

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev							
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	-	173.902	43.706	41.703	-	41.703	49.811	34.604	20.258	18.485	Continuing	Continuing
194: Engine Driven Gen Ed	-	10.854	9.692	5.027	-	5.027	11.503	9.332	4.596	1.244	Continuing	Continuing
H01: Combat Engineer Eq Ed	-	3.836	6.351	2.172	-	2.172	3.388	2.272	2.010	3.600	Continuing	Continuing
H02: Tactical Bridging - Engineering Development	-	60.403	9.525	24.374	-	24.374	23.395	11.290	2.886	2.935	Continuing	Continuing
H14: Materials Handling Equipment - Ed	-	1.613	1.415	0.298	-	0.298	0.576	0.986	0.964	0.615	Continuing	Continuing
L39: Field Sustainment Support Ed	-	4.094	2.550	1.789	-	1.789	2.753	2.588	2.269	2.456	Continuing	Continuing
L41: Water And Petroleum Distribution - Ed	-	2.012	3.839	2.650	-	2.650	4.186	4.106	3.789	3.817	Continuing	Continuing
L43: ENGINEER SUPPORT EQUIPMENT - ED	-	1.061	1.916	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
L46: Maintenance Support Equipment	-	3.064	3.697	1.232	-	1.232	2.045	1.976	1.829	1.903	Continuing	Continuing
L47: Improved Environmental Control Units Ed	-	0.000	2.976	2.968	-	2.968	0.000	0.000	0.000	0.000	Continuing	Continuing
L50: JOINT LIGHT TACTICAL VEHICLES (JLTV) - SDD	-	84.500	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
VR7: Combat Service Support Systems	-	2.465	1.745	1.193	-	1.193	1.965	2.054	1.915	1.915	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												
Note Change Summary Explanation: Funding - FY 2014: Adjustment for Tactical Bridging DH02.												

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army				DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE				
2040: Research, Development, Test & Evaluation, Army		PE 0604804A: Logistics and Engineer Equipment - Eng Dev				
BA 5: System Development & Demonstration (SDD)						
A. Mission Description and Budget Item Justification						
This Program Element (PE) provides system development and demonstration for various projects. This PE includes the development of military tactical bridging, material handling equipment, construction equipment, engineer support equipment, soldier support equipment (to include shelter systems, environmental control, field service equipment, camouflage systems and aerial delivery equipment), water purification equipment, petroleum distribution equipment, mobile electric power and water craft.						
Increase from FY 2013 to FY 2014 reflects DH02 Tactical Briding - Engineering Development increase in FY14						
B. Program Change Summary (\$ in Millions)		FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget		173.146	43.706	51.442	-	51.442
Current President's Budget		173.902	43.706	41.703	-	41.703
Total Adjustments		0.756	0.000	-9.739	-	-9.739
• Congressional General Reductions		-	-			
• Congressional Directed Reductions		-	-			
• Congressional Rescissions		-	-			
• Congressional Adds		-	-			
• Congressional Directed Transfers		-	-			
• Reprogrammings		-	-			
• SBIR/STTR Transfer		-	-			
• Adjustments to Budget Years		-	-	4.194	-	4.194
• Other Adjustments 1		0.756	-	-13.933	-	-13.933

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army									DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT 194: Engine Driven Gen Ed			
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
194: Engine Driven Gen Ed	-	10.854	9.692	5.027	-	5.027	11.503	9.332	4.596	1.244	Continuing	Continuing
Quantity of RDT&E Articles												
# 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												
Not applicable for this item.												
A. Mission Description and Budget Item Justification												
This project supports the Tactical Electric Power (TEP) program which is established to develop a Modernized, Standard Family of Mobile Electric Power Sources for all Services throughout the Department of Defense. Building on the device/component evaluations conducted in PE 0603804A project G11, this project supports the system development and demonstration of a series of innovative mobile electric power sources that are essential to the development and eventual fielding of modernized mobile electric power sources from 0.5 kilowatt (kW) to 840kW. These sources will ensure compliance with federally mandated environmental statutes and significantly lower noise and thermal signatures (thereby improving battlefield survivability), improve fuel and electrical efficiency, reduce weight, enhance portability, improve reliability and maintainability, and reduce operational and support costs. FY13-14 funds continue the Engineering and Manufacturing Development (EMD) Phase for Large Advanced Mobile Power Sources (LAMPS). Funding in FY14 will also prepare the Improved Power Distribution Illumination Systems Electrical (IPDISE)/Microgrids performance specification and initiate the EMD phase.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014	
Title: LAMPS Engineering & Manufacturing Development (EMD) Phase Articles: Description: Prepare LAMPS performance specification and begin EMD Phase FY 2012 Accomplishments: Continue preparing LAMPS performance specification and continue EMD Phase FY 2013 Plans: Continue EMD Phase of LAMPS FY 2014 Plans: Continue EMD Phase of LAMPS. Prepare the IPDISE/Microgrids performance specification and initiate EMD phase.									10.854	9.692	5.027	
									0	0		
Accomplishments/Planned Programs Subtotals									10.854	9.692	5.027	

