

No. 23-1825, 23-1826, 23-1827, 23-1828

**UNITED STATES COURT OF APPEALS
FOR THE SEVENTH CIRCUIT**

JAMIE HERRERA, CALEB BARNETT, et al.,
Plaintiffs-Appellees

v.

KWAME RAOUL, et al.,
Defendants-Appellants.

Appeals from the United States District Courts
for the Northern and Southern District of Illinois,
Nos. 1:23-cv-00532, 3:23-cv-00209-SPM, 3:23-cv-00141-SPM,
3:23-cv-00192-SPM & 3:23-cv-00215-SPM
The Honorable Lindsay C. Jenkins & Stephen P. McGlynn,
Judges Presiding

**MOTION OF THE INTERNATIONAL LAW ENFORCEMENT
EDUCATORS AND TRAINERS ASSOCIATION,
LAW ENFORCEMENT LEGAL DEFENSE FUND, AND
NATIONAL ASSOCIATION OF CHIEFS OF POLICE
TO FILE THE ATTACHED BRIEF AS *AMICI CURIAE*
IN SUPPORT OF PLAINTIFF-APPELLEES FOR
AFFIRMANCE IN *BARNETT* AND REVERSAL IN *HERRERA***

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June 26, 2023

Pursuant to F.R.A.P. 29(a) and Seventh Circuit Rule 29, International Law Enforcement Educators and Trainers Association (ILEETA), Law Enforcement Legal Defense Fund (LELDF), and National Association of Chiefs of Police (NACOP) respectfully move for leave to file a brief as *amici curiae* in support of Plaintiff-Appellees for affirmance in *Barnett* and reversal in *Herrera*.

Plaintiffs-Appellees in this consolidated case consented to this filing, including counsel for Barnett (23-1825), Harrel (23-1826), Federal Firearms Licensees of Illinois (23-1828), Herrera (23-1793), and Langley (23-1827). Defendants-Appellees State of Illinois, Cook County, and the City of Chicago denied consent.

ILEETA is an association of 4,000 professional law enforcement instructors committed to the reduction of law enforcement risk and to saving lives of police officers and citizens through the provision of training enhancements for criminal justice practitioners. LELDF is non-profit organization that provides legal assistance to law enforcement officers. It has aided nearly one hundred officers, many of whom have been acquitted, mostly in cases where officers have faced legal action for otherwise authorized and legal activity in the line of duty. The NACOP a non-profit organization founded in 1967 to promote and support the law enforcement profession. Membership is limited to command staff officers, and it currently has over 7,000 members. It's Senior Vice-President, Brian Smith, is involved in law enforcement in Illinois.

The ILEETA, LELDF, and NACOP have regularly participated as *amici* in Second Amendment cases in federal courts, including *Boland v. Bonta*, No. 23-55276 (9th Cir.), a Ninth Circuit case involving California's Unsafe Handgun Ban, *Bianchi v. Frosh*, No. 21-902 (U.S. Supreme Court), supporting the petition for certiorari in a case from the Fourth Circuit involving Maryland's "assault weapon" ban, and *New York State Rifle & Pistol Ass'n v. Bruen*, 142 S. Ct. 2111 (2022).

An amicus brief from front line law enforcement personnel and organizations will aid the Court by providing a unique perspective from professionals knowledgeable about firearms law, technology, and field use of the banned weapons, and will assist the Court in evaluating whether Illinois' state and local bans on "assault weapons" are constitutional under the Second Amendment. Many issues in this case turn upon the comparative dangerousness of firearms familiar to law enforcement officers, their terminal ballistics, including relative firepower and overpenetration in urban settings, and the consequences for law enforcement use of weapons declared to be too dangerous for civilian self-defense. The Court will benefit from understanding why the banned firearms are not excessively dangerous for use by law-abiding citizens and law enforcement professionals. The brief's analysis goes beyond what the parties have given the Court.

For these reasons, the ILEETA, LELDF, and NACOP should be granted leave to file an amicus curiae brief in support of the Plaintiffs-Appellees.

Respectfully submitted,

/s/ E. Gregory Wallace

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CERTIFICATE OF SERVICE

I hereby certify that on June 26, 2023, I electronically filed the foregoing with the Clerk of Court for the United States Court of Appeals for the Seventh Circuit by using the CM/ECF system. I certify that all participants in this case are registered CM/ECF users and that service will be accomplished by the CM/ECF system.

/s/ E. Gregory Wallace
June 26, 2023

ATTACHMENT:
PROPOSED BRIEF

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THE INTERNATIONAL LAW ENFORCEMENT
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CORPORATE AND FINANCIAL DISCLOSURE STATEMENT

Pursuant to Federal Rule of Appellate Procedure 26.1 and Seventh Circuit Local Rule 26.1, counsel for *amici curiae* certifies that none of the *amici* has a parent corporation and no publicly held corporation owns 10% or more of the stock of any of the *amici*.

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INTEREST OF *AMICI CURIAE*¹

The International Law Enforcement Educators and Trainers Association is an association of 4,000 professional law enforcement instructors committed to the reduction of law enforcement risk and to saving lives of police officers and citizens through the provision of training enhancements for criminal justice practitioners.

The Law Enforcement Legal Defense Fund is non-profit organization that provides legal assistance to law enforcement officers. LELDF has aided nearly one hundred officers, many of whom have been acquitted, mostly in cases where officers have faced legal action for otherwise authorized and legal activity in the line of duty.

The mission of the National Association of Chiefs of Police, a non-profit organization founded in 1967, is to promote and support the law enforcement profession. Membership is limited to command staff officers, and it currently has over 7,000 members. It's Senior Vice-President, Brian Smith, is involved in law enforcement in Illinois.

Amici believe that the perspective of front line law enforcement personnel and organizations that are knowledgeable about firearms law, operation, and history should be of assistance to this Court in evaluating whether Illinois' state and local bans on "assault weapons" are constitutional under the Second Amendment.

