

**NOT FOR PUBLICATION
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THE HOUSE APPROPRIATIONS
COMMITTEE
SUBCOMMITTEE ON DEFENSE**

**STATEMENT OF
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DEPUTY COMMANDANT OF THE MARINE CORPS
(COMBAT DEVELOPMENT AND INTEGRATION)
BEFORE THE
HOUSE APPROPRIATIONS COMMITTEE
SUBCOMMITTEE ON DEFENSE
CONCERNING
MARINE CORPS FORCE PROTECTION EQUIPMENT
ON
MARCH 12, 2009**

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Introduction

Chairman Murtha, Congressman Young, and distinguished members of this Subcommittee, I appreciate and am honored to appear before you today. Protecting Marines is a concern we all share, and I appreciate the opportunity to discuss Marine Corps force protection equipment. Marines and their families understand and appreciate all the support the Congress has provided in ensuring their well being. On their behalf, I want to thank you for your past support, and we look forward to working together to support our Marines as they remain engaged in combat operations in OPERATION IRAQI FREEDOM, OPERATION ENDURING FREEDOM, and other contingencies.

Lightening the MAGTF

Safeguarding Marines is one of our highest priorities and is one of our most challenging. The goal of our research and development in armoring technologies is to increase the effectiveness of armor while reducing weight for both individual protection as well as vehicle armoring. The bottom line is that the focus on armor as the principal means of protecting our force is making us too heavy. Our business is a deadly one and one that we don't take lightly but we have to view force protection as more than armor if we are ever to lighten the MAGTF. In fact, force protection of the MAGTF is also accomplished through our maneuver tactics, techniques and procedures and through increased battle space awareness. Lightening the MAGTF makes us faster and more agile; ultimately, making us more effective and deadly to the enemy. Speed and maneuverability inherently provide a measure of force protection, particularly when combined with proper training. We achieve that awareness through integration of persistent and responsive intelligence, surveillance, and reconnaissance delivered by our reconnaissance forces, by unmanned aerial sensors and through other sensor and electronic technologies. These systems do not eliminate risk but they do provide an additional layer of protection through battle space awareness.

We are developing policies and acquisition practices for our future equipment that will make it more modular and scalable to allow us to increase and decrease armor protection and its associated weight according to the commander's assessment of mission requirements and threat.

This means that there will be times in the future when Marines and vehicles are armored significantly less than they are today, but mobility and speed will increase by removing some armor. These decisions will not be taken lightly but they are absolutely necessary to enable the accomplishment of our mission. We must ensure that our commanders in the field have flexibility and the ability to tailor equipment sets to match the threat, the operating environment, and demands of the mission at hand.

The expeditionary nature of the MAGTF demands a force that is capable of the rapid movement of combat forces, whether by surface ships and amphibious landing craft, aircraft, vehicles, or on foot. Today's MAGTF is many times more lethal and more multi-mission capable than it was even a decade ago and while some of the equipment used by individual Marines is lighter and more effective than the equipment it replaced we are still a long way away from lightening the load Marines are burdened to carry. Of particular concern is armor, both personal protective armor as well as armoring of combat vehicles. A relatively recent and essential trend, increasing armor on Marines and their vehicles, born from operations in Iraq, threatens to erode our expeditionary capabilities and reduce the effectiveness of our forces. The protection of our Marines is paramount and while body and vehicle armor are life savers other methods for protecting our Marines are equally as important. Our protection philosophy must include training in personal protective measures, maneuver tactics, techniques and procedures and training our leaders in personal protective measures that allow flexibility and protection scalability. Our commanders need the flexibility to adjust protection levels as the situation dictates and provide scalability of personal protection equipment, both personal and vehicular, that provides levels of protection that reduce the burden on our personnel and equipment.