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army										DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT 194: Engine Driven Gen Ed			
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
• 643804.G11: Logistics and Engineer Equipment - Adv Dev G11	0.669	3.921	2.501		2.501	0.788	7.401	4.192	0.823	Continuing	Continuing
• MA9800: Generators and Associated Equipment	67.897	60.302	129.437		129.437	176.107	254.448	273.954	45.435	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
LAMPS (Large Advanced Mobile Power Sources) Engineering & Manufacturing Development (EMD) Phase: A single competitive contract was awarded for the LAMPS EMD Phase. The EMD phase will be a Fixed Price Incentive Firm (FPIF) contract. The EMD contract will require the vendor to integrate components and fabricate prototypes, verify prototype performance through contractor testing, deliver production representative generator sets and conduct instructor and key personnel training (I&KPT) for Government testing. Major data deliverables will include the technical data package (TDP), provisioning data, logistics management information, technical manuals, test reports and cost data reporting. The Government will purchase the TDP from the vendor with the intent of using it in future competitive re-procurements for LAMPS. A Failure Mode, Effects and Criticality Analysis (FMECA), Level of Repair Analysis (LORA), Functional Configuration Audit (FCA) and a Physical Configuration Audit (PCA) will be completed to verify that the TDP accurately describes the qualified production sets. In addition, Improved Power Distribution Illumination Systems Electrical (IPDISE)/Microgrids will prepare the program's performance specification and initiate the EMD phase.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)						R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev						PROJECT 194: Engine Driven Gen Ed			
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
LAMPS (100-200kW)	C/FPIF	L-3 Communications, Westwood Corporation, Tulsa, OK:Various	6.069	10.854	Aug 2012	9.692		-		-		-	Continuing	Continuing	Continuing
IPDISE/Microgrids	C/FFP	TBD:TBD	0.000	-		-		3.000	Sep 2014	-		3.000	0.000	3.000	0.000
Subtotal			6.069	10.854		9.692		3.000		0.000		3.000			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
LAMPS (100-200kW)	Various	CECOM LCMC:Aberdeen Proving Ground (APG), MD	3.485	-		-		-		-		-	Continuing	Continuing	Continuing
Subtotal			3.485	0.000		0.000		0.000		0.000		0.000			
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
LAMPS (100-200kW)	MIPR	Army Testing & Evaluation Ctr (ATEC):APG, MD	0.000	-		-		2.027	Jan 2014	-		2.027	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		0.000		2.027		0.000		2.027			
Project Cost Totals			9.554	10.854		9.692		5.027		0.000		5.027			
Remarks															

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army			DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>		
			PROJECT 194: <i>Engine Driven Gen Ed</i>		

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	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
Prepare Procurement Package and Solicitation																												
Award Phase 1 Contract																												
EMD Phase 1																												
DT/Log Demo/OT																												
MS C-LAMPS																												
IPDISE/Microgrids																												
Pre-EMD Review - IPDISE/Microgrids																												
RFP & Solicitation - IPDISE/Microgrids																												
Milestone B - IPDISE/Microgrids																												
EMD Award - IPDISE/Microgrids																												
Phase 1 EMD - IPDISE/Microgrids																												
Small Tactical Electric Power (STEP)																												
Pre-EMD Review - STEP																												
RFP & Solicitation - STEP																												
Milestone B - STEP																												
EMD Award - STEP																												
Phase 1 EMD - STEP																												

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

2040: *Research, Development, Test & Evaluation, Army*
BA 5: *System Development & Demonstration (SDD)*

R-1 ITEM NOMENCLATURE

PE 0604804A: *Logistics and Engineer Equipment - Eng Dev*

PROJECT

194: *Engine Driven Gen Ed*

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Prepare Procurement Package and Solicitation	2	2012	2	2012
Award Phase 1 Contract	4	2012	4	2012
EMD Phase 1	1	2013	4	2015
DT/Log Demo/OT	2	2014	3	2015
MS C-LAMPS	4	2015	4	2015
IPDISE/Microgrids	3	2014	4	2016
Pre-EMD Review - IPDISE/Microgrids	1	2014	1	2014
RFP & Solicitation - IPDISE/Microgrids	2	2014	4	2014
Milestone B - IPDISE/Microgrids	4	2014	4	2014
EMD Award - IPDISE/Microgrids	4	2014	4	2014
Phase 1 EMD - IPDISE/Microgrids	1	2015	4	2016
Small Tactical Electric Power (STEP)	4	2015	4	2018
Pre-EMD Review - STEP	1	2015	1	2015
RFP & Solicitation - STEP	1	2015	3	2015
Milestone B - STEP	3	2015	3	2015
EMD Award - STEP	3	2015	3	2015
Phase 1 EMD - STEP	3	2015	2	2018