Plaintiffs-Appellees in this consolidated case consented to this filing, including counsel for Barnett (23-1825), Harrel (23-1826), Federal Firearms Licensees of Illinois (23-1828), Herrera (23-1793), and Langley (23-1827). Defendants-Appellees State of Illinois, Cook County, and the City of Chicago denied consent. A motion for leave to file is therefore attached.

¹ No counsel for either party authored this brief in whole or in part. No person or entity other than amicus and its members made a monetary contribution to its preparation or submission.

ARGUMENT

Defendants make astonishing claims about the dangerousness of so-called “assault weapons” such as the widely-popular AR-15 semiautomatic rifle. To justify banning on these firearms, Defendants insist that they are “uniquely dangerous,” “shockingly overpowered,” and have “staggering lethality.” State Br. at 5, County Br. at 6, City Br. at 25. They make it seem as if AR-15s are somehow vastly different and far more dangerous from ordinary rifles and shotguns possessed by law-abiding civilians. They are not.

The Supreme Court reiterated in *New York State Rifle & Pistol Association v. Bruen*, 142 S. Ct. 2111 (2022), that the Second Amendment protects possession and use of “bearable arms” that are “‘in common use.’” *See id.* at 2132 (“the Second Amendment extends, *prima facie*, to all instruments that constitute bearable arms, even those that were not in existence at the time of the founding”) (quoting *District of Columbia v. Heller*, 554 U.S. 570, 582 (2008)); *id.* at 2128 (“the Second Amendment protects the possession and use of weapons that are ‘in common use at the time.’”) (quoting *Heller*, 554 U.S. at 627).

The AR-15 is “the country’s most popular rifle, irreversibly lodged into American culture.” Jon Schuppe, *America’s Rifle: Why So Many People Love the AR-15*, NBC NEWS (Dec. 27, 2017), <https://perma.cc/TXW3-YRSS>. It is owned by millions for self-defense, hunting, and target shooting. *See, e.g.*, National Shooting Sports Foundation, *Commonly Owned: NSSF Announces Over 24 Million MSRs in Circulation* (July 20, 2022) (estimating number of AR- and AK-style rifles in the United States at 24,446,000), <https://perma.cc/7SLE-K4DG>; Jacob Sullum, *The Largest-Ever Survey of American Gun Owners Finds That Defensive Use of Firearms is Common*, Reason (Sept. 9, 2022) (62% own AR-15 rifles for home defense, 35% for defense outside home, 66% for target shooting, 50% for hunting, 32% for competitive shooting), <https://perma.cc/ZQ69-ZDJ5>. By any

measure, the banned rifles are “typically possessed by law-abiding citizens for lawful purposes.” *Heller*, 554 U.S. at 625.

Defendants ignore the plain language of *Heller* and *Bruen* and instead want to make this litigation solely about the supposed “extreme lethality” of the AR-15. Their classic interest-balancing argument—now foreclosed by *Bruen*, 142 S. Ct. at 2129—is that civilian AR-15s and similar “assault weapons” are far too dangerous and therefore can be banned because of the overriding interest of protecting public safety. *See, e.g.*, State Br. At 33. They twist the historical tradition of prohibiting “dangerous and unusual” weapons into bans on “unusually dangerous” weapons. Never mind that the precise language of *Heller* is “dangerous *and* unusual.” *See Caetano v. Massachusetts*, 577 U.S. 411, 417 (2016) (Alito, J., concurring in the judgment) (explaining that “this is a conjunctive test: [a] weapon may not be banned unless it is *both* dangerous and *unusual*.”). And never mind that the banned rifles are commonly possessed by law-abiding citizens and not “highly unusual in society at large.” *Heller*, 554 U.S. at 627.

The Defendants are wrong both legally and factually. Their claims about the extreme firepower of the AR-15 are exaggerated, poorly supported, and at times, provably false. Every firearm is capable of causing serious bodily harm or death. Being dangerous is essential to accomplishing a firearm’s core function. The relevant question is whether AR-15s are *far more* dangerous than non-banned rifles and shotguns. Facts matter, but apparently not for the Defendants who have created an emotional narrative of more victims, more gruesome wounds, and more danger to law enforcement and the public in hopes they will secure judicial victory. The Court should not indulge their cascade of errors and absurdities.

I. The AR-15s Banned By Illinois Are Not Dangerous and Unusual “Weapons of War.”

Defendants stigmatize “assault weapons” such as civilian AR-15s as “weapons of war” that are “methodically designed to quickly maximize casualties on a battlefield,” and thus too dangerous for civilian use. County Br. At 5; *see* State Br. At 29. Measuring the AR-15’s lethality by analogy to combat weapons does not prove that AR-15s are dangerous and unusual.

A. The AR-15 is a civilian weapon, not a military weapon.

As a simple factual matter, the AR-15 is not a military weapon. It is the semiautomatic-only version of the military’s selective-fire M16 rifle and smaller M4 carbine. *See Staples v. United States*, 511 U.S. 600, 603 (1994) (“The AR-15 is the *civilian version* of the military’s M-16 rifle, and is, unless modified, a semiautomatic weapon. The M-16, in contrast, is a selective fire rifle that allows the operator, by rotating a selector switch, to choose semiautomatic or automatic fire.”) (emphasis added). A semiautomatic firearm fires one bullet (or “round”) for each pull of the trigger, while an automatic weapon (machine gun) fires continuously so long as the shooter presses and holds the trigger. *See id.* at 602 n.1. While the civilian AR-15 looks like a military M16 or M4, it is not a machine gun nor does it fire as rapidly as a one.

Defendants fail to identify any national military force that uses the AR-15 or any other semiautomatic-only rifle as its standard service rifle, nor could they. No military in the world uses a service rifle that is semiautomatic only. E. Gregory Wallace, “*Assault Weapon*” *Myths*, 43 So. Ill. U. Law J. 193, 205-06 (2018). Because the civilian AR-15 lacks automatic-fire capability, the U.S. military does not use it on the battlefield. *Id.* at 207-11. The AR-15 is not a “weapon of war” and never has been.

