



Members of Task Force Dark Rifles surveil from the corner of a rooftop in the mock urban town of Barasu during National Training Center rotation 21-05 at Fort Irwin, California, 16 March 2021. (Photo by Sgt. Adeline Witherspoon, U.S. Army National Guard)

# Concrete Command

## Why Combat Training Centers Should Prioritize Training on Urban Command Posts

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**A**mong the most intractable challenges facing U.S. Army brigade combat teams (BCT) attending the combat training centers (CTC) preparing for large-scale combat operations (LSCO) is maintaining command and control against adversaries equipped with sophisticated overhead surveillance complemented by electronic warfare technology that rapidly locates and facilitates the targeting of command posts. To effectively execute command-and-control operations, a headquarters must ensure its ability to receive and transmit data as it collaborates across all war-fighting functions to guide operations. Traditionally, commanders choose to synchronize multidomain operations by physically collocating staff planners in a masked stationary location as a means of continuity. However, while positioning staff together fosters good command and control, the sheer mass of modern electronic signatures of communications emanating from this headquarters to subordinate units increasingly risks easy detection by opposing forces (OPFOR).

To mitigate this vulnerability, some commanders have experimented with dispersing and frequently relocating the component elements of the tactical headquarters to dilute concentrated electromagnetic signatures. Although dispersion may increase the survivability of mobile command posts, some units mark the technique as unsatisfactory because the constant interruption to communications between component elements often leads to stovepipe planning. Consequently, the ongoing discussion of Army training experimentation to mitigate the problem of command post vulnerabilities rests on integrating an alternative to stationary, mobile, and hybrid rural command posts: leveraging existing urban infrastructure for effective command and control.

## Stationary versus Mobile Command

Military professionals who maintain the traditional view rationalize optimal command-and-control operations to mean staff elements should be located together and remain relatively stationary because effective headquarters requires stable conditions for staff collaboration facilitated by frequent face-to-face communication, situational awareness, orders production, and rehearsals best achieved under canvas and camo nets with tables, chairs, computers, projectors, printers, etc. In practice, experience shows static headquarters can move but only with deliberate planning, rehearsals, and an alternate

command post. These moves average twelve hours to displace and become operational at a new location. Those supporting the necessity for stationary command posts mitigate detection by OPFOR by proper use of terrain, camouflage, and other operational security practices already regularly trained at CTCs.

However, as demonstrated in the figure (on page 15), these command posts appear as standout anomalies in the field under advanced electromagnetic and thermal detection sensors from air and space reconnaissance despite best practices in camouflage and operational security. Critics of stationary commands assert that although such headquarters initially provide better command and control at the outset of combat operations, a post with a glaring electronic signature cannot move quickly from the threat of detection, thus reducing survivability in LSCO.

In contrast, some soldiers argue that an optimal tactical headquarters is fully mobile. These units espouse less ideal working conditions, crowding staff action officers inside the back of trucks and vans to extend survivability with the ability to displace in minutes rather than hours. For them, tents, canvases, and temporary shelters represent wasted time that could risk lives upon attack or discovery. By accepting the risk of some staff-action degradation and stovepipe planning imposed by vehicle size and portability constraints, mobile headquarters can also keep up with fast-moving armor and Stryker formations in the LSCO environment, providing the best chance for exercising operation control.

Notwithstanding, other soldiers contend that mobile headquarters sacrifice communication, stable

data reception, and an essential part of interoperability: collectively synchronizing a

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methodical staff process to support the commander's decision-making and effective order dissemination. Military leadership across the branches agree that training, even doctrinally, must prioritize clear communication to meet changes on the battlefield.<sup>1</sup>

However innovative, irrespective of mobility, any reconfiguration of command posts—including adding vehicles to make static configurations more mobile in some hybrid combination—will prove futile unless BCTs conceal the electronic signature of a headquarters while fostering an adaptable, collaborative command environment. Consequently, the remedy to the problem of command post vulnerability is finding ways to hide electronic signatures effectively.

