Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	102.522	45.803	65.155	42.647	-	42.647	46.984	31.991	28.155	30.680	Continuing	Continuing
0201: *Logistical Veh Sys Replacement (LVSR)*	35.439	0.098	0.560	2.392	-	2.392	2.182	1.739	1.733	1.762	Continuing	Continuing
2316: *Combat Service Support Eng Equip*	14.081	28.763	33.644	21.788	-	21.788	25.929	16.161	7.247	9.413	Continuing	Continuing
2509: *Motor Transport Mod*	11.941	14.137	12.438	3.457	-	3.457	5.019	1.498	1.083	1.102	Continuing	Continuing
2510: *MAGTF CSSE & SE*	0.000	0.000	13.974	9.037	-	9.037	7.458	6.549	6.162	6.268	Continuing	Continuing
2929: *Testing Measuring Diag Equip & SE*	3.339	1.450	2.043	2.571	-	2.571	2.097	2.120	2.147	2.183	Continuing	Continuing
9C90: *MTVR Mod*	37.722	1.355	2.496	3.402	-	3.402	4.299	3.924	9.783	9.952	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This program element (PE) provides funding for Marine Air-Ground Task Force requirements for Combat Service Support equipment improvement. It will enhance combat breaching capabilities of the ground combat elements, logistics, maintenance and transportation. The PE also provides improvements in all areas of Combat Service Support Equipment Vehicles by determining the replacement for the heavy, medium and light fleet vehicles. This includes projects such as: Alternative Power Sources for Communications Equipment (APSCE) which is a suite of devices that provide the commander with the capability to use existing power to operate his communication equipment, computers and peripheral equipment instead of using batteries or fossil fuel generators; the Marine Corps Family of Automatic Test Systems (ATS), formerly TETS, which provides automatic testing capability for use by technicians both in garrison and forward edge of the battlefield; improvements in all areas of the M1A1 main battle tank; the High Performance Capabilities for Military Vehicles Project which is dedicated to applying the best practices of the motor sports industry to military vehicles including engineering expertise, equipment and technology; the Marine Personnel Carrier Support System Product Data Management and Technical Information Architecture Application development and integration which includes requirements analysis, detailed system design, analysis of alternatives, implementation, and integration of a risk management tool.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy					DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*			R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*		
B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	27.072	58.393	50.312	-	50.312
Current President's Budget	45.803	65.155	42.647	-	42.647
Total Adjustments	18.731	6.762	-7.665	-	-7.665
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	20.000	0.000			
• SBIR/STTR Transfer	-1.269	0.000			
• Program Adjustments	0.000	0.000	-1.692	-	-1.692
• Rate/Misc Adjustments	0.000	6.762	-5.973	-	-5.973

Change Summary Explanation

The $6.672M increase in FY13 is the OCO request to perform ballistic testing and other planned survivability and mobility upgrades for MRAP. The FY14 base decrease consists of decreases in R2C, Engineer Squad Robot Testing, and Low Metallic Signature MD for test and evaluation, respectively. The $20.0M increase in FY12 is also related to MRAP.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 0201: *Logistical Veh Sys Replacement (LVSR)*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
0201: *Logistical Veh Sys Replacement (LVSR)*	35.439	0.098	0.560	2.392	-	2.392	2.182	1.739	1.733	1.762	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Logistics Vehicle System Replacement (LVSR) program is the replacement for the Logistics Vehicle System (LVS) fleet. The LVSR Modification line funds numerous and very important modifications and initiatives that are required to address operational priorities, engineering change proposals, safety concerns, support equipment inefficiencies, tool malfunctions, product quality deficiencies, and other issues that affect vehicle reliability, availability, maintainability and readiness. A proactive and focused approach ensures proper vehicle sustainment and life cycle management and it allows the flexibility to develop and implement improvements as needed to respond to the evolving needs of the Marine Corps.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: LVSR: Engineering Change Proposal (ECP)	0.079	0.075	1.196
Articles:	0	0	0
FY 2012 Accomplishments: Funding supported Engineering Change Proposal (ECP) feasibility studies for the effects of extended idling on the C15 Engine and the improved reliability for Armored Door Latch. Continual changes in threat environment requires an on-going and proactive approach to address these changing threats.			
FY 2013 Plans: Funding will support Engineering Change Proposal (ECP) development and testing for all variants (cargo, tractor and wrecker) of the Logistics Vehicle System Replacement (LVSR). Specifically, funding will support the development and testing of the Improved Headlights for all variants of the Logistics Vehicle System Replacement (LVSR). Continual changes in threat environment requires an on-going and proactive approach to address these changing threats.			
FY 2014 Plans: Funding will support Engineering Change Proposal (ECP) development and testing for all variants (cargo, tractor and wrecker) of the Logistics Vehicle System Replacement (LVSR). Continual changes in threat environment requires an on-going and proactive approach to address these changing threats.			
Title: LVSR: Safety	0.019	0.485	1.196

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0206624M: *Marine Corps Cmbt Services Supt*	**PROJECT** 0201: *Logistical Veh Sys Replacement (LVSR)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Articles:	0	0	0
FY 2012 Accomplishments: Funding will support safety modification development and testing required to meet the diverse environments of current and future operations of Marine Air-Ground Task Force (MAGTF) Expeditionary Maneuver Warfare. Specifically, funding supported the development and testing of the Cargo Underbody Improvement Kits (UIK). Incorporating new safety upgrades will protect the warfighter and LVSR vehicle from possible catastrophic events as warranted by continual changes in threat environment.			
FY 2013 Plans: Funding will support safety modification development and testing required to meet the diverse environments of current and future operations of MAGTF Expeditionary Maneuver Warfare. Specifically, funding supported the development and testing of the Wrecker Underbody Improvement Kits (UIK) and Automatic Fire Extinguishing System (AFES) for the unarmored vehicles. Incorporating new safety upgrades will protect the warfighter and LVSR vehicle from possible catastrophic events as warranted by continual changes in threat environment.			
FY 2014 Plans: Funding will support safety modification development and testing required to meet the diverse environments of current and future operations of MAGTF Expeditionary Maneuver Warfare. Incorporating new safety upgrades will protect the warfighter and LVSR vehicle from possible catastrophic events as warranted by continual changes in threat environment.			
Accomplishments/Planned Programs Subtotals	0.098	0.560	2.392

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• PMC/5093: *LVSR*	191.354	37.262	0.000		0.000	0.000	0.000	0.000	0.000	0.000	1,106.846

Remarks

D. Acquisition Strategy

The LVSR program uses a two-phase, single-step acquisition approach rather than an evolutionary acquisition approach. Phase I developed the Cargo variant and Phase II developed the Tractor and Wrecker variants. The program is currently in full rate production and sustainment. The strategy utilizes organic logistics support capability for the LVSR. Until that capability is fully established, the Government may exercise a contract option such that the contractor shall provide logistics support services to maintain the operational readiness of the LVSR following delivery of the end item.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 0201: *Logistical Veh Sys Replacement (LVSR)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
LVSR Variant Prototypes	C/FFP	MCSC:Quantico, VA	13.793	0.000		0.000		0.000		-		0.000	0.000	13.793	
LVSR Source Selection	C/FFP	MCSC:Quantico, VA	0.248	0.000		0.000		0.000		-		0.000	0.000	0.248	
FRC Prototypes	C/FFP	DRS Systems, Inc.:St. Louis, MO	2.720	0.000		0.000		0.000		-		0.000	0.000	2.720	
FRC Prototypes	C/FFP	Heil:Athens, TN	0.637	0.000		0.000		0.000		-		0.000	0.000	0.637	
		Subtotal	17.398	0.000		0.000		0.000		0.000		0.000	0.000	17.398	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
LVSR Engineer & Tech Support	WR	NTSC:Orlando, FL	0.194	0.000		0.000		0.000		-		0.000	0.000	0.194	
LVSR Engineer Change Support	C/FFP	MCSC:Quantico, VA	1.454	0.000		0.000		0.000		-		0.000	0.000	1.454	
LVSR Engineer Change Support	SS/FFP	Oshkosh Corp:Oshkosh, WI	0.687	0.056	Mar 2012	0.050	Jul 2013	0.997	Apr 2014	-		0.997	2.271	4.061	
LVSR Safety Mod Development	SS/FFP	Oshkosh Corp:Oshkosh, WI	0.434	0.016	Mar 2012	0.325	Jul 2013	0.998	Apr 2014	-		0.998	3.774	5.547	
		Subtotal	2.769	0.072		0.375		1.995		0.000		1.995	6.045	11.256	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
LVSR Operational T&E	WR	MCOTEA:Quantico, VA	4.552	0.000		0.000		0.000		-		0.000	0.000	4.552	
LVSR Operational T&E	C/FFP	Oshkosh Corp:Oshkosh, WI	0.730	0.000		0.000		0.000		-		0.000	0.000	0.730	
LVSR Development Design & Test	C/FFP	Oshkosh Corp:Oshkosh, WI	0.175	0.000		0.000		0.000		-		0.000	0.000	0.175	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 0201: *Logistical Veh Sys Replacement (LVSR)*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
LVSR Variant Test	MIPR	TACOM:Warren, MI	0.110	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
LVSR Corrosion Test	WR	NSWC:Philadelphia, PA	0.217	0.000		0.000		0.000		-		0.000	0.000	0.217	
LVSR ECP Testing	MIPR	Aberdeen Test Center:Aberdeen, MD	3.445	0.026	May 2012	0.185	Sep 2013	0.397	May 2014	-		0.397	0.909	4.962	
LVSR Development Test	C/FFP	Oshkosh Corp:Oshkosh, WI	1.422	0.000		0.000		0.000		-		0.000	1.127	2.549	
LVSR Development and Test	WR	NSWC:Indian Head, MD	0.024	0.000		0.000		0.000		-		0.000	0.000	0.024	
LVSR Live Fire	C/FFP	SURVICE:Not Specified	0.410	0.000		0.000		0.000		-		0.000	0.000	0.410	
FRC Modeling and Simulation	WR	NSWC:Carderock, MD	0.735	0.000		0.000		0.000		-		0.000	0.000	0.735	
FRC Developmental T&E	WR	NATC:Carson City, NV	0.505	0.000		0.000		0.000		-		0.000	0.000	0.505	
		Subtotal	12.325	0.026		0.185		0.397		0.000		0.397			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
LVSR Contractor Support	C/FFP	MCSC:Various	2.149	0.000		0.000		0.000		-		0.000	0.000	2.149	
LVSR Program Management Support	C/FFP	MCSC:Quantico, VA	0.698	0.000		0.000		0.000		-		0.000	0.000	0.698	
FRC Contractor Support	C/FFP	Sverdrup:Dumfries, VA	0.050	0.000		0.000		0.000		-		0.000	0.000	0.050	
FRC Program Management Support	WR	MCSC:Quantico, VA	0.050	0.000		0.000		0.000		-		0.000	0.000	0.050	
		Subtotal	2.947	0.000		0.000		0.000		0.000		0.000	0.000	2.947	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 0201: *Logistical Veh Sys Replacement (LVSR)*	

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	35.439	0.098		0.560		2.392		0.000		2.392			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0206624M: *Marine Corps Cmbt Services Supt*	**PROJECT** 0201: *Logistical Veh Sys Replacement (LVSR)*

LVSR Program Schedule

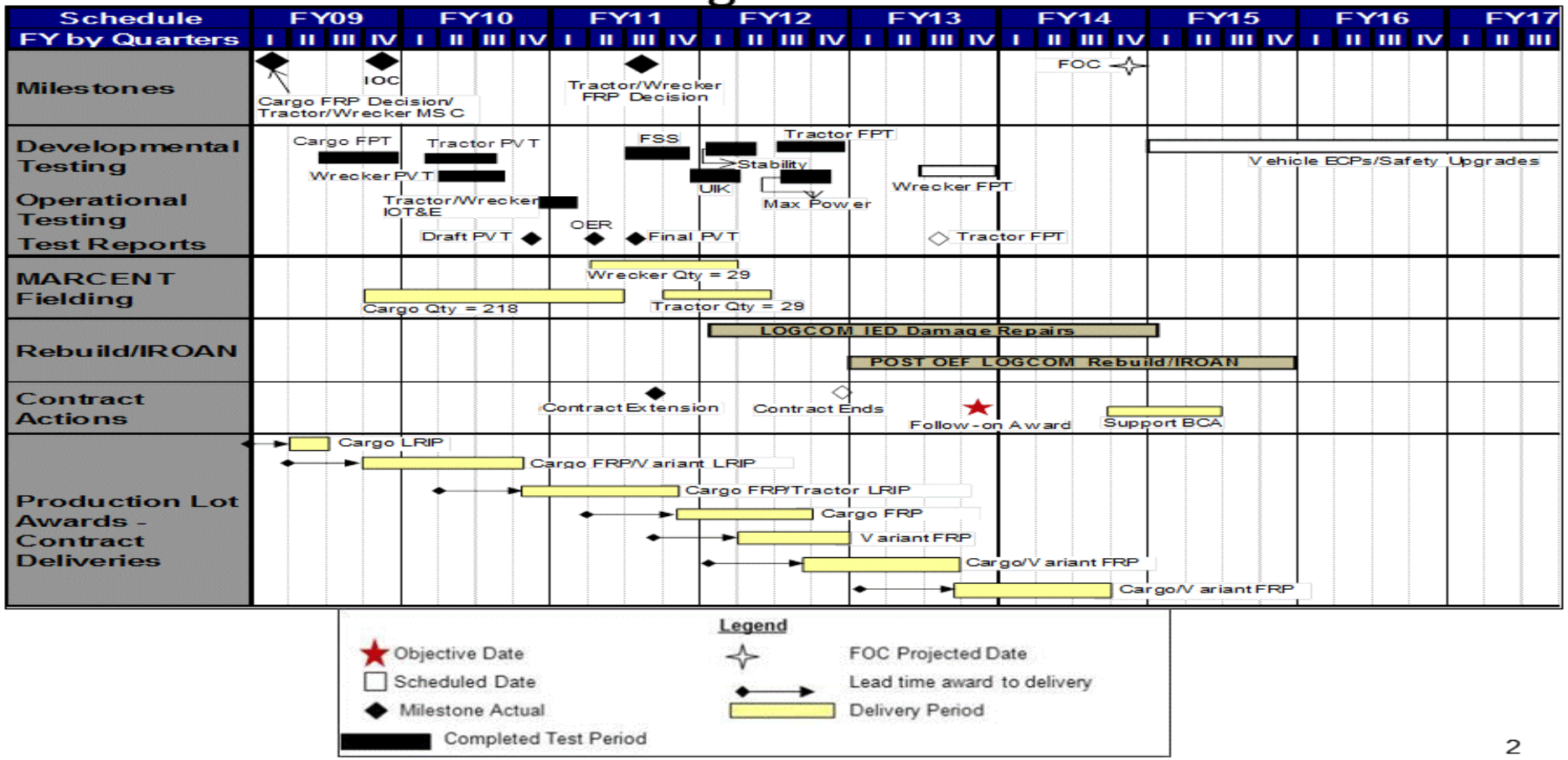

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0206624M: *Marine Corps Cmbt Services Supt*	**PROJECT** 0201: *Logistical Veh Sys Replacement (LVSR)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 0201				
Full Operational Capability	4	2014	4	2014