Defendants attempt to obscure this dissimilarity, asserting that “the fact that AR-15s have no mechanism to produce automatic fire is not a meaningful distinction,” City Br. at 25. But selective-fire capability “is the single, essential feature that makes a military firearm more useful in combat than its civilian counterpart.” Dennis Chapman, *The ‘Weapons of War’ Myth*, (Dec. 7, 2015), <https://www.linkedin.com/pulse/weapons-war-myth-dennis-chapman>; see Wallace, “Assault Weapon” Myths, at 203-11.

The fact the military does not use the AR-15 because it lacks automatic fire capability does not square with Defendants’ reliance on the “M16 and the like” test from *Kolbe v. Hogan*, 849 F.3d 114 (4th Cir. 2017). The Fourth Circuit based its ruling on a reading of *Heller* that excludes weapons “most useful in military service—M-16 rifles and the like” from Second Amendment protection. *Id.* at 131-35 (quoting 554 U.S. at 627). The Fourth Circuit’s interpretation of “the like” as analogical rather than categorical renders *Heller*’s language nonsensical. The analogical meaning extends only to weapons of comparable design, form, and function—i.e., other rifles. But *Heller* was not making a rifle-to-rifle comparison when it used the term “the like”; rather, it was excluding a *category* of weapons “most useful in military service.” These specialized weapons used exclusively by the military in modern warfare are “sophisticated arms that are highly unusual in society at large.” *Id.* at 627. They presumably include larger machine guns, grenade launchers, anti-tank weapons, and Stinger air-defense missiles—weapons uniquely suited for military applications but not for civilian self-defense. Not being “most useful” in military service—in fact, not even being *used* in military service—the semiautomatic-only civilian AR-15 is not “like” the specialized military weapons *Heller* suggests can be banned.

Just because civilian AR-15 rifles share the capability for semiautomatic fire with military rifles does not make them as lethal as military rifles. While semiautomatic fire is

the most appropriate for individual soldiers in the vast majority of combat scenarios, it does not follow, as Defendants claim, that the AR-15's lack of automatic fire capability has no effect on its dangerousness. A typical shooter firing a military M16 in automatic mode can fire 100 rounds in less time than it would take the same shooter firing a semiautomatic handgun or rifle to fire 25 rounds. If that shooter fires indiscriminately into a crowded bar, church, or classroom, the fully automatic M16 would produce far more casualties than a semiautomatic rifle like the AR-15, launching some 75 more bullets into the crowd. Using either weapon in such a scenario would be tragic, but the M16 rifle much more so.

Even if the civilian AR-15 is somehow a “weapon of war,” the Defendants’ argument proves too much. Civilians have been using weapons useful in warfare since musket days, often with little or no difference between military and civilian versions. *See Wallace, “Assault Weapon” Myths*, at 200. Civilian firearms that are used or have been used by military forces include the most popular handguns in the world—the iconic Browning-designed 1911, Sig Sauer P226, and Glock 17—as well as familiar hunting rifles and shotguns, such as the Remington 700 bolt-action rifle and Remington 870 pump-action shotgun. *See id.* at 201-02. If firearms are exceptionally lethal simply because they are military or military-style weapons, then a wide array of popular handguns and long guns are too dangerous for civilian use.

B. Comparing the AR-15 to military rifles, which themselves are not extremely lethal, does not prove the AR-15 is dangerous and unusual.

Defendants’ argument that the AR-15 is too dangerous for civilians because it is like the military M16 rests on an implicit first premise that the military selects the most lethal small arms for use in combat that are “methodically designed to quickly maximize casualties on a battlefield.” County Br. at 5. That premise is wrong.

The military does not use the M16 rifle and smaller M4 carbine solely because of their hit and kill capability; rather, these rifles incorporate various trade-offs among multiple factors relevant to small unit combat, such as mission adaptability, weight, reliability, maintenance, and cost. E. Gregory Wallace, *“Assault Weapon” Lethality*, 88 Tenn. L. Rev. 1, 7-8 (2020). The M16 and M4 use the 5.56mm NATO round, which is nearly identical in size to the commercial .223 Remington caliber round designed to kill varmints, making it less suited for mass killing on the battlefield.² See United States Military Small Arms Requirements, Hearing Before the Subcommittee on Airland of the Committee on Armed Services, 115 Cong. S. Hrg. 115-425, at 12 (May 17, 2017) (testimony of Major General Robert H. Scales); see Walter Håland, *Assault Rifle Development in the 70 Years Since the Sturmgewehr*, Small Arms Defense J. (Mar. 18, 2016) (“The M4 with its round is actually less powerful than most hunting rifles used for animals like deer.”). The 5.56 round is smaller and lighter, and thus less powerful, than those used in previous combat rifles, such as the 7.62mm round (.308) in the M14 and .30-06 round in the M1 Garand. Its size and bulk, however, allows soldiers to carry more ammunition and the smaller cartridge softens recoil when firing. Wallace, *“Assault Weapon” Lethality*, at 8-9.

Combat soldiers have complained that the smaller 5.56mm round lacks effectiveness in killing or incapacitating the enemy. *Id.* at 9-11. Combat veteran and small arms expert Jim Schatz explains that “[t]he disturbing failure of the 5.56x45mm caliber to consistently offer adequate incapacitation has been known for nearly 20 years.” Jim Schatz, *Do We Need A New Service Rifle Cartridge? End User Perspective and Lessons Learned*, Small Arms Def. J. 119 (Spring 2011), <https://www.yumpu.com/en/document/read/37272962/do>

² The numbers .223 and 5.56 designate the caliber of the round based on a rough approximation of bullet diameter, which is expressed in thousandths of an inch (.223) or millimeters (5.56). The U.S. military uses the NATO designation, measured in millimeters.

we-need-a-new-service-rifle-cartridge-hkprocom. He describes a Special Forces (SF) mission in Afghanistan when an insurgent was shot seven-to-eight times in the torso, got back up, climbed over a wall, and reengaged other SF soldiers, killing a SF medic. The insurgent then was shot another six-to-eight times from about 20-30 yards before finally being killed by a SF soldier with an M1911 handgun. *Id.* at 125. Mark Bowden's bestselling book *Black Hawk Down* gives vivid accounts of the less-than-lethal performance of the Army's 5.56mm bullet in the Battle of Mogadishu in 1993. One Delta operator's rounds "were passing right through his targets. . . . [the bullet made a small, clean hole, and unless it happened to hit the heart or spine, it wasn't enough to stop a man in his tracks. [The operator] felt like he had to hit a guy five or six times just to get his attention." Mark Bowden, *Black Hawk Down: A Story of Modern War* 208 (1999).

