



Urban Combat in World War II

How Doctrine Changed as the War Progressed

by Captain Ken Casey

But it came to pass on the seventh day that they rose early, about the dawning of the day, and marched around the city seven times in the same manner. On that day only they marched around the city seven times. And the seventh time it happened, when the priests blew the trumpets, that Joshua said to the people: 'Shout, for the Lord has given you the city!'... And it happened when the people heard the sound of the trumpet, and the people shouted with a great shout, that the wall fell down flat. Then the people went up into the city, every man straight before him, and they took the city.¹

Unfortunately, urban warfare has become much more complex than in the days of Joshua. In World War II, the U.S. Army would take an immature urban warfare doctrine in its infancy, test it, develop it, and change it, based on the new tactical realities, much as it had to do with the rest of its doctrine. World War II presented the U.S. Army with many challenges it had not previously faced on such a grand scale.

It would have been difficult to predict the precise set of tactics and combinations of weapons that would be needed to be successful in combat in both major cities and small villages. So, the Army set forth a basic doctrine on how to apply

combat power, but left the executors of these fights to develop the specific details. In most cases, the Army got it basically right, but in some cases failed to appreciate the possibilities inherent in their new weapons and doctrine, from the use of air power in support of attacking forces to the use of tanks and tank destroyers.

One of the great lessons the Army would have to learn would be to adopt a more integrated approach to fighting. "Rather than relying on either the infantry, tanks, artillery, or air power alone to get the job done, the American Army discovered it could only win battles by using all available manpower and mate-

rial resources in coordinated, combined arms operations.”²² Overall, though, the U.S. Army entered World War II with a solid basic doctrine that it adapted in the crucible of war. This adaptation can be seen best in the Army’s changing techniques and tactics in many areas, but in the area of urban combat, the Army was forced — because of tactical realities — to modify not only its tactics, but also its basic assumption that the urban fight was an infantry fight with only limited support from the other arms.

Prior to looking at specific examples of operations in Aachen and Brest, an examination of the Army’s urban warfare doctrine, as well as its pre-war training, is necessary to appreciate the Army’s starting point. A quick look at the capstone manual for all U.S. Army doctrine, the 1941 edition of *Field Manual (FM) 100-5 Operations*, reveals that the Army had not completely developed a doctrine for urban conflict: the 300-page manual has only two pages directly covering urban combat, in Section IV, “Combat in Towns.”²³

FM 100-5, however, did offer a good description of some of the characteristics of urban fighting. The manual stated that fighting in towns offered concealment for troops and weapons, as well as protection from the effects of fire and protection from mechanized attack. Towns were described as being naturally strong defensive areas, but that they are also a “conspicuous topographical feature,” the details of which can be readily discerned. The manual also pointed out that fighting in towns would be characterized by close combat and not sweeping maneuver. Additionally, difficulties in command and control would make the nature of the fight decentralized, with the outcome resting largely on the “initiative and aggressive leadership of subordinate commanders.”²⁴ Next, the manual described the basic method for attacking a town: The town was to be isolated from its surrounding terrain and neighboring defenses. Like other attacks, the attack on the town should seek a flank or the rear of the main defenses. If the town had been turned into a heavily fortified position, then the attack should be made “strongly supported by artillery, combat aviation, and other supporting weapons.”²⁵ Once these fires are lifted, the attack should proceed by bounds through the town to the far side where the unit was to prepare a defense against counterattack.

FM 100-5 accurately predicted that troops would need detailed intelligence of

an urban area. It recommended the use of reconnaissance, to include aerial photos. Actual operations would bear this out, confirming that extremely detailed reconnaissance gained through patrolling and the commanders’ personal observations was vital to the success of attacks.