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2316: *Combat Service Support Eng Equip*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
2316: *Combat Service Support Eng Equip*	14.081	28.763	33.644	21.788	-	21.788	25.929	16.161	7.247	9.413	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The M1A1 Mod Kit effort includes improvements in all areas of the M1A1 main battle tank and the Armored Vehicle Launched Bridge (AVLB). The M1A1 tank provides armor protected firepower to the USMC ground combat element. Efforts under the mod line pertaining to the M1A1 include improvements in lethality systems to increase armament accuracy, increase the crew's situational awareness through sensor enhancements and intra-vehicular data sharing, providing for off-board targeting improvement, and environmental testing of components. The AVLB provides the Marine Corps only armor-protected assault gap crossing capability. Continued funding is required to address obsolescence, address operational deficiencies to adapt the tank and AVLB to a changing operational environment and support user-defined product improvements. These improvements directly address Marine Corps Lessons Learned, after action reports, and will ensure maximum survivability, sustainability, and readiness.

Route Reconnaissance and Clearance (R2C). An incremental development project to enhance the capabilities of the R2C systems, a family of systems fielded in support of Operation Iraqi Freedom (OIF) via the Urgent Needs Statement (UNS) process. This research and development effort will integrate future vehicles, robots, and associated equipment to provide standoff detection, marking, and neutralization of Explosive Hazards such as mines and Improvised Explosive Devices (IEDs). Enhancements for R2C will provide capabilities not found in the current inventory to defeat explosive hazards and will protect Marines and equipment while conducting route and area clearance operations. The integration of the next generation of armored security and support vehicles, Vehicle Mounted Mine Detectors (VMMDs), specialized robots, and a new suite of detection, marking, and neutralization systems will enable maneuver commanders to make timely and informed decisions in avoiding or neutralizing explosive hazards that impede their missions. Multiple detection and marking capabilities will detect a broader spectrum of explosive hazards and achieve higher overall effectiveness rates, while standoff and remote-controlled detection, marking, and neutralization capabilities will enhance force protection and system survivability. Operational speeds and rates will increase, which will better support the maneuver force operational tempo.

The Engineer Modification Kit line funds modifications and initiatives which are required to address operational priorities, engineering change proposals, safety concerns, support equipment inefficiencies, product quality deficiencies and other issues that affect vehicle reliability, availability and readiness. This proactive and focused approach ensures proper vehicle sustainment and life cycle management in response to evolving needs of the Marine Corps fleet. Operational needs to provide personnel survivability on engineer equipment is essential to current and future operations. Research and development funding develops and integrates new lighter, compact armor technology and supports ballistic testing for applications to existing and future acquisitions.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2316: *Combat Service Support Eng Equip*

Corrosion Prevention and Control (CPAC): The useful life of Marine Corps assets will be extended through a comprehensive CPAC RDT&E program aimed at identifying and certifying new corrosion control products, materials, processes and procedures for legacy and new acquisition.

The Mine Resistant Ambush Protected (MRAP) Family of Vehicles (FoV) provides tactical mobility for Warfighters with multi-mission vehicles designed to support urgent operational needs, and protect personnel from the effects of improvised explosive devices (IEDs), underbody mines, and small arms fire threats. Five vehicle categories (CATs) are being tested, procured, fielded and sustained: Category I - Urban combat operations, ambulance. Category II - Multi-mission ops-convoy lead, troop transport, ambulance, utility vehicle. Category III - Mine/IED clearance ops, explosive ordnance disposal. MRAP All Terrain Vehicle (M-ATV)- Combat operations (ops) in rural, mountainous, urban terrain. Other Protected Vehicles- Specialty mission or unique configuration. Provides the same threshold ballistic, mine and IED protection as other MRAP vehicles. Includes the MRAP Recovery Vehicle (MRV) variant.

The Low Metallic Signature Mine Detector (LMS MD) will provide a light-weight, man portable, handheld detection capability that is capable of detecting traditional, low metallic, non-metallic mines, and explosive devices. The LMS MD capability enables mobility of dismounted forces by significantly increasing their ability to locate, mark, avoid, and/or reduce mine and IED threats. It will enable better categorization and identification of explosive hazards as it will be capable of detecting and discriminating between symmetric mines and asymmetric explosive devices, to include metallic, low metallic and zero metallic mines, IEDs, and Unexploded Ordinance (UXO) throughout a MAGTF Area of Operations (AO). The replacement detection capability to the interim VMR2 Minehound and AN/PSS-14 Mine Detector Program of Record, the LMS MD will be fielded throughout the Combat Engineer and EOD communities to provide dismounted manuever and mobility support to a MAGTF in an expeditionary environment. This is a FY13 new start.

The Ground Combat Element, Engineer Squad Robot (ESR) with a lightweight back packable robot will support the maneuver commander with organic route and obstacle reconnaissance, urban scouting and breaching capabilities, explosive detection, interrogation and reduction in support of dismounted tactical maneuver across the spectrum of conflict. The Robot will be part of the T/E of Combat Engineer Squads in both active and reserve Combat Engineer Battalions (CEB), Marine Wing support Squadrons (MWSS) and additional systems are allocated for supporting establishments. This is a FY13 new start.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Engineering Mod Kits	0.485	0.498	0.372
Articles:	0	0	0
FY 2012 Accomplishments: Solved highest priority issues determined during the testing and integration of modifications for the Engineer Family of Systems.			
FY 2013 Plans: Continue to work on solving the highest priority issues identified during the testing and integration of modifications for the Engineer Family of Systems.			
FY 2014 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2316: *Combat Service Support Eng Equip*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
FY14 funding will support continuation of work to solve the highest priority issues identified during the testing and integration of modifications for the Engineer Family of Systems.			
Title: M1A1 Modifications	1.759	1.326	3.272
Articles:	0	0	0
FY 2012 Accomplishments: FY12 funding has supported the testing and evaluation of lethality enhancements - particularly alternative high explosive main gun rounds- as well as engineering support for upgrades to support situational awareness and mitigate operational and obsolescence-generated deficiencies with the tank. ***FY 2013 Plans:*** This project in conjunction with the Army, will qualify tank turret systems as replacements to obsolescing units; address fire control system deficiencies; continue evaluation of attack-detection systems; develop plans for long-term modernization for the M1A1 in the Marine Corps inventory to include secondary armament targeting. ***FY 2014 Plans:*** FY14 funding will continue to identify and develop upgrades to the M1A1 turret to include obsolescence mitigation, lethality, and survivability enhancement and evaluate broader platform modernization needs.			
Title: Route Reconnaissance and Clearance (R2C):	4.455	3.892	2.751
Articles:	0	0	0
FY 2012 Accomplishments: Funding provided for testing of the High Voltage Energy (HVE) system as well as performance verification testing of various Increment II capabilities. Also included integration modeling and hardware efforts to install these capabilities onto Cougar CAT II A1 Mine Resistant Ambushed Protected (MRAP) Vehicles. ***FY 2013 Plans:*** FY13 funds will continue development, integration and testing of events began in FY12. FY13 will also begin funding of the preliminary efforts in support planned for increment III of the Route Reconnaissance and Clearance effort. ***FY 2014 Plans:*** FY14 funds will support the development and test of a semiautonomous explosive obstacle detection vehicle and a semiautonomous explosive obstacle neutralization vehicle			
Title: MRAP Vehicles	19.929	6.762	0.000
Articles:	0	0	
FY 2012 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2316: *Combat Service Support Eng Equip*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Performed Ballistic Testing on MRAP FoV in support of survivability and mobility upgrades, which includes M-ATV Underbody Improvement Kits (UIK), Vehicle Optical Sensor Systems (VOSS), M-ATV Battery Upgrades, and Cougar Block Upgrades. Performed Testing and Evaluation of capabilities requested in UUNS/JUONS and other planned survivability and mobility upgrades. ***FY 2013 Plans:*** Continue to perform Ballistic Testing on MRAP FoV in support of survivability and mobility upgrades. Continue to perform Testing and Evaluation of capabilities requested in UUNS/JUONS and other planned survivabilty and mobility upgrades.			
Title: Corrosion Prevention and Control (CPAC) ***Articles:*** ***FY 2012 Accomplishments:*** FY12 funding has focused on the program's efforts to utilize Naval Surface Warfare Center (NSWC) - Carderock and Naval Research Labratory (NRL) to test and complete all new corrosion initiatives. ***FY 2013 Plans:*** Program successes will continue testing and reviews across the inventory to explore options and opportunities to help manage the corrosion issues faced by our platforms. ***FY 2014 Plans:*** The Program will continue to leverage prior successes and advances in corrosion control and coatings technologies to further reduce the maintenance and logistics impacts of corrosion on all Marine Corps Platforms as required through SECNAV and DoD instruction and directive.	2.135 0	1.959 0	2.122 0
Title: Engineer Squad Robot ***Articles:*** ***FY 2013 Plans:*** FY13 funds will focus on development and integration of current technologies to meet the Key Performance Parameter (KPP) requirements of the Engineer Squad Robot (ESR) Capabilities Production Document (CPD): Reconnaissance Effectiveness, Availability, Reliability, Size, Speed/Mobility, Range, and Endurance ***FY 2014 Plans:***	0.000	5.822 0	4.844 0

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2316: *Combat Service Support Eng Equip*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
FY14 funds will continue integration of new and evolving technologies to meet Reconnaissance Effectiveness, Availability, Reliability, Size, Speed/Mobility, Range, and Endurance and includes live fire test and evaluation of the engineer squad robot.			
Title: Low Metallic Signature MD	0.000	13.385	8.427
Articles:		0	0
FY 2013 Plans: FY13 funds will support the development, integration, test, evaluation and procurement of a new dual sensor handheld detector system that incorporates advanced metal detection and ground penetrating radar (GPR) to provide improved performance, miniaturization, longer operating time, and optimized human systems integration. The new hand-held mine detector system replaces the interim VMR2 Minehound detector and AN/PSS-14 Mine Detector Program of Record.			
FY 2014 Plans: FY14 funds will be used to continue development of a new hand held detector system as well as incorporate advanced ground penetrating radar to provide greater efficiency, improved target discrimination, miniturization and longer operating time.			
Accomplishments/Planned Programs Subtotals	28.763	33.644	21.788

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• PMC/6520-1: *EOD Systems- R2C*	83.478	45.118	13.493		13.493	19.351	20.501	37.568	59.391	Continuing	Continuing
• PMC/6670: *CPAC*	0.485	0.484	0.848		0.848	0.837	0.857	0.872	0.874	Continuing	Continuing
• PMC/2061-1: *Modification Kits - M1A1 Mod Kits*	35.839	34.989	29.819		29.819	27.496	19.860	20.475	20.857	Continuing	Continuing

Remarks

D. Acquisition Strategy

(U) The M1A1 modification kits program will leverage Army initiatives to the maximum extent and incorporate modifications to adapt Army solutions to the USMC environment. The USMC will research, develop, and evaluate programs to improve the survivability and lethality of the USMC tank. These efforts include the Abrams integrated Display and Targeting System, threat detection and warning, situational awareness, survivability, and ownership cost reduction work. M1A1 Mods will exercise options on existing contracts of varying types to conduct research and analysis associated with the development of modifications and corrosion prevention to the M1A1 Tank and supporting platforms.

(U) Route Reconnaissance and Clearance (R2C): Starting in FY10, the Marine Corps began to procure a fleet of standardized Route Reconnaissance and Clearance systems based upon the successful route clearance teams operating in Iraq; using Capabilities Production Documents for current systems and leveraging contracts

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2316: *Combat Service Support Eng Equip*

already in place. Concurrently support a research and development effort to integrate future vehicles with enhanced mobility and survivability, a suite of improved detection and marking capabilities, and robots with greater detection, marking, and neutralization capabilities.

(U) Engineering Mod Kits: This is a roll-up line of various engineering efforts, modifications and other related items less than $5 Million each. This program provides for significant improvements to a various pieces of engineering equipment by enhancing their capabilities and improving readiness.

(U) Corrosion Prevention and Control (CPAC) Program: The Program will execute the RDT&E Program through direct allocation of funding to the Naval Surface Warfare Center - Carderock Division Corrosion Research and Engineering Branch for comprehensive program aimed at identifying and certifying new corrosion control products, materials, processes and procedures for legacy and new acquisition.

(U) The Low Metallic Signature Mine Detector will develop, integrate, test, evaluate and procure a new hand-held mine detector system to replace the current AN/PSS-14 Mine Detector Program of Record. Ground Penetrating Radar (GPR) technology has improved significantly since the development of the AN/PSS-14, allowing greater efficiency, target discrimination, miniaturization, longer operating time and command & control. The Low Metallic Signature Mine Detector will be effective against low and non metallic devices, capable of identifying man-made objects, weigh less than 7 lbs, be capable of start-up and calibration in less than 60 seconds, and be integrated with existing C2 systems.
Estimated Production Cost is $24k per system.