Military surveys confirm that combat soldiers want bullets with greater stopping power and lethality than the 5.56 round. A report from the Center for Naval Analyses, which surveyed 2,600 soldiers who fought in Iraq and Afghanistan, explains that many soldiers reported on the 5.56 round's "limited ability to effectively stop targets, saying that those personnel targets who were shot multiple times were still able to continue pursuit." Sara M. Russell, *Soldier Perspectives on Small Arms in Combat*, Center for Naval Analysis 29 (December 2006), https://www.cna.org/CNA_files/PDF/D0015259.A2.pdf.

The Defendants' comparison between the civilian AR-15 and the military M16/M4 to prove the extreme dangerousness of the AR-15 works only if the military weapons themselves are exceptionally lethal. Reports about the terminal underperformance of the smaller projectile fired by the M16/M4 suggest that these rifles are adequately lethal, but not exceptionally so. That is why the military recently decided to adopt the larger-caliber 6.8mm rifle. C. Todd Lopez, *Army Announces 2 New Rifles for Close-Combat Soldiers*, U.S. Dep't of Defense (Apr. 22, 2022), <https://perma.cc/34NR-AGRW>.

II. The AR-15s Banned By Illinois Are Not Dangerous and Unusual in Their Wounding Power.

Like all guns, the AR-15 can cause severe and sometimes fatal wounds. But the Defendants assert that the AR-15 can be banned because it causes more *far more* devastating wounds than other civilian firearms. That is plainly wrong. Wounds caused by the AR-15 typically are no more serious or lethal than wounds caused by larger-caliber rifles, shotguns, and even some powerful handguns.

A. The AR-15's firepower is at the low end of terminal performance among other common rifles and shotguns.

Defendants emphasize that AR-15 bullets travel about three times faster than handgun bullets. County Br. at 7. But bullets from almost all modern rifles travel at speeds much faster than handguns. More velocity does not necessarily mean greater wound severity—a ping-pong ball and a rifle bullet fired at the same velocity will produce very different terminal results.

Compare the wounding effects of 00-buckshot from a 12-gauge shotgun, a hollow point bullet from a .44 caliber Magnum handgun, and rimfire bullet from a .22 caliber rifle—all three fired from a distance of about 15 feet. The shotgun will cause far more tissue disruption than the handgun, and the handgun will cause far more disruption than the rimfire rifle, despite the fact that all three have approximately the same muzzle velocity. See Martin L. Fackler, *Civilian Gunshot Wounds and Ballistics: Dispelling the Myths*, 16 Emerg. Med. Clin. North Am. 17, 23 (1998).³ Bullet speed alone does not prove that the AR-15 is dangerous and unusual.

³ Dr. Fackler was a former military trauma surgeon, director of the Army's Wound Ballistics Laboratory for ten years, and one of the world's foremost wound ballistics experts.

Both velocity and bullet mass contribute to kinetic energy, which measures the amount of energy the bullet transfers to a body when it hits. See Peter M. Rhee, et al., *Gunshot wounds: A review of ballistics, bullets, weapons, and myths*, 80 J. Trauma Acute Care Surg. 853, 855 (2016). The following chart compares the typical velocity and kinetic energy of modern handgun, centerfire rifle, and shotgun projectiles measured at the firearm's muzzle and at a distance of 100 yards.

Caliber	Bullet Weight (Grains)	Velocity @Muzzle ft/s	Velocity @100 yds ft/s	Energy @Muzzle ft lbs	Energy @100 yds ft lbs
Handguns					
9 mm	115	1140	954	332	232
.357 Magnum	125	1500	1147	624	365
.40 S&W	175	1010	899	396	314
.44 Mag	200	1500	1196	999	635
.45 ACP +P	230	950	872	461	385
Long guns					
.223/5.56	55	3240	2854	1282	995
.243 Win	90	3150	2911	1983	1693
6.5 Creedmoor	143	2700	2557	2315	2076
.308 Win	165	2700	2496	2670	2282
.30-06	178	2750	2582	2989	2635
.300 Win Mag	180	2960	2766	3502	3058
.338 Lapua Mag	270	2800	2680	4699	4304
.50 BMG	750	2820	2728	13241	12388
12-ga shotgun slug	438	1610	1139	2521	1262

Wallace, “Assault Weapon” Lethality, at 44-45.

These values show that there is nothing special or magical about the .223 or 5.56 rounds typically used in AR-15 rifles. Rifle and shotgun projectiles, including those fired by the AR-15, strike with much higher kinetic energy than handgun bullets. But the AR-15's .223 and 5.56 bullets strike with much *less* power among the wide variety of centerfire rifle and shotgun projectiles. Defendants fail to explain how the AR-15's much *lower* firepower among common non-banned long guns translates into much *greater* lethality.

