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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Navy **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0206624M: <i>Marine Corps Cmbt Services Supt</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	64.856	19.466	45.172	-	45.172	73.666	55.445	11.253	10.420	Continuing	Continuing
0201: <i>Logistical Veh Sys Replacement (LVSR)</i>	1.350	1.487	0.100	-	0.100	0.100	0.368	0.891	0.328	Continuing	Continuing
2316: <i>Combat Service Support Eng Equip</i>	51.719	10.135	9.210	-	9.210	8.157	4.369	4.538	4.609	Continuing	Continuing
2509: <i>Motor Transport Mod</i>	3.190	4.644	33.028	-	33.028	62.421	46.775	0.990	1.007	Continuing	Continuing
2929: <i>Testing Measuring Diag Equip & SE</i>	1.375	1.528	1.479	-	1.479	1.488	1.522	1.555	1.584	Continuing	Continuing
9999: <i>Congressional Addds</i>	3.505	-	-	-	-	-	-	-	-	0.000	3.505
9C90: <i>MTRV Mod</i>	3.717	1.672	1.355	-	1.355	1.500	2.411	3.279	2.892	Continuing	Continuing

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. Alternative Power Sources for Communications Equipment (APSCE) 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, provides automatic testing capability for use by technicians both in garrison and forward edge of Battlefield. This project includes improvements in all areas of the M1A1 main battle tank. The M1A1 tank provides armor protected firepower to the USMC ground combat element. Its advanced thermal sights provide superior target acquisition and target identification. High Performance Capabilities for Military Vehicles Project: This project is dedicated to applying the best practices of the motor sports industry to military vehicles including engineering expertise, equipment and technology. Marine Personnel Carrier Support System: Product Data Management and Technical Information Architecture Application development and integration to include requirements analysis, detailed system design, analysis of alternatives, implementation, and integration of a risk management tool.

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B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	20.479	19.466	15.682	-	15.682
Current President's Budget	64.856	19.466	45.172	-	45.172
Total Adjustments	44.377	-	29.490	-	29.490
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	45.143	-			
• SBIR/STTR Transfer	-0.762	-			
• Program Adjustments	0.001	-	29.655	-	29.655
• Rate/Misc Adjustments	-	-	-0.165	-	-0.165
• Congressional General Reductions Adjustments	-0.005	-	-	-	-

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 9999: Congressional Adds

- Congressional Add: *High Performance Capabilities for Military Vehicles Project*
- Congressional Add: *Marine Personnel Carrier Support System*

Congressional Add Subtotals for Project: 9999

Congressional Add Totals for all Projects

	FY 2010	FY 2011
	1.115	-
	2.390	-
Congressional Add Subtotals for Project: 9999	3.505	-
Congressional Add Totals for all Projects	3.505	-

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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
0201: <i>Logistical Veh Sys Replacement (LVSR)</i>	1.350	1.487	0.100	-	0.100	0.100	0.368	0.891	0.328	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Logistical Vehicle System Replacement (LVSR) program will replace the current Logistical Vehicle System (LVS) fleet. This LVSR vehicle will increase mobility, maintainability, and reliability for the heavy fleet, while increasing off-road payload. Three (3) LVSR variants will replace the current five (5) LVS variants. The Cargo LVSR variant will be fielded prior to the LVSR Tractor and LVSR Wrecker that are options on the LVSR Cargo variant production contract. Initial Operation Test & Evaluation (IOT&E) for the LVSR Tractor and LVSR Wrecker variants is funded for 4th Quarter of FY10 through the 1st Quarter of FY11. FY12-FY16 funds the testing of Engineering Change Proposals for all variants.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: LVSR: Engineering/Program Management</p> <p align="right">Articles:</p>	0.200 0	-	-	-	-
<p>FY 2010 Accomplishments: Logistics Vehicle System Replacement (LVSR) test planning, review and analysis support provided by US Army Materiel Systems Analysis Activity (AMSAA).</p>					
<p>Title: LVSR: Engineering Support</p> <p align="right">Articles:</p>	-	-	0.100 0	-	0.100 0
<p>FY 2012 Base Plans: Development of Engineering Change Proposals (ECPs) for all variants (cargo, tractor and wrecker) of the Logistics Vehicle System Replacement (LVSR).</p>					
<p>Title: LVSR: Operational Test and Evaluation</p> <p align="right">Articles:</p>	1.150 0	1.487 0	-	-	-
<p>FY 2010 Accomplishments: Preparation for and initiation of Initial Operational Test and Evaluation (IOT&E) for the Logistics Vehicle System Replacement (LVSR) Tractor and Wrecker variants.</p> <p>FY 2011 Plans:</p>					

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Completion of Initial Operational Test and Evaluation (IOT&E) for the Logistics Vehicle System Replacement (LVSR) Tractor and Wrecker variants.					
Accomplishments/Planned Programs Subtotals	1.350	1.487	0.100	-	0.100

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• PMC (BLI# 509300): <i>LVSR</i>	271.639	242.927	0.972	38.382	39.354	1.036	1.336	1.852	1.299	Continuing	Continuing
• PMC (BLI# 505000): <i>Motor Transport Modifications</i>	0.000	0.000	0.200	62.200	62.400	0.963	1.000	1.000	1.000	Continuing	Continuing
• PMC (BLI# 700000): <i>SPARES</i>	10.497	9.419	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