(U) The Engineer Squad Robot (ESR) will focus on development and integration of current technologies to meet the KPP requirements of the ESR CPD with reconnaissance effectiveness, availability, reliability, size, speed/mobility, range, and endurance.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2316: *Combat Service Support Eng Equip*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Eng Squad Robot	TBD	TBD:TBD	0.000	0.000		5.822	Apr 2013	4.320	Nov 2013	-		4.320	Continuing	Continuing	Continuing
Low Metallic Signature MD	C/IDIQ	MCSC:Quantico, VA	0.000	0.000		13.385	Sep 2013	8.427	Dec 2013	-		8.427	Continuing	Continuing	Continuing
M1A1 MODIFICATIONS	WR	SPAWAR:Charleston, SC	0.000	0.000		0.000		0.337	Jan 2014	-		0.337	0.000	0.337	
M1A1 MODIFICATIONS	MIPR	FORT BELVOIR:Ft Belvoir, VA	0.000	0.000		0.000		2.200	Mar 2014	-		2.200	0.000	2.200	
MRAP Engineering	MIPR	ARL:Adelphi, MD	0.000	2.022	Dec 2012	0.325	May 2013	0.000		-		0.000	0.000	2.347	
MRAP Engineering	MIPR	TACOM:Warren, MI	0.000	5.828	Mar 2012	0.586	Dec 2012	0.000		-		0.000	Continuing	Continuing	Continuing
MRAP Engineering	MIPR	ATC:Aberdeen, MD	0.000	5.099	Mar 2012	0.453	Nov 2012	0.000		-		0.000	0.000	5.552	
MRAP Engineering	MIPR	TARDEC:Warren, MI	0.000	1.975	Feb 2012	0.240	Nov 2012	0.000		-		0.000	0.000	2.215	
M1A1 MODIFICATIONS	MIPR	TACOM:TACOM	2.303	0.586	Jan 2012	0.086	Jan 2013	0.086	Jan 2014	-		0.086	Continuing	Continuing	Continuing
MRAP Engineering	MIPR	AEC:Alexandria, VA	0.000	0.865	Jul 2012	0.000		0.000		-		0.000	0.000	0.865	
M1A1 MODIFICATIONS	MIPR	ABERDEEN PRV:APG, MD	1.813	0.400	Dec 2011	0.397	Dec 2012	0.378	Dec 2013	-		0.378	Continuing	Continuing	Continuing
MRAP Engineering	MIPR	ARDEC:Picatinny, NJ	0.000	0.644	May 2012	0.000		0.000		-		0.000	0.000	0.644	
M1A1 MODIFICATIONS	MIPR	FORT BELVOIR:FORT BELVOIR, VA	0.200	0.158	Jan 2012	0.201	Jan 2013	0.201	Jan 2014	-		0.201	Continuing	Continuing	Continuing
MRAP Engineering	MIPR	MDA:Huntsville, AL	0.000	1.579	Feb 2012	0.600	Jan 2013	0.000		-		0.000	0.000	2.179	
M1A1 MODIFICATIONS	MIPR	BENET LABS:WATERVELIET, NY	0.250	0.250	Jan 2012	0.247	Jan 2013	0.070	Jan 2014	-		0.070	Continuing	Continuing	Continuing
MRAP Engineering	MIPR	RDECOM:Aberdeen, MD	0.000	0.270	Feb 2012	0.419	Aug 2013	0.000		-		0.000	0.000	0.689	
M1A1 MODIFICATIONS	MIPR	PICATINNY ARSENAL:PICATINNY, NJ	0.414	0.365	Jan 2012	0.395	Jan 2013	0.000	Jan 2014	-		0.000	Continuing	Continuing	Continuing
MRAP Engineering	MIPR	AMSAA:Aberdeen, MD	0.000	0.200	Mar 2012	0.026	Nov 2012	0.000		-		0.000	0.000	0.226	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2316: *Combat Service Support Eng Equip*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MRAP Engineering	MIPR	ERDC:Vicksburg, MS	0.000	0.201	Feb 2012	0.079	Nov 2012	0.000		-		0.000	0.000	0.280	
MRAP Engineering	C/IDIQ	MCSC:Quantico, VA	0.000	0.639	Jan 2012	0.000		0.000		-		0.000	0.000	0.639	
MRAP Engineering	WR	NSWC:Panama City, FL	0.000	0.264	Apr 2012	0.634	Nov 2012	0.000		-		0.000	0.000	0.898	
R2C-Increment II	WR	NSWC:Panama City, FL	4.660	4.455	Dec 2011	3.892	Nov 2012	2.751	Dec 2013	-		2.751	Continuing	Continuing	Continuing
MRAP Engineering	MIPR	YPG:Yuma, Arizona	0.000	0.343	Mar 2012	0.000		0.000		-		0.000	0.000	0.343	
		Subtotal	9.640	26.143		27.787		18.770		0.000		18.770			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MRAP Test Support	MIPR	AEC:Alexandria, VA	0.000	0.000		0.300	Nov 2012	0.000		-		0.000	0.000	0.300	
		Subtotal	0.000	0.000		0.300		0.000		0.000		0.000	0.000	0.300	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Eng Squad Robot	MIPR	Aberdeen Proving Grounds:Aberdeen, MD	0.000	0.000		0.000		0.524	Nov 2013	-		0.524	0.000	0.524	
MRAP FoV Ballistic Evaluations	MIPR	ATC:Aberdeen, MD	0.000	0.000		1.600	Feb 2013	0.000		-		0.000	0.000	1.600	
MRAP FoV LFT&E	MIPR	ATC:Aberdeen, MD	0.000	0.000		1.200	Jun 2013	0.000		-		0.000	0.000	1.200	
MRAP Buffalo Testing Requirements	MIPR	ATC:Aberdeen, MD	0.000	0.000		0.300	Nov 2012	0.000		-		0.000	0.000	0.300	
CPAC	WR	Naval Surface Warfare Center	3.441	1.635	Dec 2011	1.959	Nov 2012	2.122	Dec 2013	-		2.122	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2316: *Combat Service Support Eng Equip*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		- Carderock:W. Bethesda, MD													
CPAC	WR	NRL:Key West, FL	1.000	0.500	Dec 2011	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Engineering Mod Kits	MIPR	Aberdeen Proving Grounds:Aberdeen, MD	0.000	0.485	Feb 2013	0.498	Mar 2013	0.372	Nov 2013	-		0.372	Continuing	Continuing	Continuing
		Subtotal	4.441	2.620		5.557		3.018		0.000		3.018			

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	14.081	28.763		33.644		21.788		0.000		21.788			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2316: *Combat Service Support Eng Equip*

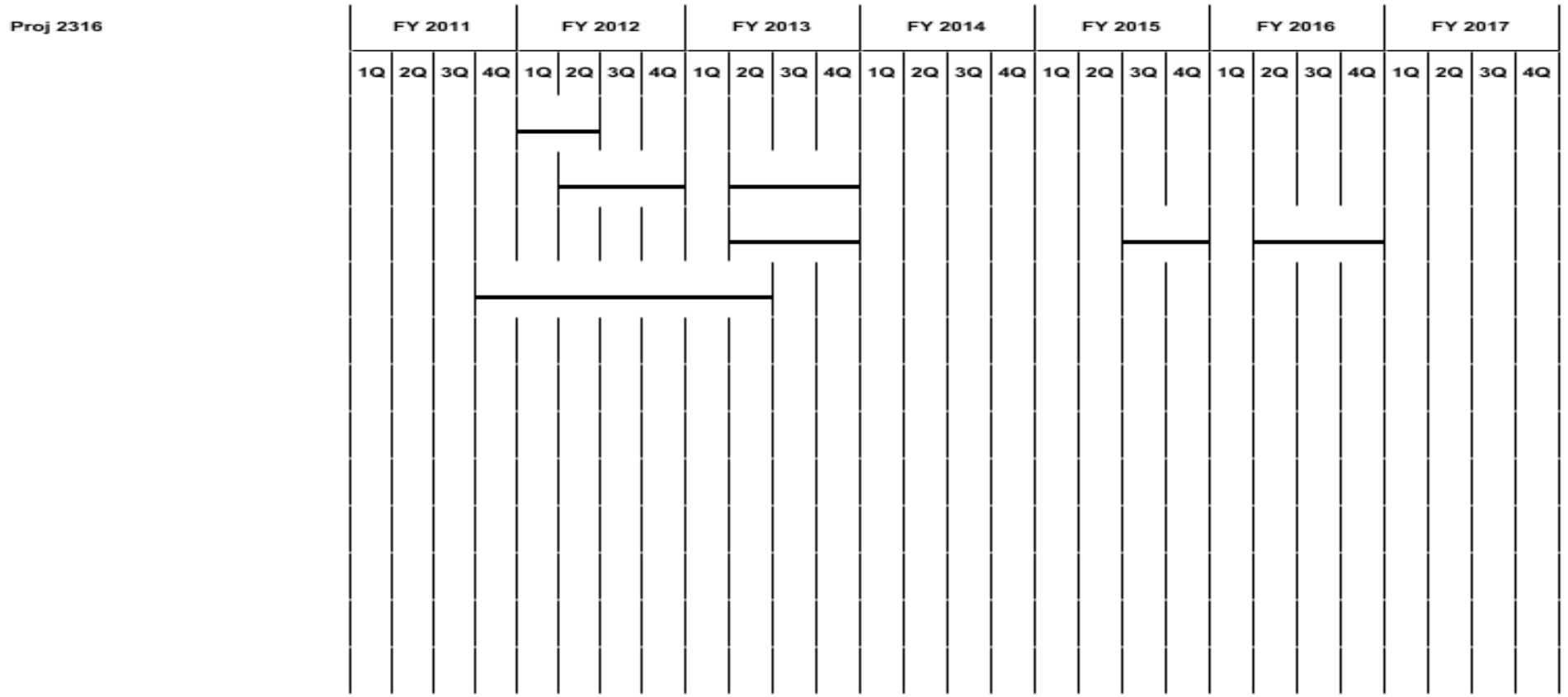

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2316: *Combat Service Support Eng Equip*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2316				
R2C Increment I Production	1	2012	2	2012
R2C Increment II Integration	2	2012	4	2012
R2C Increment II Production	2	2013	4	2013
R2C Increment III Integration	2	2013	4	2013
R2C Increment III IOT&E	3	2015	4	2015
Increment III Production	2	2016	4	2016

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2509: *Motor Transport Mod*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
2509: *Motor Transport Mod*	11.941	14.137	12.438	3.457	-	3.457	5.019	1.498	1.083	1.102	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

The Family of Tactical Trailers and MTVR Trailers projects are new starts in FY13.

A. Mission Description and Budget Item Justification

The Marine Corps Tactical Motor Transport Modification project manages procurement and life cycle sustainment for more than 40,000 principle end items divided among four fleets: Light Fleet, Medium Fleet, Heavy Fleet, and Special Fleet. A sustained effort is maintained in the Marine Corps for development and testing in support of fleet Service Life Extension Program (SLEP) initiatives, vehicle quality deficiency resolutions, safety initiatives, environmental/state transportation mandated vehicle changes, and system component refresh modifications efforts. Given that transportation asset operational availability declines at a steady rate over time, SLEP, fleet overhauls, and enhanced depot level modifications are essential in maintaining a viable transportation capability in the Marine Corps Operating Forces.

The Improved Recovery Vehicle (IRV) project includes improvements in all areas of the M88A2 Improved Recovery Vehicle. Continued funding is required to address obsolescence and support pre-planned product improvements. In addition, will implement lessons learned and develop safety related Engineering Change Proposals (ECPs) to correct hazards noted during the standard day to day operation of the M88A2 Improved Recovery Vehicle.

The HMMWV Sustainment Modification Initiative (SMI) program will restore selected variants of the remaining armored HMMWV fleet to 2004 Operational Requirements Document (ORD) performance parameters. This will be accomplished via a modification through kitting approach. The improvements will focus on restoring the vehicles to safe operating parameters over the expeditionary mission profile, restoring reliability, payload, and mobility to ORD thresholds.

P-19 Replacement will replace the aging A/S32P-19A Crash Fire Rescue fleet in support of expeditionary airfield operations and the supporting establishment. The vehicle will be outfitted with advanced fire suppression equipment and provide rescue and aircraft fire fighting capabilities to permanent and expeditionary airfields throughout the Marine Corps. The P-19 Replacement may also be employed to fight structure fires in support of base camps and as firefighting support to other elements of the MAGTF, such as ammunition supply points, Petroleum, Oil, and Lubricant (POL) distribution points, or hazardous material storage facilities.

