetting himself on a nine foot-high Bradley in the middle of the fight. I shouted at him where the threat was in the building across the street from us, and he fell back into his hatch and opened fire with his 25mm cannon. With M203 grenades, 2nd Squad's fire and the BFV's 25mm HE rounds, we quickly neutralized the enemy threat in the building across the street. As we started to carry our wounded for evacuation, we received rifle fire and grenades from the original house and sustained two

more casualties. Two of us threw grenades and returned fire again, but I determined that we could not gain enough fire superiority with only five Soldiers left unharmed; we needed to evacuate all our casualties (numbering eight now). We then started loading our casualties into the back of my BFV. Once we piled them and my medic into the Bradley, we retrograded back down the street as our tank platoon's lead tank rolled in to demolish the buildings with its 120mm rounds.

While reconsolidating back in the house with our detainees, I got a call that there were seven people exiting the back of the house where my squad had been ambushed. We ran back, hoping for a little retribution, but these young men (the youngest being around 13 years old) were waving a large white sheet to surrender. We immediately gestured and yelled at them to strip off their clothes (suicide bombers had already killed Marines in other parts of the city) and then detained them. My platoon then took all the detainees that we had not sent up to the holding area (now numbering over 20) and brought them into the mosque. We waited here until our BFVs returned from the casualty evacuation and then took the detainees to the makeshift holding facility the Marines had established. This is when my Bradley gunner told me we had lost the M249 gunner, SPC Jose Velez. For some reason, this didn't really hit me for a long time; maybe it was because I had thought we had possibly lost a few more Soldiers or because I knew the fight wasn't over yet and could easily get much worse.

After this firefight, the battalion pushed Comanche Company, the TF reserve, forward of our company's position, and we established a strongpoint in a house on a major intersection. From here, we ran satellite patrols in and around the area, searching buildings and guarding the area to the rear of our TF's lead elements. After having been in the lead, receiving many casualties, and then being pulled back to the duty of rear guard, my Soldiers' morale dropped dramatically. We ended the battle with this mission and thus began the long road to recovery for our Soldiers who had been injured, physically and mentally. Over the next five months of our deployment, my Soldiers had serious bouts of Post-Traumatic Stress Disorder. I had read about the symptoms (severe depression, insomnia, and lack of motivation) prior to being deployed but was shocked to see them in real life. Through counseling with our battalion chaplain and consulting with psychologists, my Soldiers would take months to recover (and some continue to deal with PTSD after facing additional deployments).

At the end of the Battle of Fallujah, the members of 1st Platoon earned, in total, two Silver Stars, three Bronze Stars with 'V' device, four Army Commendation Medals with 'V' device, and nine Purple Hearts. CNN, the History Channel, and three major publications told about the tenacity of 1st Platoon's men.

Key Lessons:

- Infantry fighting vehicles and tanks are unbelievably effective in urban terrain at penetrating defenses and gaining a foothold deep in enemy-held terrain. However, due to the three-dimensional terrain of the urban environment, it is paramount to keep the vehicles constantly mobile and have dismounted infantry. They can then mutually support each other. Otherwise, the enemy will easily maneuver using the terrain to their advantage to destroy the vehicles.
- With dismounted infantry and vehicles in support in urban operations, it is extremely important to have good communications between the two. This will maximize firepower, prevent fratricide, and reduce the probability of one of the two being ambushed.

- After a unit loses a Soldier or sustains many casualties, it is important to let them grieve, but not for long. Too much time can cause Soldiers to dwell on their losses and lose focus during combat operations.

Chapter 8

Insurgent Attack in Ramadi: Platoon Leader Recounts Urban Engagement

CPT Edward Clark III

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On 15 December 2006, a single shot rang out from the rubble buildings in southwest Ramadi, and a young Soldier crumpled to the ground. This sniper attack was just one of the many attacks that took place in this area of operations, and in that sense, may seem insignificant. However, it had a tremendous impact on my platoon. The incident is illustrative of the type of engagements typical of guerilla, urban, or insurgency warfare and demonstrates some of the problems inherent in fighting in such an environment. It also illustrates some strengths and weaknesses of my platoon on that particular day.

I was the platoon leader of 1st Platoon, B Company, 1st Battalion, 26th Infantry Regiment, and we were detached from our parent company and assigned to Team Bulldog (B Company, 1st Battalion, 37th Armor), which was about 11 months into a 15-month tour when we arrived. We lived on a combat outpost (COP) that was a cluster of homes that had been seized and transformed into a base of operations three months before our arrival. Our days here were a haze of endless area clearances, movements to contact, and sit and-wait ambushes highlighted by almost daily attacks on our COP.

At this point, we had not made any of the significant intelligence or public relations breakthroughs that would follow in only a few months with what would become known as the Awakening. (The Awakening was a movement in the Al Anbar province, led by local sheiks that would transform Ramadi almost overnight from an intense war zone to a model of progress and cooperation.) We had found no strong allies in the community; we were operating in an informational vacuum. We knew that there was a city surrounding us and that there were people in that city who wanted to kill us. We did not know whether the majority of the people we talked with each day were our attackers, were protecting our attackers, or were just too scared or too ignorant to stand up to them. It was into this environment that my platoon walked out each day, hoping to find a cache or an informant or just someone who believed that we were trying to help.

Ramadi, which is almost entirely made up of Sunni Muslims, was said to be the most dangerous town in Iraq. As both the Iraqi Army and the residents themselves would tell us, those who lived in Ramadi did not suffer under Saddam Hussein. Many lived in mansions with every modern convenience but now had no electricity, heat in the winter, or running water. Trying to convince them that we were there to help them was difficult. They associated the decline in their standard of living with the coalition invasion and, more recently, the development of COPs, which were usually homes that had been seized but then rented to the U.S. Army right in the middle of their neighborhoods. These outposts naturally drew fire from insurgents, who were perfectly happy to see our usually heavy-handed response, which by the time my platoon arrived, had reduced almost every building within 100 meters of the COP to rubble.

Most of our patrols were census missions. We entered houses, took photographs of the residents to add to our database, searched for evidence of insurgent activity, and usually found nothing. In December, our COP was being attacked regularly, and we were frequently finding or hitting IEDs as well. We were not, however, being decisively engaged as we walked the streets. We

attributed this to the insurgents' reluctance to hit us when they knew we were in a position to maneuver against them. We varied our routes and patrol times as much as possible within our small area of operations. We moved quickly, and we used smoke and armored vehicles to cover our movements. In short, we remained aggressive.

We had been shot at on patrol several times, but it was never accurate or sustained fire. On 15 December, my platoon was engaged for the first time in a well-planned attack by a determined enemy. We were returning from a patrol conducted only a few blocks east of our COP. The day before an Iraqi Army soldier and a U.S. Soldier from another platoon had been shot while emplacing wire on our outer perimeter. We were attempting to track down any information on the shooter by visiting the homes around the point where we deduced the shot had come. As usual, the locals claimed ignorance, but my interpreter was able to get several children to tell us that the sniper had let the neighborhood know that he was going to attack and to stay off the streets. They also gave us a description of the sniper and his comrades. We had collected all the information I thought we were going to get and began the walk back home.

We walked back with 3rd Squad in the lead, 2nd Squad in the center and 1st Squad trailing. The Bradleys were one block to the south. Ideally, I would have had one of them to the north side and one to the south, or both on our street, but the rubble and potential for IEDs made it difficult and risky for vehicles to move to our north. The lead elements of my platoon had begun to cross a no-man's land of wire, concrete barriers and rubble that separated our COP from the neighbors. Our middle and trail elements were walking west to east along a residential street that, because of its proximity to the COP, was only about half inhabited. There was no one in the street, which given the information we had just received from the children made us a little nervous. Someone remarked over the radio that it seemed especially quiet. I answered back that I thought something was about to happen and said, "Keep your rifles up and make sure you throw plenty of smoke when you cross." It was less than 30 seconds later that it happened.

Our area was almost entirely residential, comprised mainly of one or two story concrete and stucco homes. Except for the excessive trash, bullet holes and six-foot concrete walls, it could have been any neighborhood in America. We came back using a different street than the one we used on the way out. Near the COP, there was a one-block-long area that had been completely demolished by air strikes. There was, in addition to the rubble, a smattering of large concrete barriers to prevent easy shots into the COP. I never liked that area, but in an attempt to switch up entrance points as much as possible, I would use it occasionally. We usually broke into a jog as we crossed and used plenty of smoke.

We were moving east in two columns on each side of the road. I had two Bradleys out that day, which were moving around our perimeter covering our movement. I gave the order for one of the Bradleys and our lead element to throw out some smoke. Just as our lead element began to pass through our wire, a Soldier was shot passing through the smoke screen. It was a single shot, and I, just a few feet ahead of him, initially thought he had tripped and accidentally discharged his M249. Then, we began to receive more gunfire and we realized we were under attack.

We were in a terrible position. We had begun to weave through the concertina wire, rubble and concrete barriers that surrounded our outpost. This cut us off from our Bradleys, making it impossible for them to come directly to us to load our casualty. Worse, we were between the enemy and our Bradleys, which rendered their 25mm cannons useless.

As adrenaline kicked in, time slowed down and for what seemed like minutes — but was probably a couple of seconds — I watched my platoon react in textbook fashion. It was as if we were back in Germany rehearsing our battle drills. If battle drills become a reflex, Soldiers will execute them in combat. Not only does this keep them alive during the first few seconds of contact, I believe it suppresses or replaces fear and timidity which may otherwise occur; this momentum then continues throughout the battle. I found that for most people, just as in athletics, nervousness or fear only lasts a second or two if they are actively participating. I have heard of studies that say only a small percentage of combatants attempt to engage the enemy when under fire. I can't speak to the entire history of armed conflict, but from what I saw on that day and on the subsequent days we fought in Ramadi, I have to disagree. My Soldiers returned fire in such deafening mass that, were it not for the rock fragments flying from the ground, I would have had no idea we were still under fire. As it was, I could not see the enemy and had to rely on the points and shots of the men around me to deduce their location. In an urban environment, when fighting a small guerrilla force, it is difficult to discern the direction of contact, and the attack usually does not last long enough for anyone to pinpoint it. One of the things I later came to realize is that every Soldier wants to be the one who saw and killed the enemy. I do not think it is conscious, but especially among younger Soldiers, there is a tendency to misinterpret the sights and sounds of the battlefield. This may exaggerate their own perceived exposure to danger or their centrality in the conflict. This not only makes it difficult to discern reality when listening to a bunch of Soldiers tell war stories, it makes it difficult for the leader to filter this out and get a grasp of the true situation while he is on the ground (especially as he tries to suppress some of those same tendencies himself).

There were several acts of heroism that day, as Soldiers risked their lives to protect and move the wounded Soldier to relative safety. Almost as soon as he hit the ground, the Soldier behind him emptied his own magazine, ran to the wounded Soldier's side, picked up his SAW, and emptied all of its rounds in the direction of the contact. He then, without regard for his own safety, covered him with his own body and tried to move him to cover. He was soon assisted by our medic and a few more of his squad mates.

I screamed over the ICOM radio to give orders to my Bradley commanders. They could only make out bits and pieces but knew what was going on and what they had to do. They had to maneuver and come back around to get in front of us. They popped smoke canisters to help conceal us from the enemy and began their movement.

As the Bradleys arrived, one of the gunners said that he could identify an enemy position, and the gunners began peppering that position. Our COP's quick reaction force was on the scene within minutes and was also engaging targets. One of my Bradleys moved to the wounded Soldier's position, and his squad loaded him in back.

A tank from the quick reaction force (QRF) was blocking the Bradley's only exit, and because of the noise and other radio chatter, no one could get the message across to the tank's crew. Finally, I had to run over, wave him down, and signal to him to get out of the way.

As the lead elements of my platoon reacted to the contact, the rear of our line, which was still a block behind, was attacked by two men in a car with an assault rifle. The Soldiers reacted quickly though and killed the attackers.

As is typical of guerrillas in this type of environment, the enemy did not attempt to stand and fight once we gained fire superiority. The QRF vehicles, under the control of our company

commander, were able to seal off their retreat and kill three as they tried to flee. Two more were killed as they tried to drop explosives off the back of a moped. The Iraqi Police brought in a few more that night who were being treated at the hospital for wounds sustained in this action. Since this was the only engagement in the area that day, we were able to confirm their involvement in the attack.

At the company commander's order, I moved my Soldiers into the safety of the COP once the enemy had been sufficiently suppressed and were being pursued by our armored vehicles. We wanted to stay out and tear through every house within small arms range, but it would have been the wrong move. In film and during training where there is no real danger, dismounts always maneuver on the enemy and kill him where he stands. We learned that most of the time, this is not a practical approach in an urban area. It is difficult to maneuver on an enemy that Soldiers cannot pinpoint, and it serves no purpose to have Soldiers storm into the fray when a Bradley or tank can destroy the enemy. As our commander constantly, and correctly, reminded us, it was rarely worth risking the lives of dismounted Soldiers to chase after a fleeing enemy.

Our medic had jumped in the back of the Bradley that was evacuating our wounded Soldier. He broke his hand and received an enormous gash on his head when the Bradley took a sharp turn but still continued working on the Soldier until the ramp dropped at the medical station. The wounded Soldier was given the best care possible by our medic, but his wound was too serious. We learned of his death within an hour, and our lives were changed forever.

When I spoke with the fallen Soldier's parents the next day, and later when they visited our unit in Germany, they wanted to know if their son had killed the men who killed him. They didn't ask if their son's death could have been avoided. I do not know what I would have told them. I ask myself that question every day.

In the days and months following the attack, I realized that we all had different memories of what happened on the battlefield. The "fog of war" was more intense than I had experienced before and was more than I had imagined it would be. I am not sure that any two of us agreed on the exact direction of the attack or number of attackers. This is not abnormal; there were very few engagements during our tour in which we had a clear idea of the distance, direction, or depth of our enemy. Several weeks after this attack, we found a sniper position on the rooftop of an abandoned building with perfect line of sight to the spot where the Soldier had been shot. There is no way to know for sure if it was the position used, but the angles match. To my knowledge, that particular house was never engaged. Whether or not we were shooting at all of the correct buildings, the violence with which we reacted to the contact surely caused the enemy to withdraw. The battle drills, which my Soldiers had rehearsed since they joined the Army and we had practiced together, saved lives when the bullets began to fly (on that day and in the days to come). The bravery, initiative, and quick thinking of individual Soldiers made it possible to fight in an ever-changing environment.

When bullets start flying, there is a tendency for everyone to try and jump on the radio at once. Add the noise of the gunfire, which can drown out the voice of the sender or overwhelm the ears of the receiver, and the normal problems that occur with electronic equipment, and it can be next to impossible to get a message across in battle. On top of a strictly enforced and rehearsed radio SOP, leaders at all levels have to consciously attempt to filter out the excitement and emotion and communicate clearly and concisely. This is something we did not do properly. Until that day, despite all of my live-fire training and previous experiences, I did not have any idea the extent to which communications can be degraded in that type of situation.

I often replay the scenes of that day in my mind. What could I have done differently? What will I do differently in the future? What was done right? I should have had my Bradleys in a different position ... I should have had systems in place to reduce radio traffic ... I should have had more smoke...