Defendants assert that “assault weapons” like the AR-15 are “too overpowered to be useful for hunting.” *Id.* at 6. To the contrary, in some states, it is illegal to hunt deer with the .223 cartridge typically used in the AR-15 because it is considered too *underpowered* to

result in clean, humane kills. *See, e.g.*, 2 Code of Colo. Reg. 406-2-I-203(A)(1); 4 Va. Admin. Code 15-270-10; Wash. Admin. Code 220-414-020(1)(c). As Dr. Fackler points out, the .223 round is “a ‘varmint’ cartridge, used effectively for shooting woodchucks, crows, and coyotes.” Martin L. Fackler, *Literature Review*, 5 *Wound Ballistic Rev.* 39, 41 (Fall 2001).

B. The AR-15’s wounding power is no more severe than non-banned civilian long guns and even some powerful handguns.

Defendants’ most dramatic overclaims are about the AR-15’s wounding power. They maintain that the AR-15’s extraordinary dangerousness is seen in its “horrendous,” “unbelievable,” and “physically devastating” wounds that produce “gruesome injuries and more inevitable death.” County Br. at 9, 27; City Br. at 16-17. They even claim that AR-15s “blow bodies up,” frequently result in amputation of extremities, and decapitate bodies. County Br. at 9-10, 27; City Br. at 17.

1. Accounts of “harrowing” AR-15 wounds in Vietnam are unreliable.

To substantiate their claims, Defendants cite military field testing from Vietnam in 1962 reporting that the select-fire AR-15 (later renamed the M16) caused “harrowing” carnage—“a single round could cause an abdominal or thoracic cavity to explode or completely take off a limb or head.” City Br. at 22; *see* County Br. at 8. But they don’t tell the whole story. While these descriptions are gruesome to be sure, they subsequently were exposed as gross exaggerations designed to convince the military to adopt the M16.

The Vietnam testing was conducted as part of Project AGILE, a research program in southeast Asia initiated by the Defense Department’s Advanced Research Projects Administration (DARPA). At the time, the military was considering whether to replace the M14 (a Korean War gun) with the selective-fire AR-15 as its primary combat rifle. Project AGILE supplied these AR-15s to South Vietnamese combat troops for field trials to determine whether the rifles would perform satisfactorily in combat. The subsequent

report included claims of massive injuries from the AR-15's 5.56mm round, including two amputations and a decapitation. Advanced Research Projects Agency, *Report of Task No. 13A, Test of Armalite Rifle, AR-15, Annex A*, at 5, 7 (July 31, 1962), <https://apps.dtic.mil/sti/pdfs/AD0343778.pdf>.

These claims were never confirmed. The Army's Wound Ballistic Laboratory tested the lethality of the AR-15 (M16) in gelatin, animals, and cadavers but could not duplicate the "theatrically grotesque wounds" reported by Project AGILE. C. J. Chivers, *The Gun* 283, 284-88 (2010); see H. Blake Stevens & Edward C. Ezell, *The Black Rifle: M16 Retrospective* 110-16 (1994). C.J. Chivers, a Pulitzer Prize winning *New York Times* journalist, extensively researched the testing for his book *The Gun*. "No matter what they did," writes Chivers, "they were unable to reproduce the effects that the participants in Project AGILE claimed to have seen." Chivers, at 288. Testing included hollow-point rounds like those used by civilians, but "even the hollow-points failed to duplicate anything like the spectacular effects recorded by the Vietnamese unit commanders and their American advisors, which had subsequently been taken as fact and much used in the . . . campaign to sell the AR-15." Stevens & Ezell, at 116. The Wound Ballistic Laboratory's lethality study was kept secret for more than four decades, with the result that "at the most important time, during the early and mid-1960s, the Project AGILE report, with its suspicious observations and false conclusions, remained uncontested. The AR-15 continued to rise, boosted by a reputation for lethality and reliability that it did not deserve." Chivers, at 289. By omitting these facts, Defendants leave the decidedly wrong impression that civilian AR-15s today produce the same gruesome wounds reported by Project AGILE.

Dr. Fackler recounts that there were other claims in the 1960s and 70s that the M16's high velocity bullets caused "massive" and "devastating" injuries, but these claims were

disproven or contradicted by other reports. Martin L. Fackler, *Gunshot Wound Review*, 28 *Annals of Emergency Medicine* 194, 194-95 (Aug. 1996). Delegates to war surgery conferences in the early 1970s “reported no unusual problems associated with ‘high-velocity’ bullet wounds in Vietnam. There were no reports of rifle bullet wounds causing traumatic amputations of an extremity.” *Id.*

Dr. Fackler’s observations explain the multiple battlefield reports discussed above of M16 bullets passing through enemy combatants. Dr. Fackler recalls that

[i]n 1980, I treated a soldier shot accidentally with an M16 M193 bullet from a distance of about ten feet. The bullet entered his left thigh and traveled obliquely upward. It exited about passing through about 11 inches of muscle. The man walked into my clinic with no limp whatsoever: the entrance and exit holes were about 4mm across, and punctate. X-ray films showed intact bones, no bullet fragments, and no evidence of significant tissue disruption caused by the bullet’s temporary cavity. The bullet path passed well lateral to the femoral vessels. He was back on duty in a few days. Devastating? Hardly.

Martin L. Fackler, *Literature Review*, 5 *Wound Ballistic Rev.* 39, 40 (Fall 2001). Dr. Fackler further notes that “[i]n my experience and research, at least as many M16 users in Vietnam concluded that [the 5.56mm M193 round] produced unacceptably minimal, rather than ‘massive,’ wounds.” *Id.*

2. Descriptions of the AR-15’s “massive wounding” are misleading.

Defendants’ dramatic claims about the AR-15’s wounding power avoid the fundamental question of whether the AR-15’s wounding power is far more devastating than ordinary non-banned rifles and shotguns. They draw false comparisons to handguns and overgeneralize about the AR-15’s wounding power.

a. Comparisons to handgun wounds prove little.

To classify a firearm as exceptionally lethal, there must be a baseline for comparison. As with their analogy to military rifles, Defendants again rely on false equivalence. They

attempt to make “assault weapons” like the AR-15 seem unusually dangerous by comparing them to handguns in their wounding power.