The Logistics Vehicle System Replacement (LVSR) program consists of two separate phases. During the System Development and Demonstration (SD&D) phase, two contracts were awarded to procure prototypes for developmental testing. The SD&D phase winner was awarded a production contract to produce Low Rate Initial Production (LRIP) vehicles for operational testing. The LVSR Tractor and Wrecker variants have been designed and built, and are being tested under the LVSR Cargo production contract.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0206624M: <i>Marine Corps Cmbt Services Supt</i>	PROJECT 0201: <i>Logistical Veh Sys Replacement (LVSR)</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
LVSR Variant Prototypes	Reqn	MCSC:Quantico, VA	16.793	-		-		-		-	0.000	16.793	
LVSR Source Selection	Reqn	MCSC:Quantico, VA	0.248	-		-		-		-	0.000	0.248	
FRC Prototypes	Reqn	DSR Systems, Inc.:St. Louis, MO	3.920	-		-		-		-	0.000	3.920	
FRC Prototypes	Reqn	TBD:Not Specified	0.637	-		-		-		-	0.000	0.637	
Subtotal			21.598	-		-		-		-	0.000	21.598	

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
LVSR Engineer & Tech Support	WR	NTSC:Orlando, FL	0.194	-		-		-		-	0.000	0.194	
LVSR Engineer Change Support	Reqn	MCSC:Quantico, VA	1.654	-		-		-		-	0.000	1.654	
LVSR Engineer Change Support	Reqn	Oshkosh Corp:Oshkosh, WI	-	0.787	Dec 2010	0.100	Mar 2012	-		0.100	1.696	2.583	
Subtotal			1.848	0.787		0.100		-		0.100	1.696	4.431	

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
LVSR Operational T&E	WR	MCOTEA:Quantico, VA	4.052	0.700	Dec 2010	-		-		-	0.000	4.752	
LVSR Operational T&E	Reqn	Oshkosh Corp:Oshkosh, WI	0.330	-		-		-		-	0.000	0.330	
LVSR Development Design & Test	Reqn	Oshkosh Corp:Oshkosh, WI	0.175	-		-		-		-	0.000	0.175	
LVSR Variant Test	MIPR	TACOM:Warren, MI	0.110	-		-		-		-	0.000	0.110	
LVSR Corrosion Test	WR	NSWC:Philadelphia, PA	0.217	-		-		-		-	0.000	0.217	

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Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
LVSR Development Test	MIPR	Aberdeen Test Center:Aberdeen, MD	5.645	-		-		-		-	0.000	5.645	
LVSR Development Test	Reqn	Oshkosh Corp:Oshkosh, WI	1.622	-		-		-		-	0.000	1.622	
LVSR Development and Test	WR	NSWC:Indian Head, MD	0.024	-		-		-		-	0.000	0.024	
LVSR Live Fire	Reqn	SURVICE:Not Specified	0.410	-		-		-		-	0.000	0.410	
FRC Modeling and Simulation	Reqn	NSWC:Carderock, MD	0.355	-		-		-		-	0.000	0.355	
FRC Developmental T&E	Reqn	NATC:Carson City, NV	0.605	-		-		-		-	0.000	0.605	
Subtotal			13.545	0.700		-		-		-	0.000	14.245	

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
LVSR Contractor Support	Reqn	TBD:Not Specified	4.179	-		-		-		-	0.000	4.179	
LVSR Program Management Support	WR	MCSC:Quantico, VA	0.898	-		-		-		-	0.000	0.898	
FRC Contractor Support	Reqn	Sverdrup:Dumfries, VA	0.050	-		-		-		-	0.000	0.050	
FRC Program Management Support	WR	MCSC:Quantico, VA	0.050	-		-		-		-	0.000	0.050	
Subtotal			5.177	-		-		-		-	0.000	5.177	

	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		42.168	1.487	0.100	-	0.100	1.696	45.451

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy		DATE: February 2011
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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0206624M: <i>Marine Corps Cmbt Services Supt</i>	PROJECT 0201: <i>Logistical Veh Sys Replacement (LVSR)</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Proj 0201</i>				
LVSR Tractor and Wrecker Variant IOT&E	4	2010	1	2011

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APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0206624M: <i>Marine Corps Cmbt Services Supt</i>				PROJECT 2316: <i>Combat Service Support Eng Equip</i>			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
2316: <i>Combat Service Support Eng Equip</i>	51.719	10.135	9.210	-	9.210	8.157	4.369	4.538	4.609	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The M1A1 Survivability/Lethality Program effort includes critical product improvements such as the application of additional armor, integration of counter-sniper fire technology, and improvement to existing secondary armament systems. These improvements directly address Marine Corps Lessons Learned, after action reports, and will ensure maximum survivability.

This project also includes improvements in all areas of the M1A1 main battle tank. The M1A1 tank provides armor protected firepower to the USMC ground combat element. Its advanced thermal sights provide superior target acquisition and target identification. Coupled with its 120mm cannon and suite of ammunition, it is the primary armor defeating weapon on the battlefield, that also provides lethal supporting fires to supported maneuver units. Continued funding is required to address obsolescence and support pre-planned product improvements.