MTVR Trailer and Family of Tactical Trailers programs will explore options for "lightening the MAGTF" weight and cube attributes of our light and medium trailer fleet. Will explore technologies and other current and emerging options that can be employed to achieve optimum lift capability with constraints to the desired weight and cube. Transportation and expeditionary goals will be considered in the research and development phase for the trailer fleet. These projects are new starts in FY13.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2509: *Motor Transport Mod*

Family of Material Handling Equipment will explore ways to armor or design survivability for various pieces of equipment in the Material Handling Family.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Improved Recovery Vehicle (IRV)	0.114	0.315	0.266
Articles:	0	0	0
FY 2012 Accomplishments: This project continued joint participation with US Army on evaluation of prospective modifications, solutions to cold weather starting deficiencies, alternatives to wire cables used in recovery operations, and improvements to the M88A2 drive train. Developmental efforts were conducted to modify the current fording kit to support operation with the new Automatic Fire Extinguishing System (AFES). ***FY 2013 Plans:*** This project develops long-term modernization plans for the M88A2 within the Marine Corps. Continue efforts to mitigate emergent operational deficiencies. ***FY 2014 Plans:*** Develop long-term modernization plans for the M88A2 within the Marine Corps to include Situational Awareness, Upgraded Mechanics Tools, and Electronic Fuel Injection.			
Title: High Mobility Multipurpose Wheeled Vehicle ECV (HMMWV-ECV)	12.587	1.498	0.358
Articles:	12	0	0
FY 2012 Accomplishments: Phases 0-1 for the HMMWV Sustainment Modification Initiative (SMI) program were awarded. Phases 2-4 for the HMMWV SMI program were awarded in 1Q FY 2013. Phases 0-1 include: performance and cost trade studies. Phases 2-4 include: preliminary design, final design & vehicle builds, and test & evaluation as well as engineering data package development. ***FY 2013 Plans:*** Completion of test article fabrication, performance & reliability testing, delivery of engineering data packages, and program management activities in support of the RFP release for Phase 5 Production Contract award. ***FY 2014 Plans:*** Program management & source selection activities in support of the Phase 5 award.			
Title: P-19 Replacement	0.847	6.503	0.922
Articles:	0	0	0
Description: The Aircraft Rescue & Fire Fighting (ARFF) vehicle will be equipped with fire suppression compounds and extinguishing agents, handheld extinguishers, and specialized rescue tools used by firefighters for extinguishing aircraft or structural fires, providing protection for rescue personnel, cooling explosive ordnance, extricating wounded aircrew members,			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2509: *Motor Transport Mod*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
dispatching emergency response capabilities to crash and structural alarms, and supporting mutual aid agreements with local, state, and federal agencies. ***FY 2012 Accomplishments:*** Milestone B and contract award for the P-19 Replacement development effort. ***FY 2013 Plans:*** Milestone B, contract award and development of the P-19R. ***FY 2014 Plans:*** Finalize development and testing of the P-19R.			
Title: Motor Transport Modification (MTM) ***Articles:*** ***FY 2012 Accomplishments:*** Evaluated, tested, and integrated system modifications identified for application on Motor Transportation assets including testing in support of the Internally Transportable Vehicle (ITV). ***FY 2013 Plans:*** Evaluation, testing, and integration of system modifications identified for application on Motor Transportation light medium and heavy tactical assets. ***FY 2014 Plans:*** Evaluating, testing, and integrating system modifications identified for application on Motor Transportation light, medium and heavy tactical assets including testing in support of the Internally Transportable Vehicle (ITV).	0.589 0	0.632 0	0.473 0
Title: MTVR Trailers ***Articles:*** ***Description:*** The MTVR Trailer Program is a USMC initiative to replace the current M105 Trailer with a trailer capable of augmenting the MTVR's increased mobility without degrading its operational capabilities. This program will develop and field a trailer which will have greater mobility characteristics while increasing the payload capability to up to 12,000 lbs. This is a new start program in FY13. ***FY 2013 Plans:***	0.000	2.497 0	0.748 0

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2509: *Motor Transport Mod*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Design and assess new versions of water and cargo trailers to replace those trailers that did not meet new operational requirements. ***FY 2014 Plans:*** Finalize design and test new versions of water and cargo trailers to provide increased capacity with lower weight to achieve the goal of lightening the MAGTF.			
Title: Family of Tactical Trailers ***Articles:*** ***Description:*** Funding will provide for research & development activities to ensure the existing legacy tactical trailer fleet designed for the High Mobility Multipurpose Wheeled Vehicle (HMMWV) remains effective and up-to-date with restoration of HMMWV capabilities and also provides for the M870A2E1 trailer designed for the Logistics Vehicle System (LVS)/Logistical Vehicle System Replacement (LVSR). This is a new start in FY13. ***FY 2013 Plans:*** Support the evaluation and testing efforts for the M1076 Palletized Load System (PLS) Trailer and the MK1077 Flatrack Trailer modifications to ensure continued effectiveness with the Logistics Vehicle System Replacement (LVSR). ***FY 2014 Plans:*** Funding will support testing efforts to ensure continued effectiveness of Light Tactical Trailers (LTT) with the improved High Mobility Multipurpose Wheeled Vehicle (HMMWV) fleet and also provides for medium trailers as well as the Heavy Tactical Trailer (HTT) designed for the Logistics Vehicle System (LVS)/Logistical Vehicle System Replacement (LVSR).	0.000 0	0.499 0	0.349 0
Title: Family of Material Handling Equipment ***Articles:*** ***Description:*** The Family of Material Handling equipment will explore techniques and technology to help survivability of the various platforms while also working to help sustain reliability and performance of the equipment. ***FY 2013 Plans:*** Funds will be used to assess survivability of Material Handling Equipment. ***FY 2014 Plans:*** Funds will be used to assess survivability of Material Handling Equipment.	0.000 0	0.494 0	0.341 0
Accomplishments/Planned Programs Subtotals	14.137	12.438	3.457

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2509: *Motor Transport Mod*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• PMC/523000: *Motor T Mod*	1.804	2.803	2.885		2.885	2.966	3.018	3.197	3.255	Continuing	Continuing
• PMC/504500: *HMMWV*	0.000	8.052	36.333		36.333	11.601	11.810	12.351	12.572	Continuing	Continuing
• PMC/509700-1: *Family of Tactical Trailers*	3.647	7.866	4.002		4.002	9.675	9.786	9.994	10.174	Continuing	Continuing
• PMC/206100: *IRV*	4.164	3.651	3.427		3.427	3.227	3.281	3.355	3.416	Continuing	Continuing
• PMC/463000: *IRV*	0.181	0.155	0.156		0.156	0.159	0.162	0.165	0.168	Continuing	Continuing
• PMC/509700-2: *Flatrack Refueler Capability (FRC)*	0.000	11.890	18.791		18.791	4.456	0.000	0.000	0.000	0.000	35.137
• PMC/ 509700: *MTVR Trailers*	43.027	36.046	4.592		4.592	10.426	2.816	1.000	1.018	Continuing	Continuing
• PMC/500600: *P19R*	0.000	0.000	16.940		16.940	32.972	27.540	30.852	15.977	Continuing	Continuing
• PMC/646200: *Family of Material Handling Equipment*	79.608	39.759	48.549		48.549	53.318	16.393	17.948	19.565	Continuing	Continuing

Remarks

D. Acquisition Strategy

The Improved Recovery Vehicle (IRV) program leverages Army developmental projects to create a system that more readily meets Marine Corps Heavy Recovery Vehicle requirements. Improvements include safety, reliability, and technology upgrades.

The HMMWV Sustainment Modification Initiative (SMI) program will take a five-phased approach. The first phase will include trade studies and preliminary design; the second phase will focus on final design and the building of component upgrade kits; the third phase will include performance and RAM testing of production representative kitted vehicles against the requirements in the 2004 HMMWV ORD; the fourth phase will complete development of the technical specification; and the fifth phase will award the production contract. The vehicle improvements will be accomplished by enhancing the HMMWVs at industry facilities, government depots, or a partnering combination of the two, via a modification through kitting approach. Open competition for providing the kits and installing/integrating them into existing platforms is a key goal.

The P-19 Replacement will supplant the aging A/S32P-19A fleet in support of expeditionary airfield operations and the supporting establishment. The vehicle will be outfitted with advanced fire suppression equipment and provide rescue and aircraft fire fighting capabilities to permanent and expeditionary airfields throughout the Marine Corps. The P-19 Replacement may also be employed to fight structure fires in support of base camps and as firefighting support to other elements of the MAGTF, such as ammunition supply points, Petroleum, Oil, and Lubricants (POL) distribution points, or hazardous material storage facilities.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2509: *Motor Transport Mod*

Motor Transport Modification funding will focus on streamlined acquisitions of Commercial-Off-The-Shelf Non-Developmental Items (COTS/NDI) that can be identified, integrated, and tested in a short amount of time. Successful modifications and tests are intended for follow-on procurement and incorporation into existing system component upgrades, SLEPs, or rapid COTS/NDI fielding for the Fleet Marine Forces (FMF).

The Medium Tactical Vehicle Replacement (MTVR) Trailer program's original acquisition strategy consisted of procuring three variants of trailers that would have greater mobility characteristics, while maximizing the commonality of parts, across the three trailer platform. FY05 RDTE funds were used to procure six prototypes trailers (two of each variants) developed by Choctaw Manufacturing Developing Contractors (CMDC).

Prior to a fielding decision, the original MTVR Trailer program was halted due to concerns the trailers did not meet the CMC goal to lighten the MAGTF. As a result, the MTVR Trailer program was restructured for re-design of the cargo trailer and to delay procurement of the Water and General Purpose trailers. The revised acquisition strategy will assist the Capabilities Development Directorate (CDD), Logistics Integration Division (LID) with a study to determine the Marine Corps' long term water and power distribution requirements. The RDT&E funds for the MTVR Trailer program will be used to build prototypes and conduct necessary tests to support the study results for water and power distribution trailers.

The Family of Tactical Trailer (FTT) acquisition strategy will use RDT&E funding to explore current and new technological options that can be used to achieve optimum lift within the desired weight and cube constraints in support of the "Lightening the MAGTF" initiative. Transportation and expeditionary goals will be considered in the research and development phase for the light and medium/heavy trailer fleet.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2509: *Motor Transport Mod*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
FTT (Heavy)	MIPR	TBD:TBD	0.000	0.000		0.250	May 2013	0.174	Dec 2013	-		0.174	Continuing	Continuing	Continuing
MTVR Trailers	MIPR	Choctaw Defense:McAlester, OK	0.000	0.000		2.197	Apr 2013	0.548	Mar 2014	-		0.548	Continuing	Continuing	Continuing
HMMWV SMI Phases 2-4	C/CPFF	NATC:NV	0.000	8.931	Oct 2012	0.000		0.000		-		0.000	0.000	8.931	19.769
Motor Transport Modification (Light)	TBD	TBD:TBD	0.000	0.000		0.316	Mar 2013	0.237	Mar 2014	-		0.237	Continuing	Continuing	Continuing
Family of Tactical Trailers (Light)	TBD	TBD:TBD	0.000	0.000		0.249	Apr 2013	0.175	Mar 2014	-		0.175	Continuing	Continuing	Continuing
Motor T Mods	MIPR	TBD:TBD	3.373	0.000		0.000		0.000		-		0.000	0.000	3.373	
HMMWV SMI Technology Development	C/CPFF	Johns Hopkins University:Laurel, MD	0.000	1.000	Sep 2012	0.000		0.000		-		0.000	0.000	1.000	
Improved Recovery Vehicle	WR	SPAWAR:Charleston, SC	0.000	0.000		0.000		0.100	Dec 2013	-		0.100	0.000	0.100	
Family of Material Handling Equipment	C/FFP	Kalmar:San Antonio, TX	0.000	0.000		0.355	Mar 2013	0.000		-		0.000	0.000	0.355	
Improved Recovery Vehicle	MIPR	TACOM:WARREN, MI	0.966	0.114	Dec 2011	0.315	Sep 2013	0.166	Mar 2014	-		0.166	Continuing	Continuing	Continuing
Motor T. Mods (Heavy)	MIPR	TBD:TBD	0.000	0.000	Jun 2013	0.316	Jun 2013	0.236	Jul 2014	-		0.236	Continuing	Continuing	Continuing
FRC	C/FFP	Heil CO:Athens, TN	4.600	0.000		0.000		0.000		-		0.000	0.000	4.600	
P-19 Replacement	MIPR	TBD:TBD	0.000	0.847	Mar 2013	5.896	Mar 2013	0.622	Apr 2014	-		0.622	Continuing	Continuing	Continuing
		Subtotal	8.939	10.892		9.894		2.258		0.000		2.258			

Remarks

HMMWV SMI Phases 2-4 contract has a Target Value of $19.769M funded by both USMC and USA. USMC portion of this contract is $8.931M.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2509: *Motor Transport Mod*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MTVR Trlr NATC Developmental Testing	C/FFP	NATC:NV	0.796	0.000		0.300	Apr 2013	0.200	Apr 2014	-		0.200	0.000	1.296	
HMMWV SMI Test & Evaluation	C/FFP	NATC:NV	0.035	1.318	Aug 2012	0.000		0.000		-		0.000	0.000	1.353	
HMMWV SMI Energy Efficiency & Specialty Material Testing	C/FFP	TBD:TBD	0.000	0.000		0.665	Mar 2013	0.000		-		0.000	Continuing	Continuing	Continuing
P19 NATC Developmental Testing	C/BA	TBD:TBD	0.000	0.000		0.607	Apr 2013	0.300	Mar 2014	-		0.300	0.000	0.907	
Motor Transport Modification (Light)	MIPR	Various:Various	0.805	0.589	Jul 2012	0.000		0.000		-		0.000	0.000	1.394	
HMMWV SMI Operational Assesment Planning & Execution	TBD	TBD:TBD	0.000	0.000		0.792	Apr 2013	0.000		-		0.000	0.000	0.792	
HMMWV SMI Engineering & Technical	WR	MCOTEA:Various	0.000	0.165	Sep 2012	0.000		0.000		-		0.000	0.000	0.165	
HMMWV SMI Ballistic & Automotive Testing	MIPR	Aberdeen Proving Grounds:Aberdeen, MD	0.000	0.163	Oct 2012	0.000		0.000		-		0.000	0.000	0.163	
Family of Material Handling Equipment	MIPR	Aberdeen Test Center:Aberdeen, MD	0.000	0.000		0.139	Mar 2013	0.341	Mar 2014	-		0.341	0.000	0.480	
		Subtotal	1.636	2.235		2.503		0.841		0.000		0.841			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
HMMWV SMI Travel	Various	Various:Various	0.000	0.033	Feb 2012	0.033	Nov 2012	0.033	Feb 2014	-		0.033	Continuing	Continuing	Continuing
HMMWV SMI Professional Engineering Support	C/FFP	SURVICE:VA	0.913	0.977	Dec 2012	0.000		0.000		-		0.000	0.000	1.890	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2509: *Motor Transport Mod*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
HMMWV SMI Program LCCE/CARD	C/FFP	Kalman:VA	0.401	0.000		0.000		0.000		-		0.000	0.000	0.401	
Motor Transport Modification	C/FFP	Kalman:VA	0.052	0.000		0.000		0.000		-		0.000	0.000	0.052	
HMMWV SMI Program Management	Various	Various:Various	0.000	0.000		0.008	Mar 2013	0.325	Feb 2014	-		0.325	0.000	0.333	
		Subtotal	1.366	1.010		0.041		0.358		0.000		0.358			

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	11.941	14.137		12.438		3.457		0.000		3.457			

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2510: *MAGTF CSSE & SE*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
2510: *MAGTF CSSE & SE*	0.000	0.000	13.974	9.037	-	9.037	7.458	6.549	6.162	6.268	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Advanced Power Sources, Mobile Power Equipment and Environmental Control Equipment programs are new starts in FY13.