The reality of combat is that a leader will never get it 100-percent right. He has to do the best he can with the skills that he has and hope that his mistakes do not cost the lives of those around him. Then, he must honestly evaluate the decisions he made, the weaknesses inherent in his unit, and the realities of combat and devise ways to mitigate the danger.

Chapter 9

The Platoon Raid: High-Intensity Urban Operations Changing to Precision Urban Operations

CPT Gregory G. Lee

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Current publications on conducting raids in a combat zone assume the environment to be a high-intensity conflict against a determined enemy in prepared positions. U.S. Army Field Manual (FM) 3-06.11, *Combined Arms Operations in Urban Terrain*, defines precision conditions in urban operations (UO) as, “either the threat is thoroughly mixed with noncombatants or political considerations require the use of combat power to be significantly more restrictive than UO under high-intensity conditions.”¹ As the major combat phase of Operation Iraqi Freedom ended and the 1st Armor Division relieved the 3d Infantry Division in Baghdad, the attitude toward high-intensity raids had to change.

High-intensity raids would only serve to undermine support for coalition forces by harming innocent bystanders and causing collateral damage. The terms “soft raid” or “knock and search” imply that there is a culture of non-violence in a combat zone, but due to the unpredictable nature of the enemy and his ability to disguise himself as a civilian, the mission shifts from high intensity urban operations to precision UO for raid operations. If necessary, precision UO can transition immediately to high intensity UO on contact with hostile combatants. Additionally, U.S. Army UO doctrine is often tailored to combat in Western-style urban areas; Iraqi dwellings are often significantly different from their Western counterparts and present different tactical problems to the soldier. This article discusses some of the tactics, techniques, and procedures (TTPs) that our unit developed to fill the gap between doctrine and its application, while transitioning from high-intensity raids to precision raids, trying to best account for and protect the indigenous customs of the local population.

Urban Iraqi Dwellings

There are two main types of dwellings in the Baghdad area, family houses and apartment buildings. The first type of dwelling can be either a single home with its own boundaries or a row house that shares adjoining walls with its neighbors. Apartment buildings tend to be between four and eight stories with varying interior floor plans.

Single homes in urban areas are usually multistory buildings. The most significant difference from Western-style homes is that rooms are rarely constructed off a hallway. Instead, there is usually one main room that contains doorways leading to several adjoining rooms, which have doors to other rooms or connect back to the main room, creating a complicated security problem for soldiers conducting room-by-room clearing. This is mostly attributed to the need to conserve space in the home for living use (hallways are not space available for living) and the prominent Islamic culture, which protects the sanctity of the home by usually having a receiving room directly inside the main entrance to the house. This allows the women to cover themselves appropriately out of sight, while the men receive visitors. Often and not unusually, visitors will be graciously received by their hosts without seeing a woman.

Homes often contain more than one family or an extended family; consequently, they tend to be both crowded and cluttered. Several individuals may occupy a small 10x12 foot room and sleep on the floor. Large pieces of furniture are rare, with the exception being wardrobes since most Iraqi homes do not have built-in closets. Bathrooms are very small and sparsely furnished with squat-toilets and a large water basin or container. Stairways usually do not have a wall to the inside, but have a landing at the top overlooking the stairs below, and have at least one turn.

Iraqi homes tend to have flat roofs with access from the inside and are often used for storage and sleeping in hot weather. Since most Iraqi homes are built very close together, adjoining roofs make excellent escape routes. Both single homes and row houses are usually surrounded by a concrete, stone, or brick wall between six and eight feet tall with a gate for foot traffic and autos. With their maze-like construction and the need to secure routes surrounding stairs, single-family dwellings most often are cleared from the ground floor up. (The exception is when assaulting personnel can gain access to the roof from the outside.)

Apartment buildings in Iraq, like their Western counterparts, are often constructed around a central stairwell, which leads to the roof. It is therefore possible to speed the assault and enemy prisoner of war (EPW)/breach teams to the roof, where they can begin top-down clearing. As in single homes, the roofs of apartment buildings are frequently used for sleeping and storage; the roof must be cleared before proceeding to lower levels. Individual apartments are constructed like houses, with one room leading to several others and with more occupants than is typical in the West. Apartment buildings should be treated as a series of single-family dwellings.

Platoon Precision Raid Operations

Platoons, regardless of organization, are capable of successfully conducting raids; however, commanders must accept some risk when assigning raid missions to smaller platoons, such as tank platoons. FM 3-06.11 dictates that platoon offensive operations should be task organized into an assault element, support element, and a breaching element. “The purpose of the assault element is to kill, capture, or force the withdrawal of the enemy from an urban objective and to seize key terrain.”² FM 3-06.11 continues to define the duties of the support element as “isolating the objective building with direct and indirect fires” and “suppressing enemy weapons systems” and “containing a reserve for the assault element.”³ The breach element provides mobility for the assault element throughout the operation and may be a separate element or be assigned from either the assault or support elements. Although doctrine recommends a generic task organization, it fails to task the separate elements that are necessary for command and control.

The Raid Team

Raids on dwellings can be conducted by a platoon with specialized support provided by the company or task force. The following task organization is recommended:

Outer cordon. *Support element: 3 to 5 vehicles.* The outer cordon secures the target area by blocking streets and alleys or other natural choke points around the target building to prevent interference from external forces and escape of targeted personnel from the area. The soldiers scan adjoining buildings for snipers, provide suppressive fire with crew-served weapons if resistance is encountered and the building must be assaulted, and use optics and spotlights to detect personnel attempting to escape via adjoining rooftops.

Inner cordon/yard team. *Support element: 4 to 6 personnel.* This team scales the outer wall (if present) and secures yard or area outside of target building. They identify and assist in breaching the gate and secure prisoners as they exit the target building. The yard team must also provide suppressive fires with individual weapons if resistance is encountered by the clearing team. After the building is secure, they gather and inventory intelligence items seized during search.

Clearing team. *Assault element: 4 personnel.* This team consists of the basic four-man stack. Their duties include entering and clearing the building while neutralizing threats. The clearing team initially secures/neutralizes building occupants for handover to the follow-on EPW team and assists in the search for items of intelligence value.

Breach/EPW team. *Support element with breach tasking: 4 to 8 personnel.* The aptly named team breaches all obstacles, to include the outer gate and the building's entrance. They assist the clearing team by securing and advancing the foothold inside the house as it is cleared, while securing, searching, and evacuating EPWs to the EPW holding area. This is the alternate clearing team if the primary clearing team receives casualties. The breach/EPW team can also evacuate friendly casualties to the casualty collection point (CCP) (normally where initial entry or foothold was made), if the primary clearing team cannot evacuate itself. Lastly, they search for and secure items of intelligence value.

Command and control (C2) team. *Support element: platoon leader and crew, platoon sergeant and crew, interpreter, and medic.* The platoon leader directs and coordinates the efforts of all teams, initiates evacuation of the building through the use of an interpreter, initiates the assault on the building by the clearing team, conducts initial on-site interrogations of the EPWs, and identifies targeted personnel. Throughout the operation, he receives and passes reports to and from higher headquarters and controls the interpreter to prevent exposing this valuable asset. During the search phase, the platoon leader may identify items of intelligence value.

The platoon sergeant also receives and passes reports to and from higher headquarters, supervises and controls the CCP, medic, and evacuation vehicle, and conducts casualty evacuation and combat service support (CSS) resupply of supplies, equipment, and ammunition.

The platoon leader and platoon sergeant crews provide mounted security with crew-served weapons at the front of buildings for suppression of enemy weapons systems, and if necessary, assist in the conduct of casualty evacuation or CSS resupply of the soldiers inside the building.

Task Force Support

The task force must provide assets not organic to the platoon: an on-site medic (usually through standard operating procedure), an interpreter to accompany the raiding team, transportation for EPWs and seized items, and a task force quick reaction force. Depending on the distance or size of the operation, the task force may wish to establish a forward aid station (FAS) or consolidated ambulance exchange point (AXP).

Sample Sequence of Events

FM 3-06.11 states when conducting an attack, the platoon must “isolate the objective, enter the building (secure a foothold), and clear the building (room by room, floor by floor).” The following sequence of events demonstrates how a typical precision raid would unfold in the Baghdad area of operations. The planning and preparation phases are omitted in the interest of

brevity, but would follow doctrinal troop leading procedures. Also, certain steps may be omitted from the raid at the platoon leader's discretion or as necessary due to mission, enemy, terrain, troops, time, and civilians (METT-TC).

Platoon sets at attack position. The platoon leader may elect to have the platoon set at an attack position several blocks from the target building. While this affords the platoon leader greater flexibility to deploy his force in stages and synchronize his raid with other units, it also increases the risk that the raiding party will be detected and the target personnel will have the opportunity to escape or resist. If tracked vehicles are included in the raiding party, the attack position must be sufficiently distant from the target building to avoid detection by sound signature.

Clearing and breach/EPW teams conduct dismounted infiltration. If the platoon leader elects to set at an attack position, he may also choose to dismount his clearing and breach/EPW teams to reconnoiter and secure the target building via dismounted avenues of approach. The reconnaissance should focus on the following: the presence and activity of civilians on the battlefield (COBs) and enemy guards or lookouts surrounding the target building; whether or not the target building has lights/electricity; the location of entry points through the outer wall and into the building, and the assets required to breach them; the presence of dogs in the yard; and signs of human activity in the target building. All of these factors can influence the raiding party before reaching the target building, causing a gambit of problems, possibly allowing the target to escape.

Mounted element moves to target building. The mounted element moves rapidly to surround the target building. Cordon vehicles occupy positions that block or observe key avenues of approach and escape routes from the target house. The order of march should account for vehicle positioning around the cordon, not section integrity, to achieve surprise and gain a foothold in the target building before the enemy can react. Dismounted security is immediately established by both the assault and the support elements.

Yard team secures yard and inner cordon. Once the outer cordon is established, the yard team sets the inner cordon. If the gate cannot be opened from the outside, the yard team should scale the outer wall (a vehicle pulled close to the wall will expedite this). The yard team immediately secures the yard, and then moves to open at least one gate. If the gate cannot easily be opened from the inside, the breach/EPW team selects and breaches an opening. Having an open gate is necessary for easy evacuation of casualties and allows for the winch of a HMMWV or tow chain to assist in breaching a point of entry in the target building. While the yard team secures the yard, the clearing team and breach/EPW team stack separately along the outside of the wall near the designated entry point.

Building evacuation is initiated. Using the interpreter, the platoon leader initiates the evacuation of the target building. A siren is sounded to wake the buildings occupants, while an announcement is made through a loudspeaker, demanding all occupants of the target building drop their weapons and come out with their hands in the air within five minutes. Similar announcements are made every minute and a countdown is initiated at 15 seconds. As target personnel exit the building, they are secured by members of the yard team and escorted to the gate for handover to the EPW team. The EPW team secures and searches all male personnel, while females and children are moved to a separate holding area.

Females and children must be searched, but with proper regard to local cultural customs. A female soldier for a pat-down is most desirable, but electronic wands work well if the unit is all

male. With the aid of an interpreter, the platoon leader immediately begins on-site interrogations with the aim of determining the identity of all males, location of weapons in the target building, location of personal identification and documents, location of keys to all vehicles parked at the target property, and other information as specified by the higher unit. Two members of the breach/EPW team remain as guards for the male detainees (females and children should be watched by members of the C2 team). The interpreter must also reassure the family that no harm will come to anyone outside the building.

Clearing and breach/EPW team enter building. Before the occupants are awakened by the siren and countdown, the clearing and EPW teams move to the building's entry point and the clearing team immediately "stacks" the door. After the countdown, and if the building has been evacuated, the teams use the doorway through which the occupants exited, and the breach/EPW team "stacks" behind the clearing team. If the building has not been evacuated, the teams select a point of entry and the breach team forces entry.

The clearing team enters the building and establishes a foothold using proper room-clearing procedures. When the foothold is secure, two members of the breach/EPW team are called in. If enemy personnel have been encountered, they are immediately secured, searched, and evacuated by the breach/EPW team. The handover must be performed rapidly to maintain the clearing team's momentum. The clearing team moves quickly, clearing from room to room. Members of the breach/EPW team advance the foothold by trailing the clearing team and securing EPWs, breaching heavy doors and obstacles, and securing the exit route to the CCP. If a stairwell is located, members of the breach/EPW team assist in securing it, while the clearing team clears the remainder of the floor.

Once the ground floor is secure, the clearing team ascends the stairs using proper building clearing procedures and begins clearing the second floor. They continue this process until all floors are clear, including the roof. The clearing team leader reports as each floor is completed and when the entire building is secure. Team leaders must keep the platoon leader informed of the location of team members inside the house to prevent fratricide from the cordon elements.

Target building is searched. Once the target building is secure, the clearing and breach/EPW teams split into two-man search teams under the control of the breach/EPW team leader. Searchers look for items of intelligence value as determined by higher headquarters, and as items are seized, members of the yard team remove them from the building for inventory. Two copies of the inventory list are made, one of which serves as a receipt to the property's owner, the other as a record for the S2. Once a ground-floor room has been searched, the females and children may be moved indoors and guarded. Members of the yard team assist in searching vehicles parked at the target property.

Evacuating detainees. The platoon leader calls for the vehicle to transport detainees, which may be integrated into the outer cordon or set at the attack position. The detainees are silenced, blindfolded, segregated (if necessary), and loaded onto the transport vehicle (members of breach/EPW team may accompany detainees as guards or, if the task force provides guards, may rejoin their team). It is important that the transport vehicle not depart the objective until the search of the target house is complete. The platoon leader continues to interrogate the detainees until he determines that there is no more information to gain about the contents of the house. Once the search is complete and all items of intelligence value are loaded, the transport may depart for the task force jail.

Reconsolidation and exfiltration. Once all detainees and items of intelligence value have been removed from the target site and the search completed, all personnel exit the building, except for one soldier who remains to guard the females and children. After all personnel and equipment are accounted for, the guard moves to his vehicle, all personnel mount their vehicles, and the platoon exfiltrates the target area.

Equipment Requirements

To successfully complete the tasks of isolating, clearing, securing, and searching the target building and its occupants, certain items of team and individual equipment are required, while other items are desirable (but not critical). Much of the equipment is organic to the platoon, while others must be provided by the task force or specifically ordered for conduct of UO and stability and reconstruction operations.

Team equipment. Communications between the team and its leadership are crucial to the smooth, rapid execution of the raid. Squad dismount radios are preferred, but other types of personal radios are acceptable. Each team leader, the platoon leader, and the platoon sergeant should be so equipped. The team must have breaching tools, such as sledgehammers, battering ram, and heavy bolt cutters, carried on the platoon sergeant's vehicle (or another vehicle in the inner cordon) and accessible as needed. Flex-cuffs, blindfolds, and 2-foot strips of engineer tape (for gags) should also be carried by the breach/EPW team. Additionally, sand bags and boxes are useful for transporting items seized during the search, and clipboards with carbon paper will speed the inventory and receipt process. Spotlights or other portable battery-powered lights are useful in searching buildings that do not have electricity, and they can be used to illuminate the surrounding area. Thermal sights, when available, should be used by the outer cordon to observe the rooftops for fleeing personnel, while other personnel in the outer cordon, yard team, and C2 team should use night-vision goggles (NVGs) to observe their sectors.