Route Reconnaissance and Clearance (R2C). A spiral development project enhances 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 Assault Breacher Vehicle (ABV) is a tracked combat engineer vehicle that provides deliberate and in-stride breaching capability of minefields and complex obstacles to the Ground Combat Element (GCE) of the Marine Air Ground Task Force (MAGTF). The ABV combines crew protection and vehicle survivability with the speed and mobility to keep pace with the maneuver force. The ABV is assigned to and employed by the Combat Engineer Battalion (CEB) as part of a synchronized operation to rapidly breach obstacles and create lanes for the MAGTF. FY2010 / FY2011 funding will be used to develop a Counter Improvised Explosive Device (CIED) capability, integrate an Insensitive Munition (IM) compliant line charge and integrate mine roller capability for the system. Standoff CIED capability from under armor will provide a significant increase in system flexibility and lethality while improving crew protection. An IM compliant line charge will permit safe loading of the charge while on the transport vessel well deck, enabling the ABV to begin performing its mission immediately upon touching the beach. Thus, the crew will not be forced to load the line charge on the shore, possibly under fire. Integration of a mine roller will increase the ABVs "proofing" (verifies no mines in the lane) capability, thus increasing mine clearing performance.

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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.

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 Warfighters multi-mission platforms capable of mitigating Improvised Explosive Devices (IEDs), underbody mines, and small arms fire threats, which are currently the greatest casualty producers in Overseas Contingency Operations (OCO). Four 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 - Combat operations (ops) in rural, mountainous, urban terrain.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: Engineering Mod Kits</p> <p align="right">Articles:</p> <p>FY 2012 Base Plans: Solve highest priority issues determined during the testing and integration of modifications for the Engineer Family of Systems.</p>	-	-	0.495 0	-	0.495 0
<p>Title: M1A1 Survivability/Lethality Program</p> <p align="right">Articles:</p> <p>FY 2010 Accomplishments: The M1A1 Survivability/Lethality Program effort includeD critical product improvements such as, but not limited to, the application of additional armor, integration of counter-sniper fire technology, and improvement to existing secondary armanment systems. These improvements directly address Marine Corps Lessons Learned, after action reports, and will ensure maximum survivability.</p> <p>FY 2011 Plans: The M1A1 Survivability/Lethality Program effort includes critical product improvements such as, but not limited to, the application of additional armor, integration of counter-sniper fire technology, and improvement to existing</p>	0.449 0	1.967 0	-	-	-

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)					
secondary armanment systems. These improvements directly address Marine Corps Lessons Learned, after action reports, and will ensure maximum survivability.					
Title: M1A1 Modifications					
Articles:					
FY 2010 Accomplishments: Developed and tested a new forward observer/forward air controller suite for the Abrams main battle tank. Developed and tested a new commander's detachable spotlight. Developed a new armored junction box for the tank infantry phone kit. Validated the safety of the DM-11 120mm round. Developed ECPs for 15 tank modifications. All of these items improve the battlefield capability of the Abrams main battle tank and ensure its relevancy and mitigate obsolescence.					
FY 2011 Plans: This project includes improvements in all areas of the M1A1 main battle tank. The M1A1 tank provides armor protected firepower to the USMC ground combat element. Its advanced thermal sights provide superior target acquisition and target identification. Coupled with its 120mm cannon and suite of ammunition, it is the primary armor defeating weapon on the battlefield, that also provides lethal supporting fires to supported maneuver units. Continued funding addresses obsolescence and support of pre-planned product improvements. Modifications include safety, reliability, corrosion control, and technology up-grades to meet Marine Corps requirements.					
FY 2012 Base Plans: This project includes improvements in all areas of the M1A1 main battle tank. The M1A1 tank provides armor protected firepower to the USMC ground combat element. Its advanced thermal sights provide superior target acquisition and target identification. Coupled with its 120mm cannon and suite of ammunition, it is the primary armor defeating weapon on the battlefield, that also provides lethal supporting fires to supported maneuver units. Funding addresss obsolescence and support pre-planned product improvements. Modifications include safety, reliability, corrosion control, and technology up-grades to meet Marine Corps requirements.					
Title: Route Reconnaissance and Clearance (R2C):					
Articles:					
FY 2010 Accomplishments:					

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)					
Integrated future Route Reconnaissance and Clearance (R2C) vehicles with enhanced mobility and survivability, a suite of improved detection and marking capabilities, and robots with greater detection, marking, and neutralization capabilities.					
FY 2012 Base Plans: Integrates Automated Route Reconnaissance kits, vehicle optical sensor systems, and interrogation arm on CAT I and CAT II MRAPs. Provides Field User Evaluation for increment II which includes the shipment of CAT I, CAT II, and CAT III MRAPs, front end equipment, billeting, range costs, and data recorders.					
Title: R2C: Program management and engineering support					
Articles:					
	-	0.987 0	0.950 0	-	0.950 0
FY 2011 Plans: Program management and engineering support.					
FY 2012 Base Plans: Program management and engineering support for the entire R2C program.					
Title: R2C: Conduct Developmental Testing					
Articles:					
	-	1.914 0	2.155 0	-	2.155 0
FY 2011 Plans: Increment I assets such as Light Weight Route Clearance blade and various sizes of the Mine roller systems are being integration Tested.					
FY 2012 Base Plans: Increment I and III assets and items are undergoing Developmental Testing, items include the Lightweight Integration Arm, Gyrocams and New Automated Route Recon Kits.					
Title: Assault Breacher Vehicle (ABV)					
Articles:					
	1.441 0	1.533 0	-	-	-
FY 2010 Accomplishments: Three(3) identified system improvements/upgrades: Improve Counter Improvised Explosive Device (CIED) capability, integrate Insensitive Munitions (IM) compliant line charge, and integrate a vehicle width mine roller.					
FY 2011 Plans:					