Ground Mobility

The evolving threat environment requires proactive management of tactical wheeled vehicle programs in order to provide Marine warfighters with the most well protected, safest vehicles possible given technological limitations. Force protection remains a priority for the Marine Corps. We have fielded a Medium Tactical Vehicle Replacement (MTVR) Armor System for the MTVR, Fragmentation Armor Kits for the High Mobility Multipurpose Wheeled Vehicles (HMMWV), Marine Armor Kits (MAK) for the Logistics Vehicle System (LVS), Mine Resistant Ambush Protected (MRAP) vehicles, and starting this fiscal year we will begin fielding Logistics Vehicle System Replacement (LVSR) vehicles that include a removable armor kit. As

we face continuous challenges, we strive to stay ahead of the threat. To this end, we have developed increased force protection upgrades to the MRAP vehicles and the Medium Tactical Vehicle Replacement Armor System, developed safety upgrades for the HMMWVs, and developed improved armor for the Logistics Vehicle System. We will continue to work with the Science & Technology community and sister Services to develop and apply technology to address force protection requirements. Your support for our force protection efforts has been overwhelming. We thank you and ask that Congress continue their life-saving support in the coming years.

Our plan for future tactical mobility is to replace the venerable Amphibious Assault Vehicle (AAV) and the family of High Mobility Multipurpose Wheeled Vehicles (HMMWVs). The design and capabilities of our future tactical combat vehicles are informed and guided by our amphibious and expeditionary nature, by lessons learned from combat operations and by close partnership with industry. Each has helped us to understand technical requirements and make better decisions during system development. The vehicle designs must achieve balance in what we refer to as the iron triangle: protection, payload, and performance. Our future tactical combat vehicle fleets must provide the commander with balanced capability- vehicles should be adequately protected, yet maneuverable and functional across the range of military operations. Where speed, tactical maneuverability, environmental and terrain considerations dictate the most important capabilities needed in our vehicles, we will carefully consider the tradeoffs in conventional heavy armor protection versus the operational requirements for performance. These tradeoffs are not taken lightly and they are done with full consideration that our Marines will be taking the vehicles into harm's way. Where possible, we are defining requirements for our vehicles that include scalable protection, meaning that it will be possible, through kitted armor applications to adjust the level of protection as dictated by the threat condition. We anticipate that as technology improves, we will be able to achieve greater degrees of ballistic and explosive protection with lighter materials. The acquisition objectives for our tactical vehicles are based on maintaining our current infantry lift capacity into the future and on restoring our payload capacity throughout the rest of the Marine Corps. In order to do that we will field the Expeditionary Fighting Vehicle (EFV) and the Marine Personnel Carrier (MPC) and we will begin replacing selected HMMWVs with the family of Joint Light Tactical Vehicles (JLTVs).

Expeditionary Fighting Vehicle (EFV). The EFV provides the Marine Corps and the nation with our only self-deploying, tracked, amphibious operations capable, fighting vehicle and is our Commandant's number one acquisition priority. The vehicle's design will permit it to carry 18 combat-loaded Marines ashore from ships positioned 25 or more nautical miles off shore at a speed of 20-25 knots and a range of 65 nautical miles ship to shore. The EFV's capability provides Amphibious ships with maneuver space for increased force protection for the fleet. Its ability to conduct high speed maneuver at sea as well as on land, combined with its weapons systems, communications suite, and protective systems make it a highly survivable and lethal capability. The EFV is armor protected to withstand 14.5mm impacts from 300 meters and with the addition of appliqué armor 155mm fragmentation penetration from 50 feet. It has a chemical overpressure system to protect the Marines on board against NBC attack. The EFV will be built in two configurations. The command and control variant will support and enable infantry regimental and battalion command and control. The personnel variant will carry a reinforced rifle squad and 3-man crew. The program completed critical design review in December 2008 and is on schedule to begin Low Rate Initial Production in 2012. The acquisition objective is 573 vehicles.