Operations failed to appreciate the critical role tanks and tank destroyers would play, and advised *against* their use in cities: “Mechanized troops are of little value in combat within a defended town. Their use for such combat will probably result in excessive casualties, both in personnel and vehicles.”²⁶

Experience would prove otherwise. An emphasis on urban combat for armored forces was absent in the Tennessee, Louisiana, and Carolina maneuvers in 1941. While fighting generally resulted in capturing towns, units didn’t practice fighting within them.²⁷ As *FM 100-5* succinctly put it in its description of the offensive operations of armored divisions, “Defended towns and cities are avoided.”²⁸

Unfortunately, the Germans weren’t going to allow us to conveniently bypass their villages and cities. In fact, the German Army’s doctrine on urban warfare was much more developed, particularly in developing defenses.²⁹ Their doctrine called for a series of well prepared, mutually supporting positions that could be used to blunt enemy attacks. Once the main attack was contained, the Germans would use their reserves to counterattack. The Germans pre-stocked water, food, ammunition, and medical supplies forward, because during actual operations movement would be difficult.

They also understood that the main line of resistance should not be established on the edge of a town because an attacker can bring all his weapons to bear on the structures on the edge of a town. Instead, they defended within the town in an irregular pattern to make it difficult for an attacker to distinguish the main defense. Additionally, the Germans would integrate large stone and concrete buildings into their defenses as these buildings made natural strongholds. Heavy machine guns in dug-in positions at the corner of blocks would dominate the streets and open areas, from parks to cemeteries. Obstacles and barriers would keep out mechanized vehicles. The sewers and subways became routes for resupply, relief operations, and infiltration. Even on the defense, the Germans would seek to maintain the initiative by using their reserves to counterattack the flanks and rear

of the enemy. Although that was German doctrine, the reality for the Germans would be decidedly different as well. They lacked enough reserves to maintain a counterattacking force.³⁰ In addition, U.S. soldiers would use their machine guns to cover the open streets so that the Germans found it practically impossible to maneuver across streets to reposition forces. Buildings that U.S. artillery had reduced to rubble further limited the movement of any potential German counterattacking force. Based on these realities, the urban fight in Germany ended up as a “close quarters slugging match.”³¹ This is the type of fight where accurately applied firepower generally wins.

Later in the war, other manuals also elaborated on the urban fight, particularly *FM 31-50, Attack on a Fortified Position and Combat in Towns* and *FM 17-36, Employment of Tanks with Infantry*; however, both manuals weren’t published until early 1944, too late for the fighting in Italy.³² Meanwhile, military journals like Fort Benning’s *Infantry Journal* and Fort Knox’s *Armored Cavalry Journal* were filling the void by publishing articles on urban fighting.

The fighting in Italian cities might well have prompted the expeditious updating of doctrine and training. *Infantry Journal* described the fight in Cassino as “a testing ground on which the lessons are learned; lessons in tactics, lessons in the uses and application of weapons.”³³ In addition, lessons being learned here were sent back to the United States for inclusion in the training program of the divisions yet to be deployed.³⁴ In October 1942, additional training was specifically ordered to prepare for combat in cities. The additional training took the form of a “combat in cities exercise” in which small units attacked through mock villages, clearing houses of hostile forces that were simulated by “pulley-controlled dummies” designed to pop up unexpectedly.³⁵ It wasn’t much, but it was a start, and coupled with the recent publication of *FM 31-50*, the Army was headed in the right direction.

FM 31-50 covered both combat in towns and combat against fortified positions like the Siegfried Line. Although both problems were included in the same manual, they were considered separately. Much detail was provided about the effects of aircraft in close air support. Also stressed was the penetration capability of various guns against concrete fortifications and bunkers. Yet, when one moves to the chapter on combat in towns, such

details are not covered, nor is there as much discussion about the roles of tanks, tank destroyers, and artillery. The inter-relatedness of the two forms of combat seems to have been missed. If more thought had been given, one could see that towns and cities are fortified positions and that many of the same techniques and tactics described in *FM 31-50* could be used for both.

The manual recommended that it was preferable to bypass a built-up area rather than attack it. In order to bypass a locality filled with enemy forces, an attacker must leave some friendly force behind to block the bypassed force from attacking the rear of the attackers. In addition, the terrain (like that in Germany) might not allow one to bypass a location. In Germany, towns often dominated the road networks and the occupation and defense of these towns could allow a defender to hold up numerically superior forces for extended periods of time.