## Field Headquarters in Context

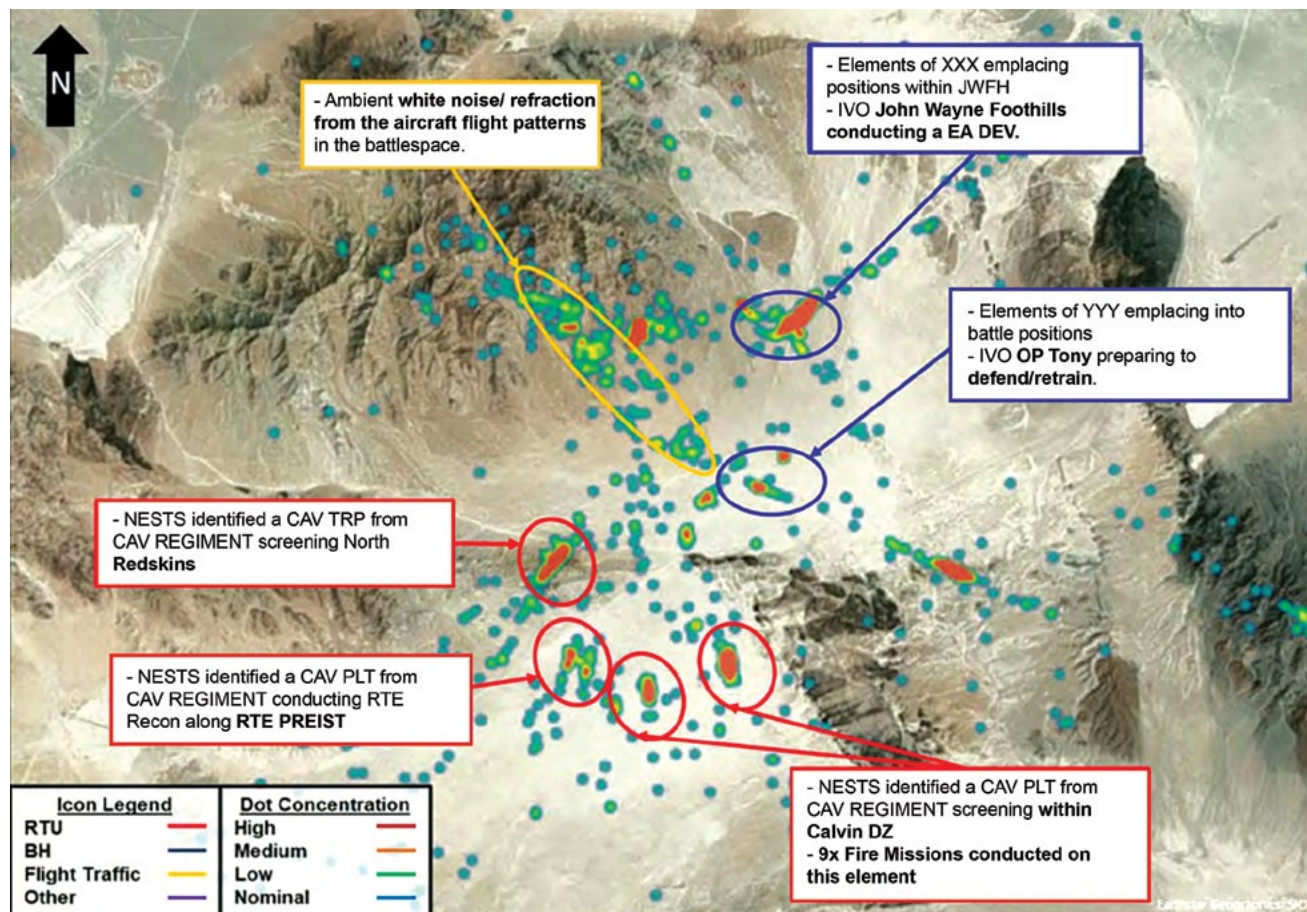
A cultural factor in military thinking that inhibits solutions to successfully masking electronic signatures is the overarching belief that tactical headquarters must be located “in the field” or in a rural setting far removed from buildings and civilians. This belief stems from the assumption that the austerity of a location intrinsically promotes safety—this view needs to be corrected.

During previous conflicts with less technological dominance in air and space domains, rural tactical

A Command Post Node/Satellite Transportable Terminal is employed 19 August 2020 during Saber Junction 20 in Hohenfels, Germany. The annual exercise is conducted by the 7th Army Training Command U.S. Army Europe to assess the readiness of the 173rd Airborne Brigade to execute unified land operations in a joint, combined environment and to promote interoperability with participating partner nations. (Photo by Master Sgt. David Ruiz, U.S. Army)

headquarters created an advantage or a reliable platform from which to command. Combat in an era of less urban development offered more options to hide from civilian interference, more protection from guerrilla or special operation forces actions, and the ability to dig in to protect against air and indirect fire. Additionally, hiding from adversaries could be accomplished using traditional cover and concealment techniques such as camouflaging vehicles and tents, enforcing noise and light discipline, proper dispersion, and vigorous counter reconnaissance patrolling. Today, however, modern detection sensors linked with long-range, precision-guided munitions are so effective that current battlefields now resemble submarine warfare in many respects far more than in previous eras of land combat—if it can be seen, it can be killed, and quickly. As military theorist Robert Leonhard observes about the modern operational environment, “The real battle is about detection.”<sup>22</sup>