Joint Light Tactical Vehicle. This is a Joint Marine Corps/Army program with the Army as the lead Service for acquisition. The JLTV family of vehicles will be designed to replace multiple configurations of the current family of HMMWVs. The Marine Corps' initial acquisition objective is 5500 vehicles but the final objective could be 25,000 or more to facilitate replacement of all HMMWVs in our inventory. As the Marine Corps's light utility vehicle it will be required to support multiple mission roles from command and control, to cargo and troop carrying, to specialized ambulance and shelter carriers. Several variants of the JLTV will be required to be externally transportable by Marine Corps Heavy Lift CH-53 helicopters and that requirement will define maximum allowable weights. The JLTV family of vehicles will have scalable levels of protection consisting of a base armor capability and several designed safety and protection capabilities as well as kitted, add-on armor. The basic vehicle design will account for the heaviest anticipated payloads including armor kits to permit the vehicle to retain its all-terrain mobility capabilities even when fully loaded.

Marine Personnel Carrier (MPC). The MPC will be a multi-wheeled, armored personnel carrier designed to operate across the range of military operations but focused on an irregular warfare operating environment characterized by operations in constrained and urban terrain. Required to carry 8-10 combat loaded Marines and 2-man crew, the MPC will enable high-speed land maneuver as well as substantial ballistic protection to embarked Marines. It is scheduled to begin Engineering, Manufacturing and Development in 2010, with initial operational capability in 2015. The acquisition objective is approximately 630 vehicles.

Mine Resistant Ambush Protected (MRAP) Vehicles. Mine Resistant Ambush Protected (MRAP) vehicles are designed to protect vehicle crew and passengers from mine blasts and fragmentary and direct fire weapons. They are designed with a “V” shaped hull and are employed to protect against the three primary kill mechanisms of mines and improvised explosive devices – fragmentation, blast overpressure, and acceleration. The Marine Corps is executing this joint urgent requirement to provide as many highly survivable vehicles to theater as quickly as possible. In November 2008, the Joint Requirements Oversight Council established a new 16,238-vehicle requirement for all Services and Special Operations Command (SOCOM). The current Marine Corps requirement of 2,225 vehicles supports our ongoing theater operations and home station training. As of 27 January 2009, 16,230 vehicles are under contract with over 15,000 accepted by the government and over 11,200 fielded in theater. Our Marine Corps requirement was satisfied in June 2008.

The Marine Corps is supporting the Central Command (CENTCOM) Joint Urgent Operational Need, for a lighter, more agile vehicle better suited to the rugged environment in OPERATION ENDURING FREEDOM. We are aggressively executing an acquisition strategy to procure an MRAP All Terrain Vehicle (M-ATV). Submitted proposals are currently under review and the evaluation will include assessments of production representative vehicles. The Marine Corps is conducting the necessary analysis to establish our specific vehicle requirements for the MRAP-All Terrain Vehicle.

Up-Armored HMMWVs. Life cycle management of HMMWVs will continue to be a focus area due to their ubiquity and expeditionary capability. Safety modification kits (3 point seat

belts, automatic fire sensing and suppression systems, gunner's restraints and intercoms) requested by the warfighter have been shipped to theater for installation. Installations were completed in February 2008. Production units of 400 amp alternator kits required to power Counter IED jammers and other electronics are targeted to be installed in the beginning of 2009. We will continue to work with the Army to assess additional upgrades, particularly related to armor and the suspension system. We are currently evaluating the Army's Vehicle Emergency Escape (VEE) Windshield kit, which allows Marines to quickly exit the HMMWV in the event of a rollover.

Expanded Capacity Vehicles. The Expanded Capacity Vehicle (ECV) is the latest configuration for the HMMWV fleet. The Expanded Capacity Vehicle increased the gross vehicle weight to 12,100 pounds, and has a more powerful turbo-charged engine, upgraded suspension and integrated air conditioning system. Additionally the Expanded Capacity Vehicles are designed to accept armor kits, installed either at the factory or at organic maintenance facilities.

