Platoon FSCX as Enabler Integration Training within IWTS — A Technique

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The Army Integrated Weapons Training Strategy (IWTS) provides a specified framework for conducting collective training and validating units as part of a progression of ever-larger echelons. While IWTS provides objective criteria for validating individual and squad-level proficiency prior to platoon collective training, it does not fully account for certain key systems, nor does it provide a readily available solution for tying these disparate training events together in support of platoon-level training. This article provides a recommendation for structuring individual and squad-level training to bridge the gap between squad and platoon live-fire exercise (LFX) events with a platoon-level fire support coordination exercise (FSCX) and enabler integration training.

Background

After completing Joint Readiness Training Center (JRTC) Rotation 22-10, the 1st Battalion, 506th Infantry Regiment, 1st Brigade Combat Team, 101st Airborne Division (Air Assault), identified digital fires capabilities as a gap in our training progression and fires enterprise. Our battalion's training glidepath after JRTC already included a machine-gun (MG) academy concept to validate tactics, techniques, and procedures (TTPs); standard operating procedures (SOPs); and crew drills across the formation and build proficiency within weapon squads. We chose to incorporate weapons squads into the digital FSCX to maximize training at echelon and focus on transitions from indirect to direct fire. Including these squads also provided

Mortarmen in 1st Battalion, 506th Infantry Regiment "Red Currahee," 1st Infantry Brigade Combat Team, 101st Airborne Division (Air Assault), fire an 81mm mortar system during a fire support coordination exercise at Camp Adazi, Latvia, on 26 August 2023. (Photo by SSG Oscar Gollaz)

platoon leaders a maneuver element to incorporate into their planning without shifting their focus from fires to maneuvering a full platoon.

Our second iteration of the enabler integration training FSCX glidepath included an anti-tank (AT) weapon academy, a small unmanned aerial systems (sUAS) university, Mortar Training and Evaluation Program (MORTEP), and a series of leader professional development (LPD) events covering sUAS, fires enterprise, and fires effects as prerequisites. Between these events, we set conditions to effectively employ all key weapon systems at the platoon and company levels during the FSCX.

Exercise Intent

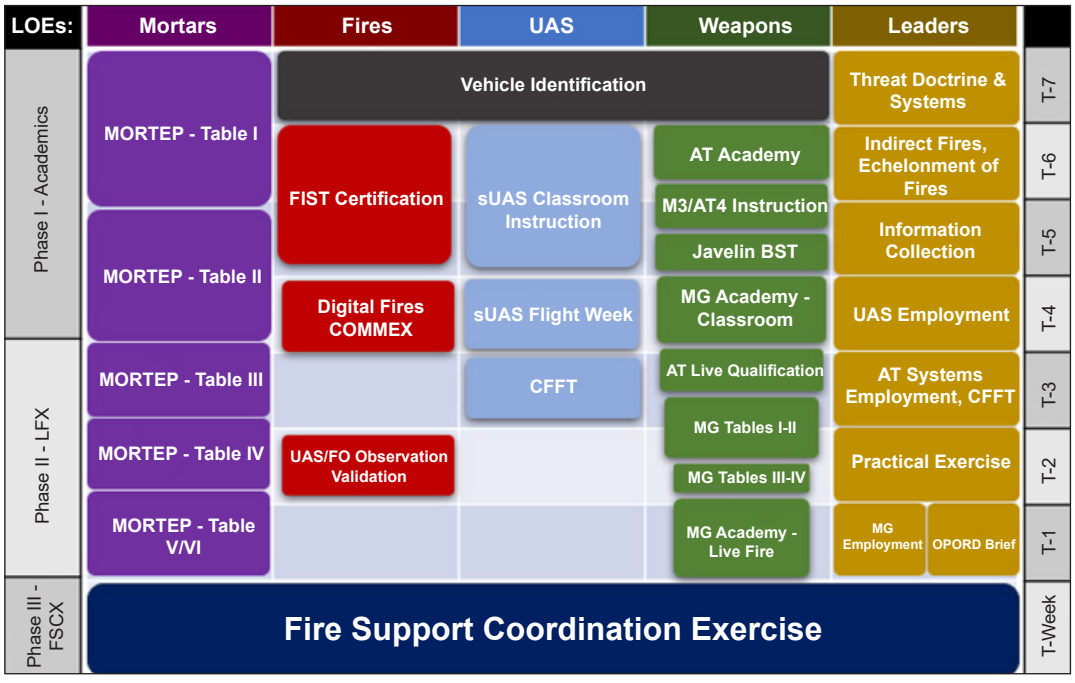
The primary consideration for our FSCX methodology was to depart from the "walk and shoot" scenario where platoon leaders echelon indirect assets in support of their own movement. Instead, we wanted leaders to integrate key weapon systems at echelon across the breadth of the formation to maximize effective employment of all suppression assets, with support from unmanned aerial systems (UAS), to support adjacent units and achieve the company commander's mission and intent. To support the FSCX, we trained and certified sUAS, AT, and mortar teams prior to the exercise to provide the platoon leaders with well-trained and coordinated enablers.