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army										DATE: April 2013									
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT H01: Combat Engineer Eq Ed										
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							
H01: Combat Engineer Eq Ed	-	3.836	6.351	2.172	-	2.172	3.388	2.272	2.010	3.600	Continuing	Continuing							
Quantity of RDT&E Articles																			
# 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 project supports the System Development and Demonstration(SDD) of military Construction Equipment used in support of horizontal and vertical engineer construction tasks and to develop a variety of enabling systems that will support and improve mobility for Engineers in the Brigade Combat Teams (BCT) and Combat Support Brigades (CSB) forces. This project also supports the SDD of enabling systems to meet critical capabilities of joint interdependence through Air and Ground Line of Communication and Rapid Tactical Earthmoving repair and construction which increase the operational reach of modular forces. The BCT and CSB systems include: High Mobility Engineer Excavators, Scrapers, Scoop Loaders, Skid Steer Loaders, Dozers, Cranes and Graders. This project will also support the Research into the Deuce Replacement and the Energy Productivity Study.																			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)										FY 2012	FY 2013	FY 2014							
Title: Family of All Terrain Cranes <div>Articles:</div> <div>Description:</div> System Pre-Award requirements, Key Performance Parameters (KPP), selection criteria development. Testing of systems. <div>FY 2012 Accomplishments:</div> System Pre-Award requirements, KPP, selection criteria development. Testing of systems. <div>FY 2013 Plans:</div> System Pre-Award requirements, KPP, selection criteria development. Testing of systems.										1.675 0	1.306 0	0.000							
Title: CE Armor <div>Articles:</div> <div>Description:</div> Design armor kits for Combat Engineer Equipment. <div>FY 2013 Plans:</div> Qualify alternative sources of supply for opaque & Transparent armor on existing CE equipment. Full Vehicle Armor Protection										0.000	1.000 0	0.000							
Title: CE Robotics Research <div>Articles:</div>										0.100 0	0.500 0	0.250							

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT H01: Combat Engineer Eq Ed		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
Description: Development of Robotics Research FY 2012 Accomplishments: Development of Robotics Research FY 2013 Plans: Development of Robotics Research FY 2014 Plans: Development of Robotics Research				
Title: CE Simulators Description: Labor, software, and hardware simulator development FY 2012 Accomplishments: Labor, software, and hardware simulator development FY 2013 Plans: Labor, software, and hardware simulator development FY 2014 Plans: Labor, software, and hardware simulator development		Articles: 1.894 0	1.245 0	0.300
Title: Hazard Clearance Description: Hazard Clearance at Speed FY 2013 Plans: Adapt existing vehicle to provide area and route clearance to remove explosive and non-expolsive obstacles.		Articles: 0.000	0.500 0	0.000
Title: Forced Entry (Airborne/Air Assault) HMEE, Grader, ERACC Type 4 and Loader Type 1 Study/Development Description: Forced Entry (Airborne/Air Assault) HMEE, Grader, ERACC and Loader Type 1 Study/Development FY 2013 Plans:		Articles: 0.000	0.500 0	0.000

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H01: <i>Combat Engineer Eq Ed</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013
FY13: ERACC Type 4 Study/Development			FY 2014
Title: Market Research Description: Market Research Survey FY 2013 Plans: Conduct market research and documentation preparation for all types of construction equipment. FY 2014 Plans: Conduct market research and documentation preparation for all types of construction equipment.		0.000	0.100 0
		Articles:	0.400
Title: Fuel Efficiency Description: Improve Fuel Efficiency/Reduce Maintenance Time FY 2013 Plans: Using Government supplied vehicles (GFE), evaluate new technologies be developed by private industry to improve the efficiency or reduce maintenance burden.		0.000	0.250 0
		Articles:	0.000
Title: Operational Energy/Duty Cycle Description: Operational Energy/Duty Cycle Monitoring FY 2013 Plans: Instrumentation of vehicles in select units to monitor the usage and to establish training and operational usage of the machine. This data, once analyzed will be used in requirements development. FY 2014 Plans: Instrumentation of vehicles in select units to monitor the usage and to establish training and operational usage of the machine. This data, once analyzed will be used in requirements development.		0.000	0.250 0
		Articles:	0.872
Title: ERACC Type III Description: ERACC Type III Equipment FY 2013 Plans:		0.000	0.200 0
		Articles:	0.000

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army									DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT H01: Combat Engineer Eq Ed			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014
Integration of ERACC Type III Equipment											
Title: System Engineering/Program Management				Articles:					0.000	0.500 0	0.350
Description: Program Management											
FY 2013 Plans: Program Management Support of R&D Program for CE											
FY 2014 Plans: Program Management Support of R&D Program for CE											
Title: SBIR+STIR				Articles:					0.167 0	0.000	0.000
Description: SBIR/STIR											
FY 2012 Accomplishments: SBIR+STIR											
Accomplishments/Planned Programs Subtotals									3.836	6.351	2.172
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
• High Mobility Engineer Excavator I: High Mobility Engineer Excavator I	20.702	30.042	23.465		23.465	22.541				0.000	96.750
• HMEE III: High Mobility Engineer Excavator III	2.067									0.000	2.067
• Grader, Mtzd, Hvy: Grader, Mtzd, Hvy	2.201	2.028	2.000		2.000					0.000	6.229
• Hydraulic Excavator: Hydraulic Excavator			50.122		50.122					0.000	50.122
• Plant, Asphalt Mixing: Plant, Asphalt Mixing	0.614	3.629								Continuing	Continuing