FM 31-50 also described the urban battlefield almost verbatim from *FM 100-5*. It then went into much more specific detail regarding actual tactics and techniques. One aspect of urban fighting discussed was the difficulty in command and control caused by the fact that the commander could not see all of his forces. Additionally, buildings blocked the signals of FM radios, so the manual recommended use of messengers and wire communications, both of which were later effectively used.

Next, the manual covered the possibilities of night operations with the bold statement that, "Much fighting in towns will take place at night."¹⁶ The theory behind this concept was that areas effectively covered by enemy fire during the day can be used at night because the enemy can't see them. Given the command and control problems already inherent in urban fighting, operations at night would seem to be even more difficult to control. In practice, actual fighting at night rarely happened, although some units used the night attack successfully against small villages. Units did use the cover of darkness to conduct reconnaissance patrols, resupply, and rest.

Field manuals stressed the need for detailed planning. Units would take these recommendations to heart and use city maps, aerial photos, even hand-drawn sketches, all to ensure that everyone understood the plan and their responsibilities. Next, the manual described the operations of each element in the attack, starting with the infantry regiment and

working its way down to the squad. For the regiment, guidance was given on the need to train and rehearse actions prior to the attack. In addition, planners were told to look at the strength of the defenses in terms of the "type of construction and density of buildings" within the regiment's area.¹⁷ Concerning the use of mechanized forces, the manual stated that tanks are generally kept in reserve for other missions. What was allowed was the limited use of individual tanks and tank destroyers. The guidance was that armored vehicles "may be used as accompanying guns to attack by fire strongly fortified buildings and to assist in reducing barricades."¹⁸ In practice, they were invariably used for these purposes. The manuals noted the fact that attacking tanks were vulnerable in built-up areas, and the need for close infantry support, which repeatedly borne out in many operations. Also mentioned was the use of flame-throwers as potentially effective in neutralizing enemy resistance. In fact, their use would prove extremely effective. Although the use of artillery and engineers was mentioned in general, they were not given the level of emphasis that their true roles would eventually merit.¹⁹

Once the manual moved to the battalion level and below, it offered a few more specifics on the integration of tanks, stating that they would remain under company or battalion control and would be brought forward as needed. In practice, tanks moved forward under the close-in protection of infantry and conducted reconnaissance by fire, shooting at any areas even suspected of being defended by the enemy.²⁰

At the squad level, soldiers were cautioned to avoid moving on streets as "they are usually well covered by enemy fire."²¹ Instead, it was preferable to move through buildings, over rooftops, and through backyards. Blasting entry holes in walls with explosives was preferable to entering through doorways and windows that would be covered by the enemy within the building. In general, soldiers were instructed to enter the building from as high as possible and fight downward to drive the enemy into the street where he could be killed by supporting forces.²²

One additional manual that laid out techniques for attacking a town is *FM 17-36, Employment of Tanks with Infantry*, which covered the general characteristics of integrating tanks with infantry. The infantry was described as "protecting tanks from enemy personnel executing

anti-tank measures, while passing through towns..."²³ Tanks meanwhile, supported the infantry by fire and destroyed automatic weapons holding up the infantry's advance. Both roles would be vital in urban combat. Other than that, there were three short paragraphs dealing with the attack of towns. Tankers were cautioned that tanks could be canalized by streets and were vulnerable to falling into the basements of buildings. What was described well is how tanks could be employed against small villages. Tanks would encircle the town and cut off reinforcements, or would assist the infantry in attacking the defenses surrounding the town, both roles the tankers would undertake. A short mention was made of tanks advancing with the infantry and firing at hostile forces.²⁴