A. Mission Description and Budget Item Justification

Environmental Control Equipment

The Enhanced Environmental Control Unit (E2CU) program is the second generation of a family of environmental control units from 9000 BTU to 60,000 BTU/Hr cooling output. The E2CU program will provide tactical Heating, Ventilation and Air Conditioning (HVAC) and superior reliability for all MAGTF units in all operational concepts. E2CU will replace all legacy ECUs starting in 2015 in the following sizes: 9000 BTU/Hr; 18,000 BTU/Hr; 36,000 BTU/Hr; and 60,000 BTU/Hr. These higher reliability and higher efficiency sets will use EPA-approved refrigerants, will be more energy efficient, be more mobile, easier to repair, and quieter than their predecessors. A significant average fuel efficiency improvement over the current ECU family has been demonstrated. With environmental control systems consuming 50-70% of tactical electric power in theater, this savings will be a significant contribution to reducing the USMC fuel demand, and lightening the MAGTF. The Warfighter benefit includes a decreased logistics footprint, less reliance on petroleum-derived fuels, increased local energy security, and reduced tanker losses (fewer on the road). The operational imperative to reduce fuel usage will consequently reduce refueling operations and exposing Marines to hazardous fuel convoy operations. Environmental Control Equipment is a new start in FY13.

Mobile Power Equipment

The Family of Mobile Electric Power Equipment consists of skid and trailer mounted tactical generators ranging from 1 to 200 kilowatts, Mobile Electric Power Distribution Systems, Load Banks, and Electrician's Tool Kits. This equipment is procured and fielded to provide electricity on the battlefield. Combat, combat support, and combat service support units all require tactical power to operate weapons systems, Command, Control, Communications, Computers and Intelligence (C4I) systems, medical and messing facilities, environmental control equipment, and water purification systems. With over 10,000 generators and using diesel engines in the Operating Forces, improving their fuel efficiency and reliability will be a significant contribution to reducing the USMC fuel demand, and lightening the MAGTF. The Warfighter benefit includes a decreased logistics footprint, less reliance on petroleum-derived fuels, increased local energy security, and reduced tanker losses (fewer on the road). The operational imperative to reduce fuel usage will consequently reduce refueling operations and exposing Marines to hazardous fuel convoy operations.Mobile Power Equipment is a new start in FY13.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2510: *MAGTF CSSE & SE*

Four discrete efforts will be pursued as follows: (1) Hybrid Generator: Funding to integrate new AMMPS 10kW Generator and energy storage devices onto a Light Tactical Trailer. Will provide capability to deliver 10kW steady state, supply up to 13kW peak demand for several hours using stored energy, provide 3kW silent operations for several hours (battery only). Will transition into production of a unit that can be integrated with the AMMPS generator. (2) Next generation power distribution. Intelligent power management devices that can integrate with existing MEPDIS-R Power Distribution Boxes and AMMPS generators. Provides capability for safe, efficient centralized power distibution from a single source to multiple loads, Automatic phase balancing of loads, power monitoring and data collection/ dissemination for remote system monitoring. (3) Next-generation FLS: Funding to integrate new 10kW AMMPS Generator and a new light tower (floodlight system) onto a Light Tactical Trailer. Provides tactical lighting and exportable 3-phase electrical power. Will transition into production of a unit that can be integrated with the AMMPS generator. (4) Integration and product qualification testing of new 1kW diesel generator for USMC-unique applications. Generator procurement will be by customers on a DoD contract.

Advanced Power Sources

Advanced Power Sources is a new start in FY13. The next generation Solar Portable Alternative Communications Energy System (SPACES) and the Ground Renewable Expeditionary Energy System (GREENS) will focus on Renewable Energy improvement in the area of smaller, lighter and more efficient systems. These R&D efforts will focus on achieving the Marine Corps goal of lightening the MAGTF and the individual Marine combat load though reduced battery weight and logistical fuel resupply needs.

The next generation Battery Management and Sustainment System (BMASS), will focus on making the next generation of the Suitcase Portable Charger smaller, lighter, more efficient and high power. In addition, a capability which will allow the Marine Corps to transport and maintain lithium batteries throughout the fleet in a safe and expeditionary manor will be developed.

The Squad Electric Power Program will focus on further weight reduction of the Squad Electric Power System and increasing survivability and durability of the system.

The On Board Vehicle Power (OBVP) is to focus on flexibility and efficiency of research and development to save fuel at idle conditions and improve vehicle energy efficiency on MTVR and HMMWV platforms.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Enhanced Environmental Control Unit	0.000	2.998	1.983
Articles:		12	0
FY 2013 Plans: Develop new 36,000 BTU/Hr and 60,000 BTU/Hr environmental control units (ECUs). ***FY 2014 Plans:*** Testing of the Enhanced ECUs developed during FY13.			
Title: Hybrid Generator/Next Gen Power Distribution System	0.000	4.985	3.558

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2510: *MAGTF CSSE & SE*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Articles:		12	0
Description: Four discrete efforts will be pursued as follows: (1) Hybrid Generator: Funding to integrate new AMMPS 10kW Generator and energy storage devices onto a Light Tactical Trailer. Will provide capability to deliver 10kW steady state, supply up to 13kW peak demand for several hours using stored energy, provide 3kW silent operations for several hours (battery only). Will transition into production of a unit that can be integrated with the AMMPS generator. (2) Next generation power distribution. Intelligent power management devices that can integrate with existing MEPDIS-R Power Distribution Boxes and AMMPS generators. Provides capability for safe, efficient centralized power distibution from a single source to multiple loads, automatic phase balancing of loads, power monitoring and data collection/dissemination for remote system monitoring. (3) Next-generation FLS: Funding to integrate new 10kW AMMPS Generator and a new light tower onto a Light Tactical Trailer. Provides tactical lighting and exportable 3-phase electrical power. Will transition into production of a unit that can be integrated with the AMMPS generator. (4) Integration and product qualification testing of new 1kW diesel generator for USMC-unique applications. Generator procurement will be by customers on a DoD contract. ***FY 2013 Plans:*** Hybrid Generator Development: Award three one-year RDTE contracts to develop and integrate new AMMPS 10kW Generator and energy storage devices onto a Light Tactical Trailer. Articles: Each contractor to produce 2 for total of 6 test articles. Next Generation Power Distribution System: Award three one-year RDTE contracts to develop next generation power distribution system. Articles: Each contractor to produce 2 for total of 6 test articles. ***FY 2014 Plans:*** Continue development and testing of the Hybrid Generator and Next Generation Power Distribution systems.			
Title: Advanced Power Sources	0.000	5.991	3.496
Articles:		28	0
Description: Solar Portable Alternative Communications Energy System (SPACES) Ground Renewable Expeditionary Energy Systems (GREENS) Suitcase Portable Charger Squad Electric Power On-Board Vehicle Power (OBVP) ***FY 2013 Plans:*** RENEWABLE ENERGY			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2510: *MAGTF CSSE & SE*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Development of new SPACES: Award three one-year RDTE contract to develop more efficient SPACES. Each contractor to produce 2 of each size for total of 6 test articles. Plan for government testing in late FY13. Development of new GREENS: Award three one-year RDTE contract to develop more efficient GREENS. Each contractor to produce 2 of each size for total of 6 test articles. Plan for government testing in FY14. BATTERY MANAGEMENT AND SUSTAINMENT SYSTEM (BMASS) Development of new Suitcase Portable Charger - Award two one-year RDTE contract to develop more efficient Charger. Each contractor to produce 3 of each size for total of 6 test articles. Plan for government testing in late FY13. Naval Surface Warfare Center Carderock Division, Carderock, MD will procure batteries and conduct study. SQUAD ELECTRIC POWER PROGRAM Development of Squad Electric Power - Award three one-year RDT&E contract to develop Squad Electric Power. Each contractor to produce 2 of each size for total of 6 test articles. Plan for government testing in late FY13. ON BOARD VEHICLE POWER (OBVP) MTVR/HMMWV On Board Vehicle Power, fuel efficiency study - Award two one-year RDT&E contract to develop more fuel efficient OBVP kits. Each contractor to produce 2 each for total of 4 test articles. Plan for government testing in late FY13. ***FY 2014 Plans:*** 2nd year of development of GREENS initiated in 2013. Testing of HMMWV On-Board Vehicle Power developed in 2013.			
Accomplishments/Planned Programs Subtotals	0.000	13.974	9.037

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• PMC/6054-1: *Environmental Control Equipment*	21.509	13.576	14.377		14.377	11.121	11.620	12.070	12.287	0.000	181.701
• PMC/6366-2: *Mobile Power Equipment*	103.985	42.792	35.135		35.135	31.824	31.005	28.624	32.984	0.000	352.248
• PMC/6366-3: *Advanced Power Sources*	30.509	33.708	26.218		26.218	15.450	15.913	16.331	16.649	0.000	170.221

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2510: *MAGTF CSSE & SE*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost

Remarks

D. Acquisition Strategy

Initial focus on development of more efficient 30,000 BTU/Hr and 60,000 BTU/Hr size model Environmental Control Units (ECUs), since they make up the greatest percentage of the inventory and are used extensively for shelter heating and cooling. Full and open competition. Three contractors to develop and deliver prototypes in two size models. Government testing to validate performance. Single contractor to produce both models using multi-year ID/IQ production contract. Low Rate Initial Production (LRIP), followed by LRIP testing, then Full Rate Production (FRP) to procure using PMC funds on annual Delivery Orders. ECUs are organically supported by Marines.

Initial focus on development of Hybrid Generator Systems using AMMPS generators beginning in FY13, and Power Distribution, followed by New Floodlight Set development in FY14. For each effort, strategies are very similar: Full and open competition. Three contractors to develop and deliver prototypes in two size models. Government testing to validate performance. Single contractor to produce both models using multi-year ID/IQ production contract. LRIP, followed by LRIP testing, then Full Rate Production to procure using PMC funds on annual Delivery Orders . All equipment is organically supported by Marines. The 1kW Generator effort will be to integrate and test these generators in USMC unique applications. Generators will be procured by others on a DoD contract.

The acquisition strategy for the Renewable Energy Program is to focus on improvements for the next generation Solar Portable Alternative Communications Energy System (SPACES) and the Ground Renewable Expeditionary Energy System (GREENS). These R&D efforts will focus on achieving the Marine Corps goal of lighting the MAGTF and the individual Marine combat load though reduced battery weight and logistical fuel resupply needs. In particular the development will focus on making these systems smaller, lighter and more efficient. In addition this development effort will also focus on development needed to transition the Office of Naval Research (ONR), Reliable S (SAP - Service Accessable Point) Update Protocal (RSUP), Future Naval Capability (FNC) effort.

The acquisition strategy for the Battery Management and Sustainment System (BMASS) is to focus on the development of the next generation portable Marine Corps charger and a Portable Lithium Battery Maintainer. These R&D efforts will focus on developing a capability which allow the Marine Corps the ability to support battery needs in all locations and environments of operation (land, sea and air). In particular the development will focus on making the next generation of the Suitcase Portable Charger smaller, lighter, more efficient and high power. It will also focus on development of a capability which allows the Marine Corps to transport and maintain lithium batteries throughout the fleet in a safe and expeditionary manor.

The acquisition strategy for the Squad Electric Power Program is to focus on the transition of the ONR Squad Electric Power FNC effort. This R&D effort will focus on achieving the Marine Corps goal of lighting the individual Marines combat load though reduced battery weight and increase interoperability of Marine Corps gear. In particular the effort will focus on further weight reduction of the Squad Electric Power System and increasing survivability and durability of the system.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2510: *MAGTF CSSE & SE*

The acquisition strategy for the On Board Vehicle Power Program is to focus on the continued adaptation and development of technologies transitioned from the Office of Naval Research Future Naval Capability. Primary focus will be on adaptation for different vehicle platform models (M1151, M1165) as well as updates to system configuration due to Armor requirement changes. Further, changes in deployment methodology with command guidance to focus on flexibility and efficiency will drive research and development to save fuel at idle conditions and improve energy export efficiency.