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army									DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT H01: Combat Engineer Eq Ed			
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
• Tractor Full Tracked, Med T-9: <i>Tractor Full Tracked, Med T-9</i>	50.434	20.867	28.828		28.828	28.505	38.652	21.470	22.148	Continuing	Continuing
• All Terrain Cranes: <i>All Terrain Cranes</i>		4.003	19.863		19.863	25.452	38.800	29.947	24.399	Continuing	Continuing
• Skid Steer Loaders: <i>Skid Steer Loaders</i>	3.984									0.000	3.984
• Scraper, Earthmoving: <i>Scraper, Earthmoving</i>	21.031	6.146	36.078		36.078	24.282	20.868	33.186	12.308	Continuing	Continuing
• EMMs: <i>EMMs</i>	43.432	31.200	9.721		9.721	10.340	1.226			0.000	95.919
• ERACC 4: <i>ERACC IV</i>		13.725	13.590		13.590	13.597	13.907	14.547	1.990	Continuing	Continuing
• Const Equip ESP: <i>SLEP</i>	9.771	13.351	16.088		16.088	14.709	14.959	13.522	15.000	0.000	97.400
Remarks											
D. Acquisition Strategy											
Conduct research, development, and investigations on future Construction Equipment (CE) and identify the path forward for programs to be transitioned for PEO program management. Identify technical advancements that can improve reliability, survivability, transportability, availability, maintainability and reduce the logistical footprints for future CE equipment.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)						R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev						PROJECT H01: Combat Engineer Eq Ed			
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SBIR+STIR	TBD	TACOM:Warren, Michigan	0.000	0.167		-		-		-		-	0.000	0.167	0.000
Subtotal			0.000	0.167		0.000		0.000		0.000		0.000	0.000	0.167	0.000
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Pre-Award requirements, KPP, selection criteria development, Testing of systems	Various	TACOM & TARDEC:Warren, MI	0.000	1.675	Dec 2011	1.306		-		-		-	0.000	2.981	0.000
Development of Robotic Research for Combat Engineer	Various	TBD:TBD	1.619	0.100	Dec 2011	0.500		0.250		-		0.250	0.000	2.469	Continuing
Design armor kits for Combat Engineer	Various	TARDEC:Warren, MI	5.512	-		1.000		-		-		-	0.000	6.512	Continuing
Development of Simulator	Various	PEO Stricom:PEO, Stricom, Orlando, FL	5.409	1.894	Dec 2011	1.245		0.300		-		0.300	0.000	8.848	Continuing
Forced Entry: HMEE Type II, Grader, ERACC Type III and Loader Type I Study/ Development	Various	TARDEC:Warren, MI	8.239	-		0.500		-		-		-	0.000	8.739	Continuing
Hazard Clearance at Speed	TBD	TARDEC:Warren, Michigan	0.000	-		0.500		-		-		-	0.000	0.500	0.000
Market Research	TBD	TARDEC:Warren, Michigan	0.000	-		0.100		0.400		-		0.400	0.000	0.500	0.000
ERACC Type III Integration	MIPR	TARDEC/ TACOM:Waren, Michigan	0.000	-		0.200		-		-		-	0.000	0.200	0.000
Subtotal			20.779	3.669		5.351		0.950		0.000		0.950	0.000	30.749	

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>						R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>						PROJECT H01: <i>Combat Engineer Eq Ed</i>			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering/ Program Mgmt	MIPR	TARDEC/ TACOM:Warren, Michigan	0.000	-		0.500		0.350		-		0.350	0.000	0.850	0.000
Subtotal			0.000	0.000		0.500		0.350		0.000		0.350	0.000	0.850	0.000
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Fuel Efficiency	MIPR	TARDEC, Warren, Michigan:TARDEC, Warren, Michigan	0.000	-		0.250		-		-		-	0.000	0.250	0.000
Operational Energy/Duty Cycle Monitoring	TBD	TARDEC:Warren, Michigan	0.000	-		0.250		0.872		-		0.872	0.000	1.122	0.000
Non Nuclear Soil Density Set Testing	TBD	TARDEC:Warren, MI	0.050	-		-		-		-		-	0.000	0.050	0.000
Subtotal			0.050	0.000		0.500		0.872		0.000		0.872	0.000	1.422	0.000
Project Cost Totals			20.829	3.836		6.351		2.172		0.000		2.172	0.000	33.188	
Remarks															

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army			DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>		
			PROJECT H01: <i>Combat Engineer Eq Ed</i>		

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	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
Family of All Terrain Cranes-Selection criteria & Testing of Systems																												
Hazard Clearance at Speed																												
ERACC III integration																												
Market Research																												
System Engineer/Program Support																												
Fuel Efficiency																												
Operational Energy/Duty Cycle Monitoring																												

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H01: <i>Combat Engineer Eq Ed</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Family of All Terrain Cranes-Selection criteria & Testing of Systems	1	2013	4	2013
Hazard Clearance at Speed	1	2013	4	2013
ERACC III integration	1	2013	4	2013
Market Research	1	2013	4	2014
System Engineer/Program Support	1	2013	4	2014
Fuel Efficiency	1	2013	4	2013
Operational Energy/Duty Cycle Monitoring	1	2013	4	2014