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
Three(3) identified system improvements/upgrades: Improve Counter Improvised Explosive Device (CIED) capability, integrate Insensitive Munitions (IM) compliant line charge, and integrate a vehicle width mine roller.						
Title: Corrosion Prevention and Control (CPAC)						
Articles:						
		2.046	2.281	2.377	-	2.377
		0	0	0		0
FY 2010 Accomplishments: Naval Surface Warfare Centers (NSWC) and Naval Research Laboratories (NRL) developed the CPAC Corrosion Products and Materials Processes (CPMP) which establish performance requirements and analysis of corrosion products introduced into the CPAC Program. These include the corrosion requirements for non-chrome hydraulic cylinders, development of metrics for a common Statement of Work for equipment life-cycle rework, development of metrics for corrosion service team vehicle service cycle times, and corrosion performance requirements for Chemical Agent Resistant Coating (CARC). CPAC analyzed bio-based CPCs for corrosion control and bedliner material for enhanced corrosion resistance in high wear areas on tactical vehicles. CPAC implemented zinc-rich coatings for enhanced corrosion performance, and dry film lubricants tasking. Naval Surface Warfare Center- Carderock Division (NSWCCD) and NRL have proven expertise in corrosion control with proven successes. These labs are testing various corrosion prevention capabilities for implementation in Technical Manual TM-4795-12.						
FY 2011 Plans: Based on the success of testing, the CPAC continues to use Government labs for the Corrosion Products and Materials Processes (CPMP), expansion of CARC specification requirements to include the usage of high-build coatings, implementation of the use of aerosol CARC touch-up coatings, corrosion requirements for conformal coatings to reduce corrosion on electronics systems, and any other emerging research issues.						
FY 2012 Base Plans: Based on the success of testing, the focus of the program's efforts will continue to utilize , NSWC and NRL to accomplish all developments.						
Title: MRAP FoV Engineering Upgrade Solutions						
Articles:						
		22.958	-	-	-	-
		0				
Description: The Mine Resistant Ambush Protected (MRAP) Family of Vehicles (FoV) provide Warfighters multimission platforms capable of mitigating Improvised Explosive Devices (IEDs), underbody mines, and small arms fire threats, which are currently the greatest casualty producers in Overseas Contingency Operations						

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0206624M: <i>Marine Corps Cmbt Services Supt</i>	PROJECT 2316: <i>Combat Service Support Eng Equip</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>(OCO). Four vehicle categories (CATs) are being 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. Category IV - MRAP All Terrain Vehicle - Combat operations (ops) in rural, mountainous, urban terrain.</p> <p>FY 2010 Accomplishments: Conducted ballistic testing of Engineering Upgrade Solutions to fielded vehicles. Provided survivability upgrades to the warfighter, focusing on: seat upgrades and seat improvements for the MRAP FoV, underbody blast mitigation, modeling and simulation, data collection boxes, and Rocket Propelled Grenade (RPG) Defeat. Suspension mobility solutions included Independent Suspension and soft soil solutions.</p> <p>Title: MRAP MATV Ballistic Test and Evaluation</p> <p align="right">Articles:</p> <p>Description: The Mine Resistant Ambush Protected (MRAP) Family of Vehicles (FoV) provides Warfighters multimission platforms capable of mitigating Improvised Explosive Devices (IEDs), underbody mines, and small arms fire threats, which are currently the greatest casualty producers in Overseas Contingency Operations (OCO). Four vehicle categories (CATs) are being 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. Category IV - MRAP All Terrain Vehicle - Combat operations (ops) in rural, mountainous, urban terrain.</p> <p>FY 2010 Accomplishments: The MATV Test and Evaluation funds ballistic tests for the MATV variant, which supported the research and development effort of survivability, underbody improvement kit testing, mobility analysis and Battle Damage Assessment Report (BDAR)support.</p> <p>Title: MRAP 1 Ballistic Test and Evaluation</p> <p align="right">Articles:</p> <p>Description: The MRAP Family of Vehicles (FoV) provides Warfighters multimission platforms capable of mitigating Improvised Explosive Devices (IEDs), underbody mines, and small arms fire threats, which are currently the greatest casualty producers in Overseas Contingency Operations (OCO). Four vehicle categories (CATs) are being procured, fielded and sustained: Category I - Urban combat operations, ambulance. Category</p>	8.000 0	-	-	-	-
<p align="right">Articles:</p> <p align="right">Articles:</p>	10.990 0	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0206624M: <i>Marine Corps Cmbt Services Supt</i>	PROJECT 2316: <i>Combat Service Support Eng Equip</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
II- Multi-mission ops-convoy lead, troop transport, ambulance, utility vehicle. Category III- Mine/IED clearance ops, explosive ordnance disposal. Category IV - MRAP All Terrain Vehicle - Combat operations (ops) in rural, mountainous, urban terrain. <i>FY 2010 Accomplishments:</i> Funds supported ballistic testing on the MRAP FoV, modeling and simulation analysis, mobility analysis and ballistic Field Service Representative support.					
Accomplishments/Planned Programs Subtotals	51.719	10.135	9.210	-	9.210

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PMC/6520-1: <i>EOD Systems- R2C</i>	74.804	49.569	43.136	35.557	78.693	44.203	48.856	55.866	66.946	Continuing	Continuing
• PMC/6520-2: <i>EOD Systems- ABV</i>	53.691	21.195	0.000	8.100	8.100	0.000	0.000	0.000	0.000	Continuing	Continuing
• PMC/667000: <i>CPAC</i>	8.495	0.485	0.485	0.000	0.485	0.484	0.579	0.577	0.587	Continuing	Continuing

D. Acquisition Strategy

(U) The M1A1 Survivability/Lethality: Program will utilize Army initiatives and programs (such as Belly Armor and Universal Headrest) as much as possible. However, it will also require modifications to some Army efforts (such as the Mine Resistant Seat and Rear View Sensor System). Lastly, it involves unilateral USMC efforts to research, develop, and evaluate programs to improve the survivability and lethality of the USMC tank. These efforts include the Improved Loader's Weapon Station, Laser Rangefinder/Designator, Laser Warning System, Tank Commander's Forward Unity Periscope upgrade, and Counter Sniper Protection Systems. When possible, these programs will use existing Army contracts and internal contracting activities when required.