Individual equipment — clearing team. Buildings are inherently cramped spaces for soldiers and narrow doorways, furniture, and other obstacles often inhibit movement. The clearing team, in particular, must remove all unnecessary equipment to ensure that they do not become caught or snagged while moving through the narrow confines of a dwelling. Such items as "butt" packs, NVG mounts, bayonets, and canteens should be removed. Ideally, the soldier should wear only his Kevlar helmet and body armor with magazine/grenade and first aid pouches attached. Needed supplies, such as water and additional ammunition, should be carried by follow-on teams. Rifle slings should be removed and replaced with snap-rings or commercially available "hands-free" slings. NVGs must not be used when clearing buildings due to the loss of depth perception; narrow field of view caused by the NVGs will make smooth, rapid movement through buildings difficult. Instead, high-intensity flashlights should be mounted on weapons, gaining the added benefit of blinding a target that is already adapted to the dark (since most raids occur at night) and on familiar ground. Because of the potential for falls while moving rapidly through dark, cluttered rooms, clearing teams should wear kneepads, elbow pads, and gloves. Ballistic goggles prevent eye injuries caused by spalling when weapons are fired indoors.

Individual equipment — breach/EPW team. Like the clearing team, the breach/EPW team should remove all unnecessary equipment. In addition to the items mentioned above, the breach/EPW team should carry one or two breach tools, such as a hooligan bar and sledgehammer, and a small supply of flex-cuffs and blindfolds. The breach/EPW team should not attempt to carry heavy breaching equipment; the platoon sergeant or yard team will bring these forward as

needed. Using a checklist, such as the one in Figure 9-1, will greatly assist leaders in preparing soldiers for various situations they may encounter during raids.

Precombat Equipment Checklist	
<p>INDIVIDUAL EQUIPMENT</p> <p><input type="checkbox"/> Mission knowledge</p> <p><input type="checkbox"/> Nonessential equipment removed</p> <p><input type="checkbox"/> Interceptor body armor with small arms protective insert plates</p> <p><input type="checkbox"/> Magazine/grenade pouches</p> <p><input type="checkbox"/> First aid pouch with casualty feeder card</p> <p><input type="checkbox"/> Rifle sling removed/hands-free sling present</p> <p><input type="checkbox"/> Flashlight mounted with fresh batteries</p> <p><input type="checkbox"/> Kneepads worn</p> <p><input type="checkbox"/> Elbow pads worn</p> <p><input type="checkbox"/> Gloves worn</p> <p><input type="checkbox"/> Goggles worn/clean and serviceable</p> <p><input type="checkbox"/> Close combat optic (M68) with fresh batteries</p> <p><input type="checkbox"/> Squad dismount radios present/radio check complete (team leaders, platoon leader, and platoon sergeant)</p> <p>SEARCH EQUIPMENT</p> <p><input type="checkbox"/> Boxes</p> <p><input type="checkbox"/> Sandbags</p> <p><input type="checkbox"/> Shoe tags</p> <p><input type="checkbox"/> Clipboard with paper and carbon paper; pens</p> <p><input type="checkbox"/> Latex gloves</p> <p><input type="checkbox"/> Large flashlight with charged batteries (MagLite D-cell preferred)</p> <p><input type="checkbox"/> Pry bar</p> <p><input type="checkbox"/> Small stepladder</p> <p><input type="checkbox"/> Electronic metal detector wand (for searching females and children)</p>	<p>BREACH/ENEMY PRISONER OF WAR TEAM EQUIPMENT</p> <p><input type="checkbox"/> Hooligan bar</p> <p><input type="checkbox"/> Sledgehammer (x 2)</p> <p><input type="checkbox"/> Battering ram (large and small if possible)</p> <p><input type="checkbox"/> Bolt cutters, heavy</p> <p><input type="checkbox"/> Wire cutters</p> <p><input type="checkbox"/> Flex cuffs/large zip strips</p> <p><input type="checkbox"/> Sandbags</p> <p><input type="checkbox"/> Engineer tape (2-foot strips for gags)</p> <p><input type="checkbox"/> Blindfolds</p> <p>COMBAT SERVICE SUPPORT ASSETS</p> <p><input type="checkbox"/> Medic with aid bag present</p> <p><input type="checkbox"/> Interpreter present and briefed with script for evacuation announcement</p> <p><input type="checkbox"/> Loudspeaker with siren</p> <p><input type="checkbox"/> All Soldiers know location of casualty collection point</p> <p><input type="checkbox"/> Bulk Class III and water present for resupply</p> <p><input type="checkbox"/> Linkup points for casualty evacuation and detainee evacuation established/briefed</p> <p>CORDON, YARD, AND COMMAND AND CONTROL TEAM EQUIPMENT</p> <p><input type="checkbox"/> Thermal sights operational with batteries or vehicle power</p> <p><input type="checkbox"/> Crew-served weapons with night sights mounted and operational</p> <p><input type="checkbox"/> Night-vision goggles operational with fresh batteries</p> <p><input type="checkbox"/> Spotlights with fresh/charged batteries</p>

Figure 9-1. Pre-combat equipment checklist

Room and Building Clearing Procedures

The following paragraphs outline procedures that have been successfully employed in previous raids. For a full discussion of room clearing, refer to FM 3-06.11.⁴

The complex layout of Iraqi homes makes it necessary that the clearing team be led from the front. While it is not always necessary that the first man in the stack be the team leader, it is essential that an experienced decision maker lead the assault. The leader, as he moves through

and clears the room, must not only identify noncombatants and engage targets, but also identify additional entrances to the room and immediately determine what resources are needed to secure all entrances/exits. Civilian casualties will only breed resentment and fuel hostilities toward coalition forces, therefore, the first man into a room must be an experienced decision maker, preferably a SGT or SSG. This allows the lead man to decide instantly who is or is not a threat without resorting to communications for guidance.

In our experience, the rooms that lead from the main room are what most UO operators consider “short” rooms. They are small in area and only require two soldiers to clear. Initially, two personnel will enter the room. The first man will follow the path of least resistance (usually straight across the door) and move to the nearest corner. The second man will proceed in the opposite direction. Their entry should be as simultaneous and as rapid as possible. Both soldiers clear as they move; swinging their muzzles from the corner they are approaching, across the room, to the opposite (diagonal) corner. Noncombatants are ordered to lie face down on the floor and enemy personnel are engaged with accurate shots (controlled pairs). If the room is irregularly shaped or contains additional entrances, the leader gives the order, “Next man in, right (or left).” The third man replies, “Coming in, right (or left),” and enters the room in the ordered direction. The leader verbally identifies the threat to be secured and directs the third man to a position from which he can best cover. If the leader determines that a security threat still exists, he orders additional personnel into the room until the room is secure. Personnel outside the room (unemployed clearing team members or breach/EPW team personnel) cover unsecured areas in the direction of travel and secure exit routes.

If noncombatants or enemy personnel are encountered, two personnel from the breach/EPW team are called in as soon as the room is secure. They immediately assume responsibility for captured, wounded, or dead enemy forces; all living enemy and noncombatants are secured and evacuated. The clearing team immediately moves to the next unsecured room and prepares to enter.

If any member of the clearing team becomes a casualty, the breach/EPW team immediately takes the lead and becomes the clearing team. This maintains the momentum of the operation and permits the rapid evacuation of the casualty. Casualty evacuation and the handover of team responsibilities will not occur until the room is secure. Once the room is secure, the casualty’s team members render aid and evacuate the casualty to the CCP, where the platoon sergeant and the medic are prepared to receive him.

Considering the labyrinth of rooms on the first floor, an unguarded or bypassed stairwell could allow enemy to infiltrate behind the clearing team and split the raiding forces inside the house. Therefore, when a stairwell is located, it must be treated as an unsecured area. Two soldiers from the breach/EPW team are detailed to secure the stairway and the stairway is bypassed until the ground floor is secure.

Training and Rehearsals

Speed, surprise, and violence of action are the three most important factors governing success, as they minimize the enemy’s ability to offer resistance and quickly overwhelm those who choose to resist. To achieve speed, the raiding party must constantly and methodically train and rehearse, resulting in smooth, seamless execution. Surprise need not be complete, as entering at a time and location unsuspected by the enemy and then attacking rapidly through the building more than compensate for any surprise lost when the five-minute warning at the outset is given. Violence of action sows confusion among enemy personnel and discourages resistance.

Importance of training and rehearsals. Because the procedures outlined in this article deviate from established U.S. Army doctrine, they are likely to conflict somewhat with how soldiers have been previously trained. Also, the execution of raids requires precision and teamwork surpassing that required for normal UO. Frequent, repetitive training will build precision and teamwork, while reinforcing the differences between high-intensity, precision, and surgical conditions in UO.

Maintaining team integrity. It is desirable for teams to be cross trained on the responsibilities of other teams, and that teams are rotated through various duties of clearing team, cordon teams, breach/EPW teams, and C2 teams on successive operations. However, team integrity must be maintained. Soldiers must train and operate as part of a team to maintain consistency, so movement of personnel between teams should be avoided as much as possible. This develops flexibility in the platoon and yields more options for the platoon leader’s planning.

Training techniques. Precision building clearing should be trained using the crawl-walk-run method. Teams begin by learning the basics of close quarters battle, then progress to clearing rooms. Training should be repetitive, like a football team practicing plays, with the emphasis placed on precision and smoothness. As training progresses, a variety of room sizes and shapes should be included, and a series of rooms representing a house should be cleared. Training may culminate with the inclusion of opposing forces personnel and noncombatant role players.

Training sites. Traditional Army UO training sites are not well suited to training for operations in Iraq, as they usually represent European-style architecture. A suitable training site must be constructed or improvised. The example at Figure 9-2 below represents the layout of a typical Iraqi home. Note the mazelike pattern of rooms, with one room containing doorways into several others, and the corner stairway with turn.

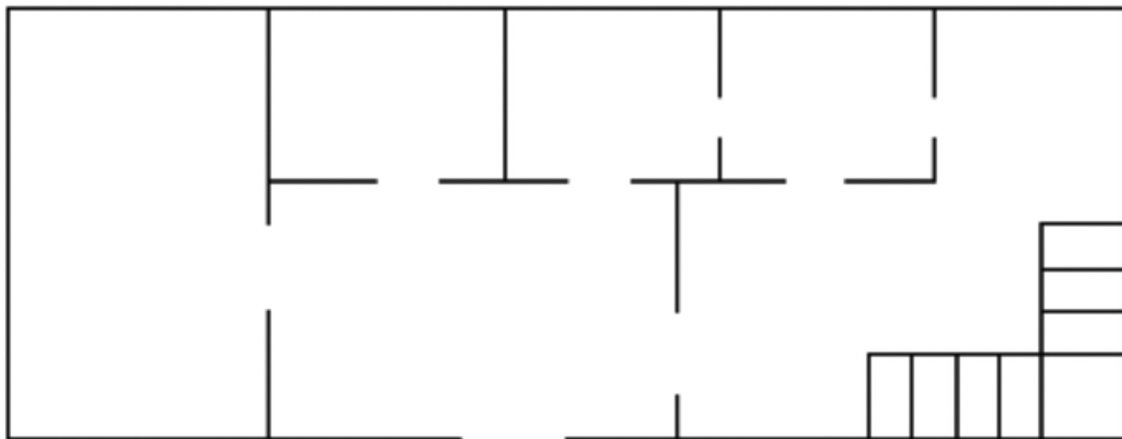


Figure 9-2

To respond to the noncontiguous combat environment in Iraq, while seeking to embrace the local customs, units must be able to transition seamlessly from surgical conditions to precision conditions to high-intensity conditions during operations. Leaders must continually revise operational and tactical procedures and train their soldiers to adapt to the ambiguous enemy threat. Leaders establish the restrictions through rules of engagement that determine whether operations occur under surgical, precision, or high-intensity conditions. Through planning and

rehearsing, leaders can train soldiers to rapidly transition from one condition to another and still maintain the warrior edge when in contact with hostile forces. Battling complacency is the toughest fight for a leader on a battlefield. It is a leader's responsibility to prepare his soldiers for every situation they may encounter on the battlefield; wherever the battlefield, whatever the mission.

Endnotes

1. U.S. Army Field Manual (FM) 3-06.11, *Combined Arms Operations in Urban Terrain*, U.S. Government Printing Office, Washington, DC, 28 February 2002.
2. Ibid.
3. Ibid.
4. Ibid.

Chapter 10

3/2 SBCT and the Countermortar Fight in Mosul

CPT Roger M. Stevens and MAJ Kyle J. Marsh

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On 3 September 2004, a military police (MP) platoon attached to 2d Battalion, 3d Infantry (2-3 IN) established a countermortar observation post (OP) in Mosul, a city of approximately 1.8 million people. The platoon saw a team of four members of the anti-Iraqi forces (AIF) in a yellow Volkswagen Passat fire three 60-mm mortar rounds at a nearby US forward operating base (FOB).

While the MP platoon engaged the AIF, another platoon maneuvered to the point of origin (POO) to assist. The AIF engaged the patrol with small arms fire but were immediately overwhelmed by superior firepower as the MP's crew served weapons disabled the vehicle, killing one insurgent and critically injuring the remaining three. A debriefing revealed interesting tactics, techniques and procedures (TTPs) used by the 60-mm mortar cell. The AIF insurgents remained in their vehicle with the rear passenger opening the door and direct laying the mortar tube from inside the vehicle. Occupation, launch and march-order occurred in less than two minutes.

After a series of combat operations in Sammara, the 3d Brigade, 2d Infantry Division Stryker Brigade Combat Team (3/2 SBCT), (the Arrowhead SBCT), deployed to northern Iraq in January 2004 during Operation Iraqi Freedom (OIF). The Arrowhead Brigade occupied the division-sized battle space in northern Iraq formerly occupied by the 101st Airborne Division (Air Assault).

Mosul, the provincial capital of the Ninewah Province, served as the focal point for the organization, consolidation, supply and transit of AIF in the province. Not unexpectedly, the majority of attacks against US and Coalition Forces occurred within Mosul proper.

Second only to improvised explosive devices (IEDs), indirect fire attacks were the next largest casualty producer of Coalition Forces in Mosul; in excess of 150 coalition Soldiers were wounded or killed over a period of 10 months. AIF attacked US FOBs with mortars and rockets in more than 300 separate incidents.

AIF employed several different weapons systems, including light, medium and heavy mortars (60-mm, 82-mm and 120-mm) and light and medium rockets (57-mm, 107-mm, 122-mm and 127-mm). The predominant type and volume of fire consisted of 60-mm and 82-mm mortars firing one to eight rounds per attack. The use of the 120-mm mortar was limited by the amount of time it took to march order and displace the system, resulting in the employment of one to two rounds per attack.