All new deliveries of Expanded Capacity Vehicle configurations (M1151, M1152 and M1165) to the Marine Corps are manufactured as armored vehicles and will have FRAG Kits 2 and 5 level capabilities integrated. FRAG Kit 2 is designed to enhance ballistic protection in the front part of the vehicle around the driver and A-driver wheel-wells. FRAG Kit 5 is designed to degrade improvised explosive device effects and reduce armor debris that results from overmatch.

Logistics Vehicle System Replacement (LVSR). The Logistics Vehicle System Replacement (LVSR) will replace the current Marine Corps aging heavy-tactical wheeled vehicle, the Logistics Vehicle System (LVS). As the Marine Corps' heavy-tactical distribution system, the LVSR Cargo variant will transport bulk liquids (fuel and water); ammunition; standardized containers; bulk, break bulk, palletized cargo, and bridging equipment. The LVSR Wrecker variant will perform heavy wrecker/recovery missions, while the LVSR Tractor variant will tow heavy engineer equipment and combat vehicles with the M870A2 40 ton Medium Heavy Equipment Trailer (MHET). All LVSR vehicles will include a base "A" armor kit, with capability to accept add-on "B" armor kits. LVSR cargo met or exceeded all survivability requirements in extensive live fire testing. LVSR cargo vehicles with armor kits will begin

fielding in FY09 to Afghanistan, as well as to CONUS and OCONUS MEF locations, training schools, and Maritime Prepositioned Shipping.

Mine Rollers. We are also fielding mine rollers to our Marines. These systems are designed to protect convoys from the effects of pressure-plate activated mines and victim initiated improvised explosive devices. The Lightweight Mine Roller system can be mounted on a variety of vehicles, including High Mobility Multipurpose Wheeled Vehicles, Medium Tactical Vehicle Replacements, and Light Armored Vehicles. It provides full-width protection coverage for the host vehicle.

Medium Tactical Vehicle Replacement (MTVR) Armor System (MAS) For our Medium Tactical Vehicle Replacement 7-ton trucks, we developed what is known as the Medium Tactical Vehicle Replacement Armor System (MAS). This armor system is a permanent modification to our Medium Tactical Vehicle Replacement fleet. It is designed for the life of the vehicle (twenty-one years). The Medium Tactical Vehicle Replacement Armor System is capable of withstanding small arms fire, improvised explosive devices, and mines. It provides complete 360 degree protection, as well as overhead and underbody protection for the cab occupants, and includes upgraded suspension, A/C system, removable armored personnel carrier (with ballistic glass), and machine gun mounts.

The Medium Tactical Vehicle Replacement Armor System is installed in all Medium Tactical Vehicle Replacement variants in Iraq and Afghanistan. We have continued to improve the Medium Tactical Vehicle Replacement Armor System in response to Urgent Universal Needs Statements (UUNS) – adding increased underbody blast protection, fuel tank fire protection kits, and 300 amp alternator kits (for powering Counter Improvised Explosive Devices (CIED), etc.). Every Medium Tactical Vehicle Replacement that leaves the FOB is equipped with the Medium Tactical Vehicle Replacement Armor System. The latest upgrade to the Medium Tactical Vehicle Replacement Armor System incorporates a removable cab roof to support Maritime Prepositioned Shipping requirements.

Vehicle Armoring in Closing

We have direct day-to-day communications with our U.S. Army counterparts to coordinate armoring strategies for our ground vehicles. We are committed to aggressively evolving our equipment to changing threats. Our ability to rapidly modify our vehicle armoring systems is a testament to this commitment. The following chart depicts the current state of our vehicle armoring efforts as of 25 January 2009.