(U) The M1A1 Modification: Program leverages Army developmental programs to create a system that more readily meets Marine Corps requirements. Modification includes safety, reliability, corrosion control, and technology up-grades to meet Marine Corps requirements. 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, procure a fleet of standardized Route Reconnaissance and Clearance systems based upon the successful route clearance teams operating in Iraq; use Capabilities Production Documents for current systems and leverage contracts 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.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	PE 0206624M: <i>Marine Corps Cmbt Services Supt</i>	2316: <i>Combat Service Support Eng Equip</i>

(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.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0206624M: <i>Marine Corps Cmbt Services Supt</i>	PROJECT 2316: <i>Combat Service Support Eng Equip</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
M1A1 MODIFICATIONS	C/CPFF	TACOM:TACOM	1.411	0.892	Jan 2011	0.586	Jan 2012	-		0.586	0.000	2.889	
M1A1 MODIFICATIONS	C/FFP	ABERDEEN PRV:APG, MD	1.170	0.561	Dec 2010	0.400	Dec 2011	-		0.400	0.000	2.131	
M1A1 MODIFICATIONS	C/FFP	FORT BELVOIR:FORT BELVOIR, VA	0.200	-		0.158	Jan 2012	-		0.158	0.000	0.358	
M1A1 MODIFICATIONS	SS/FFP	BENET LABS:WATERVELIET, NY	0.250	-		0.250	Jan 2012	-		0.250	0.000	0.500	
M1A1 MODIFICATIONS	C/FFP	PICATINNY ARSENAL:PICATINNY, NJ	0.414	-		0.400	Jan 2012	-		0.400	0.000	0.814	
M1A1 SLES	C/CPFF	NCSC:MCB QUANTICO, VA	0.473	1.967	Dec 2010	-		-		-	0.000	2.440	
JAB Development	C/FFP	MCSC:Quantico, VA	2.225	-	Dec 2010	-		-		-	0.000	2.225	
ABV CIED Dev and Integration	WR	NSWC:Panama City, FL	0.912	1.533	Nov 2010	-		-		-	0.000	2.445	
R2C Sys Articles & Integration	WR	NSWC:Panama City, FL	4.660	-		1.439	Dec 2011	-		1.439	0.000	6.099	
Subtotal			11.715	4.953		3.233		-		3.233	0.000	19.901	

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Support-R2C	C/FP	EG&G:Stafford, VA	-	0.987	Dec 2010	0.950	Nov 2011	-		0.950	0.000	1.937	
Subtotal			-	0.987		0.950		-		0.950	0.000	1.937	

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0206624M: <i>Marine Corps Cmbt Services Supt</i>	PROJECT 2316: <i>Combat Service Support Eng Equip</i>

	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Proj 2316																												
Spiral 1 Integration and Developmental Test																												
R2C Increment I Production																												
R2C Increment II Integration																												
R2C Increment II Production																												
R2C Increment III Integration																												
R2C Increment III IOT&E																												
Increment III Production																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0206624M: <i>Marine Corps Cmbt Services Supt</i>	PROJECT 2316: <i>Combat Service Support Eng Equip</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 2316				
Spiral 1 Integration and Developmental Test	1	2010	4	2010
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

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0206624M: <i>Marine Corps Cmbt Services Supt</i>	PROJECT 2509: <i>Motor Transport Mod</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
2509: <i>Motor Transport Mod</i>	3.190	4.644	33.028	-	33.028	62.421	46.775	0.990	1.007	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Marine Corps Tactical Transportation Program 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 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 HMMWV survivability improvement initiative (HSII) will be an improvement to the current armored HMMWV ECV which provides an inadequate amount of underbelly protection against current and anticipated future threat levels. Additionally, HSII intends to return lost payload and automotive performance prior to up-arming light tactical vehicles. Funding will provide development activity by various vendors addressing survivability and automotive performance improvements. 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. Additionally, funding will provide development by the original equipment manufacturer (OEM) to address 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.

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 Lubricants (POL) distribution points, or hazardous material storage facilities.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Improved Recovery Vehicle (IRV)	0.497	0.451	0.120	-	0.120
Articles:	0	0	0		0
FY 2010 Accomplishments: Continued joint participation with US Army on evaluation of prospective modifications, and began development of an On board air compressor, a Organizational/Operational Plan (O&O) KPP.					
FY 2011 Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy **DATE:** February 2011

