NOT FOR PUBLICATION UNTIL RELEASED BY
THE HOUSE ARMED SERVICES COMMITTEE
TACTICAL AIR AND LAND FORCES SUBCOMMITTEE

STATEMENT OF

VICE ADMIRAL PAUL GROSKLAGS
PRINCIPAL MILITARY DEPUTY, ASSISTANT SECRETARY OF THE NAVY
(RESEARCH, DEVELOPMENT AND ACQUISITION)

AND

BRIGADIER GENERAL JOSEPH SHRADER
COMMANDER, MARINE CORPS SYSTEMS COMMAND

AND

MR. WILLIAM TAYLOR
PROGRAM EXECUTIVE OFFICER, MARINE CORPS LAND SYSTEMS

BEFORE THE

TACTICAL AIR AND LAND FORCES SUBCOMMITTEE

OF THE

HOUSE ARMED SERVICES COMMITTEE

ON

MARINE CORPS GROUND FORCES MODERNIZATION AND ROTORCRAFT MODERNIZATION PROGRAMS

March 19, 2015

NOT FOR PUBLICATION UNTIL RELEASED BY
THE HOUSE ARMED SERVICES COMMITTEE
TACTICAL AIR AND LAND FORCES SUBCOMMITTEE

INTRODUCTION

Mr. Chairman, Ranking Member Sanchez, and distinguished members of the Subcommittee, we thank you for the opportunity to appear before you today to discuss the Marine Corps Ground Force Modernization and Rotorcraft Modernization programs. Our testimony will provide background and rationale for the Department's Fiscal Year 2016 budget request aligning to our strategic priorities and budgetary goals.

The United States is a maritime nation with global responsibilities. Our Navy and Marine Corps persistent presence and multi-mission capability represent U.S. power projection across the global commons. We move at will across the world's oceans, seas and littorals, and extend the effects of the sea-base deep inland. We enable global reach and access, regardless of changing circumstances, and will continue to be the nation's preeminent option for employing deterrence through global presence, sea control, mission flexibility and when necessary, interdiction. We are an agile strike and amphibious power projection force in readiness, and such agility requires that our Naval expeditionary forces remain strong.

The Marine Corps is the Nation's expeditionary force-in-readiness. By congressional mandate, it has a unique role and structure as a "…balanced force-in-readiness, air and ground." This mandate results in the requirement for the Marine Corps to maintain a high state of combat readiness to be "most ready, when the Nation is least ready."

Marines must be ready to respond anywhere in the world, at any time, with the full spectrum of expeditionary capabilities across a range of operations, to include, crisis response, humanitarian assistance, or armed conflict. Consequently, we man, train, and equip our force and prioritize resources for readiness. As one of the five pillars of readiness, equipment modernization is a critical factor in our ability to support our

capability requirements. But under current fiscal constraints, we have prioritized near-term readiness while assuming risk in other areas, including equipment modernization.

The Department is committed to delivering required warfighting capabilities to Marines in a timely and affordable manner. Continued funding shortfalls in our investments will force reliance on aging equipment and diminish our technical advantage over our adversaries. Not only does retooling existing legacy systems mean that innovation is delayed or impeded, but maintaining legacy systems is costly in its own right. Experience tells us that investing in new capabilities and technologies is a proven cornerstone for your Marines and Sailors to achieve mission success today and into an uncertain, but no less demanding future.

Additionally, as we face risks to our investments, we also see an adverse impact on the industrial base placing at risk our future modernization efforts. Working as a team, and with your support, we can prevail over these challenges on behalf of our service men and women and our Nation’s readiness.

A fundamental strength we have working for us is the close partnership between Navy and Marine Corps. Naval integration is a critical factor in our mission performance. The Marine Corps also works closely with the Army, other Services, and industry to provide the most effective and affordable capabilities to your Marines and Sailors. The Marine Corps and the Army have worked together on programs such as the Joint Light Tactical Vehicle (JLTV), the Enhanced Combat Helmet and the Modular Scalable Vest.

The President's Budget for Fiscal Year 2016 allocates $2.152 billion to the Marine Corps' baseline ground force modernization budget. Aviation investments for the Marine Corps are included in the Navy's aviation budget.