(Figure courtesy of Col. Scott Woodward, U.S. Army)

**Figure. Electronic Signatures from an Exercise at Fort Irwin**

Eluding detection begins with understanding the magnitude of BTC signatures. Blending in on the current battlefield means the electromagnetic BTC signature cannot be darker or brighter than the existing environment. Therefore, the most plausible location for effective command post operations removes the stark contrasts seen in reconnaissance technology by settling into a city's urban sprawl, where established infrastructure and civilian signatures appear within the same operating space.

## Using Preexisting Civilian Infrastructure

As of 2020, more than half of the global population resides in urban areas, and the U.S. Army anticipates twenty-first-century combat to move into or around cities.<sup>3</sup> Conveniently, urban landscapes offer electromagnetic and thermal concealment to hide tactical headquarters emissions. Cities also provide

the advantage of existing buildings, roads, and urban infrastructure that a BCT can retrofit to serve as a survivable tactical headquarters and modify around the activities of the resident population.

For example, during my command of Battle Group Poland stationed near the Suwalki Gap, we explored the possibility of an urban headquarters upon finding flaws in our field operations. We operated a command post rurally, maintaining distance from Polish Territorial Defense Forces camps, local towns, and borders lining Russia and Belarus. One of the difficulties communicating in the field was establishing an FM antenna on the ground high enough to support radio transmissions. Battle Group Poland found FM communications almost impossible outside of three to five kilometers, even while using several OE-254 antennas. The absence of high ground and dense forests negated using FM communications. Consequently, we had to rely on other forms of



Soldiers with the 334th Brigade Engineer Battalion, 1st Armored Brigade Combat Team, 34th Infantry Division, enter a building during military operations in urban terrain training at Camp Ripley, Minnesota, 18 July 2022. (Photo by Spc. Elizabeth Hackbarth, U.S. Army)

communicating with each presenting unique difficulties because of the environment.

Tactical headquarters using urban terrain could occupy buildings to leverage their capabilities such as antennas placed on top of high buildings, existing fiberoptic lines, and internet connections. For example, a survivable headquarters could be a parking garage, given the massive concrete structure provides a solid foundation around signals, storage for vehicles and personnel, and access to roadways. Parking also assumes an area designed around the needs of many people that would also be available to a tactical headquarters.

## Using Existing Civilian Communication Networks

To further mitigate communication challenges in a conflict, the United States could exploit a dense network of existing urban communications capabilities in Europe and CTCs to command-and-control friendly forces. Getting the host nation's agreement to use such capabilities, followed by preplanning and

subsequent exercise, would expedite command and control at a critical stage during the repositioning and deployment of forces to deal with an adversary. Under peacetime restrictions, tapping into existing civilian communication capabilities is not considered acceptable on the grounds of security and privacy.<sup>4</sup> However, anticipating potential conflict that would no doubt require innovative expedient solutions, planning for such communications compatibility between military and civilian communications systems before a crisis should be a priority U.S. Army and NATO initiative to enable tactical headquarters to assume operations rapidly after initiation of hostilities.

## Urban Sustainment Advantages

Tactical headquarters falling in on existing structures in urban environments offer sustainment advantages in contrast with large sustainment requirements to support command posts in rural areas. Operating in the field means relying heavily on resupply along unbroken lines of communication. Enemies historically target





Franco-German soldiers of the 3rd Company of the Jäger Battalion 292 of the German-French Brigade train for urban combat 29 March 2017 at the Altmark military training area in Germany as part of the preparation for a deployment in support of NATO's Enhanced Forward Presence mission. (Photo by Jana Neumann, Bundeswehr)

supply lines and communication vulnerabilities upon the outbreak of conflict. By operating in a cityscape, urban headquarters can plan around susceptible or compromised lines using public and private networks or emergency routes.

As Field Manual-3-0, *Operations*, mandates, U.S. forces must “fight and win while outnumbered and isolated.”<sup>5</sup> Tactical headquarters in urban environments can use existing water, fuel, food, and sewage capabilities with multiple sustainment lines to substantiate metropolitan populations. This network serves as a near-term advantage by relieving the pressure of any choice of vulnerable lines of communication.