The AR-15 does fire higher-velocity bullets that impact with much greater force than handguns, but that is true of virtually all rifles. That handguns generally are less terminally effective than rifles is nothing new. Comparing the wounding effects of AR-15 bullets to handguns to prove the “devastating” wounding power of the AR-15 is like comparing a Prius to a Model T to show that the Prius is a faster than most automobiles. Defendants’ comparison to handgun wounds is nothing more than an observation that rifles in general are more powerful than handguns in general.

b. The AR-15’s wounding power is comparable to non-banned rifles, shotguns, and some handguns.

Notably absent from Defendants’ graphic descriptions of the AR-15’s wounding power is any comparison to wounds caused by non-banned rifles and shotguns. Those comparisons are readily available. Wound profiles from the Army’s Wound Ballistics Laboratory illustrate the permanent and temporary cavities, penetration depth, deformation, and fragmentation of the AR-15’s .223 and 5.56mm caliber bullets as well as larger caliber bullets used in common hunting rifles, such as the .30-30 and .308 caliber bullets. A comparison of these wound profiles shows that the wounding effects of the larger-caliber rifle bullets are at least as extensive as the .223/5.56 bullets, and typically more so. Martin L. Fackler, *Wound Profiles*, 5 *Wound Ballistic Rev.* 25, 29-31, 33-34 (Fall 2001); see Gary K. Roberts, *The Wounding Effects of 5.56MM/.223 Law Enforcement General Purpose Shoulder Fired Carbines Compared with 12 GA. Shotguns and Pistol Caliber Weapons Using 10% Ordnance Gelatin as a Tissue Simulant*, 3 *Wound Ballistics Rev.* 16, 23-24 (1998).

The AR-15’s wounding power is no more devastating than shotguns. When firing at close range, as often occurs in mass public shootings, AR-15 wounds typically are less

severe than shotgun wounds. Dr. Fackler observes that at close range “the 12 gauge shotgun (using either buckshot or a rifled slug) is far more likely to incapacitate than is a .223 rifle. The 12 gauge shotgun is simply a far more powerful weapon.” Martin L. Fackler, *Questions and Comments*, 5 *Wound Ballistic Rev.* 5 (Fall 2001). Dr. P. K. Stefanopoulos, trauma surgeon and former career military officer who has written extensively on wound ballistics, confirms that at distances of less than 10 feet “the shotgun produces the most devastating injuries of all small arms.” P. K. Stefanopoulos, et al., *Wound Ballistics of Firearm-Related Injuries—Part 1: Missile Characteristics and Mechanisms of Soft Tissue Wounding*, 43 *Int. J. Oral Maxillofac. Surg.* 1445, 1453 (2014).

Powerful handgun rounds can cause similar wounding effects to the AR-15. “A similarly deforming or disintegrating bullet from a powerful handgun cartridge (e.g., Magnum) can also produce ‘high-energy’ effects to tissue, resembling those from a much faster assault rifle bullet.” P. K. Stefanopoulos, et al., *Wound Ballistics of Military Rifle Bullets: An Update on Controversial Issues and Associated Misconceptions*, 87 *J. Trauma Acute Care Surg.* 690, 696 (2019).

Every firearm is dangerous, especially when misused. But the idea that the AR-15 is unusually powerful compared to other ordinary firearms is false. Wounds caused by the AR-15 typically are not more serious or lethal than wounds caused by larger-caliber hunting rifles, shotguns, and even some powerful handguns. Thus, they do not pose unique risks to the public or law enforcement beyond those from non-banned long guns.

c. The severity of AR-15 wounds widely varies.

Defendants convey the impression that an AR-15 bullet *always* causes massive and devastating wounds, when just the opposite is true. How bullets injure and kill has less to do with velocity and kinetic energy than with the location of impact, the bullet’s physical characteristics, and the type of tissues disrupted along the bullet’s path. *See*

Fackler, *Civilian Gunshot Wounds and Ballistics*, at 19; Fackler, *Gunshot Wound Review*, at 202. Rifle bullets typically do more damage to tissue than handgun bullets, but not always so, depending on where the bullets strike. A handgun round to the brain, spinal cord, heart, or other vital organ almost always will cause more serious damage than a rifle round to an extremity or other nonvital part of the torso. “Most experienced trauma surgeons will testify that what part of the body is hit by that gun is more important than the size of the gun.” Rhee, *Gunshot wounds*, at 853-54.

Wound ballistics is far more complex than Defendants’ unqualified and hyperbolic descriptions suggest. Multiple variables affect how AR-15 bullets damage human tissue. These include the bullet’s mass, shape, and construction, which determine its tendency to deform, fragment, or yaw once it strikes, the angle at which the bullet strikes the body, the distance the bullet travels in tissue before it yaws or fragments or whether it exited the body before significant yaw occurs, the size, weight, and body form of the victim, whether the bullet impacts bone or only soft tissue, and the elasticity of the soft tissue affected. See Wallace, “Assault Weapon” Lethality, at 43-56; Stefanopoulos, *Wound Ballistics of Military Rifle Bullets*, at 690-96. In short, injuries caused by AR-15s and other “assault weapons” will vary significantly.

Defendants present only overgeneralized, worst-case scenarios in an attempt to persuade this Court that massive wounding is commonplace for the AR-15. Unfortunately, embellishments about the AR-15’s wounding power are far too common in “assault weapon” litigation. See David Kopel, *How Powerful Are AR Rifles?*, The Volokh Conspiracy (Feb. 27, 2023) (discussing absurd claims by government expert in *Rupp v. Becerra* in Ninth Circuit), <https://perma.cc/3ZDC-LA5E>. Given the variables affecting AR-15 wound severity, such broad and persistent generalizations should not drive judicial outcomes when deprivation of a constitutional right is at issue.