E. Performance Metrics

E2CU: Energy efficiency; size; weight; EPA-approved refrigerant; affordability; organically supportable.
MOBILE POWER: Energy efficiency; size; weight; affordability; organically supportable.
SPACES - 50% size reduction of controller, 50% reduction in panel surface area, 50% increase in panel efficiency
GREENS - 20% reduction in weight, 50% increase in power capability, 20% reduction in volume
BMASS: N/A
SQUAD ELECTRIC POWER PROGRAM: N/A
OBVP- N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2510: *MAGTF CSSE & SE*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ECU DEVELOPMENT	TBD	TBD:TBD	0.000	0.000		2.998	Apr 2013	0.000		-		0.000	Continuing	Continuing	Continuing
HYBRID GENERATOR/ NEXT GEN POWER DIST SYS	TBD	TBD:TBD	0.000	0.000		4.985	May 2013	0.000		-		0.000	0.000	4.985	
APS SPACES	C/IDIQ	CTQ:TBD	0.000	0.000		0.700	May 2013	0.000		-		0.000	0.000	0.700	
APS GREENS	C/IDIQ	TBD:TBD	0.000	0.000		1.200	Apr 2013	1.988	Jan 2014	-		1.988	0.000	3.188	
APS PORTABLE BATT CHARGER	C/IDIQ	TBD:TBD	0.000	0.000		0.793	May 2013	0.000		-		0.000	0.000	0.793	
APS SQUAD ELECTRIC POWER	C/IDIQ	TBD:TBD	0.000	0.000		0.500	Apr 2013	0.000		-		0.000	0.000	0.500	
APS OBVP MTVR DEVELOPMENT	C/IDIQ	TBD:TBD	0.000	0.000		0.500	Apr 2013	0.000		-		0.000	0.000	0.500	
APS OBVP HMMWV	C/IDIQ	TBD:TBD	0.000	0.000		0.300	May 2013	0.000		-		0.000	0.000	0.300	
		Subtotal	0.000	0.000		11.976		1.988		0.000		1.988			

Remarks

TBD - Source Selection to be completed in early FY13.
2nd year of development of GREENS initiated in 2013.
Hybrid Generator Development begin in 2013. Vendor TBD.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ECU TESTING	MIPR	ABERDEEN TEST CENTER:ABERDEEN, MD	0.000	0.000		0.000		1.983	Mar 2014	-		1.983	0.000	1.983	
HYBRID GENERATOR/ NEXT GEN POWER DIST SYS	MIPR	ABERDEEN TEST CENTER:ABERDEEN, MD	0.000	0.000		0.000		3.558	Mar 2014	-		3.558	0.000	3.558	
APS SPACES TESTING	MIPR	NWSC:CARDEROCK, MD	0.000	0.000		0.497	Jun 2013	0.000		-		0.000	0.000	0.497	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2510: *MAGTF CSSE & SE*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
APS GREENS TESTING	MIPR	NSWC:CARDEROCK, MD	0.000	0.000		0.300	Jun 2013	0.000		-		0.000	0.000	0.300	
APS SQUAD TESTING	MIPR	NSWC:CARDEROCK, MD	0.000	0.000		0.195	May 2013	0.000		-		0.000	0.000	0.195	
APS OBVP MTVR TESTING	MIPR	ABERDEEN TEST CENTER:ABERDEEN, MD	0.000	0.000		0.250	May 2013	0.000		-		0.000	0.000	0.250	
APS OBVP HMMWV TESTING	MIPR	ABERDEEN TEST CENTER:ABERDEEN, MD	0.000	0.000		0.150	Jun 2013	1.508	Mar 2014	-		1.508	0.000	1.658	
		Subtotal	0.000	0.000		1.392		7.049		0.000		7.049	0.000	8.441	

Remarks

Testing of Power Distribution developed in 2013.
Teting of HMMWV On-Board Vehicle Power developed in 2013.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
APS PM support for development and test mgmt	C/FFP	TBD:Quantico, VA	0.000	0.000		0.606	Apr 2013	0.000		-		0.000	0.000	0.606	
		Subtotal	0.000	0.000		0.606		0.000		0.000		0.000	0.000	0.606	

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		13.974		9.037		0.000		9.037			

Remarks

Exhibit R-4, **RDT&E Schedule Profile:** PB 2014 Navy		**DATE:** April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0206624M: *Marine Corps Cmbt Services Supt*	**PROJECT** 2510: *MAGTF CSSE & SE*

Exhibit R-4, RDT&E Schedule Profile:			DATE: June 2011
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT	
	PE 0206626M MOBILE POWER EQUIPMENT		

HYBRID GENERATOR	FY13	FY14	FY15	FY16	FY17	FY18	FY19
Milestones	Δ MS "B"	MS "C" LRIP Δ	MS "C" FRP Δ				
Contract Awards	Δ RDTE		Δ PRODUCTION	Δ 1ST PROD D.O.	Δ 2ND PROD D.O.	Δ 3RD PROD D.O.	Δ 4TH PROD D.O.
Engr / Manuf Development							
Government Testing			LRIP PVT				
Production			LRIP	FRP			
Fielding							
Operations and Support							

POWER DISTRIBUTION	FY13	FY14	FY15	FY16	FY17	FY18	FY19
Milestones	Δ MS "B"	MS "C" LRIP Δ	MS "C" FRP Δ				
Contract Awards	Δ RDTE		Δ PRODUCTION	Δ 1ST PROD D.O.	Δ 2ND PROD D.O.	Δ 3RD PROD D.O.	Δ 4TH PROD D.O.
Engr / Manuf Development							
Government Testing			LRIP PVT				
Production			LRIP	FRP			
Fielding							
Operations and Support							

FLOODLIGHT SET	FY13	FY14	FY15	FY16	FY17	FY18	FY19
Milestones		Δ MS "B"	MS "C" LRIP Δ	MS "C" FRP Δ			
Contract Awards		Δ RDTE		Δ PRODUCTION	Δ 1ST PROD D.O.	Δ 2ND PROD D.O.	Δ 3RD PROD D.O.
Engr / Manuf Development							
Government Testing				LRIP PVT			
Production				LRIP	FRP		
Fielding							
Operations and Support							

1KW INTEGRATION	FY13	FY14	FY15	FY16	FY17	FY18	FY19
Integration Effort							
Government Testing							
Operations and Support							

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2510: *MAGTF CSSE & SE*

Exhibit R-4, RDT&E Schedule Profile:							DATE: June 2011
APPROPRIATION/BUDGET ACTIVITY			R-1 ITEM NOMENCLATURE		PROJECT		
			PE 0206626M ENVIRONMENTAL CONTROL EQUIP		Enhanced Environmental Control Unit		
	FY13	FY14	FY15	FY16	FY17	FY18	FY19
Milestones	Δ MS "B"	MS "C" LRIP Δ	MS "C" FRP Δ				
Contract Awards	Δ RDTE		Δ PRODUCTION	Δ 1ST PROD D.O.	Δ 2ND PROD D.O.	Δ 3RD PROD D.O.	Δ 4TH PROD D.O.
Engr / Manuf Development							
Government Testing		DT	LRIP TEST				
Production			LRIP	FRP			
Fielding							
Operations and Support							

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0206624M: *Marine Corps Cmbt Services Supt*	**PROJECT** 2510: *MAGTF CSSE & SE*

Exhibit R-4, RDT&E Schedule Profile:			DATE:
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT	
		BMASS	

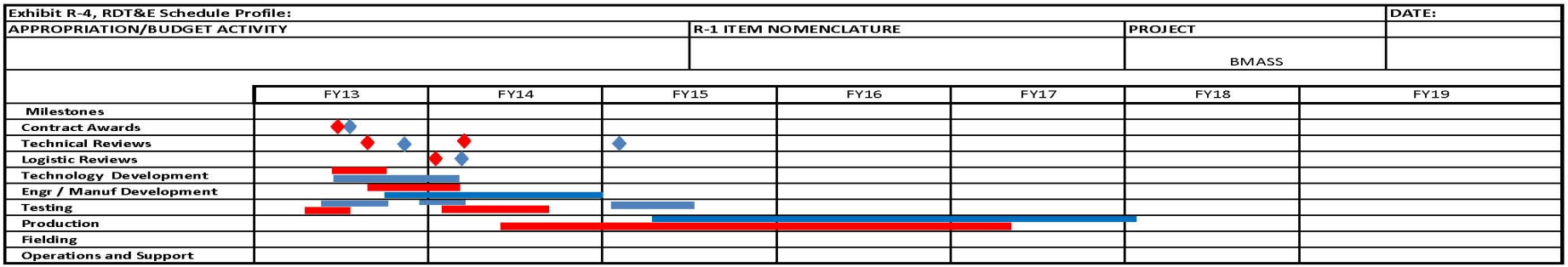

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0206624M: *Marine Corps Cmbt Services Supt*	**PROJECT** 2510: *MAGTF CSSE & SE*

Exhibit R-4, RDT&E Schedule Profile:						DATE:
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE			PROJECT		
				Squad Electric Power		

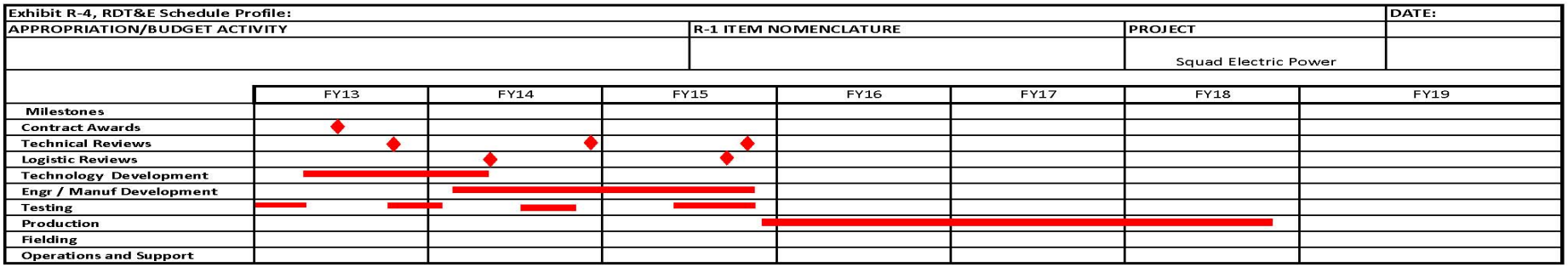

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0206624M: *Marine Corps Cmbt Services Supt*	**PROJECT** 2510: *MAGTF CSSE & SE*

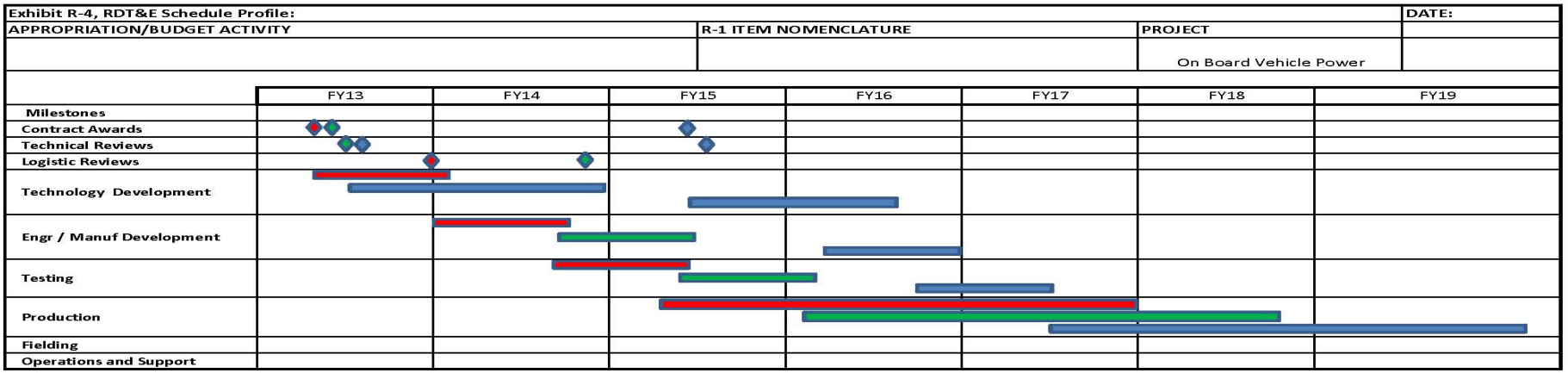

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0206624M: *Marine Corps Cmbt Services Supt*	**PROJECT** 2510: *MAGTF CSSE & SE*

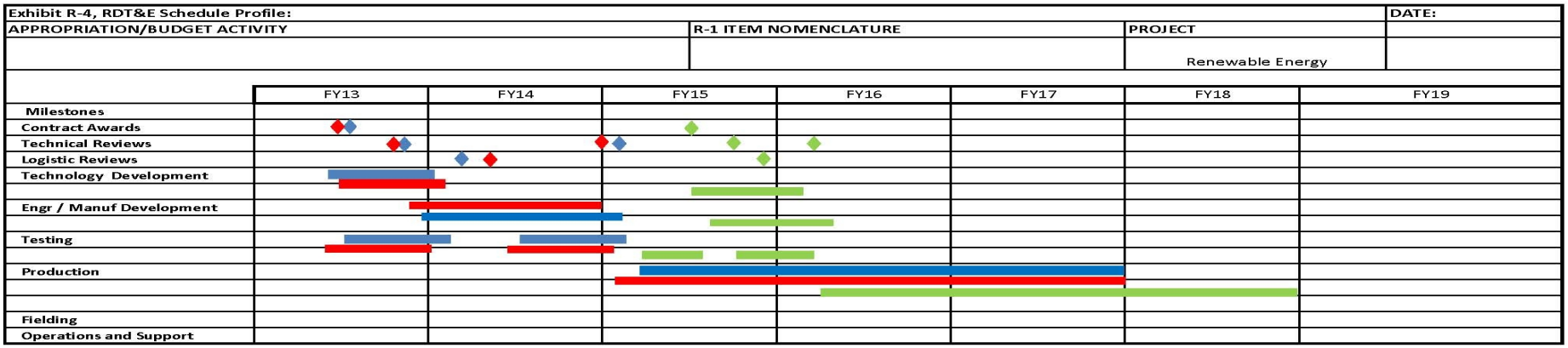

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0206624M: *Marine Corps Cmbt Services Supt*	**PROJECT** 2510: *MAGTF CSSE & SE*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
HYBRID GENERATOR				
Milestone B	1	2013	1	2013
Contract Award: Schedule Detail	3	2013	3	2013
Engr/Mfg Development: Schedule Detail	3	2013	4	2013
Milestone C LRIP: Schedule Detail	4	2014	4	2014
Eng/Mfg Develop (Milestone C): Schedule Detail	1	2014	2	2014
Govt Testing: Schedule Detail	2	2014	3	2014
Milestone C FRP: Schedule Detail	4	2015	4	2015
Milestone C Production: Schedule Detail	2	2015	2	2015
1st Production D.O.: Schedule Detail	1	2016	1	2016
FRP: Schedule Detail	1	2016	1	2016
2nd Prod D.O.: Schedule Detail	1	2017	1	2017
Production: Schedule Detail	1	2017	4	2017
LRIP PVT MS C: Schedule Detail	2	2015	3	2015
LRIP: Schedule Detail	2	2015	2	2015
FIELDING: Schedule Detail	1	2017	4	2017
OPERATIONS SUPPORT: Schedule Detail	1	2017	4	2017
POWER DISTRIBUTION				
MS B: Schedule Detail	1	2013	1	2013
CONTRACT AWARD: Schedule Detail	3	2013	3	2013
EMD: Schedule Detail	3	2013	3	2013
MS C LRIP: Schedule Detail	4	2014	4	2014