To highlight this advantage in current context, Russian and Ukrainian forces have garnered attention for using urban landscapes. However, the invasion led to the inevitable use of neighborhoods and power plants as battlegrounds. Throughout the ongoing Ukraine-Russia conflict, Ukrainian and Russian forces frequently utilize strategic command-and-control posts in urban and residential areas, including the

Chornobaivka Airport, to survive and shift urban terrain assets to organize effective offensive operations.<sup>6</sup>

## Defense of Command Posts in an Urban Environment

Urban environments offer tactical headquarters more security options than austere field environments. Tactical headquarters are notoriously vulnerable targets for OPFOR, and securing them is always problematic. Tactical headquarters rarely have dedicated personnel for security, so they must pull soldiers from the headquarters to establish guard duty rosters, complicating defense. When soldiers reorganize, it is common for headquarters personnel's warfighting skills to have atrophied due to a lack of refresher training and experience. Yet, these headquarters staff soldiers with little recent experience and weapons skills training are responsible for defending the most lucrative target from the best soldiers and arms available to an enemy if the command post is detected. This is an unfair fight with a marginal chance of success.

By operating tactical headquarters in cities, the odds even up for soldiers with limited weapons skills because of the urban environment's defensive advantages. For one, offensive forces are disadvantaged when attacking an urban headquarters. A few soldiers—with effective leadership and organization—properly utilizing the 720-degree (360 horizontal, 360 vertical) possibilities can fight off vastly outnumbering attackers. Additionally, tactical headquarters can reinforce security and defense with mutual interest civilian organizations including police, fire, and volunteers.

## Cultivating Support from Urban Populations

Another dimension that urban areas offer under certain circumstances is support from local populations. Local support can bolster defense, communication, and credibility in and around a headquarters based on two assumptions: willing authority to the military and subsequent friendly interactions. Psychological scar tissue from the Global War on Terrorism created a common planning assumption that civilian populations are hostile to the presence of U.S. forces. However, civilian relationships are conditional and will likely be more neutral, even friendly, in many future warfighting scenarios involving U.S. forces. As illustrated by Battle Group Poland, the village leadership and town mayors near the Suwalki Gap highly supported U.S. forces and our efforts—they believed supporting our forces was in their best interests against potential Russian threats. They told us, in the event of a Russian invasion, NATO forces could rely on Polish civilian leadership for aid, including support for offering and obtaining access to desirable tactical headquarters locations in urban areas.

These relationships also commit an enemy to the logistics and narrative justifications of attacking an urban headquarters with an active population. If the military can co-opt civilian populations rather than create a “human shield” by forcing civilians to stand in front of enemy fire, adversaries who choose to attack in an urban environment inherently risk more of their force.

Though the presence of tactical headquarters operating in towns is associated with some risk to the local population, there is not necessarily an expectation of support. A real threat often prompts endangered citizens to flee as they can. According to the CIA

World Factbook, more than twenty million people fled Ukraine and an estimated 5.3 million citizens were internally displaced because of the Russian invasion in 2022.<sup>7</sup> Citizens who choose to stay in their country during an attack tend not to have any option or desire to resist. The former group can be worked around while the latter group can be leveraged through their grievances against an adversary.

## Conclusion

Though field craft in rural areas still has relevance, tactical headquarters should give at least as much attention to training that develops “city craft” for the simple reason that there is a greater likelihood that most of the battlefields U.S. forces will face in the future will be urban fights.

Training to take advantage of an existing structure allows soldiers to train as they'd fight by co-opting the environment, breaking the premise of “losing doctrinally.”

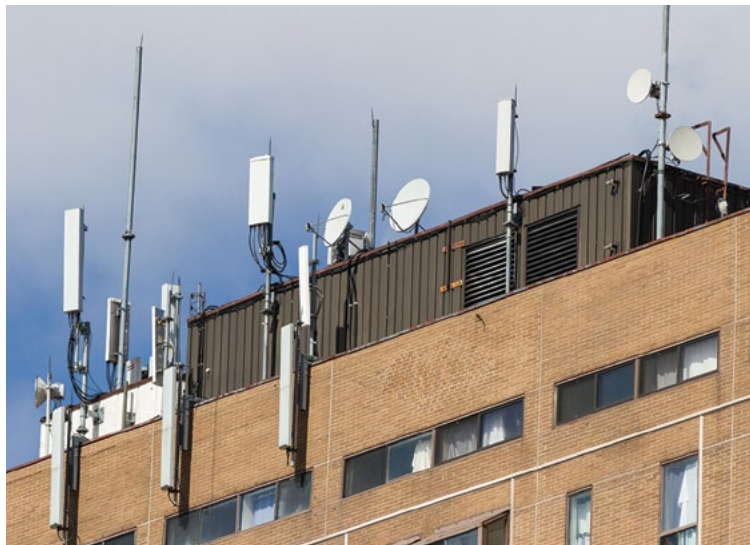
Throughout their careers, active-duty soldiers may have limited opportunities to train in a CTC rotation and build a mental model of warfare they can integrate into the combat experience. Training to maintain command and control in urban and rural environments can create a cross-discipline advantage in a sometimes singular opportunity to understand these complexities in person.