III. The AR-15s Banned By Illinois Are Not Dangerous and Unusual Because Their Bullets Penetrate Walls and Body Armor.

Defendants assert that the AR-15 is too dangerous for self-defense because its bullets are “more likely” to penetrate walls and endanger innocent bystanders, while shotguns and revolvers have a “low probability” of overpenetration. State Br. at 30; County Br. at 5, 7, 23, 26; City Br. at 16, 44. This is simply false. Overpenetration is a risk with *all* firearms. Almost all handgun, rifle, and shotgun rounds will pass through multiple walls. Defendants want to limit home-defenders to only handguns, but handgun rounds will penetrate several layers of sheetrock as well as exterior house walls. See R.W. Scheifke, *Penetration of Exterior House Walls by Modern Police Ammunition*, Canadian Police Research Centre (Oct. 1997), <https://perma.cc/8V6N-8MK9>.

The AR-15’s .223 and 5.56 bullets generally penetrate *less* though building materials than common handgun and shotgun rounds. The difference between handgun and rifle bullets is how they behave when passing through walls. A pistol round typically remains relatively stable, while the AR-15’s longer and thinner profile round is likely to fragment or to lose stability and tumble end-over-end, bleeding energy rapidly due to the larger surface area hitting the drywall. See Gabriel Suarez, *The Tactical Rifle: The Precision Tool for Urban Police Operations* 38 (1999). Suarez says that concerns about .223/5.56 overpenetration and resulting danger to the public have been greatly exaggerated. *Id.*

One test showed that .223/5.56 bullets fired through an interior wall had “significantly less penetration” than popular handgun and 12 gauge rounds, and affirmed that “stray 5.56mm/.223 bullets seem to offer a reduced risk of injuring innocent bystanders . . . where bullets miss their intended targets and enter or exit structures.” Roberts, at 23-24. AR-15s and similar “assault weapons” are actually *less* dangerous than handgun rounds. This is one reason law enforcement officers often use the select-fire M4

or semiautomatic AR-15 rifles for raiding buildings and hostage situations, especially in urban areas. *See* Boone Decl. at J.A. 2168-69, *Kolbe v. Hogan*, 849 F.3d 114 (4th Cir. 2017) (en banc) (No. 14-1945).⁴

Defendants also claim that the AR-15 poses extreme danger to law enforcement officers because its bullets can penetrate police soft body armor. County Br. at 7-8, 13, 23; City Br. at 28. But this is true of *all* centerfire rifles. Soft body armor (Levels I-III) only stops rounds from handguns and shotguns; rifle rounds require steel, ceramic, or composite hard plates (Levels III-IV). *See Body Armor Performance Standards*, National Inst. of Justice (Feb. 22, 2018), <https://nij.ojp.gov/topics/articles/body-armor-performance-standards>. Again, while this may show one way rifles are more dangerous than handguns, it does not explain why the AR-15 is far more dangerous than other non-banned rifles.

IV. Higher Casualties in Mass Public Shootings Do Not Prove That The AR-15 Is Dangerous and Unusual.

Defendants cite statistics numbering the incidents and casualties where “assault weapons” such as the AR-15 are used in mass public shootings AR to show that such firearms are exceptionally dangerous and justifiably banned. State Br. at 41-43; County Br. at 4-5, 10, 26-29; City Br. at 26-27. Mass public shootings are unspeakable tragedies that take innocent lives, shatter families, and traumatize communities. But just because a mass murderer picks an “assault weapon” with which to perpetrate his crime does not necessarily make the firearm itself more deadly. The Defendants’ simplistic counting of incidents and casualties in mass public shootings does not tell the whole story.

⁴ Boone is a firearms and ballistics expert, firearms trainer, and former FBI agent who directed the FBI Ballistic Research Facility for 15 years.

Defendants fail to answer the relevant question: Would there have been fewer injuries or deaths if the shooter had used a handgun, shotgun, or hunting rifle instead? If the mass shooter's bullet strikes the victim's head, heart, or other vital organ, it is unlikely the firearm type will make much difference. If the mass shooter fires multiple rounds that strike a stationary target at very close range, it is unlikely the firearm type will make much difference. Since all guns can kill, lethal outcomes in these cases are even less contingent on the type of weapon used. Shooters with firearms other than "assault weapons" can and have produced high casualties in mass public shootings. Mass shooters armed only with handguns have perpetrated high-casualty shootings at Luby's (50), Virginia Tech (49), Ft. Hood (45), and Thousand Oaks (33), where the total casualties approximate or exceed mass shootings with "assault weapons" at Highland Park (53), El Paso (48), Sutherland Springs (46), Uvalde (38), and Parkland (34). *See Wallace, "Assault Weapon" Lethality*, at 58.

To determine if "assault weapons" like the AR-15 are more lethal than other firearms, Defendants must go beyond simply counting incidents and casualties and consider factors relevant to whether the type of weapon used in a mass shooting makes a difference in the outcome. This requires examining an array of variables and their interaction: the shooter's intent, skill, weapon caliber and type, rate of fire, and total rounds fired; the duration of the shooting; the location, size, density, and posture of victims; and, yes, even the age and physical condition of those victims. *See D.C. Reedy & C.S. Koper, Impact of handgun types on gun assault outcomes: a comparison of gun assaults involving semiautomatic pistols and revolvers*, 9 *Injury Prevention* 151, 153 (2003) ("A number of factors such as gun caliber, wound location, and the physical condition of the victim influence whether a gunshot victim dies.").

When a mass shooter fires into a large, dense crowd in a venue with limited routes of escape (Las Vegas, Orlando, Aurora) or shoots victims at extremely close range (Sutherland Springs, Orlando, Sandy Hook, Virginia Tech, Columbine, and others), the type of firearm used may not make a significant difference in the outcome. If the mass shooter uses multiple types of firearms (Orlando, San Bernardino, Sandy Hook, Aurora, Columbine, and others), it must be determined how many casualties are associated with each weapon. Research shows that mass shooters with multiple firearms kill more victims, on the average, than those with a single firearm. See Adam Lankford & James Silver, *Why have public mass shootings become more deadly? Assessing how perpetrators' motives and methods have changed over time*, 19 *Criminology & Pub. Pol.* 37, 38-39 (2020) (citing sources). Until such data are collected and analyzed, simplistically counting incidents and casualties in mass shootings with "assault weapons" is an incomplete and potentially misleading way to assess "assault weapon" lethality.