The same manual later described the attack on a pillbox, with a detailed description of a special tank-infantry-flame-thrower team attacking, with the tank firing armor-piercing rounds to penetrate the pillbox, followed by either high explosive (HE) rounds or a burst from the flame-thrower. This description accurately described the tactics the Americans would eventually use in cities once they started applying tactics for attacking a fortified line to urban fighting. Finally, in Supplement No. 1 to *FM 17-36*, an illustrated problem was provided for an attack on a village; however, the attack described made no use of many of the combined arms available, like close air support from medium bombers. Additionally, the attack made little imaginative use of artillery or the engineers. This supplement did go much farther in describing the maneuver of the tanks with the infantry, although it didn't discuss how each element would communicate or how leaders would command and control.²⁵

Overall, the U.S. Army entered urban combat with an immature, untested doctrine. "Americans had little practical experience in street fighting and drew most of their know-how from publications and training."²⁶ Fortunately for the Americans, they were fast learners in practice, and they would wisely adapt to the different tactical situations they would face.

The battle for Brest, a coastal city on the Brittany Peninsula, would provide the Americans with their first broad experience in urban combat. The Allies decided to attack Brittany because of the need for additional ports. The Normandy beachhead was incapable of handling all of the logistics needed to sustain the invasion.

Brest was a fortress city of 80,000 people with good port facilities.

Major General Middleton's VIII Corps drew the mission to seize the city. He had the 2nd, 8th, and 29th Divisions available, with around 50,000 soldiers. Unfortunately, his corps tank battalions had been given to 3rd Army for their drive across France.²⁷ Middleton's plan, in keeping with doctrine, called for occupying the dominating hills around the north of the city to encircle it. Then he would demand Brest's surrender. If the Germans failed to comply, Middleton would attack with a series of offensives to take the city.²⁸

For the Germans, Generalleutnant Herman Ramcke was under orders to defend Brest to the last man. Ramcke knew he couldn't defeat the Americans with only 30,000-odd defenders, but he could make the U.S. pay dearly for its capture and generally waste time and ammunition while he took actions to destroy the port facilities. Ramcke organized the soldiers in his command in a defense in depth, taking advantage of the terrain around Brest. His plan incorporated a number of old French forts dating from before the Franco-Prussian War, along with more modern concrete pillboxes, gun emplacements, minefields, and other obstacles. He further augmented his defenses with "dual-purpose anti-aircraft guns and guns stripped off of ships sunk in the harbor by Allied planes."²⁹

If Ramcke's forces were pushed off the heights, he would displace into Brest and take up a house-to-house fight. Once in Brest, the German defenses had every street intersection and the approaches to the intersections covered by machine gun fire.³⁰ In addition, pillboxes and dug-in positions "were generally located at multiple street intersections with all-around fields of fires."³¹ Snipers were also emplaced to protect the machine guns from close assault.

By August 18, 1944, the Americans were in position on the key terrain around the city, and by the 25th, they had started a heavy bombardment of the city and surrounding terrain with heavy and medium bombers in addition to corps artillery. On September 8, Middleton launched all three divisions and drove the Germans off the high ground. From the 8th to the 18th of September, the Americans received their "baptism by fire with street fighting."³² The first lesson the Americans would learn would be the need for combined arms operations. The use of close air support from the Air Corps de-

veloped, with bombers attacking enemy anti-aircraft facilities, strong points, and defenses in Brest. Their main function developed into attacking strong points at least 1,000 yards behind the front. The pilots also experimented with the use of napalm with some success.³³ In addition, the planes strafed and bombed German positions and conducted aerial reconnaissance for ground forces.³⁴

The engineers, who had previously been almost ignored in urban warfare doctrine, directly supported the attacking infantry with demolitions teams that blasted holes in buildings so that the infantrymen could avoid the bullet-swept streets.³⁵ This technique was an innovative solution to the problem of moving freely on the urban battlefield. By blasting new entrances to buildings, the infantry could surprise the defenders in the building, who were expecting them to use the door. The Americans also discovered that this approach decreased their own casualties at the same time.