National Guard soldiers may have only one CTC experience to build their experience of LSCO in practice. In an actual conflict, if initial echelons are lost early, the next force must have exposure to another option for tactical headquarters operations outside of traditional field operations.

Additionally, CTC rotations should actively look at ways to reduce the friction on the command post when moving in a tactical command post is already so hard. During the repetition of moving, establishing communications, and camouflaging, a training unit never becomes fully proficient at commanding and controlling operations, though it builds resilience and reaction skills. Structural developments—though currently operating as more of an anathematic aspect of CTCs—should be used to practice adapting infrastructure for combat.

In my experience during exercises in Europe, using the urban environment for tactical headquarters deployment appeared to be the most feasible solution to be an effective and survivable headquarters in eastern





Satellite and cellphone antennas crowd the top of a building 18 March 2016 in Kingston, Ontario. Unit command posts operating in urban settings should develop and employ techniques for exploiting similar concentrations of electronic devices in urban settings worldwide to mask their own electronic signatures. (Photo by Lars Hagberg, Alamy)

Poland. In the field, supply lines of communication are highly vulnerable to interdiction and are time-consuming. We saw firsthand how easily drones could detect our forces. Additionally, the dense forests and absence of mountains hindered communications. By contrast, it was much more difficult to spot and track troops in cities and towns and easier to mask our electronic signature.

Today, twenty-first-century tactical headquarters can no longer count on finding refuge in the “rural jungle” but rather in the “urban jungle.” As a practical matter, until future breakthroughs in technology or

camouflage and concealment emerge, the dense plethora of civilian electromagnetic and thermal signatures emanating from sprawling urban jungles in cities and towns offer the only currently feasible and effective “electronic camouflage” available for command posts attempting to evade detection from enemy electronic and overhead surveillance. Proper “electronic camouflage” means not emitting a too bright or dim electromagnetic signature to blend into and hide among the plethora of civilian electronic signatures already present.

As the Army prepares for LSCO in an increasingly urban world, it should rethink how to train units to leverage rather than resist opportunities urban environments can provide for tactical headquarters. Doing so is the only practical methodology available at present, however imperfect, to enable tactical headquarters to be both effective and survivable in the densely populated LSCO environments of the regions in which, unfortunately, the Army most likely may be called upon to fight, for example, in Asia or central Europe.

We should leverage existing structures and practice that way because it is more likely to be realistic rather than hauling big loads of stuff to establish command posts in austere rural settings. To that end, the Army’s CTCs need to invest in preparing simulated urban facilities to effectively train units and drive innovative solutions for overcoming the disadvantages of urban warfare. ■

## Notes

1. David Vergun, “Multi-Domain Battle Requires Non-Stovepipe Solutions, Say Leaders,” *Army.mil*, 25 May 2017, accessed 26 March 2023, [https://www.army.mil/article/188282/multi\\_domain\\_battle\\_requires\\_non\\_stovepipe\\_solutions\\_say\\_leaders](https://www.army.mil/article/188282/multi_domain_battle_requires_non_stovepipe_solutions_say_leaders).

2. Robert R. Leonhard, *The Principles of War for the Information Age* (Novato, CA: Presidio Press, 2000), 71.

3. “Urban Development: Overview,” The World Bank, last updated 3 April 2023, accessed 28 April 2023, <https://www.worldbank.org/en/topic/urbandevelopment/overview>.

4. Army Doctrine Publication 3-0, *Operations* (Washington, DC: U.S. Government Publishing Office, July 2019), 1-41.

5. Field Manual 3-0, *Operations* (Washington, DC: U.S. Government Publishing Office, October 2022), 1-4.

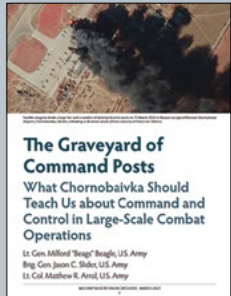
6. Jay Beecher, “UPDATE: Ukrainian Rocket Strike Killed Twelve Russian Officers Near Kherson,” *Kyiv Post* (website), 13 July 2022, accessed 8 May 2023, <https://www.kyivpost.com/post/2295>.

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