Due to the complex urban nature of Mosul, the brigade commander restricted the use of all lethal counterfire to reduce unnecessary and likely disastrous collateral damage or ill will on the part of the local populace. By restricting lethal counterfire, any indirect fire attacks on civilian infrastructure could be attributed to AIF indirect fire cells. This was a crucial component to the brigade information operations (IO) campaign against AIF indirect fire activity and gave the commander legitimacy when refuting negative reports of coalition inflicted casualties and infrastructure damage. Winning the hearts and minds of the local populace was deemed vital

to success in Mosul, and any coalition activity impacting this effort was scrutinized in detail. Despite the absence of a lethal reactive counterfire program, the joint fires and effects cell (JFEC) focused on the countermortar fight and capturing or killing AIF insurgents.

Capabilities of the SBCT

The SBCT is an infantry-centric unit with 3,600 Soldiers combining the best characteristics of the current Army force while exploiting technology to fill the gap between the capabilities of the Army's heavy and light forces. The SBCT enjoys increased operational and tactical flexibility and can conduct missions across the full spectrum of military operations.

The SBCT employs an impressive array of organic assets. It has a cavalry squadron for reconnaissance, surveillance and target acquisition (RSTA); a Field Artillery battalion; a brigade support battalion; a military intelligence company; an engineer company; a signal company; an anti-tank company; and a robust headquarters company and brigade staff, in addition to three infantry battalions.

The SBCT leverages advanced command, control, communications, computer, intelligence, surveillance and reconnaissance (C4ISR) systems that enable the brigade to "see" the entire battlefield and posture effectively before closing with the enemy. This is commonly referred to as "See first, understand first, act first and finish decisively at a time and place of our choosing." The SBCT's all-weather intelligence and surveillance capabilities and its digitized systems enable it to maintain 24-hour distributed operations on a noncontiguous battlefield against asymmetric or traditional adversaries.

The SBCT also fielded a number of force modernization projects. Specifically, the Raven small unmanned aerial vehicle (SUAV) and lightweight countermortar radar (LCMR) augmented the brigade's capabilities by improving acquisition and reconnaissance capabilities.

To achieve decisive action in various types of terrain, including urban settings, the SBCT incorporates impressive combined arms capabilities at the company level. Doctrinally, Stryker Brigade infantry companies consist of the following assets: three Infantry platoons, a mobile gun system (MGS) platoon, a mortar section (consisting of two 120-mm and two 60-mm mortars), a fire support team (FIST) and a sniper team. Designed to achieve decisive action through dismounted assault, these infantry companies support themselves with enhanced organic direct fires from their vehicle-mounted primary weapons systems as well as via indirect fire support from mortars and artillery.

SBCT Fire Support Assets

The strength of the SBCT's fire support acquisition capabilities is anchored in the two organic Firefinder radars. A Q-36 (Version 8) and Q-37 (Version 6, Package 11) provide immediate and accurate artillery, mortar and rocket POOs and probable points of impact (POIs).

During deployment, the SBCT was augmented with A Battery, 2d Battalion, and 131st Target Acquisition Battery (TAB) from the Texas Army National Guard. The battery supplemented coverage with a battery headquarters, the target processing section (TPS) and three Q-36 radars (Version 5). As part of the Army Force Modernization Program, the addition of two LCMRs proved a valuable complement to the indirect fire effort.

Because of the threat within Mosul, all radars were positioned on US FOBs for security reasons. The collective effort provided redundant coverage over the entire city.

One shortfall to the radars' positions was the dominant terrain. The elevated altitude created many dead space areas, allowing the enemy to fire 60-mm mortars and the rockets in direct fire mode. We were unable to acquire most of these direct fire attacks as their trajectories either did not have enough time for the radar to track them or fell under the radars' beams. To counter this developing threat and overcome the terrain constraint, the JFEC revised the brigade's counterfire battle drill and developed a comprehensive maneuver-centric countermortar program. (The keys to the countermortar program's success are listed in the figure.)

Countermortar Set

Following a significant increase in 60-mm mortar attacks against US FOBs in June 2004, the JFEC, S2, and S3 collectively developed a countermortar "set" to address the threat. This is a set of assets synchronized to track down and destroy AIF mortar teams based on intelligence.

The brigade staff determined that the strength of the enemy mortar crew was its ability to retain the initiative (choosing when, where, who and how to attack). To address this ability, the countermortar set was specifically designed to deny the enemy the use of terrain to disrupt his decision cycle and force him to act under pressure. The desired end state was the reduction of casualties and damage to infrastructure.

Infantry patrols, traffic control points (TCPs) and the integration of scout weapons teams (SWTs) served as the primary assets to find, fix and destroy the enemy. Additional SBCT assets, such as Shadow UAVs and Air Force fighter aircraft, provided sensors that allowed increased observation of potential enemy firing points.

Psychological operations (PSYOP) teams also were integrated into the countermortar sets. PSYOP patrols were sent to areas of concentrated enemy indirect fire activity to collect intelligence and inform local residents of reward programs for reports that led to the killing or capture of indirect fire cells. Intelligence gained by PSYOP through face-to-face interaction included types of vehicles used in attacks and TTPs used by the enemy while employing indirect fire assets. The integration of nonlethal effects and the information provided by these patrols were extremely beneficial and excellent combat multipliers.

The enemy proved a capable foe, adjusting quickly to the brigade's actions and establishing or coercing support from Mosul neighborhoods. The enemy's ability to adjust his TTPs proved the need to continuously analyze and adjust friendly courses of action. However, we firmly believed that the considerable risk to the enemy posed by our adaptive countermortar set would force him to make more and more exploitable mistakes.

Keys to Countermortar Success:

- Apply constant pressure on the enemy.
- Synchronize combined arms assets (countermortar set).

- Use nonlethal information operations (IO) assets, such as psychological operations (PSYOP), as a force multiplier.
- Conduct detailed analyses to provide the information necessary to disrupt the enemy's decision-action cycle.

Importance of Analysis

Analysis of AIF mortar and rocket activity was crucial to the conduct of the SBCT's successful countermortar operations in Mosul. The brigade counterfire officer developed a comprehensive assessment of enemy activity through Firefinder acquisitions, strike reports, human intelligence (HUMINT), computer analysis tools, terrain analysis from the brigade terrain team, and analysis from the brigade S2 and battalion fire support elements (FSEs). The JFEC facilitated cross-staff analyses by posting all products on the 3/2 SBCT secure internet protocol router network (SIPRNET) web page, allowing the brigade staff and subordinate units the opportunity to download current analyses and historical records.

Strike reports were an important tool for enhancing our analyses of enemy indirect fire attacks, providing information to compare the actual POI to the radar generated POI. In addition, the report facilitated a comparison of the back azimuth from crater analyses to the radar POO.

The Iraqi Ordnance Identification Guide and National Ground Intelligence Center databases provided both the brigade and subordinate units with pertinent information which, when coupled with accurate POO reporting, allowed the expansion of the historical record and facilitated enemy TTP analyses and subsequent countermortar set planning. If a counterfire radar did not detect an indirect fire round, this data provided information to conduct a Firefinder position analysis system (FFPAS) analysis and predict the likely cause of the non-detection.

The JFEC maintained historical records of all confirmed indirect fire acquisitions in Mosul using a Microsoft Excel impact tracker spreadsheet. The spreadsheet permitted easy manipulation of data and produced graphs, pivot tables and statistics with little additional effort.

Falcon View provided the means to conduct detailed analyses of these historical records. Using both plotted radar acquisitions and crater analysis reports, a visual representation of firing trends emerged. The pictorial generated detailed POO analysis and permitted proactive POO prediction.

Detailed analyses provided the SBCT with the means to note changes to enemy TTPs and recommend adjustments to the countermortar set, allowing the SBCT to apply constant pressure on the enemy. The deputy effects coordinator (DECOORD) presented recommended countermortar set changes to the task force S3s, brigade IO coordinator (IOCOORD), brigade S2, brigade S3 and brigade deputy commander (DCO) at the weekly SBCT targeting meeting. Changes were discussed and applied for the next week. Emergency changes during the week were developed and applied as soon as possible after discussion by the S2, S3, DECOORD and DCO. These aggressive measures were instrumental in allowing the SBCT to adjust to the enemy and continue to disrupt his decision-action cycle.

Applying Pressure with Constant Change

Over time, the JFEC discovered that maneuver patrols were the countermortar system of choice, effectively denying the enemy terrain and forcing him to use longer range weapon systems, such as rockets (107-mm, 122-mm) and larger caliber mortars (82-mm and 120-mm). To avoid

confronting US patrols, the enemy began emplacing rockets on improvised launchers under timer control. This allowed the AIF to continue indirect fire attacks against FOBs and minimized the risk posed by the countermortar set within the city. AIF also used long-range mortar systems, minimizing their own risk with stand-off capability.

The brigade determined that the optimal way to neutralize the rocket and long-range mortar cells was by employing aggressive presence patrols and sniper teams and adjusted accordingly.

Faced with an equally adaptive US combined arms threat, the enemy reverted to short-range mortar attacks, becoming more vulnerable to coalition identification and interdiction. However, the AIF began to change its method of attack. Attacks with 60-mm mortars increased in frequency yet decreased in volume of fire. When a radar acquired a POO, the brigade was able to vector US combat power to it within three to five minutes. However, due to the complex urban environment and the abundance of high-speed avenues of approach, AIF mortar teams were able to displace before a response force arrived.

To address this rapid exfiltration capability, the JFEC, using its historical database, conducted predictive analyses of favored firing points and recommended the establishment of TCPs to control escape routes. The brigade staff assessed that enemy mortar teams were reluctant to attack if denied easily identifiable escape routes.

Thus began a period of wargaming actions and reactions where each adjustment of the counter mortar set was countered by a corresponding change in AIF tactics. Steady analyses and changes on the part of the SBCT exponentially increased risk to the enemy each time he adjusted his TTPs. This was fully evident when the enemy was finally forced to resort to 60-mm attacks at precariously close range. As related in the vignette at the beginning of this article, the SBCT anticipated AIF actions, identified a mortar team during occupation and totally destroyed it.

Lessons Learned

Countermortar operations in an urban environment proved to be a uniquely challenging mission. Challenged daily by an enemy who routinely melted into the city and attacked US FOBs with multiple explosive munitions, the SBCT was forced to create a highly detailed solution for an indiscriminate and dangerous enemy.

With lethal counterfire lacking effect and detrimental to the overall effort, a synchronized and combined arms effort was paramount to the denial of enemy indirect fire attacks. Using a multitude of available assets, careful and thorough analyses on the part of the JFEC helped refine countermortar sets and keep pressure on the enemy indirect fire effort.

The countermortar fight in a nonlinear environment is, therefore, little different from the counterinsurgency effort as a whole. Denied traditional means of response, we must, through continuous analyses and TTP refinement, use all assets to apply constant pressure on the enemy. This forces the enemy to assume an unsustainable amount of risk and, ultimately, to ensure his own destruction.

Chapter 11

TF 2-2 IN FSE AAR: Indirect Fires in the Battle of Fallujah

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Task Force 2d Battalion, 2d Infantry's (TF 2-2 IN's) fire support element (FSE) operated as a mini-brigade FSE during the Battle of Fallujah. The FSE coordinated the combat effects of Army, Air Force and Marine assets more autonomously than the traditional, doctrinal battalion-level FSE—a model of joint interdependency. Although the FSE did not have joint personnel assigned to it, it worked closely with the brigade air liaison officer (BALO), who was chopped to TF 2-2 IN, and functioned as a "Joint FSE," if you will.

— Editor, *Field Artillery Magazine*

MEMORANDUM FOR RECORD: FSE, TF 2-2 IN, 3d Brigade Combat Team (BCT), 1st ID, Operation Iraqi Freedom (OIF) II, Forward Operating Base (FOB) Normandy, Muqdadiyah, Iraq APO AE 09392 (AETV-BGR-FSE), 1 December 2004.

Subject: After-Action Review (AAR) for the Battle of Fallujah

1. Background and Mission. The Battle of Fallujah was conducted from 8 to 20 November 2004 with the last fire mission on 17 November. The battle was fought by an Army, Marine and Iraqi force of about 15,000 under the I Marine Expeditionary Force (IMEF), sweeping from north to south. The joint and combined force cordoned the city and searched door-to-door, clearing buildings and engaging insurgents in the streets—reputedly the most fierce urban fighting for Marines since the Battle of Hue City in Vietnam in 1968.

Fallujah is roughly 40 kilometers west of Baghdad on the Euphrates River. Its population before the battle was about 250,000 people; however, TF 2-2 IN encountered few civilians in its attack south.

TF 2-2 IN's mission initially was to attack south to Phase Line (PL) Fran (Highway 10) from the northeastern edge of the city to protect our eastern flank and destroy the anti-Iraqi Forces (AIF), keeping the lines of communications open. For the attack, the city was sliced north and south into six areas of responsibility (AORs): TF 2-2 IN on the northeastern slice of the city with TF 1-3 Marines on our western flank followed (east to west) by TF 1-8 Marines, TF 2-7 Cavalry, TF 3-5 Marines and, finally, TF 3-1 Marines in the northwestern AOR along the Euphrates River.

During the attack, many fragmentary orders (FRAGOs) were issued, which pushed TF 2-2 IN south of PL Fran to the southern edge of the city. TF 2-2 IN's rear tactical operations center (RTOC) and two M109A6 Paladin howitzers were at Camp Fallujah (22 kilometers southwest of Fallujah) from which the Paladins fired during the Battle of Fallujah.

The city is about five kilometers wide and five kilometers deep. It is divided east and west by Highway 10 with residential neighborhoods to the north and the industrial sector in the south. In the most southern sector of the city is a poor neighborhood that was filled with foreign fighters,

dubbed the “Martyr’s District.” This was the sector in which we encountered the heaviest resistance.

2. Enemy Forces. In TF 2-2 IN’s AOR, the AIF had emplaced many obstacles and fortified buildings as strong points, dug trenches and established fighting positions and bunkers. Additionally, the enemy had rigged buildings and vehicles with explosives.

Along the southeastern portion of the city, the AIF emplaced rockets as remotely controlled direct fire weapons against any Coalition Forces that attempted to attack from the south or east of the city. The enemy also emplaced improvised explosive devices (IEDs) and mines along key routes and at intersections to impede and funnel Coalition Forces’ movement. Vast caches of AIF munitions had been positioned throughout the sector for tactical resupply.

3. Friendly Forces. TF 2-2 IN deployed to Camp Fallujah under the operational control (OPCON) of Marine Regimental Combat Team-7 (RCT-7), 1st Marine Division. TF 2-2 IN’s task organization consisted of one mechanized infantry company, one armored company, the brigade reconnaissance troop (BRT), one Iraqi Intervention Forces (IIF) Battalion (-), one engineer platoon, two M109A6 Paladins (positioned on Camp Fallujah), four organic 120-mm mortars and two 81-mm mortars. Four Air Force joint terminal attack controllers (JTACs) were attached from the 3d BCT headquarters and sliced out to the maneuver companies with one BALO and an enlisted driver in the task force tactical command post (TAC).

4. Artillery Fires. As part of TF 2-2 IN, the M109A6 Paladins and a platoon fire direction center (FDC) were attached in direct support (DS) to the TF. For most of the fight, this was their only role. Later, after TF 2-2 IN had reached its limit of advance (LOA) at PL Fran, it also was tasked to support RCT-7.