**MARCENT Current Vehicle Armoring Posture
as of 25 January 2009
(for official use only)**

**Since August 2004 all Marine Corps vehicles operating outside the
FOBs have been at Level II or better armor protection.**

	Vehicle Systems in CENTCOM AOR	OIF O/H	OEF O/H	HOA - Bahrain O/H	Total	Level I	Level II	Level III	Total Unarmored Vehicles not Leaving FOBs
LTV	M1114	1917	158	0	2075	2075			
	HMMWV	544	48	41	633	0	1873	9	10
MTV	5-ton	56	0	0	56	0	56	0	0
	MTVR	976	0	0	976	890	86	0	0
HTV	LVS	226	0	0	226	0	226	0	0

Level I: A wheeled vehicle that is manufactured as an armored vehicle Level II: HQDA and Marine Corps approved Add-on-Armor (AoA) kits Level III: Hardening of vehicles through fabricated armor (HQDA) approved steel
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LTV: Light Tactical Vehicle MTV: Medium Tactical Vehicle HTV: Heavy Tactical Vehicle
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ISR

Marine Corps Persistent ISR (P-ISR) is an integrating concept designed to enhance intelligence planning and collection. Under development within the construct of the Marine Corps Intelligence, Surveillance, and Reconnaissance - Enterprise (MCISR-E), P-ISR will encompass materiel and non-materiel solutions, traditional and non-traditional ISR collection capabilities (ISR, NTISR), and the subsequent integration of data into intelligence products supporting the decision-making process across all staff functions. Our objective end state for P-

ISR is the seamless integration of ground and airborne sensor data, enabling the MAGTF Commander to sense, detect, identify, and track threat and other activities in near-real-time and without interruption. USMC P-ISR capabilities are being developed and assessed to address three primary geographic areas of the operating environment: point targets, route security, and area coverage. The MAGTF C2 family of systems will provide the interfaces necessary to integrate capabilities into combat operations centers and small unit C2 nodes.

Currently, our focus is on providing commanders capabilities that enhance their security posture and expand the area over which they have situational awareness. As part of P-ISR support to Force Protection, we deployed the Ground Based Observation and Sensing System (GBOSS). GBOSS provides persistent surveillance of the area outside forward operating bases. For areas of interest within restricted terrain, we are developing a Micro-terrain Sensing System (MTSS) designed to provide full-motion video and still photography. In the air, based upon successes and lessons learned with the manned Angel Fire program in Iraq, we are pursuing better, more cost effective solutions. In cooperation with the Air Force and the Office of Naval Research, we are developing a wide area coverage payload for our organic unmanned aircraft system, SHADOW, that will include automated tools for the detection of anomalous behavior within the field of view. We also intend to leverage other Service's airborne initiatives such as TASK FORCE ODIN and PROJECT LIBERTY. To better provide combat information and intelligence to the lowest tactical level, we implemented the Company Level Intelligence Cell (CLIC) as part of an Enhanced Company Operations concept. Implementation of the CLIC has also provided the infantry company commander an organic ability to develop situational awareness and intelligence products for his area of operations and subsequently feed that information to higher headquarters. These capabilities, coupled with our current suite of tactical sensors providing imagery, signals intelligence, human intelligence, and measurement and signature intelligence, provide the commander an ability to maintain a greater awareness of his battle space. Our ability to selectively and intelligently feed sensor data to our lower tactical units will be critical to our ability to sustain and inform small unit actions across large operating areas such as Afghanistan.

As we move ahead with sensor development across the battlefield, we continue to pursue the ability to more comprehensively integrate battlefield sensors toward the mutual cueing of

ISR and NTISR sensors against high priority information requirements and the integration of data for sharing within and external to the MAGTF. These capabilities will be designed to make sensor data rapidly available across the MAGTF and within the larger joint community. Marine Corps Systems Command, in collaborative efforts with the Office of Naval Research, is furthering our ability to integrate disparate sensors with experimentation in Empire Challenge 2009, scheduled for this summer.