The key tasks in this training progression include validating the digital fires kill chain, integrating UAS into fire support and mortar training, incorporating lessons learned from the war in Ukraine, training appropriate and contextually appropriate fires planning, and reinforcing mission command principles (intent vs. specified task). At end state, leaders from squad to battalion echelons understand the integration of key direct and indirect fires assets, the importance of commander's intent vs. specified tasks, and how to incorporate lessons learned to drive future training progressions as a learning organization. It also sets the conditions for follow-on echelon training, which includes platoon situational training exercises (STXs)/LFXs, company STXs/LFXs, and battalion and higher STXs. This training methodology builds upon lethal squads from the squad LFX to train platoon and company leaders to employ enablers at echelon to ensure companies do not fight like large platoons (and battalions do not fight like large companies).

Train-Up Concept

Figure 1 illustrates the seven-week training progression along five lines of effort (LOEs). Of note, the Leaders LOE lists LPDs for each week; these are executed in conjunction with leaders observing the concur-

Figure 1 — Enabler Integration Training Model



rent training applicable to that week's LPD. For instance, in T-4, while Soldiers are conducting certification flights, leaders will be observing the UAS flights and receiving briefs from trainers on the employment of these systems. The train-up can be divided into three phases.

Phase I — Academics. Phase I of enabler integration training begins with completion of squad live fires on or before T-8 and lasts four weeks. A robust vehicle identification block of instruction serves as the foundation for the fire support, weapons, and UAS training due to how critical this is for target acquisition and proper effects delivery. Fire support team (FIST), sUAS, and AT system certifications/qualifications adhere to applicable training circulars (TCs). The AT system training is augmented with an initial AT academy which serves two purposes:

- To move beyond the technical operation of the weapon systems and discuss tactical employment, and
- To provide weapon squad leaders TTPs for training their AT teams during and after the FSCX training glidepath.

Likewise, the MG academy block of instruction focuses on the technical and tactical considerations, as well as instruction techniques, prior to conducting qualification. Finally, MORTEP completes Table I (gunnery skills) and Table II (fire direction center certification) in a garrison environment while the digital fires communications exercise (COMMEX) validates the digital fires architecture between the battalion fire support element (FSE) and the mortar platoon.

Phase II — LFX. Phase II occurs during T-3 through T-1. The MG academy transitions from classroom to live-fire events. Starting with an AT live-fire qualification, weapons squads conduct their qualification tables and then move into a robust LFX that builds upon the individual qualification up to a weapons squad LFX. In conjunction with practical exercises, the MG academy teaches and reinforces battalion SOPs for weapons squads. In this phase, sUAS operators go through the Call For Fire Trainer (CFFT) in preparation for the following week's event, which pairs them with platoon forward observers (FOs) who will utilize sUAS to observe and adjust fires in support of MORTEP Tables IV-VI.

Phase III — FSCX. The training LOEs merge into the platoon FSCX, which serves as the culminating exercise for the training glidepath and integrates all previously trained capabilities. The FSCX challenges platoon leaders to establish a support-by-fire (SBF) position with only their weapons squad as a maneuver element, utilizing sUAS and indirect fires assets to set conditions for SBF establishment and suppression on a company objective. The enemy disposition is deliberately vague to compel platoon leaders to reconnoiter the objective, adjust targets accordingly, and think about the order in which they employ their direct and indirect systems to achieve suppression and allow the notional adjacent platoons to breach and clear the objective.