The engineers also detected and cleared mines, removed obstacles, cleared streets of rubble, and repaired cratered roads.³⁶ Minesweeper teams followed directly behind the assault platoons and cleared the roads of mines so the supporting tank destroyers could get into position to support the infantry by blasting enemy defenses at point blank range, a tactic they had learned in Italy.³⁷ Prior to the war, the doctrinal task for tank destroyers was just that — to destroy tanks. The tank destroyers had been designed to fight in battalions as the corps reserve to stop massed armor formations of German tanks, but because of Germany's production problems, massed formations of German armor failed to appear on the battlefield. So, tank destroyers took on many missions, one of which was close support of the infantry.

Armored vehicles also helped in the same way the engineers did, by providing alternate entrances to buildings by either blasting passageways or merely ramming the building. Infantry guided the tank destroyers into position and provided them with protection against bazooka fire.³⁸ Flame-throwers were also effective, either mounted on tanks or carried by the infantry. In one attack on an outlying fort, British Crocodile flame tanks shot at the apertures of the fort while engineers placed explosive charges to create a breach in the outside wall. The attack was successful.

As expected, command and control was difficult as squads and platoons could be

easily isolated in buildings and rooms. Normal graphic control measures and military maps weren't useful.

Commanders also learned that the tempo of operations was much slower than expected. Instead of a "simultaneous grand effort," the battle was characterized as "large-scale nibbling."³⁹ Several techniques were developed and implemented. Commanders drew sketch maps and identified objectives and coordination points with numbers and letters. In addition, they numbered buildings to more easily identify them.⁴⁰ Platoons received objectives in terms of buildings, with squads having missions in terms of rooms and basements.⁴¹ Radios that didn't work were discarded and wire communications became the primary means of talking, as doctrine had predicted. Another doctrinal concept that was validated was the need for detailed planning. Coupled with methodical execution, detailed plans led to success.

In terms of organization, some platoons reorganized from three squads and a headquarters section into two sections, one assault and one support.⁴² The assault section contained two Browning Automatic Rifle (BAR) teams, and at least one bazooka, and was augmented by an engineer demolitions team and a flame-thrower team. They would move rapidly and aggressively, clearing all floors and basements. The support section covered the assault section with machine-gun fire, kept the streets leading into the platoon's flanks covered, and repelled counterattacks.⁴³

The fight of Company F, 2nd Battalion, 23rd Infantry is a great example of a unit putting these innovative techniques into effect.⁴⁴ Between 10-13 September, the company was ordered to seize a city cemetery defended by the Germans, who had anchored their defense on machine gun positions in huge mausoleums and marble vaults. They covered all of the open areas and entrances to the cemetery with heavy cross-fires and grazing fires. The company tried two attacks on successive days, and both were repelled. The mausoleums protected the Germans from mortar fire, whereas the Americans attacked in the open and found that ricochets off the headstones aggravated the effects of the enemy's fire. The third attack made much better use of combined arms. First, the company's mortars started a concentrated barrage on the positions. As the infantry assault platoons moved into position, tank destroyers (TD) with infantry escorts moved into

position and took the marble vaults under direct fire with excellent results. The TDs also blasted snipers out of the outlying buildings. With the Germans' heads down, the infantry platoons, augmented by engineer demolitions teams, blasted a hole in one building and cleared it. Instead of moving to the next building via the covered street, they blasted a hole in the side of the adjacent building, and continued until they had slowly cleared the street and were able to place fire on the cemetery from the upper floors. The end result was that the buildings were cleared and the infantry had outflanked the Germans in the cemetery. The following day, the Americans swept through the cemetery with little resistance. Company F's attack was symbolic of the combined arms efforts to capture Brest. "The actual conquest of the garrison had come as the result of action by the combined arms — heavy artillery fire, infantry assault, engineer blasting operations, and the use of flame-throwers."⁴⁵

The next operation that illustrated the developing American urban combat prowess was the Battle of Aachen. First Army's original plan as it approached the vicinity of Aachen was to breach the West Wall of the Siegfried Line and bypass Aachen in accordance with American doctrinal thinking. Lieutenant General Courtney Hodges, First Army's commander, saw Aachen as an obstacle, not an objective. Developments would alter that plan, however. The Americans met stiff resistance from the Germans, and Hodges believed he lacked the forces to both contain the Germans within Aachen and continue the attack to the Rhine.⁴⁶ So, Hodges decided to reduce Aachen. Aachen's pre-war population was around 165,000; now only 20,000 or so civilians lived there. Colonel Wilck of the 246th Volksgrenadier Division, with around 5,000 soldiers, assumed responsibility for its defenses, along with elements of the 1421st Fortress Battalion.⁴⁷