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT H02: Tactical Bridging - Engineering Development			
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
H02: Tactical Bridging - Engineering Development	-	60.403	9.525	24.374	-	24.374	23.395	11.290	2.886	2.935	Continuing	Continuing
Quantity of RDT&E Articles												
# 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 project supports the engineering, system development and demonstration, testing and transition to procurement of Future Force Tactical Bridge Systems. Systems include the Joint Assault Bridge (JAB)and Line of Communications Bridge (LOCB). Other efforts supported include a Bridge Supplemental Set to provide better footing on muddy or soft soil conditions, as well as structural strength and fatigue testing of Bridging prototypes, development systems and validation of design modifications. This project also includes a remote controlled automatic launch for the Rapidly Emplaced Bridge System (REBS).												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014	
Title: BEB Testing									2.516	0.000	0.000	
Description: BEB Testing												
FY 2012 Accomplishments: Completion of operational and development testing and logistics demonstration of the Bridge Erection Boat.												
Title: Development, integration, and testing of REBS Auto Launch-Retrieve with Common Bridge Transporter (CBT)									1.100	1.400	2.000	
Description: Development, integration, and testing of REBS Auto Launch-Retrieve with Common Bridge Transporter (CBT)												
FY 2012 Accomplishments: Completion of the development, integration and testing of the Rapidly Emplaced Bridge System Auto Launch-Retrieve capability with the Common Bridge Transporter (CBT).												
FY 2013 Plans: Completion of the development, integration and testing of the Rapidly Emplaced Bridge System Auto Launch-Retrieve capability with the Common Bridge Transporter (CBT).												
FY 2014 Plans:												

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>		PROJECT H02: <i>Tactical Bridging - Engineering Development</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2012	FY 2013	FY 2014
Completion of the development, integration and testing of the Rapidly Emplaced Bridge System Auto Launch-Retrieve capability with the Common Bridge Transporter (CBT).					
Title: JAB Development and Testing Description: JAB Development and Testing FY 2012 Accomplishments: JAB Development. FY 2013 Plans: JAB Development/Testing FY 2014 Plans: JAB Testing.			Articles: 49.810 0	7.625 0	11.313
Title: SBIR+STTR Description: SBIR+STTR FY 2012 Accomplishments: SBIR+STTR			Articles: 1.682 0	0.000	0.000
Title: LOCB Development Description: LOCB Development FY 2012 Accomplishments: LOCB Development FY 2013 Plans: LOCB Development FY 2014 Plans: LOCB Development			Articles: 5.295 0	0.500 0	9.735
Title: Structural Health Monitoring			0.000	0.000	0.750

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army							DATE: April 2013				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>			PROJECT H02: <i>Tactical Bridging - Engineering Development</i>				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)							FY 2012	FY 2013	FY 2014		
Description: Develop a passive method to collect mobile military bridge system usage and health data for remote monitoring.											
FY 2014 Plans: Structural Health Monitoring											
Title: Bridge Supplemental Set							0.000	0.000	0.576		
Description: Multi-functional consolidated engineering set consisting of a multi-functional anchorage system targeted for use with multiple tactical bridging systems to include the Line of Communication Bridge (LOCB), Improved Ribbon Bridge (IRB), and the Dry Support Bridge (DSB).											
FY 2014 Plans: Bridge Supplemental Set											
Accomplishments/Planned Programs Subtotals							60.403	9.525	24.374		
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
• OPA3, MX0100: OPA3, MX0100	92.428	35.499	14.188		14.188	12.136	20.997	21.548	21.914	Continuing	Continuing
• OPA3, MA8890: OPA3, MA8890	72.354	32.893	23.101		23.101	15.766	13.708	15.509	15.793	Continuing	Continuing
• WTCV, GZ3001: WTCV, GZ3001			2.002		2.002	53.928	55.089	78.402	170.027	Continuing	Continuing
Remarks											
D. Acquisition Strategy RDT&E efforts to support testing and follow-on production.											
E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)						R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev						PROJECT H02: Tactical Bridging - Engineering Development			
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Support	MIPR	Various:Various	0.000	-		-		3.000	Nov 2013	-		3.000	0.000	3.000	0.000
SBIR+STTR	TBD	TBD:TBD	0.000	1.682		-		-		-		-	0.000	1.682	0.000
Subtotal			0.000	1.682		0.000		3.000		0.000		3.000	0.000	4.682	0.000
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
JAB Development	C/FFP	DRS/GDLS:Saint Louis, MO/Sterling Hts, MI	0.000	48.128		-		-		-		-	Continuing	Continuing	Continuing
LOCB Development	MIPR	Rock Island Arsenal (RIA)/Anniston Army Depot (ANAD):Rock Island, IL/Anniston, AL	1.123	5.295	Aug 2013	0.500		-		-		-	Continuing	Continuing	Continuing
Bridge Supplemental Set	MIPR	TBD:TBD	0.000	-		-		0.326	Jan 2014	-		0.326	0.000	0.326	0.000
Structural Health Monitoring	MIPR	TARDEC:Warren, MI	0.000	-		-		0.500	Jan 2014	-		0.500	0.000	0.500	0.000
REBS Testing (Auto Launch-Retrieve)	SS/FFP	General Dynamics European Land Systems:Kaiserslautern, Germany	0.000	-		-		1.000	Jun 2014	-		1.000	0.000	1.000	0.000
Subtotal			1.123	53.423		0.500		1.826		0.000		1.826			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Govenment In-House	MIPR	TACOM:Warren, MI	2.100	3.000	Dec 2011	3.000		-		-		-	Continuing	Continuing	Continuing
Subtotal			2.100	3.000		3.000		0.000		0.000		0.000			