Enabler Training Concepts

Vehicle Identification (Phase I). Deliberate and thorough vehicle identification training has reemerged as a critical task in a large-scale combat operations (LSCO) environment, especially in the European theater where units would fight alongside multinational formations. During this training, students receive classroom instruction on vehicle identification techniques and the capabilities of both friendly and threat vehicles; they are then tested in accordance with Gunnery Skills Test criteria.[1]

Weapons Squad Academy (Phase I-II). Of the five LOEs, weapons squads receive the most tailored training. The academic portions cover operator drills for AT systems and machine guns (Tables I and II) but also place significant focus on the tactical employment of these systems and their role within a weapons squad. These portions also teach and codify battalion SOPs for individual-through-squad employment and provide weapons squad leaders TTPs for training and qualifying their crews. Our battalion's Heavy Weapons Leader Course-certified instructor conducts Javelin Basic Skills Trainer (BST) during the academic portion, satisfying Table III for the Javelin. In a similar vein, the live-fire portion of the MG academy begins with Tables IV-VI of the M240 qualification but then transitions to crew drills, gun emplacement/displacement, and squad actions. The LFX ends with a company SBF position utilizing six machine-gun teams.

Anti-Tank Academy - Academics				
• Systems overview • Employment considerations • Planning considerations • Principles of direct fire control • Range estimation • Preliminary marksmanship instruction (PMI) methods	• Ammunition identification • M3 NVS • M3 and AT4 individual drills • M3 and AT4 crew drills • M3 maintenance	• Engagement Skills Trainer II (AT4) • M3 crew drills • M3 and AT4 testing	• Javelin - Training modules 1-5 & 8	
Javelin Basic Skills Trainer			Practical Exercise (PE) - Crew Drills	
Machine-Gun Academy - Academics				
• Roles and responsibilities • Planning for machine gunners, assistant gunners, and weapons squad leaders • Cycle of functions and maintenance	• Optics and lasers • Boresighting • PMI methods • Conducting Tables I-III • Machine-gun (MG) theory • Rate of fire • Fire commands	• Direct fire control measures • Range cards • MG math • Suppression time • Planning process • Field craft	•Gun team SOPs • Emplacement procedures • Terrain association	• Gun drill PEs • Crew emplacement PEs
MG Qualification - Tables I & III		MG Qualification - Table II		
Weapons Squad Academy - Live Fire				
MG Qualification - Tables IV-VI		AT Qualification - Tables IV-VI		
• Grouping drills • Known distance - 500m • Hand and arm signals	• Search and traverse • Plunging fires	• SOPs • Crew emplacement • Crew displacement • Fire control measures	• SOPs • Squad emplacement • Squad displacement • MG math	• Platoon support by fire (SBF) • Weapons squad live-fire exercise • Company SBF exercise

Figure 2 — Detailed Overview of Weapons Squad Training Progression

Fire Support Certification (Phase I). FIST certification is conducted in accordance with TC 3-09.8, *Fire Support and Field Artillery Certification and Qualification*, and is validated by the brigade fire support officer.[2] Following certification, the battalion FSE conducts technical training on all digital fires devices, with a digital communications architecture validation as part of the training. The FSE then conducts CFFT to set conditions for observing and adjusting fires with UAS during MORTEP live tables.

UAS Certification (Phase I-II). UAS certification consists of two weeks of classroom and simulator instruction followed by one week of live flight training. Operators complete the Basic Operator Qualification online training prior to starting the classroom portion. After initial/refresher flights, operators conduct CFFT under the supervision of the battalion FSE to ensure familiarization with the terminology and technical procedures of fire support. This assists the operator in relaying accurate information to leaders and battalion staff while the FO concentrates on processing fire missions.

Figure 3 — UAS Certification Overview

Week 1	Soldier Borne Sensor (SBS) introduction SBS capabilities	SBS preventive maintenance checks and services (PMCS)	Simple flight PE	Complex flight PE	Deliberate recovery PE
Week 2	Raven introduction Raven capabilities	Raven PMCS	One System Remote Video Terminal introduction and PE	Launch, recovery, flight planning	Intelligence collection planning
Week 3	Launch and recover PE	Simple flight PE	Complex flight PE	Night flight PE	Deliberate recovery PE