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2510: *MAGTF CSSE & SE*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
MS C EMD: Schedule Detail	1	2014	1	2014
GVT TESTING: Schedule Detail	2	2014	3	2014
MS C FRP: Schedule Detail	4	2015	4	2015
MS PRODUCTION: Schedule Detail	2	2015	2	2015
LRIP PVT: Schedule Detail	2	2015	3	2015
LRIP: Schedule Detail	2	2015	3	2015
1ST PROD D.O.: Schedule Detail	1	2016	1	2016
FRP: Schedule Detail	1	2016	1	2016
2ND PROD D.O.: Schedule Detail	1	2017	1	2017
PRODUCTION: Schedule Detail	1	2017	4	2017
FIELDING: Schedule Detail	1	2017	4	2017
O/S: Schedule Detail	1	2017	4	2017
FLOODLIGHT SET				
MS B: Schedule Detail	1	2014	1	2014
CONTRACT AWARD: Schedule Detail	2	2014	2	2014
EMD: Schedule Detail	3	2014	3	2014
MS C LRIP: Schedule Detail	4	2015	4	2015
MS C EMD: Schedule Detail	1	2015	2	2015
GVT TESTING: Schedule Detail	2	2015	3	2015
MS C FRP: Schedule Detail	4	2016	4	2016
PRODUCTION: Schedule Detail	2	2016	2	2016
LRIP PVT: Schedule Detail	2	2016	3	2016
LRIP: Schedule Detail	2	2016	3	2016
1ST PROD D.O.: Schedule Detail	1	2017	1	2017
FRP: Schedule Detail	1	2017	1	2017

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2510: *MAGTF CSSE & SE*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
1KW INTEGRATION				
INTEGRATION	2	2015	2	2015
GVT TESTING: Schedule Detail	2	2016	3	2016
O/S: Schedule Detail	1	2017	4	2017
ENVIRONMENTAL CONTROL UNIT				
MS B	1	2013	1	2013
C/AWARD: Schedule Detail	3	2013	3	2013
EMD: Schedule Detail	3	2013	4	2013
MS C LRIP: Schedule Detail	4	2014	4	2014
M/S C EMD: Schedule Detail	1	2014	2	2014
DT: Schedule Detail	2	2014	3	2014
MS C FRP: Schedule Detail	4	2015	4	2015
MS C PRODUCTION: Schedule Detail	2	2015	2	2015
LRIP TEST: Schedule Detail	2	2015	3	2015
LRIP: Schedule Detail	2	2015	3	2015
1ST PROD D.O.: Schedule Detail	1	2016	1	2016
FRP: Schedule Detail	2	2016	4	2016
2ND PROD D.O.: Schedule Detail	1	2017	1	2017
PRODUCTION: Schedule Detail	1	2017	4	2017
FIELDING: Schedule Detail	1	2017	4	2017
O/S: Schedule Detail	1	2017	4	2017
BMASS				
C/AWARD: Schedule Detail	3	2013	3	2013
BMASS TECHNICAL REVIEWS: Schedule Detail	3	2013	4	2013
BMASS TECH DEVELOP: Schedule Detail	3	2013	4	2013

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2510: *MAGTF CSSE & SE*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
EMD: Schedule Detail	3	2013	4	2013
TESTING: Schedule Detail	3	2013	4	2013
TECH REVIEWS: Schedule Detail	2	2014	2	2014
LOGISTIC REVIEWS: Schedule Detail	1	2014	1	2014
TECH DEVELOP: Schedule Detail	1	2014	2	2014
BMASS EMD (1): Schedule Detail	1	2014	2	2014
BMASS EMD(2): Schedule Detail	1	2014	4	2014
BMASS TESTING: Schedule Detail	2	2014	4	2014
BM PROD: Schedule Detail	3	2014	4	2014
BMASS TECH REVIEWS: Schedule Detail	2	2015	2	2015
B M TESTING: Schedule Detail	2	2015	3	2015
PRODUCTION: Schedule Detail	1	2015	4	2015
BMASS PROD: Schedule Detail	1	2016	4	2016
B PROD: Schedule Detail	1	2017	4	2017
SQUAD ELECTRIC POWER				
C/AWARD: Schedule Detail	3	2013	3	2013
TECH REVIEWS: Schedule Detail	3	2013	3	2013
SUAD TECH DEVELOP: Schedule Detail	2	2013	4	2013
SQUAD TESTING: Schedule Detail	1	2013	3	2014
SQUAD TECH REVIEWS: Schedule Detail	4	2014	4	2014
LOG REVIEWS: Schedule Detail	2	2014	2	2014
TECH DEVELOP: Schedule Detail	1	2014	2	2014
EMD: Schedule Detail	2	2014	4	2014
TESTING: Schedule Detail	3	2014	3	2014
TECH REV: Schedule Detail	4	2015	4	2015

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2510: *MAGTF CSSE & SE*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
LOG REV: Schedule Detail	3	2015	3	2015
SQUAD EMD: Schedule Detail	1	2015	3	2015
SQ TESTING: Schedule Detail	3	2015	4	2015
SQ PRODUCTION: Schedule Detail	4	2015	4	2017
ON-BOARD VEHICLE POWER				
C/AWARD: Schedule Detail	3	2013	3	2013
TECH REVIEWS: Schedule Detail	3	2013	3	2013
LOG REVIEWS: Schedule Detail	4	2013	4	2013
TECH DEVELOPMENT: Schedule Detail	3	2013	3	2016
EMD: Schedule Detail	1	2014	3	2015
OBVP EMD: Schedule Detail	2	2016	4	2016
TESTING: Schedule Detail	3	2014	3	2015
OBVP TESTING: Schedule Detail	1	2016	3	2017
PRODUCTION: Schedule Detail	2	2015	4	2017
RENEWABLE ENERGY				
C/AWARDS (S): Schedule Detail	3	2013	3	2013
C/AWARD (G): Schedule Detail	3	2013	3	2013
TECH REVIEWS (S): Schedule Detail	3	2013	3	2013
TECH REVIEWS (G): Schedule Detail	3	2013	3	2013
TECH DEVELOP (S): Schedule Detail	3	2013	1	2014
TECH DEVELOP (G): Schedule Detail	3	2013	1	2014
EMD (S): Schedule Detail	4	2013	1	2015
TESTING (S): Schedule Detail	3	2013	1	2014
TEST (S): Schedule Detail	3	2014	1	2015
TECH REV (S): Schedule Detail	4	2014	4	2014

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2510: *MAGTF CSSE & SE*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
LOG REV (S): Schedule Detail	2	2014	2	2014
LOG REV (G): Schedule Detail	3	2014	3	2014
TESTING (G): Schedule Detail	3	2013	4	2013
TEST (G): Schedule Detail	3	2014	1	2015
C/A ONR SYS: Schedule Detail	3	2015	3	2015
TECH REV (G): Schedule Detail	2	2015	2	2015
TECH REV (ONR SYS): Schedule Detail	4	2015	4	2015
LOG REV (ONR SYS): Schedule Detail	4	2015	4	2015
TECH DEVEL (ONR SYS): Schedule Detail	3	2015	1	2016
EMD (ONR SYS): Schedule Detail	3	2015	2	2016
TEST (ONR): Schedule Detail	2	2015	3	2015
TEST (ONR SYS): Schedule Detail	3	2015	2	2016
PRODUCTION (S): Schedule Detail	2	2015	4	2017
PRODUCTION (G): Schedule Detail	1	2015	4	2017
PRODUCTION (ONR SYS): Schedule Detail	2	2016	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2929: *Testing Measuring Diag Equip & SE*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
2929: *Testing Measuring Diag Equip & SE*	3.339	1.450	2.043	2.571	-	2.571	2.097	2.120	2.147	2.183	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Marine Corps Automatic Test Equipment (MCATE) program provides development of sustainment technology for automatic test equipment used in organizational/ intermediate maintenance facilities.

The Autonomic Logistics (AL) provides platform-based situational awareness to Marine Corps ground weapon systems. Embedded Platform Logistics System (EPLS) interfaces to a weapon system data bus to collect and process sensor data into actionable information. EPLS provides systems health, fuel and ammo levels, mobile and troop load information to the combatant commander and his supporting staff.

Automatic Identification Technology (AIT) devices encompass a variety of read and write data storage technologies that are used to improve accuracy, timeliness, and handling. These technologies provide near-real time Total Asset Visibility data used to influence critical decisions by Operational Commanders. AIT enhances our force in readiness by coordinating, synchronizing and automatically transferring data by means of barcodes, magnetic stripes, integrated circuit cards, optical memory cards, active Radio Frequency Identification (aRFID), and passive RFID (pRFID) tags, as well as the software required to create and manage the devices, read the information stored on them, and integrate that information with other logistics data. The information on each device can range from a single part number to a self-contained database. These devices can be interrogated using a variety of means, including fixed infrastructures and portable systems. The information obtained from those interrogations is provided electronically to various Automated Information Systems (AIS).

The Marine Corps Family of Automatic Test Systems (ATS), formerly called Third Echelon Test Sets (TETS), provides automatic test program capability for use by technicians both in garrison and the forward edge of the battlefield; specifically in the areas of interactive electronic technical manuals, condition/predictive based maintenance, and embedded sensors and prognostics.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Marine Corps Automated Test Equipment	1.204	2.043	0.000
Articles:	0	0	
Description: Overall thrust of this program is to develop advanced technology concepts for automatic test and integrate these subsystems and components into system prototypes for field experiments and/or tests in a simulated environment. The focus is on demonstrating the military utility of technologies and applying them to our Automatic Test Systems (ATS) acquisition programs.			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2929: *Testing Measuring Diag Equip & SE*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
A primary secondary thrust is to prevent obsolescence in our current automatic test systems by identifying new technologies that can be implemented immediately. ***FY 2012 Accomplishments:*** Activities have researched new testing techniques to prevent obsolescence of legacy automatic test systems (ATS). Replacements for signal generators and RF down-converters to prevent ATS obsolescence and testing techniques for new infrared sighting assemblies are being identified. ***FY 2013 Plans:*** Activities will continue to research new testing techniques to prevent obsolescence of legacy systems. Develop integration techniques to address new testing solutions into fielded automatic test systems.			
Title: Autonomic Logistics ***Articles:*** ***FY 2012 Accomplishments:*** Activities have continued to integrate Embedded Platform Logistics System (EPLS) applications with external USMC logistics applications.	0.246 0	0.000	0.000
Title: Automatic Identification Technology (AIT) ***Articles:*** ***FY 2014 Plans:*** Supports procurement of demo equipment from the DoD contract to perform integration and accreditation testing with the USMC Automatic Identification Technology (AIT) infrastructures. This funding will also allow for limited enhancements to the consolidated AIT infrastructure to expand the AIT devices included.	0.000	0.000	0.500 0
Title: General Purpose Automatic Test Systems ***Articles:*** ***FY 2014 Plans:*** Activities will continue research of new testing techniques to prevent obsolescence of legacy systems. Develop integration techniques to address new testing solutions into fielded automatic test systems.	0.000	0.000	2.071 0
Accomplishments/Planned Programs Subtotals	1.450	2.043	2.571

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2929: *Testing Measuring Diag Equip & SE*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• PMC/41811: *Calibration*	3.389	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	49.881
• PMC/41812: *TETS*	0.000	7.078	0.000		0.000	0.000	0.000	0.000	0.000	0.000	126.250
• PMC/41813: *Autonomic Logistics*	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	119.271
• PMC/41814: *General Purpose Automatic Test Systems*	0.000	0.000	12.992		12.992	13.312	13.371	13.590	13.825	Continuing	Continuing

Remarks

D. Acquisition Strategy

Automatic Test Systems (ATS) and Marine Corps Automatic Test Equipment (MCATE) acquisition is being done through Marine Corps Systems Command (MCSC) contracts and in-house at Marine Corps Logistics Command (MCLC), Albany, GA, and Naval Air Systems Command (NAVAIR), Pax River, MD.

Autonomic Logistics (AL) Embedded Platform Logistics System's (EPLS) work is being done through Naval Sea Systems Command (NAVSEA), Washington, District of Columbia.

Automatic Identification Technology (AIT) funding supports procurement of demo equipment from the DoD contract to perform integration and accreditation testing with the USMC AIT infrastructures. This funding will also allow for limited enhancements to the consolidated AIT infrastrcture to expand the AIT devices included.

E. Performance Metrics

N/A
N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2929: *Testing Measuring Diag Equip & SE*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Study & Hardware (MCATE) 6	C/FFP	NAVAIR:Pax River, MD	0.000	0.000		0.245	Dec 2012	0.000		-		0.000	0.000	0.245	
Study & Hardware (MCATE) 7	C/FFP	MCSC:Quantico, VA	0.000	0.000		0.000		0.641	Mar 2014	-		0.641	0.000	0.641	
Study & Hardware (MCATE) 8	C/FFP	MCSC:Quantico, VA	0.000	0.000		0.000		0.935	Feb 2014	-		0.935	0.000	0.935	
Service Enhancements (AIT)	TBD	TBD:TBD	0.000	0.000		0.000		0.250	Mar 2014	-		0.250	0.000	0.250	
Study & Hardware (MCATE) 2	C/FFP	MCSC:Quantico, VA	0.449	0.000		0.000		0.000		-		0.000	0.000	0.449	
Study & Hardware (MCATE) 4	C/FFP	MCSC:Quantico, VA	0.000	0.505	Mar 2012	0.650	Jan 2013	0.000		-		0.000	0.000	1.155	
Study & Hardware (MCATE) 5	C/FFP	MCSC:Quantico, VA	0.000	0.385	Jan 2012	0.400	Dec 2012	0.000		-		0.000	0.000	0.785	
		Subtotal	0.449	0.890		1.295		1.826		0.000		1.826	0.000	4.460	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Support (AL)	C/CPFF	NAVSEA:Washington, District of Columbia	0.000	0.246	Nov 2011	0.000		0.000		-		0.000	0.000	0.246	
Engineering Support (MCATE)	WR	MCLB:Albany, GA	2.890	0.314	Nov 2011	0.748	Nov 2012	0.495	Nov 2013	-		0.495	Continuing	Continuing	Continuing
		Subtotal	2.890	0.560		0.748		0.495		0.000		0.495			

Remarks

Autonomic Logistics (AL) FY12 funds will focus on the integration of the Embedded Platform Logistics System applications with external USMC logistics. Autonomic Logistics (AL) applications include Embedded Platform Logistics System (EPLS), the EPLS MIMOSA data Repository (EMDR), and the Electronic Maintenance Support System (EMSS).