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>						R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>						PROJECT H02: <i>Tactical Bridging - Engineering Development</i>			
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
JAB Testing	MIPR	Aberdeen Proving Grounds (APG):APG, Maryland	2.541	-		5.125		10.063	Jan 2014	-		10.063	Continuing	Continuing	Continuing
REBS Testing (Auto Launch-Retrieve)	TBD	Aberdeen Proving Grounds (APG):APG, MD	0.000	1.100	Feb 2012	0.900		1.000	Jan 2014	-		1.000	0.000	3.000	0.000
BEB Testing	Various	Various:Various	5.230	1.198	Feb 2012	-		-		-		-	0.000	6.428	0.000
LOCB Testing	MIPR	ATEC:Aberdeen, MD	4.800	-		-		8.485	Jan 2014	-		8.485	0.000	13.285	0.000
Subtotal			12.571	2.298		6.025		19.548		0.000		19.548			
			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			15.794	60.403		9.525		24.374		0.000		24.374			
Remarks															

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army	DATE: April 2013
--	-------------------------

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H02: <i>Tactical Bridging - Engineering Development</i>
--	--	---

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	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
LOCB Development and Testing																												
REBS Auto Launch-Retrieve																												
SBIR Technology Transition																												
Bridge Supplemental Set																												
Structural Health Monitoring Project																												

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H02: <i>Tactical Bridging - Engineering Development</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
LOCB Development and Testing	2	2012	4	2016
REBS Auto Launch-Retrieve	3	2012	4	2015
SBIR Technology Transition	1	2014	4	2018
Bridge Supplemental Set	2	2014	4	2015
Structural Health Monitoring Project	2	2014	4	2016

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army										DATE: April 2013									
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT H14: Materials Handling Equipment - Ed										
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							
H14: Materials Handling Equipment - Ed	-	1.613	1.415	0.298	-	0.298	0.576	0.986	0.964	0.615	Continuing	Continuing							
Quantity of RDT&E Articles																			
# 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 project supports system development and demonstration of Material Handling Equipment (MHE) including Rough Terrain Forklifts, Container Handling Equipment, and other cargo handling related items to enable Combat Service Support units to rapidly and efficiently move and deliver critical supplies worldwide to the Soldier. Efforts performed under this project include conducting market research, supporting operational requirements identification and validation, conducting trade studies, generating life cycle cost estimates, performing system engineering, developing performance specifications, conducting pre-production test and evaluation, and preparing program management and acquisition documents.																			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)										FY 2012	FY 2013	FY 2014							
Title: Material Handling Equipment (MHE) Training Aids Articles: Description: Material Handling Equipment (MHE) Training Aids FY 2012 Accomplishments: Continue upgrade of Rough Terrain Container Handler (RTCH) Electronic Training Aid. Conduct design verification testing										1.116 0	0.000	0.000							
Title: Small Business Innovative Research/Small Business Technology Transfer Program Articles: Description: Small Business Innovative Research/Small Business Technology Transfer Program FY 2012 Accomplishments: SBIR + STTR										0.032 0	0.000	0.000							
Title: Material Handling Equipment (MHE) System Improvement Articles: Description: System Improvements for Light Capability Rough Terrain Forklift (LCRTF) for Tactical Operations FY 2013 Plans:										0.000	0.655 0	0.155							

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army									DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT H14: Materials Handling Equipment - Ed			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014
Design and test air drop configuration package for the LCRTF.											
FY 2014 Plans: Integrate and test add-on hardware for reliable cold starting.											
Title: Material Handling Equipment (MHE) Armor Kits									0.353	0.460	0.143
Articles:									0	0	
Description: Lightweight Armor for All Terrain Lifter Army System (ATLAS) II											
FY 2012 Accomplishments: N/A											
FY 2013 Plans: Investigate alternative armor solutions to eliminate known performance degradation when operated with current add on armor.											
FY 2014 Plans: Conduct evaluation of armor solution at test-site for both performance and survivability											
Title: Sling Load Attachment for Rough Terrain Container Handler (RTCH)									0.112	0.300	0.000
Articles:									0	0	
Description: Sling Load Attachment for Rough Terrain Container Handler (RTCH)											
FY 2012 Accomplishments: N/A											
FY 2013 Plans: Conduct demonstrations and evaluations of proposed Sling Load Attachment to assess operational suitability and value added capability.											
Accomplishments/Planned Programs Subtotals									1.613	1.415	0.298
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
• OPA M41200: Rough Terrain Container Handler			1.250		1.250					0.000	1.250
• OPA M41800: All Terrain Lifting Army System	23.659		2.500		2.500					0.000	26.159