Once again, Hitler had ordered a fight to the last man, and Wilck planned on carrying it out. Groups of two to ten Germans defended each house. In addition, the Germans controlled the sewer system and made great use of it to move securely throughout the city immune to artillery and air attack.⁴⁸ The 1st Infantry Division under General Huebner received the mission to seize the city, but Huebner had only the 26th Infantry Regiment available with one of its battalions already serving as the division reserve. The regiment's plan was to attack from east to west with two battalions abreast, 3rd Battalion in the north, and 2nd Battalion under Lieu-

tenant Colonel Derrill M. Daniel in the south. It was hoped that this orientation of attack would surprise the Germans whose defenses appeared to be oriented to the south.⁴⁹

LTC Daniel task-organized his companies into combined arms company teams.⁵⁰ Each rifle company received three tanks (Shermans) or tank destroyers, two towed antitank guns, two bazookas, one flame-thrower, and two heavy machine gun teams. The companies further task-organized these supporting forces down to the platoon level. He assigned zones of action to the companies who then assigned each platoon a single street. Given that the battalion's sector was very wide, he maintained no reserve, but planned on repelling counterattacks by shifting his forces laterally across his front. Knowing that urban fighting used tremendous amounts of ammunition, he established an ammunition dump forward and made plans to move it forward again during the attack. His plan called for artillery and mortars to hit the enemy deep in order to isolate the area, pin down reserves, and generally hammer the enemy's defenses. His battalion adoption of the motto "Knock 'em All Down" should give one an appreciation for how Daniel planned on using firepower. He instructed his men to maintain a heavy volume of fire throughout the attack.⁵¹

The attack kicked off on 11 October with two days of bombardment by over 300 fighter-bombers and 12 battalions of artillery. They dropped over 200 tons of ammunition onto the city in the first day alone, but patrols that tested the defenses in the early evening found no appreciable lessening of German fire.⁵² On 13 October, the battalion methodically attacked for the next eight days. Like the soldiers in Brest, they quickly found that survival meant staying out of the streets. In addition to using tanks and demolitions to blast holes in building, they also used bazookas to breach walls. Much more so than in Brest, artillery was much more effective. Light artillery and mortars kept the volume of fire up several streets ahead of the attackers, while heavy artillery pounded the Germans further to the rear. The battalion found that they could call artillery fire in fairly close to themselves because the stone buildings protected them from fragments.

Forward observers also experimented with delayed fuzes that allowed rounds to penetrate through several floors before exploding, rather than exploding harmlessly on the roof.⁵³ One additional use of artillery was rediscovered when the bat-

talion encountered a building that the tank destroyers could not penetrate. The battalion used a self-propelled 155mm-artillery piece in point-blank direct fire, leveling one building with one shot.⁵⁴ The regimental commander so liked the results, he gave a 155mm gun to 3rd Battalion as well. Under the cover of tank and TD fire, the infantry assaulted a building augmented by the demolitions teams and flame-throwers. The mere threat of the flame-throwers frightened some of the enemy to surrender.⁵⁵

The best combination of tanks and infantry seemed to be two tanks per infantry platoon. "The infantry preceded the tanks by 100 yards, thoroughly searching the houses on both sides of the street. The tanks provided machine gun and tank cannon fire as requested."⁵⁶ The tanks placed fire on all known or suspected enemy positions before the infantry assaulted. This close support provided the infantrymen with a feeling of security, knowing that they had such firepower on their side. Additionally, the infantry knew that they had to "protect their protectors by constant reconnaissance" which they did by assigning four riflemen to the tank commander.⁵⁷ These soldiers provided close-in security, acted as messengers, and kept the tankers informed as to where the friendly infantrymen were.

