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Standard Guide for
Body Armor for Non-Law Enforcement First Responders¹

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INTRODUCTION

Non-law enforcement first responders, such as fire fighters, emergency medical service providers, and non-law enforcement fire investigators are facing increased exposure to scenes of violence, and, since the early 2000s, many departments have required that ballistic-resistant body armor be worn on emergency calls. Since 2018, the wearing and use of body armor has been required for fire and emergency medical personnel when operating in a warm zone. For the past 40 years, law enforcement officers have been wearing body armor and guidance has been provided to them by the National Institute of Justice. The concern for other responders is that the use and wear conditions are different than for law enforcement: different limitations of body armor, levels of protection, threat assessment, use and care, compatibility with other required protective gear, and training. This guide provides necessary information developed by a multi-discipline group of experts within a consensus process. Those benefiting from this guide include all non-law enforcement responders and their agency/department leadership.

1. Scope

1.1 This guide provides information to non-law enforcement first responders for the selection and use of body armor.

1.2 Non-law enforcement first responders, including but not limited to fire fighters, emergency medical service providers, fire investigators, and civilian/community response teams, require specialized guidance on types of body armor and their limitations, levels of protection, threat assessment, use and care, compatibility with other required protective gear, and training.

1.3 This guide is directed to authorities having jurisdiction (AHJs) and all non-law enforcement first responders and their agency or department leadership.

1.4 This guide is not intended for law enforcement and corrections personnel.

NOTE 1—See NIJ SAG 0101.06.

¹ This guide is under the jurisdiction of ASTM Committee E54 on Homeland Security Applications and is the direct responsibility of Subcommittee E54.04 on Public Safety Equipment.
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1.5 This guide is divided into the following sections:

Section	Title
1	Scope
2	Referenced Documents
3	Terminology
4	Significance and Use
5	Managing a Body Armor Program
6	Understanding Protection Levels
7	Selecting the Appropriate Body Armor
8	Sizing Body Armor to the End User(s)
9	Guidance on Purchasing
10	Verifying that Your Body Armor is NIJ Certified
11	Fit, Coverage, and Wear Guidance
12	Fire Fighter Guidance for Body Armor Use with Turnout Gear
13	Inspection, Care, and Maintenance
14	Keywords
Annex A1	Risk Assessment Guidance
Appendix X1	Body Armor Program Management Guidance
Appendix X2	Comparison of NIJ Ballistic Protection Levels
Appendix X3	General Federal Government Grant Programs

1.6 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system are not necessarily exact equivalents; therefore, to ensure conformance with the standard, each system shall be used independently of the other, and values from the two systems shall not be combined.



1.6.1 The user of this standard will identify the system of units to be used, and it is critical to ensure that any cross-referenced standards maintain consistency of units between standards.

1.7 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.8 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 ASTM Standards:²

E3003 Practice for Body Armor Wearer Measurement and Fitting of Armor

E3005 Terminology for Body Armor

E3195 Guide for Body Armor Program Management

2.2 NFPA Standards:³

NFPA 3000 Standard for an Active Shooter/Hostile Event Response (ASHER) Program

2.3 NIJ Standards:⁴

NIJ Standard 0101.06 Ballistic Resistance of Body Armor

NIJ Standard 0115.00 Stab Resistance of Body Armor

NIJ SAG 0101.06 Selection and Application Guide to Ballistic-Resistant Body Armor for Law Enforcement, Corrections and Public Safety

3. Terminology

3.1 Definitions from Terminology **E3005**:

3.1.1 *accessory, n*—a body armor component that is detachable or removable from the body armor and is intended to provide extended area of coverage protection against threats that may include ballistic threats, stabbing, fragmentation, blunt impact, or a combination of threats.

3.1.1.1 *Discussion*—Accessories are typically attachments to tactical body armor providing protection to areas not covered by the vest, such as the shoulders, upper arms, neck, sides, pelvis, and groin. See *tactical body armor*. See *vest*.

3.1.2 *armor panel, n*—a component of soft body armor consisting of protective materials, typically enclosed in a panel cover.

3.1.3 *body armor, n*—an item of personal protective equipment intended to protect the wearer from threats that may include ballistic threats, stabbing, fragmentation, or blunt impact.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, MA 02169-7471, <http://www.nfpa.org>.

⁴ Available from National Institute of Justice (NIJ), 810 7th St., NW, Washington, DC 20531, <http://nij.gov>.

3.1.3.1 *Discussion*—Law enforcement and corrections officers typically refer to body armor as a vest.

3.1.4 *carrier, n*—a garment whose primary purpose is to retain the armor panel(s) or plate(s) and provide a means of supporting and securing the armor panel(s) or plate(s) to the wearer.

3.1.5 *hard armor, n*—an item of personal protective equipment that is constructed of rigid materials and is intended to protect the wearer from threats that may include ballistic threats, stabbing, fragmentation, or blunt impact, or combinations thereof; synonymous with hard armor plate and plate.

3.1.6 *in conjunction with armor, n*—soft or hard armor that is designed to provide a specific level of ballistic protection only when layered with a specified model(s) of body armor.

3.1.7 *soft armor, n*—an item of personal protective equipment constructed of pliable/flexible materials intended to protect the wearer from threats that may include ballistic threats, stabbing, fragmentation, or blunt impact.

3.1.8 *strike face, n*—the surface of an armor panel or plate intended to face the oncoming threat.

3.1.9 *vest, n*—type of body armor intended to protect the wearer's torso.

3.1.10 *wear face, n*—the surface of an armor panel or plate that is intended to be placed against or proximal to the wearer's body.

4. Significance and Use

4.1 This guide is intended for non-law enforcement first responders facing increased exposure to scenes of violence where firearms or stabbing weapons may be used.

4.2 The use and wear conditions are different than for law enforcement, requiring specialized guidance on types of body armor and their limitations, levels of protection, threat assessment, use and care, compatibility with other required protective gear, and training.

5. Managing a Body Armor Program

5.1 To assist public safety agencies or departments with managing a body armor program, Guide **E3195** was developed which includes recommendations for policies, program roles and responsibilities, program planning, and inventory management.

5.2 Body armor program management guidance from Guide **E3195**, tailored specifically for non-law enforcement applications requiring use of body armor, is provided in **Appendix X1**.

6. Understanding Protection Levels

6.1 NIJ is the U.S. government agency responsible for developing and maintaining performance standards for body armor worn by U.S. law enforcement, corrections officers, and other public safety personnel.

6.2 There are three types of body armor addressed by NIJ standards:

6.2.1 Ballistic-resistant armor to protect against handgun and rifle threats;