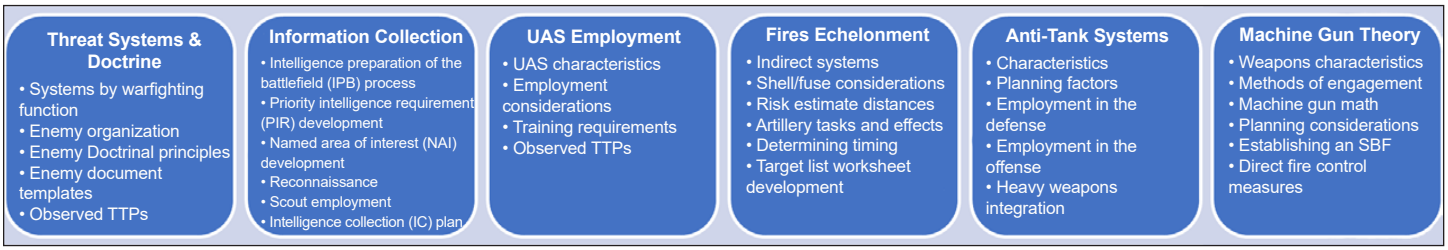


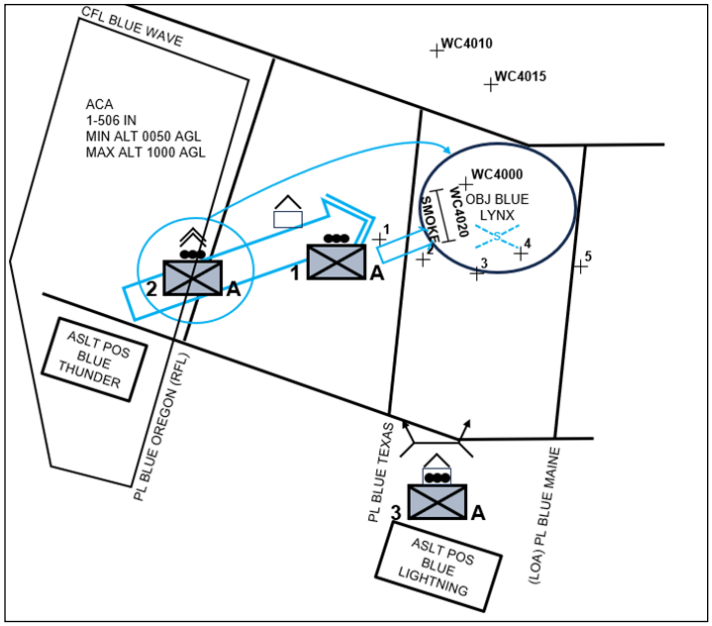
Figure 4 — LPD Agenda and Progression

MORTEP (Phase I-II). Mortar platoons and company mortar sections conduct MORTEP according to IWTS, with the inclusion of UAS operators and FOs paired together to observe and adjust fires during Tables IV through VI.[3] In this way, we practice and validate the employment of UAS in support of indirect fires prior to the FSCX.

Leader Training. LPDs run concurrently with the train up and are augmented by hands-on observation of training occurring that week; briefs and demonstrations are given by trained instructors. The LPD progression mirrors the steps taken during the FSCX: enemy analysis, information collection (IC) plan, indirect fires echelonment, and then direct fires employment. The LPD series culminates in a tactical vignette and receipt of the FSCX's scenario. Platoon leaders then backbrief their plans and conduct a tactical exercise without troops (TEWT) with their weapons squad leaders and mortar section leaders of the actual exercise terrain.

Fire Support Coordination Exercise (Phase III). Typical FSCX scenarios have platoons echeloning fires in support of their own movement, which turns into a basic exercise in geometry and timing — a "walk and shoot." Our scenario instead places the emphasis on controlling fires in support of an adjacent platoon that is conducting a breach in support of an overall company deliberate attack. Platoons are given a covered-and-concealed route up to an assault position, allowing them to wait until the last possible moment to begin echeloning fires, first in support of their own SBF establishment and then in support of the adjacent platoon's movement up to the breach point. Platoon leaders also receive criteria for triggering the initiation of the adjacent unit's departure of its assault position. The company-level scenario with associated triggers emphasizes cross-communication between platoons, both for the assault initiation as well as controlling fires as the adjacent platoon approaches the objective. To this end, platoon leaders control

Figure 5 — Simplified FSCX Scenario Course of Action Sketch
(3/A is the execution platoon, while the two other platoons are notional with a company response cell providing key calls from these platoons.)



their organic weapons squad with all weapons and have direct support from company sUAS, battalion mortars, and field artillery.

Training Crosswalk. The weapons squad academy and FSCX have sizable additional ammunition requirements. Ammunition bearers are often not included in ammunition calculation, but we highly recommend their inclusion if the ammunition is available. Weapons squad ammunition bearers should be qualified on both the M240 and Javelin systems.