Ground force modernization is focused on high-priority programs such as the Amphibious Combat Vehicle (ACV) 1.1, Amphibious Assault Vehicle (AAV) survivability upgrades, Ground/Air Task Oriented Radar (G/ATOR), and Joint Light Tactical Vehicle (JLTV). Rotorcraft programs include the MV-22 and the CH-53K. Together, these are required to modernize capabilities and provide the technology required to dominate our adversaries.

GROUND FORCE MODERNIZATION

Ground Combat and Tactical Vehicles (GCTV)

The overarching priority within the GCTV portfolio is the replacement of the legacy Amphibious Assault Vehicle (AAV) with modern armored personnel carriers through a combination of complementary systems. The ACV program is the Marine Corps highest ground modernization priority and will use an incremental approach that consists of two Phases: ACV Phase 1 Increment 1 (ACV 1.1) and ACV Phase 1 Increment 2 (ACV 1.2). Phase 1 Increment 1 will field a personnel carrier while Increment 2 will deliver improved personnel carrier capabilities, a command and control variant, and a recovery variant. Phase 2 will examine High Water Speed.

The second highest priority within the portfolio remains the replacement of a portion of the high mobility multi-purpose wheeled vehicle (HMMWV) fleet that is most at risk; those vehicles that perform a combat function and are typically exposed to enemy fires. In partnership with the Army, the Marine Corps has sequenced the JLTV procurement so as to ensure affordability of the entire GCTV portfolio while replacing one third of the legacy HMMWV fleet with modern tactical vehicles.

Amphibious Combat Vehicle (ACV) 1.1

The Fiscal Year 2016 President's Budget requests $219.1 million in RDT&E for ACV 1.1. The Marine Corps appreciates the support of the Congress and this Committee in the restructuring of the ACV program in the Fiscal Year 2015 defense authorization. We will release a Request for Proposal to industry in March/April 2015. Leveraging the stability of the Service's requirements and the mature technologies of non-developmental wheeled, armored combat vehicles, we have developed a program to field a capability for the Marines in six (6) years.

Leveraging demonstrated mature technologies, ACV 1.1 will be acquired as a modified non-developmental item and is approved to enter the acquisition cycle at Milestone B. We anticipate awarding Engineering and Manufacturing Development (EMD) contracts to two vendors in 1st Quarter Fiscal Year 2016 with a competitive down-select for production in Fiscal Year 2018. The Acquisition Objective (AO) for ACV 1.1 is 204 vehicles. This AO provides lift for two infantry battalions and is planned to achieve Initial Operational Capability (IOC) in Fiscal Year 2020. This aggressive schedule for ACV 1.1 requires full funding and the continued support of this Committee and Congress.

The Marine Corps is also investing in the exploration of a range of high water speed technology approaches to provide for an affordable, phased modernization of legacy capability to enable extended range littoral maneuver. These efforts will develop the knowledge necessary to reach an informed decision point in the mid-2020s on the feasibility, affordability, and options for developing a high water speed capability for maneuver from ship-to-shore.

Amphibious Assault Vehicle (AAV) Survivability Upgrade (SU)

The Fiscal Year 2016 President's Budget requests $48.5 million for RDT&E and $26.7 million for PMC for the AAV program. To restore much needed survivability and mobility to the current AAVs, approximately one third of that fleet will undergo a survivability upgrade. The AAV Survivability Upgrade (SU) improves AAV capability in order to support Marine Expeditionary Unit (MEU) deployments, and when globally sourced, provide the essential capacity necessary for the assault echelons of two Marine Expeditionary Brigades. The combination of a modern amphibious armored personnel carrier alongside the improved AAV generates a complementary set of capabilities to meet general support lift capability and capacity requirements of our Ground Combat Element.

Joint Light Tactical Vehicle (JLTV)

The Fiscal Year 2016 President's Budget requests $36.7 million in RDT&E and $79.4 million in PMC for the Marine Corps portion of the JLTV program. The Department remains firmly partnered with the U.S. Army in fielding a JLTV that meets requirements of both services while remaining affordable. The JLTV program strives to control ownership costs by maximizing commonality, increasing reliability over the legacy HMMWV fleet, improving fuel efficiency, and achieving additional reduced costs through effective competition in all phases of program execution. The program completed the EMD phase in November 2014. Later this year the program will down-select to one of three competing vendors and enter the production and deployment phase. Funding for major activities in this budget request includes test and evaluation, procurement of 109 USMC Low Rate Initial Production (LRIP) assets, associated government furnished equipment, training, and development of maintenance publications. The remaining acquisition objective of 5,500 will be procured over the

Future Year Defense Program. The Marine Corps expects to have completed their procurement by Fiscal Year 2021.