Despite *FM 31-50's* dictum to conduct urban fighting at night, the 26th Infantry Regiment conducted its attacks during the day, and used the night to rest, reorganize, and resupply. In the realm of logistics, soldiers also improvised when they realized their wheeled ambulance couldn't negotiate the roads because of glass, debris, and rubble. The soldiers converted half-tracks into ambulances to give themselves not only some protection from fire, but also some mobility to make it through the cluttered battlefield back to the aid station.⁵⁸ An additional headache for the Americans was the Germans' use of the sewer system to mount counterattacks, move patrols behind their lines, and infiltrate snipers to their rear.⁵⁹ As they attacked, the Americans soon learned to locate and seal every manhole cover and sewer grate.

On 21 October, Colonel Wilck surrendered. At the conclusion of the battle, the effects of firepower were seen in that 80 percent of all buildings were either destroyed or badly damaged.⁶⁰ Overall, Daniel's reasons for his success were a slow, thorough search of every area; the use of all available firepower; the use of daylight operations to enhance command

and control; the close integration of infantry, armor, artillery, and engineers. In addition, the regimental commander remarked, "We employed common sense, normal tactical principles, and maximum firepower."⁶¹

The U.S. Army in World War II learned multiple lessons on the nature of urban combat and the techniques and tactics that would make its conduct successful. The Army adapted thanks to the initiative of its soldiers and leaders who did not feel constrained by doctrine, but understood that doctrine was a guide for the conduct of operations, and was by no means a replacement for common sense. A quick review of today's *FM 90-10-1, An Infantryman's Guide to Combat in Built-up Areas*, reveals the codification of many lessons learned by World War II

soldiers, yet the very name of the manual, *An Infantryman's Guide*, makes one wonder if we haven't reverted back to thinking about the urban fight in terms on an infantry-only affair. In the invasion of Panama in 1989, the 82nd Airborne Division was supported by its Sheridan-equipped 3-73 Armor. A few of the lessons learned seemed remarkably familiar, "Sheridans were absolutely critical to fighting in built-up areas by providing direct fire support to infantry, as well as surgical fires capable of penetrating reinforced concrete buildings," and "Strip maps, with individually numbered buildings, are a must for operations in a built-up area."⁶² With the world's increased population, industrialization, and urbanization, the U.S. Army will sooner or later find itself in a major urban warfare fight; hopefully, the U.S. Army will be able to

apply the same level of common sense it did during World War II, even if the conditions do not allow for the unrestricted use of firepower.

CPT Ken Casey was commissioned in Armor upon graduation from USMA in 1990. He served in Germany in 2/11 ACR as a scout platoon leader and Headquarters Troop XO; as the S3 Air for 1-72 Armor in Korea; and as the S4, B Co. commander, and HHC commander in 1-33 Armor at Fort Lewis, Wash. He is currently a Board Recorder at the Secretariat for DA Selections Boards in Alexandria, Va.

Notes

¹Joshua 6:15-20, NKJV (New King James Version).

²Michael D. Doubler, *Closing with the Enemy: How GIs Fought the War in Europe, 1944-1945* (Lawrence, Kan.: University Press of Kansas, 1994), 1-2.

³War Department Basic Field Manual 100-5, *Field Service Regulations: Operations* (Washington D.C.: Government Printing Office, 22 May 1941), 209-210.

⁴*Ibid.*, 209.

⁵*Ibid.*, 210.

⁶*Ibid.*

⁷Donald E. Houston, *Hell on Wheels: The Second Armored Division* (Novato, Calif.: Presidio Press, 1977), 59-101.

⁸*FM 100-5*, 270.

⁹Doubler, 90-91.

¹⁰*Ibid.* 91.

¹¹*Ibid.*

¹²War Department Basic Field Manual 31-50, *Attack on a Fortified Position and Combat in Towns*, (Washington D.C.: Government Printing Office, 31 January 1944); War Department Basic Field Manual 17-36, *Employment of Tanks with Infantry* (Washington D.C.: Government Printing Office, 13 March 1944); War Department Basic Field Manual 17-36, Supplement Number 1, *Employment of Tanks with Infantry, Illustrated Problems* (Washington D.C.: Government Printing Office, 7 July 1944).