The Paladins were in a position area (PA) in Camp Fallujah adjacent to the Marine Corps and a battery of Paladins from the 1st Cavalry Division, A/3-82 FA that was attached to the IMEF. This facilitated the FA’s sharing meteorological (Met) data and survey and relieved the platoon of self-security.

a. *Organic to the TF.* As an organic part of the TF, the howitzers provided accurate, timely fires throughout the fight, delivering 925 rounds, mostly in danger-close fires. As dedicated assets to the TF, Paladin fires were greatly expedited in a 360-degree fight with fluid targets and a rapidly advancing maneuver force. Fire missions took less than two minutes from the initial call-for-fire (CFF) to rounds down range.

b. *Responsibilities of TF FSE.* The TF FSE assumed responsibility for coordinating with the TF 2-2 IN S4 for Class V resupply, positioning the platoon and selecting shell-fuze combinations. The TF FSE cleared fires at the TAC along with the TF battle captain or S3. Clearance of fires was executed by demanding accurate company frontline traces and forward observer (FO) locations at regular intervals and battle tracking in detail.

c. *Role of the Artillery.* The artillery was used in doctrinal roles, such as screening the initial point of penetration, preparatory fires, close fire support and disruptive deep fires, as well as in non-doctrinal roles, such as clearing routes of IEDs and breaching minefields.

Using Paladins directly attached to the TF gave us a tremendous advantage in the fight. Our tactics, techniques and procedures (TTP) were effective and lethal and gave maneuver TFs greater flexibility, firepower and mobility.

The overall performance was outstanding. By using FOs and accurate intelligence-driven targeting, the artillery was a driving force in the TF's ability to attack through a large city with minimum casualties in six days.

d. *Massing Fires.* The only drawback was our inability to mass fires on targets due to having only two guns. While we did have general support reinforcing (GSR) assets, they were slow, cumbersome and more difficult to coordinate with than our organic systems. Trust was also an issue as the vast majority of our fires were danger-close, and we did not know the proficiency level of the supporting guns. While it did not impact our operations overall, at times the physical and psychological effects of massed artillery fires were the preferred effects. We could use our 120-mm mortars when we wanted to mass fires, but additional 155-mm howitzers would have been more effective.

5. Mortars. The Thunder Mortar Platoon that is organic to 2-2 IN proved to be the equal of the artillery in this fight in terms of accuracy and responsiveness and was an integral part of the indirect fires used. When provided the five requirements for accurate predicted fires, mortars were every bit as accurate and deadly as artillery. The firepower of the 120-mm munitions allowed us to respond quickly with overwhelming firepower when needed. During the course of the battle, mortars fired 942 rounds of timely, accurate fires.

a. *Mortar Challenges.* Our mortar platoon received two M252 81-mm mortars before deploying to the Fallujah AOR. These were useful indirect fire weapons when close fires were required. The only drawback was they had no sights. To use them, we had to take sights from the 120-mm tubes and use the sights with the 81-mm mortars, taking two 120-mm tubes out of the fight.

The mortars' high angle of fire was preferable for military operations in urban terrain (MOUT), but there were times when the mortars' maximum ordinate (MAXORD) exceeded the close air support (CAS) ceiling, limiting mortar fires.

b. *Platoon Security.* The mortar platoon operated outside of Camp Fallujah at various firing points and had to pull self-security. It was manned to do so with no degradation of fires. The platoon received enemy indirect fires frequently during the fight and was forced to displace. But due to superior training and good maneuverability, it quickly displaced, reset and resumed operations.

6. Danger-Close Fires. Danger close missions were the rule, not the exception. 2/A/1-6 FA, our Paladin platoon, and Thunder Base, our 120-mm mortar platoon, quickly earned our confidence in their abilities to deliver timely and, more importantly, accurate fires. We routinely had 155-mm and 120-mm fires within 200 meters of friendly forces. Less frequently, 81-mm mortars fired within 100 meters.

a. *Walking Fires In.* We could deliver fires in various ways. The nature of MOUT actually helped us mitigate the risk of danger-close missions because the houses and structures served as buffers for effects between friendly forces and the target. The most widely used method when bringing fires in was to "walk" the fires in close, using adjustments sent

from an observer. Before going into the fire-for-effect (FFE) phase, friendly companies about to receive danger-close fires were alerted and given time to button up or take cover.

b. *Danger-Close Redefined.* Per doctrine, the smallest munitions were used closest to the frontline traces of the maneuver element and larger munitions at greater distances. Although this technique was used, rarely were any fires outside of the doctrinal danger-close 600 meters. That was the “deep fight” in this environment, and to have considered it as danger-close and followed all of the existing procedures for adjustment would have decreased the effectiveness of indirect fires.

7. Forward Observer (FO). The FOs played a key role in this fight. We placed a fire support team (FIST) with A/2-2 IN, an FO with the BRT and a fire support officer (FSO) with A/2-63 AR. The FIST with A/2-2 IN included a sergeant (promotable) as the FSO, a private first class as radiotelephone operator (RTO) and a sergeant in two of the three platoons. One of our team chiefs, a sergeant who was an experienced FO, became the BRT FO. We did not have the manning to deploy full FISTs but compensated by deploying leaders where they were most effective; the FSE platoon was at 50 percent strength.

a. *BRT FO Positioning and Reconnoitering.* A/2-2 and A/2-63 were deployed in the city for most of the fight with the BRT screening to the east. Due to the BRT’s position outside the city, the BRT FO had excellent observation from dominant terrain and was decisive in the early fight. He was in position very early before the attack. This was excellent TTP that allowed us to adjust the preplanned smoke fires for breaching operations and destroy enemy observation posts (OPs).

As any combat training center (CTC) fight tells us, he who wins the reconnaissance fight will do well. The BRT FO could destroy enemy OPs early and refine target locations as well as confirm or deny that targets we had planned were viable, such as AIF targets or buildings that did not appear to have been recently inhabited. His location with the BRT outside the city looking in enabled him to see the entire battlefield and service targets throughout.

He used the BRT’s long-range advanced scout surveillance system (LRAS3), an excellent piece of equipment that allowed him to accurately locate targets, day or night, with 10-digit grids. LRAS3 is superior to the ground/vehicular laser locator designator (G/VLLD) in both optics and target location, has night-vision optics and can be mounted on vehicles. If scout and BRT elements have this equipment, fire supporters also should have it.

b. *City FOs Kept Moving.* The other observers were not as fortunate during the early phases of the fight because they were down in the city and could not readily occupy OPs on dominant terrain. The platoons that included FOs could not afford the time or manpower to establish an OP while they were conducting the attack.

However, during halts or while the platoons occupied strong points, the observers established OPs and destroyed targets. The platoon FOs came into play mainly before the task force crossed the line of departure (LD) when they could occupy OPs on rooftops and adjust preparatory fires. One platoon FO was very effective at adjusting rounds onto specific houses and destroying them before we crossed the LD.

c. *FO Vehicles.* The FOs had to ride in the back of Bradley fighting vehicles (BFVs) or M113s to move around the battlefield, degrading both their communications and ability to observe fires. The TF FSO chose not to bring our two FIST vehicles (FISTVs) to the fight for the following reasons: they are mechanically unreliable; we could not man them, given our personnel strength; and they cannot stay abreast of maneuver forces in Bradleys.

Instead we had M1114 up-armored high-mobility multipurpose wheeled vehicles (HMMWVs) with all related equipment in them although they often were left in the combat trains with the FSO's riding in the company commander's Bradley.

We could have used the new Bradley fire support team vehicles (BFISTVs) with the personnel to man them.

d. *Attached Companies with No FISTs.* One of the biggest issues for FOs and manning was attached companies from other battalions that did not bring their FIST personnel. A/2-63 AR brought only one second lieutenant for fire support—no other FISTers. This severely degraded its ability to use fires during the battle, especially when its FSO was wounded in action (WIA).

A company attached as part of a TF must bring its entire FIST, particularly in a MOUT fight. If not, the ability to support that company with fires is extremely difficult.

8. Other Equipment. Before deploying to Fallujah, we made deliberate choices about what equipment to bring and what to leave behind, and there was equipment we should have had but did not have.

a. *Fire Support Gear.* The FOs had single-channel ground and airborne radio systems (SINCGARS) manpacks, binos, a compass, Viper-2 night-vision goggles and precision lightweight global positioning system receivers (PLGRs). Communications were adequate. They were degraded when moving, but once OPs were established, they worked well.

The Viper-2 is an excellent tool for FOs. In conjunction with the PLGR, it reliably provided accurate target location.

The Blue Force Tracker was a good tool to use at the TF FSE. It provided a good picture of forces on the battlefield, but could not give friendly unit locations consistently enough to clear fires. It is useful for targeting when imagery is loaded.

The flash, immediate, priority and routing (FIPR) messaging function of Blue Force Tracker was a good tool we did not use fully. It could have been very effective in communicating and passing fire support products from TOC to TAC and vice-versa.

b. *Joint Surveillance and Target Attack Radar System (JSTARS).* We used JSTARS as a targeting tool. The assistant FSO and S2 collected JSTARS data at the TOC and passed it to us as targeting data to be serviced with indirect fires.

c. *Advanced FA Tactical Data System (AFATDS).* We did not have AFATDS in the FSE, although 2/A/1-6 FA's platoon operations center (POC) did. The battalion-level FSE has

only one AFATDS, and it was at FOB Normandy to support counterstrike operations. We need two AFATDS at the task force level. Twice we've had to execute split operations and leave the AFATDS behind (Najaf, April 2004).

Fires were controlled at the TAC. With the vehicle available, we could not have used AFATDS, although with a BFIST, we would have been able to.

We did not use the lightweight forward entry device (LFED); it was too time-consuming to input targets of opportunity, and there was no AFATDS at the battalion FSE.

9. Munitions. The munitions we brought to this fight were 155-mm high explosive (HE) M107 (short-range) and M795 (long-range) rounds, illumination and white phosphorous (WP, M110 and M825), with point-detonating (PD), delay, time and variable-time (VT) fuzes. For the 120-mm mortars, we had HE, illumination and WP with PD, delay and proximity fuzes. We also carried 81-mm HE with the same fuzes.

a. *Range of Munitions.* The munitions at our disposal gave us excellent flexibility. The 81-mm munitions allowed us to deliver extremely close fires to friendly forces while we used larger caliber munitions to engage and destroy heavily fortified houses and bunkers. The standard table of organization and equipment (TOE) for a mechanized battalion does not include 81-mm mortars, something the Army should examine and correct.

b. *White Phosphorous.* WP proved to be an effective and versatile munition. We used it for screening missions at two breaches and, later in the fight, as a potent psychological weapon against the insurgents in trench lines and spider holes when we could not get effects on them with HE. We fired "shake and bake" missions at the insurgents, using WP to flush them out and HE to take them out.

c. *Hexachloroethane Zinc (HC) Smoke and Precision-Guided Munitions.* We could have used these munitions. We used improved WP for screening missions when HC smoke would have been more effective and saved our WP for lethal missions.

We had several important targets, often reinforced houses that FOs had eyes on, that would have been more effectively engaged with a precision-guided ammunition, such as Copperhead with its shaped charge or the developmental Excalibur Unitary round that is concrete piercing (to be fielded in 2006). Barring the use of such precision-guided munitions, concrete-piercing (CP) fuzes would have been more effective than delay and PD fuzes were, but the latter were satisfactory.

d. *Ammo Resupply.* The biggest challenge we had was ammunition resupply. The amount of munitions expended was surprising, and we had to struggle to keep our cannons and tubes supplied. The targeting officer at the TOC and the S4 did a fantastic job of obtaining ammunition, but in the future, it would be easier to over-anticipate ammunition needs before the fight and stockpile it.

The Marines gave us what they had, and the location of the Paladin platoon on FOB Fallujah helped greatly. The fact that the Paladin platoon brought a palletized loading system (PLS) was a huge plus. It allowed the S4 to coordinate for ammunition and the Paladin platoon to pick it up.

In the final analysis, it all worked, but I recommend we not put ourselves in that position again. We never ran out of ammunition, but we came close several times.

10. CAS. We used CAS well in this fight, dropping more than 15 guided-bomb unit-12s (GBU-12s), which are laser-guided 500-pound bombs; four 2,000-pound joint direct attack munition (JDAMs) penetrators; and one Maverick. We also had more than six hours of AC-130 Specter gunship support.

a. *CAS Effectiveness.* We had problems with the GBU-12s. At least five duds were dropped, all from F/A-18s. The AC-130 was an awesome weapon, operating at night and prepping our deep battle space with outstanding accuracy. The four JDAM penetrators were dropped on a bunker complex with excellent results. The bunker and more than 20 AIF were destroyed.

Initially, we had difficulty working with Marine air. However, once our JTACs learned the system, it worked rather well. An air liaison officer (ALO) from the Marines at the TOC would have helped in the early stages and facilitated the use of more Marine CAS.

b. *Pulling Timely Air Assets.* While the Air Force JTACs were useful on the ground, they had limited success pulling timely air assets. A TOC ALO is a must for two reasons: first, a Marine ALO with direct access to higher will pull air assets more quickly and be able to disseminate their fires faster than an Air Force JTAC on the ground. Second, you need an officer who understands the Marine system attached to the FSE for better coordination.

Air assets are requested through a different system than indirect lethal fires. An ALO with two radios tied in to higher and the battalion is a must and will cut air request times in half. Although air was planned, it often was difficult for the battalion JTAC to talk to the RCT-7 ALO and get air when needed.

c. *CAS and Other Indirect Fires.* A big lesson is that CAS was not a substitute for responsive artillery and mortars. CAS was most effective in the deep fight, particularly when used on intelligence-driven targets.

11. Unmanned Aerial Vehicles (UAVs) and Tactical UAVs (TUAVS). UAVs were an integral part of this fight and should be included in any future planning. The UAVs in this fight—the Predator, Shadow, Hunter and Pioneer—were very effective for precision, intelligence-driven targeting. Their targets often were built-up strong points being fortified or occupied before our attack.

a. *Targets in the Deep Fight.* The UAVs gave us a great advantage in the deep fight, usually beyond the coordinated fire line (CFL). We engaged what the AIF considered safe areas well in advance of the forward line of troops (FLOT), destroying the AIF's command, control and communications (C3) nodes and denying them any respite from the fight, a tremendous psychological advantage.

Except for the Raven TUAV, the UAVs provided 10-digit grids and accurate target descriptions, allowing us to choose the most appropriate weapon for the targets. The Raven also did not have enough loiter time to obtain the information we needed.

b. *Targets of Opportunity.* We attempted to initiate and adjust fire missions against targets of opportunity using UAVs as observation platforms and were unable to do so in a timely and accurate fashion. It was difficult to coordinate with the platform operators who were great distances away (some stateside) to give us the viewing angles needed for adjustments.

The TF TOC used UAVs for targeting and as observers for fire missions several times. But unless the UAVs were looking straight down, the grid received usually was off by several hundred meters. When adjusting from the Predator, the delay on the feed is about 20 to 30 seconds. The Shadow or Scan Eagle is a better platform for battalion indirect fires as they are more responsive and more easily adjusted.