Additional sub-caliber ammunition allows all AT4 and M3 crews to conduct Table V and VI from all five firing positions or to conduct Table VI and additional training on moving targets. While not allocated by STRAC, we recommend requesting as much live AT4 and M3 ammunition as possible for the AT academy; we do not recommend the use of high explosive (HE)/high-explosive dual purpose (HEDP) rounds during FSCX because of potential delays from misfires.

In addition to ammunition, this training plan requires Javelin BST systems, four dummy Javelin rounds, dummy M3 rounds, AT4 systems (two trainers and two inert), and a link of inert 7.62 rounds per participating machine-gun team. These are typically available from installation Training Support Centers.

To maximize training value, we recommend including moving targetry in the weapons squad academy. For FSCX, the scenario works best with a range that provides a covered/concealed route to a SBF position that maximizes the range of M240s while also allowing the platoon leader to adjust fires against targets on the objective and see the effects of fires. Vehicle hulks are the obvious targetry for this exercise. If a plethora of hulks are available, we recommend painting hulks to provide target differentiation. This also allows you to plan for scenario injects (for instance, white hulks for the original templated enemy, yellow for reinforcements, etc.). Depending on terrain, you may need to construct target reference points (TRPs) on the objective as well. Doctrine provides a variety of constructed TRP suggestions, such as diesel fuel and sand in ammunition cans. This gives the training audience ideas to incorporate into their own engagement area development during future exercises.

Observations and Lessons Learned

We noticed in early iterations that platoon leaders tended to conduct fires echelonment by rote execution, using UAS to simply confirm the presence of enemy on the objective prior to executing their target list worksheet. We coached later iterations to use their fires deliberately using a three-step process:

1) Understand the target and why we're shooting it. Use UAS (or other collection assets) to not merely confirm the presence of enemy on the objective but identify the exact disposition of the enemy in the form of a SALUTE (size, activity, location, unit, time, and equipment) report. Then, given the disposition, determine if the pre-planned targets and effects are still appropriate and meet the commander's intent to achieve his purpose.

2) Understand the targeting solution and why we're shooting that way. Given the disposition, determine the necessary adjustments to attack guidance. At a minimum, pre-planned target coordinates should be adjusted to maximize first-round effects. Platoon leaders may also need to consider changing shell/fuse combinations or reallocating systems altogether; if you've allocated a 60mm target against what turns out to be a BMP-3, it makes sense to switch it with the 105mm target you have templated against a dismounted trench system.

3) Ensure we achieved the desired effects. Confirming battle damage whenever possible, either by direct observation or with sUAS, ensures platoon leaders achieve the desired effects. Platoon leaders must then report these effects to their fellow leaders to ensure shared understanding and allow adjacent units to execute their own conditions-based actions. While unobserved fires are necessary in LSCO, platoon leaders should be held accountable for providing observation of fires when observation methods are available.

The three-step process is a coaching method for leaders at echelon to be deliberate in their use of fires, achieve commander's intent, and understand their mission within the larger operational concept. The

Soldiers with 1st Battalion, 506th Infantry Regiment conduct AT4 live-fire training in Adazi, Latvia, on 17 September 2023. (Photo by SGT Cesar Salazar Jr.)

battle damage assessment reporting requirement is crucial (when observation is possible) because it reinforces the purpose of the platoon's mission — suppression of Objective Blue Linx in support of their sister platoon.

Platoon leaders also initially struggled with thinking of their mission in the context of the higher commander's mission; they used assets to support their own movement and SBF emplacement instead of in support of the company. Coaching platoon leaders prior to FSCX to think of the larger mission in context is critical for FSCX success. Leaders must understand how and why they are suppressing and ensure they are properly employing the higher echelon assets entrusted to them.

Finally, we noticed that weapons squads continue to think of their ammunition bearers exclusively as a third member of the gun team and fail to account for their role in transporting AT munitions. This is an issue units will likely struggle with as we continue to transition to a LSCO training focus. Proper resourcing of training aids and strict enforcement of AT drills during dry iterations are critical to reinforcing the importance of ammunition bearers for keeping AT assets in the fight.