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 2929: *Testing Measuring Diag Equip & SE*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Equipment Evaluation (AIT)	TBD	TBD:TBD	0.000	0.000		0.000		0.250	Mar 2014	-		0.250	0.000	0.250	
		Subtotal	0.000	0.000		0.000		0.250		0.000		0.250	0.000	0.250	

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	3.339	1.450		2.043		2.571		0.000		2.571			

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 9C90: *MTVR Mod*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
9C90: *MTVR Mod*	37.722	1.355	2.496	3.402	-	3.402	4.299	3.924	9.783	9.952	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The MTVR Modification program line funds numerous and very important modifications and initiatives that are required to address operational priorities, engineering change proposals, safety concerns, support equipment inefficiencies, tool malfunctions, product quality deficiencies, beneficial suggestions and other issues that affect vehicle reliability, availability, maintainability and readiness. A proactive and focused approach ensures proper vehicle sustainment and life-cycle management and it allows the program office the flexibility to develop and implement improvements as needed to respond to the evolving needs of the Marine Corps.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Medium Tactical Vehicle Replacement (MTVR): Fuel Economy/Energy Efficiency	0.300	0.500	2.411
Articles:	0	0	0
FY 2012 Accomplishments: Funding supported PMO participation in the Office of Naval Research (ONR) Future Naval Capability (FNC) initiative for fuel economy improvements for the MTVR vehicles, which supports the CMC priorities for reducing costs, logistics footprint and improved environment.			
FY 2013 Plans: Funding will support increased PMO participation in the Office of Naval Research (ONR) Future Naval Capability (FNC) initiative for fuel economy improvements for the MTVR vehicles, which supports the CMC priorities for reducing costs, logistics footprint and improved environment.			
FY 2014 Plans: Funding will support testing of the Office of Naval Research (ONR) Future Naval Capability (FNC) initiative for fuel economy components on different variants of the MTVR vehicles in preparation of its transition to the program office.			
Title: Medium Tactical Vehicle Replacement (MTVR): Engineering Change Proposal (ECP)	0.150	0.500	0.369
Articles:	0	0	0
FY 2012 Accomplishments: Funding supported Engineering Change Proposal (ECP) development and testing for transportability of the MTVR vehicle. Specifically, funding supported ECPs and studies to improve MTVR Lighting Kit, Transportability of the MTVR fleet of vehicles, Lift			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 9C90: *MTVR Mod*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
and Tie Down Provisions, Improved Wheel Ramps and Steering Gear Failures. Continual changes in threat environment requires on-going vehicle modifications to address new and changing threats which must be developed and tested. ***FY 2013 Plans:*** Funding will support Engineering Change Proposal (ECP) development and live fire and prototype testing for the MTVR program. Specifically, funding supported ECPs for Transportability of the MTVR fleet of vehicles and the Lift and Tie Down Provisions. Continual changes in threat environment requires on-going vehicle modifications to address new and changing threats which must be developed and tested. ***FY 2014 Plans:*** Funding will support Engineering Change Proposal (ECP) development and live fire and prototype testing for the MTVR program. Continual changes in threat environment requires on-going vehicle modifications to address new and changing threats which must be developed and tested.			
Title: Medium Tactical Vehicle Replacement (MTVR): Safety	0.455	0.499	0.322
Articles:	0	0	0
FY 2012 Accomplishments: Funding supported development, testing and modifications for Emergency Egress Windows, Blast seats and floor mats, relamination of transparent armor and brake based stability testing. These are in response to safety concerns to protect the warfighter and MTVR from possible catastrophic events as a result of continual changes in the current and future threat environments. ***FY 2013 Plans:*** Funding supported continued development, testing and modifications for Emergency Egress Windows, Blast seats and floor mats, relamination of transparent armor and brake based stability testing. These are in response to safety concerns to protect the warfighter and MTVR from possible catastrophic events as a result of continual changes in threat environment requires on-going vehicle modifications to address new and changing threats which must be developed and tested. ***FY 2014 Plans:*** Funding will support Engineering Change Proposal (ECP) development, various testing and modifications required to meet the diverse environments of current and future operations of MAGTF Expeditionary Maneuver Warfare for the MTVR program. In response to protect the warfighter and MTVR from possible catastrophic events as a result of continual changes in threat environment requires on-going vehicle modifications to address new and changing threats which must be developed and tested.			
Title: Medium Tactical Vehicle Replacement (MTVR): Integration	0.200	0.500	0.000
Articles:	0	0	

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 9C90: *MTVR Mod*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: Funding supported development and testing of components related to the integration of common video display into the MTVR vehicle. Continual changes in threat environment requires on-going vehicle modifications which need to be incorporated into the MTVR fleet of vehicles to address new and changing threats. ***FY 2013 Plans:*** Funding will support development and testing of components related to the integration of brackets and cables to accommodate add-on components and equipment (such as Blue Force Tracker (BFT), radio jammers, Intercoms, Drivers Vision Enhancer (DVE), etc) for both CONUS and OCONUS vehicles. Continual changes in threat environment requires on-going vehicle modifications which need to be incorporated into the MTVR fleet of vehicles to address new and changing threats.			
Title: Medium Tactical Vehicle Replacement (MTVR): Modeling & Simulation (M&S) ***Articles:*** ***FY 2012 Accomplishments:*** Funding provided continued support to address operational effectiveness and improved efficiencies of the MTVR vehicles with the use of the ADAMS software model. ***FY 2013 Plans:*** Provide continued support to address operational effectiveness and improved efficiencies of the MTVR vehicles with the use of the ADAMS software model. ***FY 2014 Plans:*** Funding will provide continued support to address operational effectiveness and improved efficiencies of the MTVR vehicles with the use of the ADAMS software model.	0.250 0	0.497 0	0.300 0
Accomplishments/Planned Programs Subtotals	1.355	2.496	3.402

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• PMC/505000: *MTVR Modifications*	41.789	44.334	1.542		1.542	7.498	9.503	10.033	10.214	Continuing	Continuing
• PMC/508800: *MTVR*	98.224	10.466	0.000		0.000	0.000	0.000	0.000	0.000	0.000	3,186.711

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 9C90: *MTVR Mod*

D. Acquisition Strategy

The strategy for the MTVR Modification initiative is to be proactive in our approach. This will aid in the prevention of parts obsolescence, potential safety concerns, and support the needs of the Marine Corps. A proactive and focused approach ensures proper vehicle sustainment and life-cyle management and it allows the program office the flexibility to develop and implement improvements as required to respond to evolving needs. The anticipated life of the MTVR was partially based on the vehicle being at curb weight a large percentage of its life time. Due to the addition of the MTVR Armor System, various other components and the current high optempo, it is anticipated that the MTVR life expectancy will be lessened. It is important to ensure MTVR sustainment in any and all circumstances and this Modification line supports this effort.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 9C90: *MTVR Mod*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prototype Development & Testing	SS/T&M	Oshkosh:Warren, MI	18.500	0.000		0.000		0.000		-		0.000	0.000	18.500	
		Subtotal	18.500	0.000		0.000		0.000		0.000		0.000	0.000	18.500	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ECP Development	SS/T&M	Oshkosh:Warren, MI	3.945	0.200	Mar 2012	0.250	Mar 2013	0.269	Mar 2014	-		0.269	0.713	5.377	
Integration	SS/T&M	Oshkosh:Warren, MI	1.750	0.200	Apr 2012	0.300	Apr 2013	0.000		-		0.000	0.000	2.250	
Safety Initiatives	SS/T&M	Oshkosh:Warren, MI	3.325	0.160	Jul 2012	0.249	Jul 2013	0.222	Jul 2014	-		0.222	0.700	4.656	
Energy Efficiency	Various	TBD:TBD	0.000	0.300	May 2012	0.500	May 2013	2.411	May 2014	-		2.411	19.800	23.011	
		Subtotal	9.020	0.860		1.299		2.902		0.000		2.902	21.213	35.294	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Modeling and Simulation (SIL)	MIPR	TARDEC:Warren, MI	0.235	0.250	Apr 2012	0.497	Apr 2013	0.300	Apr 2014	-		0.300	0.300	1.582	
Component Upgrade, Prototype Testing	MIPR	APG:Aberdeen, MD	1.250	0.100	Jul 2012	0.250	Jul 2013	0.100	Jan 2014	-		0.100	0.000	1.700	
Operational Testing	WR	MCOTEA:Quantico, VA	2.750	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Live Fire Testing	MIPR	ATC/ARL:Aberdeen, MD	2.520	0.000		0.350	Jan 2013	0.100	Jan 2014	-		0.100	0.000	2.970	
Modeling and Simulation	WR	NSWC:Carderock	1.495	0.100	Jun 2012	0.000		0.000		-		0.000	0.000	1.595	
Component Upgrade, Prototype Testing	MIPR	NATC:NV	1.952	0.045	Jul 2012	0.100	Jul 2013	0.000		-		0.000	0.000	2.097	
		Subtotal	10.202	0.495		1.197		0.500		0.000		0.500			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 9C90: *MTVR Mod*	

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	37.722	1.355		2.496		3.402		0.000		3.402			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 9C90: *MTVR Mod*

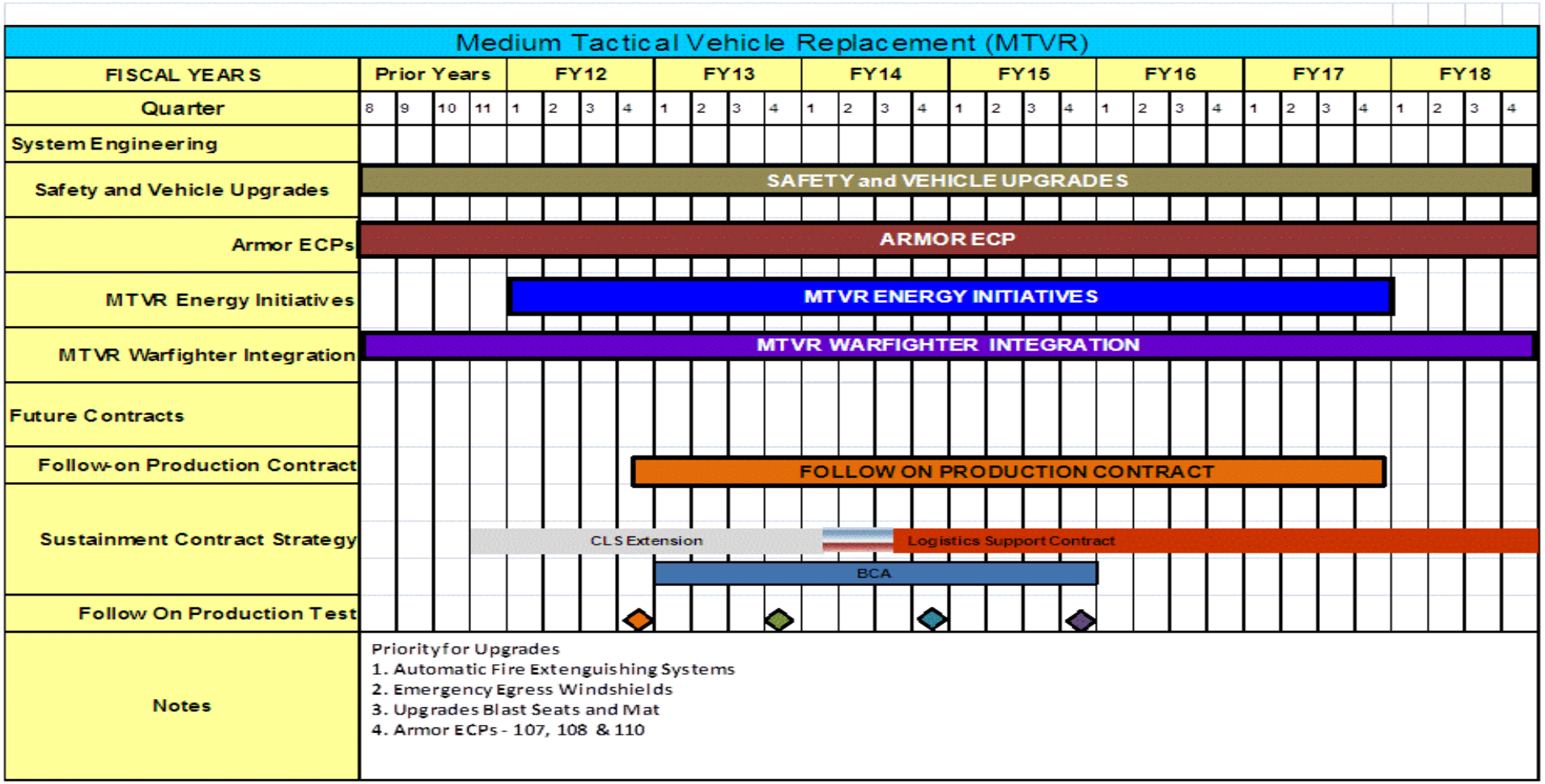

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0206624M: *Marine Corps Cmbt Services Supt*	PROJECT 9C90: *MTVR Mod*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 9C90				
Follow-on Production Contract: Follow-on Production Contract Award	4	2012	4	2017
Follow-on Production Contract: Follow-on Production Testing 1	4	2012	4	2012
Follow-on Production Contract: Follow-on Production Testing 2	4	2013	4	2013
Follow-on Production Contract: Follow-on Production Testing 3	4	2014	4	2014
Follow-on Production Contract: Follow-on Production Testing 4	4	2015	4	2015
Sustainment Contract: Business Case Analysis	1	2013	4	2015
Sustainment Contract: Logistics Support Contract	3	2014	4	2018
Safety Modifications, ECP Upgrades and Integration: Safety Upgrades	1	2012	4	2018
Safety Modifications, ECP Upgrades and Integration: Armor Engineering Change Proposals	1	2012	4	2018
Safety Modifications, ECP Upgrades and Integration: Warfighter Integration	1	2012	4	2018
MTVR Energy Initiatives: Energy Initiative	1	2012	4	2017