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Continue joint participation with US Army on evaluation of prospective modifications, and continue testing of the onboard air compressor. FY 2012 Base Plans: Continue joint participation with US Army on evaluation of prospective modifications, and begin research and development of On Board Air Compressor ancillary tools and equipment.					
Title: High Mobility Multi-Wheeled Vehicle ECV (HMMWV-ECV) Articles:	0.309 0	0.324 0	30.000 0	-	30.000 0
FY 2010 Accomplishments: Accomplished Joint RPG net testing in ongoing efforts and we progress with DARPA. FY 2011 Plans: We plan to perform efforts that will support our need to Develop and Test advanced Armoring Materials for the HMMWV. FY 2012 Base Plans: We will award a contract to support HSII Prototype Design/Development and prototype testing to include LFT&E, RAM-D, Fire Suppression, Corrosion, and Performance.					
Title: FRC: Flatrack Articles:	1.284 0	3.261 0	-	-	-
FY 2010 Accomplishments: FRC Prototype Design/Development. Prototypes are planned to be delivered during the 1st quarter of FY11. FY 2011 Plans: Prototype testing is planned to begin during 2nd quarter FY11.					
Title: P-19 Replacement Articles:	-	-	2.286 0	-	2.286 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 extinguishing aircraft or structural fires, providing protection for rescue personnel, cooling explosive ordnance, extricating wounded aircrew members, dispatching emergency response capabilities to crash and structural					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0206624M: <i>Marine Corps Cmbt Services Supt</i>	PROJECT 2509: <i>Motor Transport Mod</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
alarms, supporting mutual aid agreements with local, state, and federal agencies, all ultimately leading to the successful execution of the mission.					
FY 2012 Base Plans: We will issue a Request for Proposal and award a contract to support P-19 Prototype Design/Development.					
Title: Motor Transport Modification (MTM): Test <p align="right">Articles:</p>	1.100 0	0.608 0	0.622 0	-	0.622 0
FY 2010 Accomplishments: We are performing work that support the Testing, integration, and evaluation of Transportation Systems modifications.					
FY 2011 Plans: We plan to Continue testing, integration, and evaluation of Transportation Systems modifications identified for potential application on our Motor Transportation assets.					
FY 2012 Base Plans: Funds will be used to Continue the testing, integration, and evaluation of Transportation Systems modifications identified for potential application on our Motor Transportation assets.					
Accomplishments/Planned Programs Subtotals	3.190	4.644	33.028	-	33.028

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• 523000: <i>Motor T Mod</i>	2.756	2.803	1.804	0.000	1.804	2.803	2.885	2.966	3.018	Continuing	Continuing
• 504500: <i>HMMWV</i>	36.523	17.843	0.000	0.000	0.000	38.226	42.431	0.000	0.000	Continuing	Continuing
• 509700: <i>FOTT</i>	34.538	41.286	21.848	24.826	46.674	39.517	125.440	109.146	104.978	Continuing	Continuing
• 206100: <i>IRV</i>	59.191	17.313	4.164	0.000	4.164	4.325	4.092	3.848	3.913	Continuing	Continuing

D. Acquisition Strategy
The Motor Transport Modification (MTM) program is a sustained program line for "level of effort" programs. 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).

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
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<p>HSII will pursue a multi-faceted approach in which the first facet will be to modernize the current unarmored HMMWV A2s and ECVs. The second approach will be an increase in survivability of the current ECV through various armor developments/technologies. The third level will consist of a fully recapitalized vehicle receiving performance and survivability upgrades. Expect a high degree of development and testing in FY12/13 with anticipated production consideration of all levels to begin by second quarter FY14.</p> <p>The Flatrack Refueling Capability (FRC) program original acquisition strategy consisted of a joint procurement contract with the US Army. FY07 RDTE funds were used to procure two prototypes developed by DSR Systems Inc. After development and initial testing the Army decided not to procure the DSR system. Our revised acquisition strategy will only include US Marine Corps requirements. Further analysis has resulted in the new acquisition strategy focused on contract for Commercially available Items via a Small Business Set Aside procurement. These funds will procure one prototype for Developmental Testing and Field Users Evaluation (FUE). After successfully testing, the Marine Corps will procure the approved acquisition objective (AAO) quantity.</p> <p>The Improved Recovery Vehicle (IRV) program also leverages Army developmental programs to create a system that more readily meets Marine Corps heavy recovery vehicle requirements. Improvements include safety, reliability, and technology upgrades.</p> <p>P-19 Replacement will replace 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.</p> <p>E. Performance Metrics N/A</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0206624M: <i>Marine Corps Cmbt Services Supt</i>	PROJECT 2509: <i>Motor Transport Mod</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
HMMWV Sys Dev & Demonstration	C/FFP	TBD:TBD	-	-		15.000	Feb 2012	-		15.000	0.000	15.000	
HMMWV Technology Development	C/FFP	TBD:TBD	-	-		8.000	Nov 2011	-		8.000	0.000	8.000	
IMPROVED RECOVERY VEH	C/CPFF	TACOM:WARREN, MI	0.515	0.451	Dec 2010	0.120	Dec 2011	-		0.120	0.000	1.086	
MT Armor Testing	MIPR	APG:MD	2.245	0.506	Nov 2010	0.622	Dec 2011	-		0.622	Continuing	Continuing	Continuing
HMMWV Test	MIPR	NATC:NV	1.588	0.324	Dec 2010	6.000	Jul 2012	-		6.000	Continuing	Continuing	Continuing
FRC Developmental Testing	C/FFP	Heil CO:Athens, TN	-	3.261	Dec 2010	-		-		-	0.000	3.261	
P-19 Replacement	MIPR	TBD:TBD	-	-		2.182	Dec 2011	-		2.182	Continuing	Continuing	Continuing
Subtotal			4.348	4.542		31.924		-		31.924			

Remarks
 Source selection for the P-19 Replacement development effort is scheduled for fourth quarter FY11. Performing activity/location will be unknown until source selection is complete.
 FY 11 HMMWV and MT and FY 12 MT Tests To Be Determine (TBD) efforts and cost are determined each year in accordance with the current readiness reports.