Force Protection Equipment and Initiatives

Counter Remote-Controlled Improvised Explosive Device Electronic Warfare (CREW) – High Power Jammers. During 2005, radio-controlled (RC) devices became the most deadly triggering mechanisms for Improvised Explosive Devices (IED). In recognition of that fact, in June 2005 the Commandant of the Marine Corps directed the Marine Corps Systems Command to find a rapid means to counter this threat. Working with the Joint IED Defeat Task Force (now JIEDDO), we immediately embarked on a world-wide search for a solution. By April 2006, we began fielding jamming systems to counter the RCIED threat.

Today, we have a significant number of Counter Radio-Controlled Improvised Explosive Device Electronic Warfare (CREW) systems in theater and protecting Marines. Every Marine vehicle that travels outside of operating bases is protected by a CREW system that counters the RCIED threat.

In August 2008, the Marine Corps began upgrading current CREW systems, Chameleon and Hunter, to counter emerging threats. The upgrades provide an expanded threshold frequency range. Upgraded systems will be interoperable with currently fielded CREW systems. The CREW Vehicle/Receiver Jammer has been identified as the next iteration of CREW system for the Marine Corps. Our CREW systems will continue to evolve to meet or stay ahead of the threat.

Ground Based Operational Surveillance System (GBOSS). To provide commanders with increased situational awareness to counter insurgent activities and the threat of improvised explosive devices (IED) a persistent ground based surveillance capability is required at the battalion and company level. In response, the Marine Corps has fielded the Ground Based

Operational Surveillance System (G-BOSS). This system consists of two electro-optic, infra-red cameras, a ground surveillance radar, and unattended ground sensors. Thirty-three G-BOSS systems were delivered in FY07, 78 systems in FY08, and 13 systems in FY09 to support Marines in OPERATION IRAQI FREEDOM

In August 2008, MARCENT submitted a request for an expeditionary “G-BOSS like” capability for persistent surveillance in support of OPERATION ENDURING FREEDOM. The request is for 22 mobile, scalable, lightweight systems to be used at combat outposts and temporary tactical locations. The Cerberus long range and portable systems were identified as an acceptable materiel solution. Deliveries of these systems will begin to arrive within the next 45 days. These systems have similar operational capabilities as the G-BOSS, however, the increased mobility and scalability of these systems will enable personnel to tailor their employment options to meet the rugged, remote terrain of Afghanistan.

Military Working Dogs. Military Working Dogs have been an asset to the Marine Corps since World War II. Today, there are six varieties of explosive-detecting Military Working Dogs in the Marine Corps including the Explosive Detector Dog (single purpose), Patrol/Explosive Detector Dog (dual purpose), Combat Tracker Dog and Specialized Search Dog. There is also the IED Detector Dog, which will remain a “just-in-time” capability as a result of an Urgent Universal Needs Statement. Unlike other Military Working Dogs, Specialized Search Dogs and IED Detector Dogs do not need a Military Police Marine; they are handled by infantry Marines. All of these dogs provide Marines with the ability to prevent attacks, explosions, and unnecessary casualties. IED Detector Dogs should be particularly beneficial in Afghanistan, where the rugged terrain often requires dismounted patrolling. Two Battalions are currently training with 26 IED Detector Dogs in preparation for their Afghanistan deployments.

Biometrics. In 2003, Marine Commanders requested biometric capabilities for operations in Iraq and Afghanistan. The primary solution fielded in response to these urgent needs was the Biometric Automated Toolset (BAT). Four hundred fifty seven BAT systems have been fielded to Marines in OIF and OEF, and the device is used widely by our Army partners. The employment of BAT has assisted Marines in positively identifying an increasing number of significant Persons of Interest or High Value of Individuals over the past several years. The

BAT system has assisted Marines in detaining IED suspects/terrorists after matching latent fingerprints from Sensitive Site Exploitation materials collected from IED components or from weapons. Marine's aggressive employment of biometric systems has restricted the enemy's freedom of movement appreciably aiding in the disruption of enemy operations.