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army										DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>					R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>			PROJECT H14: <i>Materials Handling Equipment - Ed</i>			
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
• OPA G41002: <i>Light Capacity Rough Terrain (LCRT) Forklift</i>	10.944	5.895	5.760		5.760	5.898	6.117	6.240	6.420	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
Develop specifications for LCRTF improvements, award contracts to produce test items for production verification testing. Testing LCRTF improvements to be performed using Army test facilities. Design lightweight armor solution for ATLAS using U.S. Army TARDEC's Center for Ground Vehicle Development and Integration. Test armored ATLAS at Aberdeen Proving Ground, MD. Procure RTCH Sling Load Attachment, obtain safety confirmation and conduct user demonstrations to valid requirements.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)						R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev						PROJECT H14: Materials Handling Equipment - Ed			
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering/ Program Management	MIPR	TARDEC:Warren, MI	0.000	-		-		0.037		-		0.037	0.000	0.037	0.000
SBIR + STTR	TBD	TBD:TBD	0.000	0.032		-		-		-		-	0.000	0.032	0.000
Subtotal			0.000	0.032		0.000		0.037		0.000		0.037	0.000	0.069	0.000
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
MHE Training Aids	MIPR	Kalmar Rt:Cibolo, TX	0.974	1.581		-		-		-		-	Continuing	Continuing	Continuing
System Improvements for LCRTF for Tactical Operations	Various	TBD:TBD	0.000	-		0.200		0.155		-		0.155	0.000	0.355	0.000
Lightweight Armor for ATLAS II	MIPR	TARDEC:Warren, MI	0.000	-		0.350		-		-		-	0.000	0.350	0.000
Sling Load Attachment for RTCH	Reqn	Kalmar RT Center:Cibolo, TX	0.000	-		0.100		-		-		-	0.000	0.100	0.000
Subtotal			0.974	1.581		0.650		0.155		0.000		0.155			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Improvements for LCRTF for Tactical Operations	MIPR	TARDEC:Warren, MI	0.000	-		0.055		-		-		-	0.000	0.055	0.000
Lightweight Armor for ATLAS II	MIPR	TARDEC:Warren, MI	0.000	-		0.110		-		-		-	0.000	0.110	0.000
Subtotal			0.000	0.000		0.165		0.000		0.000		0.000	0.000	0.165	0.000

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>						R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>						PROJECT H14: <i>Materials Handling Equipment - Ed</i>			
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Lightweight Armor for ATLAS II	TBD	TBD:TBD	0.000	-		-		0.106		-		0.106	0.000	0.106	0.000
System Improvements for LCRTF for Tactical Operations	TBD	TBD:TBD	0.000	-		0.400		-		-		-	0.000	0.400	0.000
Sling Load Attachment for RTCH	MIPR	Various:Various	0.000	-		0.200		-		-		-	0.000	0.200	0.000
Subtotal			0.000	0.000		0.600		0.106		0.000		0.106	0.000	0.706	0.000
			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			0.974	1.613		1.415		0.298		0.000		0.298			
Remarks															

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

2040: Research, Development, Test & Evaluation, Army
BA 5: System Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604804A: *Logistics and Engineer
Equipment - Eng Dev*

PROJECT

H14: Materials Handling Equipment - Ed

[illegible]

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H14: <i>Materials Handling Equipment - Ed</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Design and test LCRTF air drop configuration package	3	2013	3	2013
Integrate and test LCRTF cold weather start kit	1	2014	1	2014
Investigate alternative armor solution for ATLAS II	1	2013	1	2013
Conduct evaluation of armor solution at test-site	2	2014	2	2014

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE				PROJECT			
2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					PE 0604804A: Logistics and Engineer Equipment - Eng Dev				L39: Field Sustainment Support Ed			
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
L39: Field Sustainment Support Ed	-	4.094	2.550	1.789	-	1.789	2.753	2.588	2.269	2.456	Continuing	Continuing
Quantity of RDT&E Articles												

[#] 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 project supports the System Development and Demonstration (SDD) of critical distribution and sustainment capabilities to include cargo aerial delivery, field shelters, showers, latrines, heaters, mortuary affairs systems, organizational equipment, and other combat service support equipment to fill identified theater distribution and services capability gaps, improve unit sustainability, and increase combat effectiveness. Project supports the demonstration of engineering development models and Type Classification of cargo parachutes, airdrop containers and other aerial delivery equipment to improve safety, effectiveness, and efficiency of airborne operations. Project supports development of tactical field systems and support equipment such as heaters, camouflage systems and base camp equipment. This project develops critical enablers that support the Quartermaster (QM) Force Transformation Strategy and the Army's Modular Force Capabilities by maintaining readiness through fielding and integrating new equipment. This project also ensures Army Expeditionary Forces are capable of rapid deployment by providing aerial delivery initiatives. These reduce sustainment requirements, related Combat Support/Combat Service Support (CS/CSS), lift demands, the combat zone footprint, and costs for logistical support.