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
HMMWV Program Management and travel	C/FFP	MCSC:VA	-	-		1.000	Dec 2011	-		1.000	0.000	1.000	
P-19 Program Management and travel	C/FFP	MCSC:VA	0.202	0.102	Dec 2010	0.104	Dec 2011	-		0.104	0.000	0.408	
Subtotal			0.202	0.102		1.104		-		1.104	0.000	1.408	

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		4.550	4.644		33.028	-		33.028			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0206624M: <i>Marine Corps Cmbt Services Supt</i>	PROJECT 2509: <i>Motor Transport Mod</i>

	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Proj 2509																												
P-19 Replacement Engineering Manufacturing & Dev																												
Milestone B																												
Contract Award																												
PDR																												
Official Design Review/DRR																												
System Verification Review																												
Production Readiness Review																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Navy **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0206624M: <i>Marine Corps Cmbt Services Supt</i>	PROJECT 2509: <i>Motor Transport Mod</i>
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Proj 2509</i>				
P-19 Replacement Engineering Manufacturing & Dev	2	2012	4	2014
Milestone B	1	2012	1	2012
Contract Award	1	2012	1	2012
PDR	3	2012	3	2012
Official Design Review/DRR	4	2013	4	2013
System Verification Review	4	2014	4	2014
Production Readiness Review	4	2014	4	2014

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0206624M: <i>Marine Corps Cmbt Services Supt</i>				PROJECT 2929: <i>Testing Measuring Diag Equip & SE</i>			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
2929: <i>Testing Measuring Diag Equip & SE</i>	1.375	1.528	1.479	-	1.479	1.488	1.522	1.555	1.584	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

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.

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) program provides weapon system sensor data collection and processing for information conversion to provide situational awareness.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Marine Corps Automated Test Equipment	1.139	1.282	1.228	-	1.228
Articles:	0	0	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 ATS acquisition programs. A primary secondary thrust is to prevent obsolescence in our current automatic test systems by identifying new technologies that can be implemented immediately.					
FY 2010 Accomplishments: Performed analysis and research on the requirements for a new full capability automatic test system as well as a downsized, specified capability Electro-Optical (EO) tester. Began initiatives planned for research of new testing techniques, laser safety and system automatic test.					
FY 2011 Plans: Plan future research and development on a test program set translator and develop an ubiquitous device to control USMC automatic test. Continue initiatives planned for research of new testing techniques.					
FY 2012 Base Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0206624M: <i>Marine Corps Cmbt Services Supt</i>	PROJECT 2929: <i>Testing Measuring Diag Equip & SE</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Plan future analysis and research on the requirements of solutions for improved digital I/O and common interfaces. Continue initiatives for research or new testing techniques.					
Title: Autonomic Logistics	0.236	0.246	0.251	-	0.251
Articles:	0	0	0		0
FY 2010 Accomplishments: Initiated an economic analysis to address a Marine Corps Analysis of Alternatives (AoA) to support pre-milestone A activities for Autonomic Logistics Service Program (AL).					
FY 2011 Plans: Complete the economic analysis. Review economic analysis recommendations and conduct gap analysis to support the Autonomic Logistics Service Program (AL).					
FY 2012 Base Plans: Focus on various studies supporting pre-milestone A activities in support of Autonomic Logistics Services (AL) in anticipation of a milestone A decision in FY14.					
Accomplishments/Planned Programs Subtotals	1.375	1.528	1.479	-	1.479

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• PMC/41811: <i>Calibration</i>	9.841	9.918	2.176	0.000	2.176	2.228	2.288	2.350	2.390	0.000	57.838
• PMC/41812: <i>TETS</i>	1.297	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	119.172
• PMC/41813: <i>Autonomic Logistics</i>	4.552	1.019	1.093	0.000	1.093	3.270	3.409	3.548	3.608	0.000	134.199

D. Acquisition Strategy
Automatic Test Systems (ATS) and Marine Corps Automatic Test Equipment (MCATE) program's work is being done through Marine Corps Systems Command (MCSC) contracts and in-house at Marine Corps Logistics Base (MCLB), Albany, GA, and Naval Air Systems Command (NAVAIR), Lakehurst, NJ.

Autonomic Logistics (AL) is Competitive through Marine Corps Systems Command contracts and funding will focus on pre-milestone A activities in support of AL . All other work is being done in-house and at government engineering facilities.

E. Performance Metrics
N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0206624M: <i>Marine Corps Cmbt Services Supt</i>	PROJECT 2929: <i>Testing Measuring Diag Equip & SE</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Study & Hardware (MCATE) 2	C/FFP	MCSC:Quantico, VA	-	0.425	Dec 2010	-		-		-	0.000	0.425	
Study & Hardware (MCATE) 4	C/FFP	MCSC:Quantico, VA	-	-		0.505	Mar 2012	-		0.505	0.000	0.505	
Study & Hardware (MCATE) 5	C/FFP	MCSC:Quantico, VA	-	-		0.409	Jan 2012	-		0.409	0.000	0.409	
Subtotal			-	0.425		0.914		-		0.914	0.000	1.339	

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Support (ALS)	C/FFP	MCSC:Quantico, VA	3.591	0.246	Feb 2011	0.251	Nov 2011	-		0.251	0.000	4.088	
Engineering Support (MCATE)	WR	MCLB:Albany, GA	2.033	0.857	Nov 2010	0.314	Nov 2011	-		0.314	0.000	3.204	
Subtotal			5.624	1.103		0.565		-		0.565	0.000	7.292	

Remarks
ALS FY11 & FY12 funds will focus on pre-milestone A activities for the Autonomic Logistics Service (ALS) Program.