We displayed the UAV feed in the TOC on a projector so the FSE could coordinate and call for fires. The easiest way to call for fires is to create a fictitious observer and adjust through cardinal directions (the operators flying the UAVs are not trained in calling for fires). We need to develop TTP for adjusting fires with UAVs.

The way to use a UAV is for the TF FSE to have this asset under its control. It was an almost insurmountable task to coordinate for and adjust fires accurately using UAVs because the controlling element had to describe the rounds' impact.

12. Personnel Manning. Big problems in this fight were lack of fire support personnel with concurrent operations in two separate geographical locations. The TF 2-2 IN FSE had 14 of 30 authorized personnel before the tactical road march to Fallujah.

a. *Fire Support Personnel.* TF 2-2 IN forward deployed with a 10-man FSE, including FIST personnel, leaving four personnel behind as part of the S5 and operations sections.

Even when the TF fire support NCO was able to join the FSE, the shortage of personnel stretched the FSE. At the TOC, the targeting officer and RTO literally slept next to the radios. Until the TF FSNCO arrived, the TF FSO was forced to maintain 24-hour operations for three days.

The company FSO for A/2-63 AR was WIA on Day +3, leaving that company with no organic FSE to facilitate fires, effectively taking them out of the indirect fire fight.

b. *Manning Effects on the Fight.* The shortage of fire support personnel put unnecessary strain on maneuver elements and damaged our ability to detect, engage and destroy targets. In future combat deployments, it is imperative for the Army to ensure fire support personnel are at or near 100 percent strength to avoid the problems we faced in this fight.

13. Training. The training that platoon, company and battalion personnel received at the various CTCs paid off richly. Our fire supporters could handle any mission presented to them. TF 2-2 IN FSE conducted danger close training several times in Iraq that paid huge dividends in the Battle of Fallujah.

a. *Confidence in Fires for the Force.* FOs were confident in their ability to call for and adjust close fires and often did so. Training with our organic mortar platoon facilitated our fire missions in Fallujah. We often worked with them, knew their capabilities and were supremely confident in them.

Although we had not worked with 2/A/1-6 FA before deploying to Fallujah, the battery's performance early in the fight quickly won our confidence.

b. *Importance of Danger-Close Live-Fire Training.* In our time in the Army, we have had limited live-fire training for danger-close missions until last summer in Iraq. The typical training of initiating and adjusting rounds on targets at great distances is vastly different from training for danger-close fires. The results of our missions clearly indicate this type of training must be implemented across the board for fire supporters.

c. *Training for MOUT.* We also learned that corrections in MOUT are much smaller, often smaller than the doctrinal minimum of add/drop 50 and left/right 30 that we are trained on. We often found it necessary to make adjustments smaller than these values to get rounds on target, particularly when engaging fighting positions, fortified houses, trench lines and spider holes. The artillery and mortars showed outstanding flexibility in applying these corrections.

The bottom line is that before engaging in offensive operations in a MOUT environment, it is imperative that all fire support personnel are highly trained on call-for-fire and adjustment procedures and their equipment. The MOUT environment is extremely fast-moving, and there is no time to waste. Fires must be initiated, adjusted and brought to the FFE phase rapidly.

Paladins and mortars are an integral part of this process, and must move as rapidly as the observers. Combined live fire training for observers, the FDC and the guns is the answer.

14. Conclusion. The contributions of indirect fires were a decisive part of the Battle of Fallujah and contributed tremendously to the outcome of the fight. They allowed the maneuver forces to rapidly move through the city with minimum casualties and demonstrated what a joint and combined arms team can do.

The effects were physically and psychologically devastating. Not only did indirect fires destroy AIF personnel, but they also destroyed their will to stand and fight. Indirect fires also positively influenced our forces by demonstrating to commanders on the ground that overwhelming firepower was at their disposal.

The Paladin platoon greatly increased the TF's firepower, timeliness and flexibility, allowing us to move at an unprecedented pace through a fortified city. We learned to use indirect fires early and often in large volumes. During the course of the battle, more than 2,000 artillery and mortar rounds were fired and more than 10 tons of precision Air Force munitions were dropped.

However, as successful as we were, had the battle lasted longer it would have been difficult to sustain fire support operations. We must learn from this fight to prepare for the future.

At the end of the fight we thought back on some of the things we were the proudest of. What jumped to the forefront was infantry and tank platoon sergeants, platoon leaders and company commanders telling us that the artillery and mortars were awesome. At the end of the day, that is what it is all about: our maneuver brethren recognizing why we are called the "King of Battle."

Chapter 12

The Combat Corps Wheeled Battalion in the Divisional War Fight: Combat Engineering in an Urban Environment

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Imagine a unit being transformed from Code 4 (C4) (not combat ready) to Code 1 (C1) (fully combat ready) in only 152 days and then successfully executing more than 1,400 combat engineer missions in an urban environment in the span of a one-year deployment. A unit engaged by insurgent forces more than 50 times, yet never wavering in the face of the inherent dangers of combat. A unit whose Soldiers were awarded 42 Bronze Stars, 22 Purple Hearts, and 12 Army Commendation Medals for Valor and nominated for the Meritorious Unit Citation. Sounds like Audie Murphy's unit in World War II, doesn't it? Well, it isn't. This is the story of the 458th Engineer Battalion (Corps) (Wheeled), United States Army Reserve, and how its Citizen-Soldiers provided full spectrum engineer support to the 1st Cavalry Division in the urban environment of Baghdad, Iraq, during Operation Iraqi Freedom. The purpose of this article is to share information with the Engineer Regiment to help guide other engineer units in their preparations for conducting operations in an urban environment in support of the Global War on Terrorism.

Mission Analysis and METL

The corps wheeled engineer battalion is comprised of a headquarters and headquarters company and three line companies. Each line company is comprised of a headquarters element, three sapper platoons, and an equipment and obstacle section (commonly referred to as the support platoon). The three maintenance teams (nuclear, biological, and chemical [NBC] specialists; communications specialists; and medics assigned to the headquarters company) were attached to the line companies during the deployment, which increased their assigned strength. This personnel structure, along with the battalion's organic equipment, was ideal for stability and reconstruction operations in an urban environment.

According to the modified table of organization and equipment (MTOE), the mission of the combat corps wheeled battalion is *"to increase the combat effectiveness of the corps by accomplishing mobility, countermobility, survivability, and sustainment engineering tasks."* Upon mobilization in November 2003, the 458th Engineer Battalion was told by the Engineer Brigade, 1st Cavalry Division, to provide direct support to the division. We only had to look at our secondary mission *"to reinforce divisional engineer units when required,"* to know that we were operating within doctrine. We were being pushed forward from the corps rear into the division fight on an asymmetric battlefield and immediately recognized the need to conduct a thorough mission analysis and revise our mission-essential task list (METL) for combat engineering in an urban environment. The revised METL proved invaluable in guiding the battalion to combat readiness in a minimum amount of time during post mobilization training.

During the home station phase of mobilization, the military decision-making process (MDMP) was used to refine the battalion's METL. The battalion's previous war trace alignment was to another major theater of operations and was geared for high-intensity conflict. After being alerted for mobilization, the battalion's senior leadership conducted a detailed mission analysis for

stability and reconstruction operations. The analysis was that the battalion would not be required to perform many doctrinal engineer missions (such as emplacing or breaching minefields or supporting river-crossing operations), but would be tasked to execute several non-doctrinal missions (such as heavy rescue and route clearance with prototypal equipment). Our refined mission statement became —

“The 458th Engineer Battalion provides mobility, countermobility, survivability, and general engineering to the 1st Cavalry Division in Multinational Division (MND)-Central Baghdad in support of stability operations and support operations in order to set the conditions for coalition forces and enable them to support the progressive transfer of authority to the Iraqi people, their institutions, and a legitimate Iraqi national government.”

The battalion METL was then revised based on the new mission statement and the doctrine of Field Manual 7-1, *Battle Focused Training*.

Training

Based on a training readiness assessment of the stability and reconstruction operations METL, the battalion commander and operations staff officer (S-3) developed a training strategy that ensured combat readiness at the conclusion of the reception, staging, onward movement, and integration (RSOI) process. Because 52 percent of assigned personnel strength was cross-leveled into the battalion within 30 days of mobilization, the strategy initially focused on individual Soldier survivability skills.

While squad leaders and platoon sergeants were executing this training and building cohesive teams, the senior leadership was developing training plans to achieve combat readiness for stability and reconstruction operations. The unit then mapped out a plan to train the additional requirements during a 25-day period of mobilization-station training to attain (METL) proficiency for deployment. This training included multi-echelon training in military operations on urbanized terrain (MOUT), basic and advanced demolitions, urban search and rescue (heavy rescue), and counter-improvised explosive device (IED) operations. Our partner throughout the training process was the 3d Battalion, 315th Regiment (Training Support) (3/315th) which assumed the role of unit assistor during the mobilization process. The 458th had previously attended annual training with the 3/315th, which helped plan and execute a training strategy.

Full-Spectrum Operations

The 458th conducted a relief-in-place/transfer of authority, initially supporting the 1st Armored Division on 27 March 2004 and then the 1st Cavalry Division 30 days later. Our expectation was that stability and reconstruction operations would evolve into nation building, and we would be heavily engaged in general engineering in support of civil-military operations. We were wrong. By the middle of April, Mahdi’s army declared war on coalition forces and the insurgency was in full swing. Stability and reconstruction operations turned into full-spectrum operations for the division. The 458th was directed to reorganize a platoon to fight as infantry. And the battalion’s mission evolved into: route clearance (becoming our bread and-butter mission), force protection engineering, and heavy rescue and consequence management (taking on a greater sense of urgency due to the use of vehicle-borne improvised explosive devices [VBIEDs]).

Fight as Infantry

In May 2004, the 458th was tasked by the division Engineer Brigade to reorganize a platoon to fight as infantry and attach it to the 91st Engineer Battalion to help secure a sector of West Baghdad for 9 months. During that period, the platoon executed patrols, raids, cordon-and-search operations, IED clearance, and quick-reaction force missions as mounted and dismounted infantry. The Soldiers executed 450 combat patrols, engaging insurgents on multiple occasions, without a single serious injury. The ability of this platoon to rapidly reorganize and train and successfully execute infantry missions in a tough urban environment is a testament to the platoon's leadership and the rugged training that the corps wheeled battalion habitually executes in peacetime to be able to fight as infantry in wartime.

Route Clearance Operations

Probably the single most important engineering mission executed by the 458th Engineer Battalion was that of conducting counter-IED operations. Known as Task Force Iron Claw, the operation assured mobility within the division battlespace by finding IEDs along main and alternate supply routes and coordinating with supporting explosive ordnance teams for destruction or retrieval of the IEDs. Using prototypal equipment known as the Interim Vehicle-Mounted Mine Detection System (IVMMDS), the line platoons executed Task Force Iron Claw operations. The tactics, techniques, and procedures were continuously altered to enhance the task force's capability and survivability in an environment where 93 percent of all IEDs emplaced within Iraq were found. The primary combat system used by the task force was the mine protected clearance vehicle (MPCV) commonly referred to as the Buffalo. The ability of the Buffalo to "interrogate" potential IEDs with its articulating arm, while the crew remained protected inside the vehicle, made it invaluable. During 12 months of combat operations, Task Force Iron Claw completed 575 missions, clearing 171 IEDs over 34,000 kilometers of roadway. The task force's ability to locate and neutralize IEDs preserved combat power and assured mobility for coalition forces.

Insurgents were using the rural roads outside of Baghdad's population centers to ferry arms and forces from outlying weapons caches into the city. The routes they used were known as "rat lines." Soldiers of the 458th provided the brigade combat teams with no-notice barrier emplacement support for snap traffic control points on many occasions to interdict these rat lines. The battalion also participated in a more unconventional approach to interdicting the rat lines by using mine-clearing line charges (MICLICs). The end result was the denial of insurgent lateral maneuver.

Force Protection Engineering

Many of the forward operating bases (FOBs) constructed during Operation Iraqi Freedom had limited force protection due to the availability of barrier materials or engineers to complete force protection projects. The heavy equipment available to the battalion, coupled with the abundance of military occupational specialty 21B combat engineer Soldiers, made this mission a perfect fit. The battalion was continually employed in the heightening of force protection at FOBs and Iraqi facilities within the Task Force Baghdad area of responsibility. Anything from erecting precast concrete barriers around key facilities, filling HESCO® Bastions, constructing berms around FOBs, and erecting concertina fence were all missions that the 458th Engineer Battalion performed on a daily basis. In support of force protection operations, the battalion constructed more than 19 kilometers of earthen berms and 11 kilometers of concertina fencing, emplaced

1,523 mortar bunkers and 34,071 precast concrete barriers, and filled 23,690 HESCO Bastions at 11 FOBs and numerous Iraqi government facilities to harden them against insurgent attack.

Heavy Rescue Operations

Before deploying, the 458th received the mission to provide a consequence management and heavy rescue capability as a result of weapons of mass destruction incidents within Baghdad. A heavy rescue unit was trained and equipped at the Fort McCoy Mobilization Station in Wisconsin and provided urban search and rescue and confined-space rescue on numerous occasions within the Task Force Baghdad area. (A description of this unit and its training can be found in the January–March 2005 issue of *Engineer*, page 37.)

The pinnacle achievement of the heavy rescue unit, known as Rescue One, was its actions in response to an anti-Iraqi forces bombing in the Ghazaliyah section of Baghdad on 29 December 2004. An Iraqi family was held hostage inside a three-story structure that was wired with 1,800 pounds of explosives. Once the Iraqi police arrived and opened the door to the residence, the blast devastated the entire neighborhood. Members of Rescue One, working hand-in-hand with the Iraqi first responders, saved the life of a 22-year-old Iraqi woman through a 3-hour, confined-space rescue and recovered all four of her children using confined-space rescue and heavy equipment recovery techniques.

Support of Fallujah Offensive

In November 2004, the 458th Engineer Battalion received the mission to provide horizontal engineering support to the 2d Brigade Combat Team and the United States Marine Corps during the Fallujah Offensive. The battalion staff performed the MDMP (as it had for every mission the battalion received) and tailored a platoon-sized task force of horizontal construction assets with embedded 21B Soldiers for security. During a 2-week period, the task force constructed earthen berms around FOBs, emplaced HESCO Bastions around command and control nodes, dug in the brigade artillery battery, and constructed multiple traffic-control points.

Civic Action Projects/Humanitarian Assistance

Due to the intensity of the insurgency, the brigade combat teams frequently conducted kinetic (offensive) operations to establish control in sectors. The goal of the division commander was to eventually conduct nation building operations. His intent was to take the AK-47s out of the hands of the insurgents and replace them with shovels, employing the insurgents in projects that would help to rebuild their nation. The negative aspect of kinetic operations was the collateral damage that resulted, creating a need to quickly show the coalition's commitment to "making it right." The 458th Engineer Battalion's Headquarters Company was tasked to support what became known as *Operation Rhode*, and served to get the Iraqis back on their feet after kinetic operations. The headquarters company transportation section purchased, stored, and delivered "Rhode Packages" to brigade combat teams after combat operations in their sectors.