Explosive Ordnance Disposal (EOD). In response to lessons learned from current operations, we have increased our Explosive Ordnance Disposal (EOD) forces from 317, in Fiscal Year 2004, to 732 during Fiscal Year 2010. With the proliferation of sophisticated trigger mechanisms being employed in IEDs, coupled with future threat assessments with regards to Weapons of Mass Destruction, the increased Marine Corps EOD organizational structure is presently being evaluated to better leverage this capability across the full range of military operations. This evaluation may call for a relocation of the Marine Corps' EOD capability. EOD technicians are the only personnel trained, organized and equipped to render safe, neutralize or dispose of IEDs. The Marine Corps' EOD community will increase support in Afghanistan in the near future.

Personal Protective Equipment

The wartime environment constantly changes and no one is better suited to determine what is the most effective in any given situation than the warfighter. Therefore, we provide solutions that can be configured to meet varying levels of threat. In the case of body armor, we provide every Marine with a modular ballistic body armoring system. Operational commanders are then able to determine what specific equipment their Marines will wear based upon specific mission requirements and environmental conditions.

Evolution of Tactical Vests

The foundation for our modular ballistic body armoring system is the Interceptor Body Armor System. Combat operations over the last few years have highlighted a need for improvements in our protective vest system. Therefore, we have transitioned from the Outer Tactical Vest to a new, more capable Modular Tactical Vest (MTV). The MTV provides greater coverage over the OTV, but adds nearly four pounds of additional weight (33.5 lbs versus 29.9 lbs). We are currently in the design phase for the development of an Improved Modular Tactical

Vest (IMTV). The soft and hard armor within the personal protective vests issued by the Marine Corps and the Army are the same and provide the same level of fragmentation and ballistic protection and are similar. The vests are similar, but not identical. The Marine Corps collaborated with the Army throughout the acquisition process to include sharing of test and evaluation data.

The Modular Tactical Vest accommodates use of our existing Enhanced Small Arms Protective Inserts and our Enhanced Side Small Arms Protective Insert plates. These are the same armor plates used by the Army and will continue to be the same as we make improvements to the Modular Tactical Vest.

The Marine Corps has teamed with engineers from the U. S. Army's Research, Development and Engineering Center in Natick, Massachusetts to address the areas of concern identified by Marines who wore the Modular Tactical Vest and to design an Improved Modular Tactical Vest that does the following:

- Mobility: Reduce Weight, Maximize torso/shoulder mobility to the greatest extent possible, and improve load distribution and weight bearing capabilities
- Comfort: Reduce soft armor overlap and bunching; and make cummerbund adjustments
- Accessibility: Reduce donning/doffing concerns, improve cummerbund flap closure
- Weapons Employment: Facilitate stock weld
- Modularity/Scalability: Facilitate the commander's discretion/flexibility for determining overall system weight and level of protection based on the prevailing threat and mission requirements

The acquisition objective for the Improved Modular Tactical Vest is 108,000 systems. A Request for Proposal is planned for release sometime this summer, 2009. Deliveries are planned to begin after a competitive award, with anticipated completion of deliveries in 2010. At the same time, we are conducting collaborative planning on the Next Generation personal protective vests with our sister Services.

Scalable Plate Carrier. The Scalable Plate Carrier is a lighter vest (25.4 lbs) that provides a body armor capability with greater mobility and reduced thermal stress in high elevations, thick vegetation and tropical environments than that provided by the Modular Tactical Vest. It allows

greater mobility and reduced thermal stress while maintaining direct fire protection. Both vests use Enhanced Small Arms Protective Inserts (E-SAPI) and Side SAPI plates and provide the best protection available against a wide variety of small arms threats. E-SAPI plates weigh 13 pounds for the large size, and the Side SAPI plates weigh 4.6 pounds. We recently fielded approximately 14,000 Scalable Plate Carriers. Coupled with the Modular Tactical Vest, the Scalable Plate Carrier provides commanders options to address various mission/threat requirements.