	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		5.624	1.528	1.479	-	1.479	0.000	8.631

Remarks

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0206624M: <i>Marine Corps Cmbt Services Supt</i>	PROJECT 9999: <i>Congressional Adds</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
9999: <i>Congressional Adds</i>	3.505	-	-	-	-	-	-	-	-	0.000	3.505
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Congressional Add: High Performance Capabilities for Military Vehicles Project
FY2010 Plans (C10C190) Currently coordinating to ascertain congressional intent and direction.

Congressional Add: Marine Personnel Carrier Support System
FY2010 Plans
(C10C191) Currently coordinating to ascertain congressional intent and direction.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011
Congressional Add: High Performance Capabilities for Military Vehicles Project	1.115	-
FY 2010 Accomplishments: N/A		
Congressional Add: Marine Personnel Carrier Support System	2.390	-
FY 2010 Accomplishments: N/A		
Congressional Adds Subtotals	3.505	-

C. Other Program Funding Summary (\$ in Millions)

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0206624M: <i>Marine Corps Cmbt Services Supt</i>	PROJECT 9C90: <i>MTVR Mod</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
9C90: <i>MTVR Mod</i>	3.717	1.672	1.355	-	1.355	1.500	2.411	3.279	2.892	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The MTVR Modication 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 need to respond to the evolving needs of the Marine Corps.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: Medium Tactical Vehicle Replacement (MTVR): Energy Efficiency</p> <p align="right">Articles:</p> <p>FY 2012 Base Plans: Funding will support PMO participation in the Office of Naval Research (ONR) Future Naval Capability (FNC) initiative for hybridization/fuel demand reduction for the MTVR vehicles. Which supports the CMC priorities for reducing costs, logistics footprint and improved environment.</p>	-	-	0.500 0	-	0.500 0
<p>Title: Medium Tactical Vehicle Replacement (MTVR): ECP</p> <p align="right">Articles:</p> <p>FY 2010 Accomplishments: Funding supports Live Fire Testing and Evaluations for the MTVR vehicle and Troop Carrier to assess vehicle vulnerabilities and crew protection as per the approved LFT&E strategy and the live fire event design plan.</p> <p>FY 2011 Plans: Funding will support Transportability test and ECP development for the MTVR program. Transportability testing helps to evaluate the current maximum safe MTVR lifting weight, evaluate, engineer and price vehicle upgrades to lift MTVRs at highway Gross Vehicle Weight Rating (GVWR). Important data from this testing will prevent issues which could negatively impact deployments and the ability of other services or agencies to transport the MTVR.</p> <p>FY 2012 Base Plans:</p>	0.350 0	0.422 0	0.200 0	-	0.200 0

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0206624M: <i>Marine Corps Cmbt Services Supt</i>	PROJECT 9C90: <i>MTVR Mod</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Funding will support Engineering Change Proposal (ECP) development and 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.</p> <p>Title: Medium Tactical Vehicle Replacement (MTVR): Safety</p> <p align="right">Articles:</p> <p>FY 2010 Accomplishments: Funding supported Live Fire Testing and Evaluations for the MTVR vehicle and Troop Carrier to assess vehicle vulnerabilities and crew protection as per the approved LFT&E strategy and the live fire event design plan. Testing has begun on UUNS Fire Suppression Systems for MTVR Vehicle Cab.</p> <p>FY 2011 Plans: Funding will support Transportability test and ECP development for the MTVR program. Transportability testing helps to evaluate the current maximum safe MTVR lifting weight, evaluate, engineer and price vehicle upgrades to lift MTVRs at highway Gross Vehicle Weight Rating (GVWR). Important data from this testing will prevent issues which could negatively impact deployments and the ability of other services or agencies to transport the MTVR.</p> <p>FY 2012 Base Plans: Funding will support Engineering Change Proposal (ECP) development and testing for the MTVR program in response to UUNS requiring quick egress from a catastrophic event to protect th warfighter and MTVR from fire outbreaks in the cab and troop carrier and to protect the engine from fire damage. Continual changes in threat environment requires on-going vehicle modifications to address new and changing threats which must be developed and tested.</p>	2.458 0	0.221 0	0.100 0	-	0.100 0
<p>Title: Medium Tactical Vehicle Replacement (MTVR): Upgrade</p> <p align="right">Articles:</p> <p>FY 2010 Accomplishments: Funding supported Live Fire Testing and Evaluations for the MTVR vehicle and Troop Carrier to assess vehicle vulnerabilities and crew protection as per the approved LFT&E strategy and the live fire event design plan.</p> <p>FY 2011 Plans:</p>	0.324 0	0.428 0	0.255 0	-	0.255 0

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0206624M: <i>Marine Corps Cmbt Services Supt</i>	PROJECT 9C90: <i>MTVR Mod</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Funding will support Engineering Change Proposal (ECP) development and 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.					
<i>FY 2012 Base Plans:</i> Funding will support Engineering Change Proposal (ECP) development and 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.					
Accomplishments/Planned Programs Subtotals	3.717	1.672	1.355	-	1.355

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PMC/BLI 5050: <i>MTVR Modifications</i>	2.936	5.253	8.189	33.600	41.789	9.258	3.419	4.785	3.354	Continuing	Continuing
• 0206315M/508800: <i>MTVR</i>	139.313	92.280	5.833	392.391	398.224	0.675	46.232	50.046	35.881	Continuing	Continuing

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-cycle 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

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0206624M: <i>Marine Corps Cmbt Services Supt</i>	PROJECT 9C90: <i>MTVR Mod</i>