Identified Gaps and Recommendations

Doctrine. IWTS provides a thorough training glidepath and qualification criteria for small arms, gunnery, and crew-served systems, but it only provides a generic "Special Purpose Weapons" qualification outline, which also includes shotguns and M320 grenade launchers.[4] The TC for Javelin training provides a training timeline for the BST and Field Skills Trainer but does not provide specific testing or qualification criteria in the way that vehicle gunnery does.[5] Likewise, the M3 TC does not have specific training gates or a training timeline associated with qualification.[6] For instance, there are no vehicle or ammunition identification testing requirements. We recommend publishing a new TC specifically addressing AT weapons with prescriptive qualification tables and specified testing criteria for Tables I and II.

Material. Training aids for the Javelin (replicant rounds and BST) are available through the Training Support Center but may be limited in number. We recommend issuing units a BST and replicant rounds to both enable training as well as reinforce the practical realities of carrying two Javelin rounds per command launch unit. As a field expedient alternative, units can approximate the size and weight of rounds and construct dummy rounds using PVC pipe and filler material.

Regarding sUAS, the aerial intelligence, surveillance, and reconnaissance gap at the battalion level becomes especially apparent during this training glidepath; other officers have already identified and discussed this lack of battalion-level sUAS assets.[7] While the battalion scout platoon conducts reconnaissance and answers priority intelligence requirements, the scout platoon and its reconnaissance teams lack the mobility of an aerial asset to quickly maneuver around the battlefield.

The future division force structures include sUAS munition delivery in the multifunction reconnaissance troops, but we argue that battalions should also receive sUAS assets capable of delivering munitions. The ability to rapidly identify and engage key weapon systems can have an outsized effect on tactical operations (for instance, identifying and targeting enemy breaching assets or re-seeding breach lanes with a small scale, UAS-delivered point minefield). Armed UAS would also mitigate the risk of employing the battalion assault platoon, a key asset against a mechanized force. Armed sUAS can screen a company's advance as well as defeat point AT systems along the company's axis of advance.

Organization. We also recommend creating a UAS section with dedicated operators at the battalion level, which could be overseen by the battalion S2. Current sUAS are bulky, and the light infantry battalion modified table of organization and equipment does not have a dedicated position for sUAS operators. This is especially hard for company commanders to buy into as the LSCO fight demands our Soldiers carry a greater variety of systems into a fight, such as additional AT, breaching, and counter-mobility systems (e.g., Anti-Personnel Obstacle Breaching System) and air defense/counter-UAS systems. Furthermore, smaller systems with lower training requirements, such as Soldier Borne Sensors (SBS), are now available to company commanders. For light infantry company commanders, legacy systems inevitably are lower in priority than commercial UAS solutions and lethal enablers, and thus are underutilized.

Conclusion

While the FSCX methodology we developed focuses on platoon-level leadership, it is both scalable and tailorable to the needs of the unit and the expertise of the training audience. It allows battalions or brigades to train sensor-to-shooter linkage at echelon and incorporate staffs and enabling units who train to achieve their own collective task proficiency. For example, brigade staffs can build a robust enemy scenario to practice executing the deep fight and presenting the desired correlation of forces and means to platoon leaders. Incorporating assault/AT platoons, howitzer batteries, and attack aviation allows these formations to meet training objectives while giving platoon leaders real-world effects feedback and building further complexity to challenge experienced platoon leaders. The key to all of this, as shown in our own enabler integration training strategy, is a methodical and concurrent training glidepath for all enablers with deliberate integration training prior to FSCX execution.

Notes

[1] Training Circular (TC) 3-20.31-1. *Gunnery Skills Test*, November 2015, Chapter 2, Section II. Note: This exceeds the vehicle identification testing requirements for fire support team certification as listed in Chapter 6 of TC 3-09.8, *Fire Support and Field Artillery Certification and Qualification*, March 2020.
[2] TC 3-09.8, Chapter 6.
[3] TC 3-20.33, *Training and Qualification of Mortars*, August 2017.
[4] TC 3-20.40, *Training and Qualification – Individual Weapons*, July 2019, Chapter 1.
[5] TC 3-22.37, *Javelin – Close Combat Missile System*, August 2013, Chapter 3.
[6] TC 3-22.84, *M3 Multi-Role, Anti Armor Anti-Personnel Weapon System*, July 2019.
[7] LTC Michael Hamilton and CPT Christopher J. Egan, "Improving the Tactical Employment of sUAS for Light Infantry Battalions in Decisive Action," *Infantry* 112/2 (Summer 2023), https://www.moore.army.mil/infantry/magazine/issues/2023/Summer/pdf/8_Hamilton_SUAS_txt.pdf.

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