- Sustenance packages consisted of items for meeting basic nutritional needs (including rice, flour, and canned goods).
- Construction packages consisted of basic construction materials required to make repairs to damaged homes (such as lumber, nails, roofing materials, and plywood).

- Neighborhood area council packages consisted of items to help reestablish government at the local level (such as computers, office automation equipment, and basic office furniture).

This form of nation building provided coalition forces with a method of demonstrating commitment to the rebuilding of Iraq.

Summary

The 458th Engineer Battalion served with distinction during Operation Iraqi Freedom in the tough urban environment of Baghdad. The broad spectrum of missions the battalion accomplished reflects its adaptation of engineering doctrine to the contemporary operating environment, coupled with effective training and sound leadership. The flexibility of the corps wheeled structure, when combined with the versatility of the Army Reserve's Citizen-Soldiers, makes it an ideal organization for supporting divisional operations across the continuum of conflict.

Chapter 13

Urban Operations Training at the Power Projection Platform — “Welcome to Al Wadi”

LTC John C. McClellan and CPT Eric M. Noe

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Creating challenging, realistic urban-training environments for deploying units requires Army leaders assigned to training support battalions (TSBs) and brigades to adapt and innovate. Early in 2004, 2d Brigade, 91st Division (Training Support) (2-91st TSB), began planning post mobilization training to be conducted at Fort Bliss, Texas, for an Army National Guard brigade combat team (BCT). Accomplishing this goal required some out-of-the-box thinking by the leadership of 1st Battalion, 361st Engineer Regiment (Task Force Redhawk), which is part of 2-91st TSB. This article presents the scenario—and the lessons learned—used to achieve the complex effects of urban terrain and the design and execution of training for a deploying BCT.

Existing Fort Bliss Facilities

Although the Fort Bliss power projection platform (PPP) offered outstanding realism in time-distance factors, desert terrain, and weather, initial reconnaissance of base facilities revealed few that were suitable for patrols, close quarters combat, or urban-warfare training. The base had range camps that could be converted into forward operating bases (FOBs), but lacked suitable training villages or military operations on urbanized terrain (MOUT) sites. So the observer controller/trainers (OC/Ts) of the 2-91st TSB began transforming the base into a series of interlinked urban-training sites. These included mock villages, industrial centers, and FOBs capable of supporting squad- or platoon-level patrolling, company and battalion task force cordon-and-search operations, and close-quarters combat operations.

While at Fort Bliss, the 2-91st TSB initially occupied three mobilization base camps that were converted into replicas of the FOBs that deploying forces would occupy in theater. BCT maneuver task forces rotated through FOB Baker, located at Biggs Army Airfield. Two of the five BCT maneuver task forces were housed for 10 days at a time. The 2-91st TSB training concept required Task Force Redhawk to train basic patrolling techniques for the BCT's five maneuver task forces. The training included squad/platoon dismounted security patrols and quick-reaction-force operations and culminated in company raids and battalion task force-sized cordon-and-search operations. A sister training battalion also trained them on mounted patrols and traffic control point operations.

The location of FOB Baker provided a unique opportunity to develop a training plan that would take full advantage of the only urban terrain available in the immediate vicinity—the base itself. In response, Task Force Redhawk created the fictitious province of “Al Wadi”—a combination of villages and urban areas designed to replicate an area of operations located on the outskirts of a large Iraqi city. The Fort Bliss garrison leadership supported the battalion and, for the first time in recent history, training lanes were created directly on Biggs Army Airfield, the adjacent railhead facility, and portions of the main cantonment area of Fort Bliss. Figure 13-1 shows the main post areas used for the urban-patrolling operations.

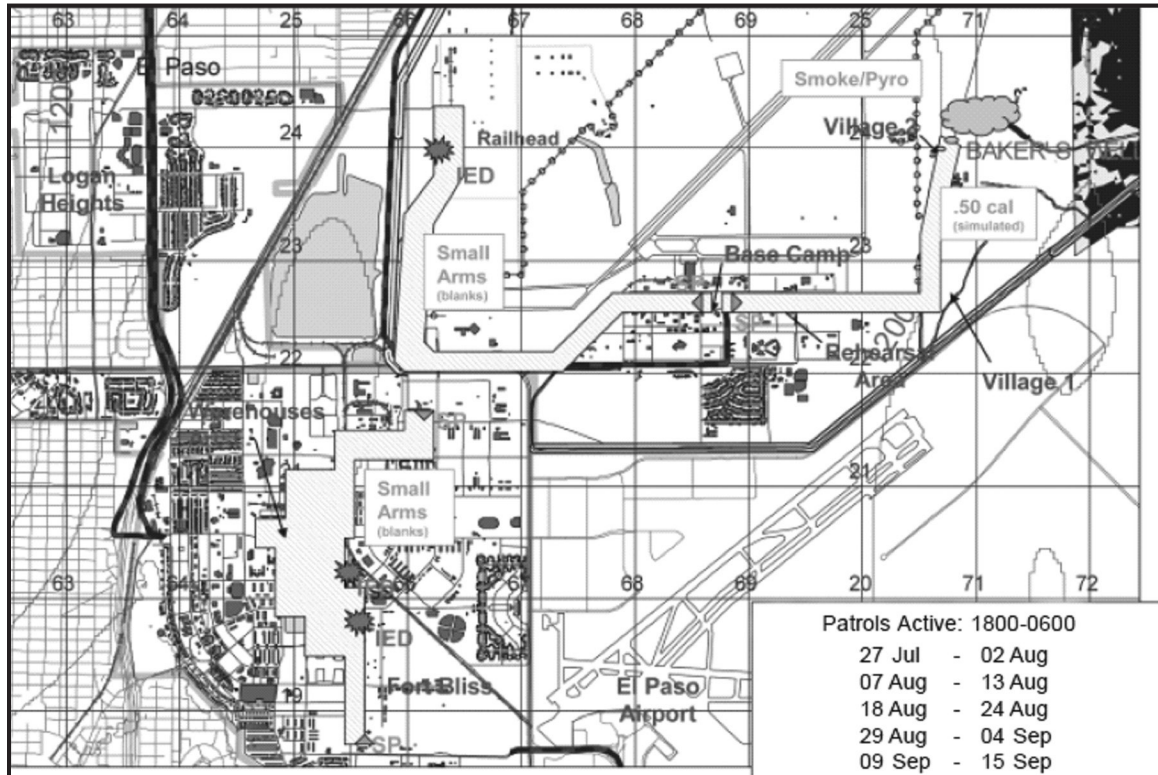


Figure 13-1

In order to use these main facilities to conduct training, rehearsals, and force-on-force blank-fire combat patrols, a detailed plan was briefed to the PPP and garrison leadership for approval. Several key controls were put into place to ensure the safety of the Blue Force (BLUEFOR) Soldiers, OC/Ts, permanent party Soldiers, and residents and employees of Fort Bliss. A copy of Figure 13-1 (along with an explanation of the training concept) was given to the garrison commander to provide situational awareness to all on-post agencies on the times and locations of our training patrols. Advance coordination with the provost marshal, airfield commander, Force Protection Office, Public Affairs Office, and various tenant agencies adjacent to the patrolling areas was critical to the plan's success.

The risk assessment for the operating plan included—

- Alerting Fort Bliss garrison agencies of the areas and times of patrol operations.
- Alerting the garrison Security/Force Protection Office and the Provost Marshal Office of the locations of all patrol routes emplaced training improvised explosive devices (IEDs), mock ambushes, and drive-by shootings.
- Coordinating closely with the Provost Marshal Office throughout operations.
- Positioning OC/Ts in the front and rear of dismounted formations for traffic control.
- Specifying locations where blank-fire weapons, the Multiple Integrated Laser Engagement System (MILES), pyrotechnics, and simulated IEDs would be used.

- Planning routine policing of brass from blanks to prevent hazards to vehicles or pedestrians.
- Training and rehearsing for Opposing Forces (OPFOR) and contracted civilians on the battlefield.
- Adapting exercise rules of engagement to account for military and civilian personnel in the area who were not part of the training (but were a useful backdrop).

In addition, since most of the dismounted patrolling was conducted between 1800 and 0600 hours, limited visibility.

Creating Al Wadi

Within the Al Wadi area of operations, two major considerations drove the details of the intelligence scenario created to frame the insurgent activity that would operate there. The first was the close proximity of Biggs Army Airfield and the El Paso International Airport, and the second revolved around the Fort Bliss warehouse district and railhead.

Biggs and El Paso Airports

The training scenario presented a growing insurgent threat to coalition air operations at the two airfields that included anti-Iraqi force surveillance and fence line breaches, IEDs on coalition supply routes within the sector, and rocket/mortar attacks aimed at the FOB and the airfields. These activities disrupted coalition air operations and delayed the reopening of civilian air traffic (an interim government priority) at the “Al Wadi International Airport,” still under coalition military control since the initial seizure. Thus, task force elements would need to patrol these areas, check fence lines, develop pattern analysis, conduct crater analysis, and locate insurgent firing positions in order to defeat the IED threat and rocket/mortar attacks and restore stability. BLUEFOR dismounted patrolling operations from the FOB included mounted quick-reaction force missions to reinforce dismounted security patrols, react to local demonstrations, or conduct downed aircraft rescue missions in the open desert military training areas east of the airfields.

To support the airfield threat scenario, Task Force Redhawk identified the need for outlying urban settings from which the insurgents could recruit and operate. The task force constructed two small Iraqi villages with basic structures that included centrally located homes and businesses, a school, a police station, and a cafe. The villages were built by the OC/Ts out of pressure-treated lumber and plywood purchased by the brigade through the Fort Bliss Directorate of Public Works and Logistics. While many of the buildings were simple one- or two-room structures with a single entry, each village had some complex floor plans and a two-story mosque. Later, several old storage buildings were added that the garrison commander made available. A contract provided soil stabilization of the roads, which started out as off-road tire tracks in the Fort Bliss sand. The northern village of “Akbar-Kristalad” consisted of 41 tightly grouped structures, and the southern village of “Al Matt” consisted of 63 structures dispersed over a wider area (see Figure 13-2). The sizes and geography of the two villages allowed different tactical challenges for the commander to consider, including security patrols, raids, or cordon-and-search operations. The construction of the two villages took approximately 6 weeks and cost about \$300,000.



Figure 13-2

Sand-colored paint, courtyards (formed with concrete barriers), junked cars, operational streetlights, and realistic Arabic signage on structures used by role players enhanced the basic plywood construction of the village. Key structures—a mosque, police station, town square, coffee house, and schoolhouse—were treated like the sets of a stage play. A few carefully placed items—Arabic inscriptions and prayer rugs in the mosque, a desk and a bulletin board with police patrol routes in the police chief’s office, and a few desks and a map of the Middle East in the school—made these structures complete. Our contracted civilians on the battlefield spent considerable time there and were encouraged to add anything that would make the villages more real. Some of the civilians brought additional furniture, desert plants, and framed artwork, and one industrious El Paso woman made two authentic Iraqi flags! They also cooked food over open fires and played indigenous music. The addition of these features not only maintained the morale of the civilian workforce but made the task of searching rooms and buildings more difficult. Weapons caches were dug into the sand, and then they were covered with a carpet and a desk. Maps, photographs, and computer disks were stashed behind pictures.

Task Force Redhawk also inherited the use of a previously constructed “terrorist training camp” that was ideally situated near the two villages (see Figure 13-3). This complex was surrounded by a 4x2 double-apron barbed wire fence and included a tower, bunkers, an abandoned bus, and a mock building. The complex—dubbed “Camp Al Qaeda” by the OC/Ts—replicated an insurgent staging area and was an ideal target for platoon or company raids, frequently containing a weapons cache or other intelligence indicators for the patrols to discover, search, confiscate, or destroy.

Fort Bliss Warehouse District and Railhead

The Fort Bliss warehouse district and railhead, the second major factor in the scenario for Al Wadi, replicated the northern edge of the city. Several square blocks of large storage warehouses became the local storage and distribution center for humanitarian relief supplies by various nongovernmental organizations. Operating among the legitimate organizations, the task force inserted the “Islamic Children’s Relief” agency, an insurgent front whose primary purpose was smuggling weapons and explosives to support attacks on coalition main supply routes and the

airfields. The training task forces therefore patrolled the warehouses, checked local (armed) Iraqi security forces posted there, and attempted to uncover evidence of insurgent infiltration and covert weapons smuggling.



Figure 13-3

From the FOB, patrols moved either east (parallel to the Biggs Army Airfield and the north) in and around two new MOUT villages, or west and then north to the Fort Bliss railhead area. The southern patrolling area encompassed portions of the Fort Bliss main post, including a warehouse district that was ideal for the operational scenario. Through coordination with the garrison, Task Force Redhawk gained access to the warehouse grounds and the interior of selected buildings to portray insurgent operations in this area, eventually leading up to raids or cordon-and-search operations at the company or task force level.

The tactical challenges of the “Al Wadi warehouse district” were the centerpiece of the training. Complex urban features included multistory buildings, deep box-culvert drainage ditches, 90-degree blind corners, loading docks, fenced compounds, streetlights, and dumpsters. Since Fort Bliss is an active military base, real-world traffic added realism to the environment. OC/Ts ensured that traffic was unimpeded by the training operation, although the confusion and gawking from post personnel and families as they drove past the training site effectively simulated some of the same conditions found in Iraq.

Patrol routes (5 to 7 miles in length) were controlled by mandating designated checkpoints. These checkpoints, typically power or water substations, required security checks because they provided essential services to the local villages and were routinely sabotaged by insurgents to discredit coalition efforts. Units on patrol would encounter sniper fire, drive-by shootings, informants, rock-throwing crowds, and eventually firefights with armed insurgents found caching weapons inside one of the warehouses.

For the OC/Ts, the checkpoints served to keep multiple, simultaneous patrols “on time, on target” with the established master event list in order to accomplish the training objectives each night. Several squads and platoons could be on patrol at the same or nearby routes, offset only by a later start time. OC/Ts used internal communications to maintain situational awareness and

patrol intervals. Squads and platoons were chosen from separate companies to minimize radio collaboration while on a patrol designed to train squad leader and platoon leader instincts.

Using this combination of varying urban terrain and the supporting threat scenario gave the task force the opportunity to interact with friendly villagers and enemy insurgents, apply rules of engagement, hone their patrolling skills, and practice the battle drills they would need to survive these situations in theater. Junior leaders quickly developed decentralized thinking since communications were challenging in their operating environment. At the same time, company command posts and task force tactical operations centers were able to refine tactics, techniques, and procedures; develop link diagrams, pattern analysis, and graduated response matrices; and track the location and status of their small units while outside the FOB wire.

Lessons Learned

Urban terrain available for training with battlefield effects is limited at most Army bases. The 2-91st TSB constructed its own and convinced post leadership to allow it to fire blanks and use pyrotechnics in what was essentially the cantonment area of Fort Bliss. The combination of the railhead, warehouses, airfields, and mock villages became a highly effective patrolling environment once occupied by interactors tied together with a realistic provincial intelligence backdrop.

Traditional Army MOUT sites can be highly effective training for some small-unit tactics, patrolling, and close quarters combat with simulations or blanks, but full-up “shoot houses” of the type the 2-91st TSB constructed at Fort Bliss are needed to advance training squads and platoons all the way through live-fire close-combat clearing rooms and buildings. What most Army MOUT facilities lack is suitable size; variety of interior layouts; and actual basements, sewers, streetlights, and other features that are found in a real city.