Ground Force Command and Control (C2)

The ability to coordinate and synchronize distributed Command and Control (C2) sensors and systems is critical to the success ashore of the MAGTF. Modernization priorities in this area are the Ground/Air Task Oriented Radar (G/ATOR) and the Common Aviation Command and Control System (CAC2S). These systems will provide modern-day, interoperable technologies that support real-time surveillance, detection and targeting, in addition to the common C2 suite required to enable the effective employment and situational awareness of the MAGTF.

Ground/Air Task Oriented Radar (G/ATOR)

The Fiscal Year 2016 President's Budget requests $80.1 million in RDT&E and $130.7 million in PMC for the G/ATOR program. G/ATOR is the Marine Corps short and medium range multi-role radar designed to detect aircraft, unmanned aerial systems, cruise missiles, air breathing targets, rockets, artillery and mortars. G/ATOR will replace five legacy radars and has the growth capability to provide air traffic control. G/ATOR Block 1 provides air defense and air surveillance capability, and achieved Milestone C in 2014. Block 2 is in the EMD phase and will provide counter-battery and target acquisition capability. RDT&E funding resources Block 2 development and refurbishment of one Engineering Development Model. Procurement funding resources LRIP of two Block 1 systems. This program is critical to replacing radars that have exceeded their expected life cycle and technological relevance and we appreciate the continued support of the committee in furthering the capability.

Common Aviation Command and Control System (CAC2S)

The Fiscal Year 2016 President's Budget requests $13.4 million in RDT&E and $35.1 million in PMC for CAC2S. CAC2S Increment 1 is a modernization effort to replace existing Marine Air Command and Control System (MACCS) equipment. Increment 1/Phase 1 successfully fielded a product baseline Processing and Display Subsystem (PDS) and Communications Subsystem (CS) during 4th Quarter Fiscal Year 2013. Increment 1/Phase 2, covers the integration of sensor capabilities with the PDS and addresses the remaining Air Combat Element (ACE) Battle Management and C2 requirements through integrating the Air Command and Control Subsystem.

Phase 2 completed a successful Milestone C in February 2015. Funding in this budget supports the assembly and Initial Operational Test and Evaluation (IOT&E) of the first four Limited Deployment Units and the required government furnished equipment. IOT&E is scheduled for Fiscal Year 2016. Phase 2 completion will result in the delivery of the full CAC2S Increment 1 capabilities and is planned to begin fielding in Fiscal Year 2017. The approved AO is 50 systems.

Family of Ballistic Protective Systems

The Marine Corps continuously works toward the improvement of personal protective equipment (PPE) for the warfighter. PPE includes body armor components, combat helmets, combat protective eyewear, and protective clothing. There are trade-offs between weight (which may create fatigue and restrict movement) and the level of protection to be achieved. Despite the challenges of technology and an austere fiscal climate, we continue to provide the warfighter with the best available personal protective equipment.

The Modular Scalable Protective System (MSPS) delivers an integrated system which provides the warfighter a "scalable" armor solution with load distribution capabilities. The development of a single system that scales across the Armor Protection Levels will reduce life cycle costs, operational footprint and overall weight, while providing greater mobility through integrated load carriage and flexibility. The Modular Scalable Vest (MSV), the developmental torso protective system of the MSPS, currently provides these capabilities in prototype form. In addition to the MSV, the Enhanced Combat Helmet is moving forward with production.

Reductions in funding, particularly RDT&E funding, may limit the advances of the overall MSPS program, and in particular, the timely development of the MSV capability.

Ground Equipment Modernization Programs at Risk

While we are able to invest in only the highest priority modernization efforts, the Marine Corps forecasts critical issues in several areas, including:

- Recapitalization of the Marine Corps 30 year old TRC-170 system, required to provide alternate communications networks in degraded spectrum contested environments.
- The Marine Corps ability to maintain Joint Interoperability with other Services through the Tactical Communications Modernization program.
- The Networking on the Move program, which leaves two thirds of our operating forces without the ability to conduct mobile networking in distributed environments.