¹³W.F. Shadel, "Street Fighting in Cassino," *Infantry Journal*, LIV, No. 6, (June 1944), 27.

¹⁴Robert R. Palmer, Bell I. Wiley and William R. Keast, *The Procurement and Training of Ground Combat Troops*, United States Army in World War II (Washington D.C.: U.S. Army, Historical Division, 1948), 448.

¹⁵*Ibid.*, 449.

¹⁶*FM 31-50*, 65-66.

¹⁷*Ibid.*, 71.

¹⁸*Ibid.*, 73.

¹⁹*Ibid.*, 73-74.

²⁰War Department Pamphlet No. 20-17, *Lessons Learned and Expedients Used in Combat* (Washington D.C.: Government Printing Office, 1945), 58.

²¹*FM 31-50*, 81.

²²*Ibid.*, 79-91.

²³*FM 17-36*, 27.

²⁴*Ibid.*, 77.

²⁵*FM 17-36*, Supplement No.1, 25-27.

²⁶Doubler, 88.

²⁷*Ibid.*, 92.

²⁸Blumenson Martin, *Breakout and Pursuit: United States Army in World War II*, Washington D.C.: U.S. Army, Office of the Chief of Military History, 1961, 632-637; Doubler, 90.

²⁹Blumenson, 638.

³⁰Headquarters, 38th Infantry Regiment, 2d Infantry Division, "Notes on Street Fighting," Records Group 407, Entry 427, National Archives, 22 September 1944, 1.

³¹Blumenson, 638.

³²Doubler, 91.

³³Blumenson, 642, 653.

³⁴Doubler, 92.

³⁵Blumenson, 646.

³⁶*Ibid.*

³⁷Doubler, 92; J. P. Barney, "Tank Destroyers in Direct Support," *Infantry Journal*, LV, No. 5, (November 1944), 17-19; 38th Infantry Regiment, 4.

³⁸38th Infantry Regiment, 2-3.

³⁹Blumenson, 643.

⁴⁰Doubler, 92-93.

⁴¹38th Infantry Regiment, 1.

⁴²Doubler, 92-93.

⁴³38th Infantry Regiment, 2.

⁴⁴Doubler, 93-96.

⁴⁵Blumenson, 652.

⁴⁶Doubler, 96-97.

⁴⁷Charles B. MacDonald, *The Siegfried Line Campaign*, United States Army in World War II, (Washington D.C.: U.S. Army, Office of the Chief of Military History, 1963), 307-308; Headquarters, 1st Infantry Division, "Breaching the Siegfried Line and the Capture of Aachen," Records Group 407, Entry 427, National Archives, 7 November 1944, 8.

⁴⁸Headquarters, 26th Infantry Regiment, 1st Infantry Division, "After Action Review: October 1944," Records Group 407, Entry 427, National Archives, 4-7.

⁴⁹1st Infantry Division, 12.

⁵⁰Doubler, 97-101.

⁵¹*Ibid.*

⁵²MacDonald, 309-310.

⁵³Doubler, 100.

⁵⁴26th Infantry Regiment, 7.

⁵⁵*Ibid.*, 8.

⁵⁶William R. Campbell, "Tanks with Infantry," *Armored Cavalry Journal*, LVI, No. 5, (September-October 1945), 50-51.

⁵⁷*Ibid.*, 51.

⁵⁸MacDonald, 311; Lawrence Loewiuthan, "Medical Evacuation with a Reconnaissance Squadron," *The Cavalry Journal*, LIV, No. 2, (March-April 1945), 36.

⁵⁹Doubler, 100.

⁶⁰*Ibid.*, 101.

⁶¹*Ibid.*

⁶²Kevin J. Hammond and Frank Sherman, "Sheridans in Panama," *ARMOR*, XCIX, No. 2, (March-April 1990), 14.