These questions are not some clever attempt to avoid the fact that "assault weapons" have been used in a large number of high casualty mass public shootings. A recent study considered for the first time the relationship between the type of firearm used, wounding characteristics, and probability of death in mass public shootings. Babak Sarani, et al., *Wounding Patterns Based on Firearm Type in Civilian Public Mass Shootings in the United States*, 228 *J. Amer. College Surgeons* 228 (March 2019). Researchers studied firearm types and autopsy reports for 232 victims from 23 mass shootings, including high-casualty shootings with "assault weapons" at Orlando and Las Vegas. While initially assuming that mass shootings with rifles would be more lethal than those with handguns, they found that mass public shootings with a handgun are more lethal than those associated a rifle because they result in more wounds per victim and more injuries to vital organs. *Id.* at 228-29, 232-33. "All of us were shocked," Dr. Sarani said, "[w]e came to the table

with our bias that an assault weapon would be worse.” Carolyn Crist, *Handguns more lethal than rifles in mass shootings*, REUTERS (Dec. 31, 2018), <https://perma.cc/N9VY-CVUX>.

Those who were shot with a handgun were almost four times more likely to have three or more wounds compared with those shot with a rifle, thus “the probability of death is higher for events involving a handgun than a rifle.” Sarani, at 232. Twenty-six percent of those shot with handguns and 16% shot with shotguns had multiple fatal organ injuries, while only 2% of those shot by a rifle had two or more fatal organ injuries. *Id.* Wounds to the brain and heart, which have higher fatality rates than gunshots to other organs, were most likely to occur when handguns were used. *Id.* at 233. Those shot with rifles were twice as likely to have a preventable death than those shot with other firearms. *Id.* at 231. More research needs to be done, of course, but the study’s conclusions undermine the Defendants’ reliance incident-and-casualty counting.

V. If AR-15s Are Dangerous and Unusual, Use of Law Enforcement Patrol Rifles May Constitute Excessive Force.

The Defendants’ position may lead to disarming law enforcement. Many Illinois police officers are equipped with AR-15 style patrol rifles and such rifles are standard equipment for police tactical teams. Law enforcement prefers AR-15 style rifles for many of same reasons civilians often prefer them for home defense. A Massachusetts Municipal Police training manual states that these weapons are used “due to the increased accuracy that the rifle afforded over the pistol and the shotgun.” Massachusetts Municipal Police Training Committee, Basic Firearms Instructor Course: Patrol Rifle 3 (Sept. 2007), <https://perma.cc/M8VW-DUXR>. It explains that “[t]he rifle is a superior tool. It allows the officer to either stand off from the threat or, if the situation requires, advance to the threat with the confidence that the tool in their hands can deal with almost any perceived

threat.” *Id.* The AR-15 is actually less dangerous to bystanders because “the most popular patrol rifle round, the 5.56mm NATO (.223 Remington) will penetrate fewer walls than service pistol rounds or 12 gauge slugs.” *Id.*

Defendants claim, however, that the AR-15 is “too overpowered” for self-defense and useful only for “providing rapid and indiscriminate cover fire in the military.” County Br. at 6; *see* City Br. at 15 (AR-15s “offer far greater fire power than is necessary for self-defense”); *id.* at 25 (“they nevertheless retain the sort of ‘staggering lethality’ that makes them more suitable to military use”). The Defendants even argue that “[g]iven the extraordinary lethality of assault weapons, such weapons are patently incompatible with basic principles of moderate self-defense” and that use of such weapons “is excessive force, and not self-defense, and thus a crime.” County Br. at 23; *see id.* at 26 (assault weapons are “practically and legally unsuitable for self-defense under Illinois law”).

If Defendants prevail on these grounds, amici anticipate that police use of patrol rifles such as the AR-15 will trigger complaints of excessive deadly force. While police officers are exempted from the “assault weapon” bans at issue here, they are not protected from penalties for wrongful use of deadly force. In Illinois, police officers shall use deadly force only when reasonably necessary in defense of human life. 720 Ill. Comp. Stat. § 5/7-5 (a-15)(d). Police officers are not soldiers and use of deadly force laws not the typical rules of engagement on the battlefield. If “assault weapons” like the AR-15 are far too dangerous for civilians to use for self-defense, then are they too dangerous for police officers to use for defense of themselves and others?

CONCLUSION

“Assault weapons” such as the civilian AR-15 are not exceptionally dangerous. Despite claims that the AR-15 is a militaristic weapon suited only for the battlefield that causes more horrendous and deadly wounds than other firearms, the truth is more

mundane: the banned firearms are just a subset of ordinary semiautomatic rifles, and are owned and used by many millions of law-abiding citizens and thousands of law enforcement agencies and officers for lawful purposes. The Court should affirm the preliminary injunction in the consolidated *Barnett* cases and reverse the denial of the preliminary injunction in the *Herrera* case.

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

1. This brief complies with the type-volume limitation of Fed. R. App. P. 29(a)(5) and 7th Cir. R. 29 because it contains 6,948 words, excluding the parts exempted by Fed. R. App. P. 32(f).
2. This brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and 7th Cir. R. 32(b) and the type-style requirements of Fed. R. App. P. 32(a)(6) because it has been prepared in a proportionally spaced typeface in Palatino 12-point font.

/s/ E. Gregory Wallace
June 26, 2023

CERTIFICATE OF SERVICE

I hereby certify that on June 26, 2023, I electronically filed the foregoing with the Clerk of Court for the United States Court of Appeals for the Seventh Circuit by using the CM/ECF system. I certify that all participants in this case are registered CM/ECF users and that service will be accomplished by the CM/ECF system.

/s/ E. Gregory Wallace
June 26, 2023