Scalable Plate Carrier feedback from Marine combat veterans has been clear and positive. Marines have welcomed protective equipment which provides identical ballistic protection at a lower weight, improving mobility in combat. The acquisition objective has been increased to approximately 65,000 plate carriers. Planned improvements to the Improved Scalable Plate Carrier (ISPC) include a cummerbund interoperable with the Modular Tactical Vest/Improved Modular Tactical Vest and enhancements to the shoulder straps to simplify donning/doffing.

Lightweight Helmet. We are committed to providing the best head protection available to our warfighters. The Lightweight Helmet provides the best performance and combat protection capabilities required by our Marines. At approximately, 3.5 pounds, the Marine Corps' Lightweight Helmet weighs slightly less than its predecessor and provides a high level of protection against fragmentation threats and 9mm bullets. Study results have demonstrated that the Lightweight Helmet with the pad suspension system provides greater protection against non-ballistic blunt trauma than the Lightweight Helmet with the sling suspension system. Therefore, the Marine Corps requires the use of the pad system in all of our Lightweight Helmets. We have completely replaced the sling suspension with pads. All new Lightweight Helmets produced by the manufacturer are delivered with the approved pad system installed. Independent testing conducted by University of Virginia and the U.S. Army Aeromedical Research Laboratory showed that the pads provide the best blunt trauma protection across the widest possible temperature ranges.

Current collaborative Research and Development efforts with the U.S. Army and industry partners have shown progress towards a potential replacement for the Lightweight Helmet. The Marine Corps' vision for the next Department of Defense helmet provides rifle ballistic

protection at the same weight as the Lightweight Helmet. Our goal is to produce the next generation helmet providing that level of protection as quickly as possible.

Personal Protection in Closing

It is very important to the Marine Corps that we provide robust personal protection solutions to our warfighters -- and provide these solutions to them immediately. Working with our nation's dedicated manufacturing base and our sister Services, the Marine Corps continues to be able to provide the best possible levels of personal protection to known and anticipated threats; and we remain committed to aggressively matching our equipment to changing threats. Our Personal Protective Equipment works.

Training Marines

It is easy to focus our force protection focus on new gear and equipment. However, taking care of Marines and protecting the force means ensuring they have the proper training to react to uncertain situations.

In order to properly train and protect our operating forces enduring the rigors and challenges of OIF and OEF, we have developed a very demanding, realistic and adaptive pre-deployment training program. The Pre-deployment Training Program (PTP) contains standards-based, progressive skills training which is evaluated by commanders and assessed by our Training and Education Command at the final Mission Rehearsal Exercise. The PTP includes counter-insurgency combat skills, as well as operational language and culture skills. Unit after-action reports and unit surveys, conducted by the Marine Corps Center for Lessons Learned, are shared Corps-wide and have influenced training changes to keep PTP relevant. For example, the Afghanistan Pre-Deployment Training Program, while similar in many facets to the PTP for Iraq, includes an emphasis on both mountain warfare and the integration of MAGTF combined arms. Force protection training runs through all blocks in the PTP, and it is a particularly important feature in each deploying unit's Block IV Mission Rehearsal Exercise.

During the past year, counter-IED pre-deployment training has been expanded to include home station training and use of mobile training teams. Additionally, counter-IED training lanes

and tactical search houses are currently under construction at several of our major bases. These facilities will support both “attack the network” and “defeat the device” training objectives.

CLOSING

We are committed to providing the Nation with multi-capable, ready forces. Our expeditionary nature and inherently balanced Marine Air Ground Task Forces make Marines ideally suited today’s complex environment. As much as ever, the Corps needs your continued support and the support of the American people to ensure we are providing the very best ground equipment as we fight today’s adaptive enemy and prepare for an uncertain future. Again, I thank you for the opportunity to report on behalf of our Marines and their families.