ROTORCRAFT MODERNIZATION

Assault Support Aircraft (V-22/MV-22)

The Fiscal Year 2016 President's Budget requests $87.9 million in RDT&E,N for continued product improvements, including engineering development of a Navy variant of the MV-22; and $1.48 billion in APN for procurement and delivery of 19 MV-22s (Lot 20). Fiscal Year 2016 will be the fourth year of the 2nd V-22 Multi-Year Procurement (MYP) contract covering Fiscal Years 2013-2017. The funds requested in the Fiscal Year 2016 budget fully fund Lot 20 and procure long-lead items for Fiscal Year 2017 Lot 21 MV-22 aircraft. The APN request includes $126.1 million to support Operations and Safety Improvement Programs (OSIPs), including Correction of Deficiencies and readiness improvements. The 2016 request includes funding starting in Fiscal Year 2018 to procure a Navy V-22 variant in support of the Carrier Onboard Delivery mission.

MV-22 Osprey vertical flight capabilities, coupled with the speed, range, and endurance of fixed-wing transports, are enabling effective execution of missions that were previously unachievable. In 2014, a second Marine Corps Special Purpose MAGTF-Crisis Response unit stood up in CENTCOM, and the twelfth and final MV-22 for HMX-1 "Greenside" logistics and passenger transport was delivered for support of the Executive transport mission. As the V-22 fleet approaches the 300,000 flight hour milestone, it continues to be the safest Marine Corps vertical lift aircraft.

The second MYP, which began in Fiscal Year 2013, will procure at least 93 MV-22s over five years and result in savings of approximately $1 billion when compared to single year procurements. The stability of the MYP supports the Marine Corps' retirement of legacy aircraft, benefits the supplier base and facilitates cost reductions on the part of both the prime contractor and sub-tier suppliers.

Due to an extremely high operational tempo in 2014, the mission capability rates leveled-off and did not continue the year over year improvements seen since 2010. However, cost per flight hour continued to decrease, with a total reduction of approximately 30 percent since 2010. Fiscal Year 2016 OSIP provides a necessary and stable source of crucial modification funding as the Osprey program works to improve readiness and continue to reduce operating costs.

CH-53K Heavy Lift Replacement Program

The Fiscal Year 2016 President's Budget requests $632.1 million RDT&E,N to continue the EMD phase of the CH-53K program. Since entering into developmental test in December 2013, the Ground Test Vehicle (GTV) has completed bare head light-off and shakedown light-off has commenced. Over the last year, the GTV has accumulated over 180 test hours. The first flight vehicle, Engineering Development Model (EDM) 1, has completed its bare head light-off and preparation for bladed ground runs is underway. The program is currently on schedule to execute its first flight by the end of 2015. During Fiscal Year 2016, the program will continue to execute developmental test flights, deliver the final EDM, and continue assembly of System Demonstration Test Article aircraft, which will be production representative aircraft utilized for Operational Test.

Expeditionary heavy-lift capabilities will continue to be critical to successful land and sea-based operations in future anti-access, area-denial environments, enabling sea-basing and the joint operating concepts of force application and focused logistics. The CH-53K will provide land and sea based heavy-lift capabilities not resident in any of today's platforms; and contribute directly to the increased agility, lethality, and presence of joint task forces and MAGTFs. The CH-53K will transport 27,000 pounds of external cargo out to a range of 110 nautical miles, nearly tripling the CH-53E’s external lift capability under similar environmental conditions, while fitting into the same shipboard footprint.

The CH-53K will also provide unparalleled lift capability under high-altitude and hot weather conditions, greatly expanding the commander's operational reach.

Compared to the CH-53E, maintenance and reliability enhancements of the CH-53K will improve aircraft availability and ensure cost effective operations. Additionally, survivability and force protection enhancements will dramatically increase protection for both aircrew and passengers.

The CH-53E aircraft currently in service continue to meet unprecedented operational demands, but are approaching 30 years of service and becoming ever more challenging to maintain. To keep the "Echo" viable until the "Kilo" enters service, the Fiscal Year 2016 President's Budget requests $46.9 million in APN for both near and mid-term enhancements. For both the USN MH-53E and USMC CH-53E helicopters, these modifications include Condition Based Maintenance software upgrades, Kapton wiring replacement installations, and improved Engine Nacelles. The Marine Corps' CH-53E fleet is continuing with the T-64 Engine Reliability Improvement Program, Critical Survivability Upgrade, Satellite Communications kit installations, and Smart Multi-Function Color Display procurements and installations.