Existing or abandoned urban settings, such as multi block warehouse districts or housing areas, are extremely effective for large-scale urban-operations training such as company and battalion task force-sized cordon-and-search operations. A consideration for the Army in this next round of base realignments and closures might be to hold onto one or more suitable areas for this kind of training.

The Army needs an urban warfare center, on the scale of the existing combat training centers, suitable for audiences up to battalion task force level and manned by a dedicated team of observer-controllers and OPFOR who are experts in close quarters combat and insurgent tactics. An urban operations and counterinsurgency school of thought for mid- to senior level staff officers and commanders could also be added. In addition, an urban warfare school could be established on par with the Northern Warfare or Jungle Warfare Schools, along with potentially changing a phase of the Ranger School to accommodate an urban-center rotation.

Summary

As 75 percent of the world’s population moves to urban areas within the next 10 to 20 years, urban combat will become more prevalent and will increase our Army’s need to properly train for it. The province of Al Wadi developed into a highly effective urban and complex terrain training area for a task force in a BCT. The Al Wadi villages have now been relocated; however, before they were moved, elements of this scenario were used again for a second deploying BCT and several separate companies. And United States Army Training and Doctrine Command

(TRADOC) and United States Army Forces Command (FORSCOM) tenant units and a number of government, joint, or international organizations also used the villages to support training on numerous occasions. Sharpen the Edge!

Chapter 14

MOUT: Fort Sill Expands Urban Operations Training

CPT Sean D. O’Berry

Reprinted from the May–June 2006 issue of *Field Artillery*.

Army operations in the Global War on Terrorism (GWOT) emphasize military operations in urban terrain (MOUT), and schoolhouses and home stations should do the same, in terms of discussions, training and resource allocations. To prepare Soldiers for GWOT Fort Sill, Oklahoma has transformed and expanded its MOUT training and facilities.

This year at Fort Sill, Initial Entry Training (IET), Basic Officer’s Leader Course II (BOLC II) and mobilization preparation training all modified their support plans to better prepare leaders and Soldiers for MOUT challenges.

Commensurate with this training focus, Fort Sill built robust new training facilities. Some of these facilities are now in use, such as the recent BOLC II expansion of Liberty City, a modularly constructed building-clearing MOUT site. Others, such as the new Urban Assault Course north of Kerr Hill, will open this summer.

Liberty City

The 30th Field Artillery Regiment (FAR) designed and built a large expansion of Liberty City for BOLC II. Construction began in November 2005, and the city opened for operations in February 2006. The expansion involved input from the entire cadre, from company commanders to platoon mentors.

The plan laid out a bold three-story, \$500,000 facility. Construction centered around eight 40-foot military vans (MILVANS) built in sections off site and brought in on flatbeds. The most recent additions are a town mosque with minaret and safety railings on the highest points of the buildings.

The new complex features a labyrinth of buildings and staircases to make navigation through the city a greater training challenge. Some parts of rooms are accessible only through tunnels hidden behind furniture. Other buildings outside the walls simulate a street or market place and are well suited for conducting presence patrols.

In Week Five of BOLC II training, the officers practice room-clearing techniques as part of a three-day exercise. The central courtyard is perfect for four-man teams to rehearse entering and clearing rooms through both corner and center doors.

On Day One, officers rotate between breaching practice, moving within a building and entering/clearing a room. On Day Two, platoons rotate through multiple room clearings, presence patrols and advanced rifle marksmanship (ARM). Then the platoons attack to secure a building, engage in advanced-firing, quick-fire techniques and target discrimination on Day Three. The officers also conduct a force-on-force exercise that includes fighting against an eight-man well trained opposing force (OPFOR) while simultaneously practicing hallway, stairwell and staircase clearing plus seizing a priority human target from the city.

By the summer of 2006, the site will train 50 percent of all new officers entering the Army. Five companies of 220 officers will train in urban operations at this Fort Sill site, starting in June 2006.

IET Soldiers also train at Liberty City. Each battery selects Soldiers well into IET to demonstrate the urban operations situational-training exercise (STX) lane to Day-One recruits. After new recruits have completed their urban operations training in IET, the best are handpicked to demonstrate the urban operations lane to a class of new recruits.

The initial entry Soldier is on the cutting edge in terms of modern equipment. He wears the new Army combat uniform (ACU) and is equipped with the Interceptor body armor system (IBAS). To prepare for current operating environment (COE) operations, all Soldiers now undergo both day and night ARM training using M16A4 rifles equipped with the M68 close combat optic (CCO). Each Soldier fires live wearing PVS-7 night-vision goggles (NVGs) and weapons equipped with AN/PAC-4 lasers.

Arranged in a U-shape with a central gravel roadway, Liberty City consists of five clusters of MILVANS stacked and arranged as one- and two-story buildings. Walls adorned with Arabic writing surround the buildings. The city includes 100 doors and windows that open at all angles with corridors and internal and external staircases scattered throughout the facility. The insides of the buildings contain furniture to create a complex and realistic environment. Destroyed hulks and cement barriers lay outside the city to provide cover. The Field Artillery Training Center (FATC), Fort Sill, built and opened Liberty City in 2005. The site can accommodate up to platoon-sized elements of IET Soldiers in a rotation of up to 256 Soldiers per day.

Freedom Town

In June 2005, IET Soldiers began conducting convoy and patrol missions to this wooded village. Soldiers identify suspected enemy weapons and ammunition caches and react to improvised explosive devices (IEDs) throughout the town. Squads also receive missions to deliver humanitarian rations and conduct presence patrols. Soldiers receive evaluations on the tasks of manning a checkpoint, reacting to news media, conducting vehicle searches and providing first aid. In July 2005, the school placed a crashed helicopter near the south gate of the town for Soldiers to train on rescuing a downed pilot.

The FATC continues to improve and modify the town's facilities and layout to enhance IET training.

Camp Eagle

The NCO Academy's Warrior Leader Course (WLC), Basic NCO Course (BNCOC) and Advanced NCO Course (ANCOC) each conduct a 96-hour STX during Week Three at Camp Eagle. The STX focuses on the COE.

A major part of the STX is the student-conducted MOUT training. The students rotate through squad leader and team leader positions and conduct several dry-fire rehearsal missions before training with blank ammunition. The students plan, coordinate and conduct all aspects of their missions.

Students learn how to approach a building, avoid cross-linear danger areas and react to possible IED scenarios. Once the students reach a building, they configure into a four-man room clearing “stack,” check for booby traps and maintain constant security. Students then move from room to room clearing closets, cubby holes and attic spaces. The small group leaders coach and critique them, and the students conduct an after-action review (AAR) for each run-through.

Once the students have trained properly, they conduct the mission with blanks in their rifles, running through all the tasks again. This time, the OPFOR is involved, and as the students clear each room, they must deal with force-on-force and possibly civilians on the battlefield. During all blank missions, small group leaders use smoke grenades and artillery simulators to increase the realism but always focus on the students’ safety.

The benefit of the STX is that it allows those students who have already experienced combat to share their lessons learned with students who eventually will lead young Soldiers into harm’s way. After all the training is finished, the students get a feel for real-world combat with the missions combined into a single mission.

Live- and Blank-Fire “Shoot Houses”

The 4th Brigade, 75th Division (Training Support) conducts post-mobilization training of Army Reserve and National Guard Soldiers and active duty Air Force Airmen preparing to deploy to Iraq and Afghanistan through Fort Sill. These units come to train at Fort Sill from across the continental United States. As part of the prescribed training for these units, the brigade provides short-range marksmanship and close-quarters combat training, led primarily by the brigade’s 1-289 Training Support Battalion (out of Houston, Texas) known as Task Force Liberty.

The training takes place on a facility on the East Range where the Soldiers and Airmen learn techniques for target discrimination and reflexive fire under day and night conditions and also train on techniques for day and night building clearance. This training uses a number of structures designed to enable the progressive training of the techniques to increasing levels of complexity.

The capstone event is a live-fire building clearance exercise using a “shoot house” structure designed specifically and safely for this purpose. The Soldiers and Airmen also practice these building-clearance techniques with blanks in low-light conditions using night-vision devices.

Other urban operations training for mobilizing units incorporates the Liberty City complex into scenarios for advanced convoy mission exercises. Future training for these units will also incorporate the Urban Assault Course.

Urban Assault Course

The Army Corps of Engineers has built a new Urban Assault Course on West Range, north of Kerr and McKenzie Hills. The course is an installation range and soon will open to all units. Mobilizing units will have first priority for training on the Urban Assault Course; courses, such as WLC, will have second priority; and then Fort Sill and outside units’ training will have third priority.

Work began on this project in February 2005 after six months of planning. The Corps of Engineers completed the Urban Assault Course in February. The main construction of the course cost 2.7 million dollars.

The course trains individual Soldiers, squads and platoons on tasks required to operate within urban areas. It has five stations with fully automated targets. Specific target scenarios are computer event-driven and scored from the Range Operations Center.

At Station 1, the individual and team trainers contain adjoining rooms with interior precision targetry and doors designed to be kicked in and replaced. The squad and platoon trainer at Station 2 is a U-shape along the lines of Liberty City.

Station 3 is a grenadier gunnery trainer with damaged hulks and four bunkers arranged at varying distances. A two-story building with targets is at the end of the station. At Station 3, Soldiers fire M203 rounds at targets arranged in the trainer.

Station 4 is an urban offense/defense building, a large two-story mansion with roof access. Trainees will practice multiple-room clearing and platoon-sized operations at this station. The basement is accessed through a trap door. Station 5 is underground next to Station 4. Station 5's underground clearance facility leads directly to the basement of the urban offense/defense building.

In the future, Liberty City will feature Beamhit, the laser marksmanship training system (LMTS), or similar technologies. BOLC II Soldiers will train at a multi-million dollar FOB north of Liberty City. Mobilizing Soldiers will train at FOB Moway and train for urban operations at the new Urban Assault Course.

Fort Sill is on azimuth to expand training venues for urban operations. We are transforming our facilities to immerse the Soldier in the training he needs to become expert in the tasks he will have to conduct in the COE. Whatever the requirement to train the Soldier Fort Sill will rise to the occasion.

Chapter 15

Personnel Recovery Quick Reference Guide

Marvin Decker, Center for Army Lessons Learned Analyst

Introduction

Personnel recovery is the sum of diplomatic, civil, and military efforts to return isolated persons — military, Department of Defense civilian and contractor, or any person designated by proper authority — to safety or friendly control. Soldiers involved in urban operations may become isolated or separated from their units. Leaders of those units must maintain positive control and account for their personnel. During urban operations, the potential for an isolating incident is high. Unit commanders and their staffs must plan for and rehearse the actions for the recovery of isolated Soldiers.

Commander and Staff

Personnel recovery is based on leadership and accountability. The commander has several basic personnel recovery responsibilities:

- Develop and disseminate personnel recovery guidance for the execution documents of the command.
- Produce isolated Soldier guidance (ISG) based on personnel recovery guidance.
- Maintain Soldier accountability at all times.
- Identify and provide guidance and tasks to the recovery task force.
- Execute the command and control of personnel recovery operations.

Units and Recovery Forces

Recovery of isolated personnel is normally the responsibility of two entities: the Soldier's unit or a designated recovery force. Among the responsibilities of the unit or other designated recovery force in this situation are the following:

- Receive the mission and conduct the military decisionmaking process.
- Execute the order.
- Deliver the isolated person or group to reintegration.

Isolated Personnel

The primary task of isolated personnel is to try to regain contact with friendly forces according to the ISG, which provides some predictability to the isolated person(s) and improves the chances of recovery.

Isolated Soldier guidance

Translated into specific actions for the individual Soldier, development of ISG begins when the commander gives initial guidance. ISG focuses on situational awareness, maintenance of accountability, and rapid reporting of isolating events. ISG must contain elements that address the challenge of isolation, including isolation criteria, actions to take when isolated, signals, and linkup methodologies. Soldier guidance is triggered by isolation criteria — the circumstances (situational) under which personnel should execute the ISG based on the command's personnel recovery guidance.

Action to Take When Isolated

Isolated personnel have a responsibility to make it back to friendly forces unassisted, even if the situation and conditions on the ground require a deviation from the ISG.

- **Use of signals:** ISG should address use of ground-to-air or ground-to-ground signals, such as radios, distress beacons, and other electronic devices, and describe visual signals.
- **Linkup procedures:** Should be similar (when practical) to normal combat signals used for recognition and operational security, and should define near and far recognition signals the IP will take to identify themselves.

Small Tactical Unit Personnel Recovery Responsibilities

Commanders and leaders of small tactical units (company, battery, or troop and below) have personnel recovery responsibilities equal to leaders at higher echelons. All Soldiers deployed in military operations are considered at risk of becoming isolated. Personnel recovery should be considered with troop leading procedures in planning and executing missions.

Small tactical units are often in front of operational formations and placed in situations of greatest risk. Leaders should weigh the isolation risk associated with each specific mission or circumstance and engage in composite risk management to mitigate that risk accordingly. When an isolating event occurs, individuals and small units often have the best opportunity to make a quick assessment and react or recover from the isolating situation.

The following are responsibilities for leaders to consider at the small tactical unit level:

- Know higher command personnel recovery guidance.
- Develop ISG for every member of the unit.
- Identify shortfalls in personnel recovery capabilities.
- Identify intelligence requirements for personnel recovery.
- Evaluate each tactical situation, and apply the personnel recovery planning principles of primary, alternate, contingency, and emergency plans for each situation.
- Assess the unit's ability to conduct the personnel recovery tasks of report, locate, support, recover, and reintegrate to the level of the unit's capabilities.

Battalion and Brigade Personnel Recovery Responsibilities

Commanders are responsible for the safety and protection of their Soldiers. Personnel recovery officers are accountable for recovery responsibilities and these additional duties:

- Include personnel recovery responsibilities in unit operations plans and orders.
- Establish personnel recovery staff capabilities and assign primary personnel recovery officer responsibilities.
- Establish isolated person reporting requirements in the brigade and subordinate information management systems.
- Recommend task organization and mission assignment to subordinate elements.
- Advise the commander on steps to ready subordinate units for personnel recovery missions.
- Synchronize and integrate all required assets for personnel recovery activities.
- Assist subordinate staffs and commanders in the development of their specific echelon personnel recovery programs.
- Support joint personnel recovery operations, if directed.

Conclusion

Isolated personnel have a responsibility to avoid capture and to try to regain contact with friendly forces as soon as possible. With respect to personnel recovery operations, the primary responsibility of the commander — at the appropriate level — is to issue personnel recovery guidance and ISG. The vehicle for exercising his responsibility is face-to-face contact with subordinate commanders and interaction with the staff. When required, this coordination extends beyond the chain of command to host nations, multinational partners, and international or nongovernmental organizations. To properly employ the staff, to include personnel recovery operations, the commander guides their actions.

Personnel recovery is a function of planning, preparation and accountability. When leaders have a plan and their personnel comply with that plan, the likelihood of isolation can be reduced and the impact mitigated.

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