ATTACK AND UTILITY AIRCRAFT

UH-1Y // AH-1Z

The Fiscal Year 2016 President's Budget requests $27.2 million in RDT&E,N for continued product improvements; and $856.2 million in APN for 28 H-1 upgrade aircraft: 12 UH-1Y and 16 AH-1Z. The program is a key modernization effort designed to resolve existing safety deficiencies and enhance operational effectiveness of the H-1 fleet. The 85 percent commonality between the UH-1Y and AH-1Z will significantly reduce life-cycle costs and the logistical footprint while increasing the maintainability

and deployability of both aircraft. The program will provide the Marine Corps with 349 H-1 aircraft through a combination of new production and a limited quantity of remanufactured aircraft.

The H-1 Upgrades Program is replacing the Marine Corps' UH-1N and AH-1W helicopters with state-of-the-art UH-1Y "Yankee" and AH-1Z "Zulu" aircraft. The new aircraft are fielded with integrated glass cockpits, world-class sensors, and advanced helmet-mounted sight and display systems. The future growth plan includes a digitally-aided, close air support system designed to integrate aircraft sensors and weapons systems with ground combat forces and other capable Department of Defense aircraft. Integration of low-cost weapons such as the Advanced Precision Kill Weapon System II, provides increased lethality with reducing collateral damage.

The UH-1Y aircraft achieved IOC in August 2008 and Full Rate Production (FRP) in September 2008. The "Yankee Forward" procurement strategy prioritized UH-1Y production in order to replace the under-powered UH-1N fleet as quickly as possible. The last UH-1N was retired from service as of December 2014. The AH-1Z received approval for FRP in November 2010 and achieved IOC in February 2011. As of February 2015, 148 aircraft (109 UH-1Ys and 39 AH-1Zs) have been delivered to the Fleet Marine Force. An additional 60 aircraft are on contract and in production.

EXECUTIVE SUPPORT AIRCRAFT

VH-3D/VH-60N Executive Helicopter Series

The VH-3D and VH-60N are safely performing the Executive Lift mission worldwide. As these aircraft continue to provide seamless vertical lift for the President of the United States, the Department is working closely with HMX-1 and industry to sustain these aircraft until a Presidential Helicopter Replacement platform is fielded. The Fiscal Year

2016 President's Budget requests an investment of $76.1 million of APN to continue programs that will ensure the in-service Presidential fleet remains safe and reliable. Ongoing efforts include the Cockpit Upgrade Program, engine upgrade program, Structural Enhancement Program, Obsolescence Management Program and a Communications Suite Upgrade (Wide Band Line of Sight) that provides survivable access to the strategic communications network. The technology updates for legacy platforms will be directly leveraged for the benefit of the ensuing replacement program (VH-92A).

VH-92A Presidential Helicopter Replacement Aircraft

The Fiscal Year 2016 President's Budget request includes $507.1 million of RDT&E,N to fund the VH-92 EMD contract and associated government activities. Significant progress has been made in the past year with completion of the Milestone B Review in March, award of the EMD contract to Sikorsky Aircraft Corporation in May, completion of the System Requirements Review in August and completion of the Integrated Baseline Review in November. The Sikorsky S-92A aircraft will be used to execute the acquisition strategy of integrating mature subsystems into an air vehicle that is currently in production. Initial contractor testing on an S-92A aircraft is planned to occur during 2015 and early 2016, and the Critical Design Review is planned for the 4th quarter of Fiscal Year 2016. The first of the planned operational inventory of 21 aircraft will begin fielding as early as 2020.

CONCLUSION

The Marine Corps continues to improve our essential ground and rotorcraft capabilities through a strategy that is stable and affordable. We recognize the need for continued vigilance in achievement of a proper balance between current readiness and the long-term imperatives of modernization and innovation. This balance is critical to ensuring the

Marine Corps and the individual Marine has the capability to fight and win future battles while being prepared to respond today as our Nation's force in readiness. Mr. Chairman, and distinguished committee members, on behalf of your Marines, we request your continued support for our modernization strategy.