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

	FY 2012	FY 2013	FY 2014
Title: Joint Precision Airdrop System P3I (JPADS) Articles: Description: JPADS is a Precision Guided Airdrop system that autonomously navigates along a predetermined glide and flight path to accurately deliver supplies and equipment. Its two primary components, a decelerator and an Autonomous Guidance Unit (AGU), interface with the United States Air Force (USAF) JPADS mission planner and has a gross rigged weight of 2,400 pounds (lbs) to 10,000 lbs. FY 2012 Accomplishments: Continue JPADS 2K product improvement efforts to integrate advanced hardware and software capabilities	1.497 0	0.000	0.000
Title: Joint Precision Airdrop System 10,000 lbs. (JPADS 10K) Articles: Description: JPADS 10K is a Precision Guided Airdrop system that autonomously navigates along a predetermined glide and flight path to accurately deliver supplies and equipment. It utilizes two primary components, a JPADS 10K air vehicle's decelerator	1.400 0	0.000	0.000

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT L39: Field Sustainment Support Ed		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
connected to an Autonomous Guided Unit (AGU) which interface with the USAF JPADS Mission Planner, and has a maximum gross rigged weight of 10,000 lbs.				
FY 2012 Accomplishments: Complete Operational Testing (OT) and obtain Milestone C for JPADS 10K.				
Title: Advanced Low Velocity Airdrop System (ALVADS) - Light and Heavy Articles: Description: ALVADS - Light and Heavy are capable of airdrop operations at an altitude of 500-ft Above Ground Level (AGL) with increased aircraft survivability, and improved accuracy. Light-Gross rigged weight of 2,520-22,000 lbs and Heavy-Gross rigged weight of 22,001-42,000 lbs. FY 2013 Plans: Complete Design Validation (DV) for ALVADS-L and initiate Developmental Testing (DT). FY 2014 Plans: Initiate fabrication of Developmental Testing (DT) assets for ALVADS.		0.000	2.000 0	1.789
Title: Low Cost Aerial Delivery System (LCADS) Articles: Description: LCADS is a modular suite of low cost, expendable parachute/container air items that can be used in lieu of current low and high velocity systems. System includes a low cost container, high-velocity parachute (70 - 90 feet per second (fps)) and low-velocity parachute (less than 28.5 fps). System is compatible with United States Air Force Aircraft (USAF A/C) and aerial port handling equipment. LCADS is a proven means to execute critical resupply missions without having to place soldiers and ground vehicle convoys on the road. FY 2012 Accomplishments: Execute LCADS product improvement efforts with focus on modular capability that spans weights and altitudes for low velocity and high velocity systems.		1.068 0	0.000	0.000
Title: Advanced Cargo Parachute Release System (ACPRS) Articles: Description: The ACPRS will replace the existing M-1 and M-2 cargo parachute release and is intended to decrease the number of inoperable payloads due to rollovers, while also providing a capability to airdrop loads at 500 ft Above Ground Level (AGL). FY 2013 Plans:		0.000	0.550 0	0.000

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army								DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L39: <i>Field Sustainment Support Ed</i>			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2012	FY 2013	FY 2014	
Obtain Milestone C on ACPRS and initiate pre-planned product improvement effort.											
Title: SBIR+STTR Description: SBIR+STTR FY 2012 Accomplishments: SBIR+STTR								Articles: 0.129 0	0.000	0.000	
Accomplishments/Planned Programs Subtotals								4.094	2.550	1.789	
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
• MA7806: <i>Precision Airdrop, OPA</i>	16.207	5.935	9.500		9.500	7.209	7.395	7.400	5.628	Continuing	Continuing
3,											
• 643804 K39: <i>Field Sustainment Support AD,</i>	2.857	2.970	2.161		2.161	3.061	3.434	2.727	2.801	Continuing	Continuing
• 643804 VR8: <i>Combat Service Support Systems AD,</i>	1.977	2.023	1.613		1.613	2.405	2.619	2.415	2.415	Continuing	Continuing
• 654804 VR7: <i>Combat Service Support Systems,</i>	2.465	1.745	1.193		1.193	1.965	2.054	1.915	1.915	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
Accelerate product development and testing to transition into production.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)						R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev						PROJECT L39: Field Sustainment Support Ed			
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management Support	Various	PM FSS, Natick:Natick, MA	1.823	0.370		0.400		0.431		-		0.431	0.000	3.024	Continuing
SBIR+STTR	TBD	Various:Various	0.000	0.129		-		-		-		-	0.000	0.129	0.000
Subtotal			1.823	0.499		0.400		0.431		0.000		0.431	0.000	3.153	
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Soldier Support Equipment	Various	PM FSS, Natick:Various	3.867	-		-		-		-		-	0.000	3.867	0.000
ALVADS-L&H	Various	Various:Various	14.003	-		0.400		1.108		-		1.108	0.000	15.511	Continuing
JPADS P3I	Various	Various:Various	5.270	0.500	Dec 2011	-		-		-		-	0.000	5.770	Continuing
LCADS P3I efforts	Various	Various:Various	0.750	0.200	Dec 2011	-		-		-		-	0.000	0.950	Continuing
Subtotal			23.890	0.700		0.400		1.108		0.000		1.108	0.000	26.098	
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Soldier Support Equipment	Various	Yuma Proving Ground (YPG), AZ, AEC:AZ	9.079	0.671	Dec 2011	-		-		-		-	0.000	9.750	Continuing
JPADS P3I	Various	Yuma Proving Ground, AZ:Yuma, AZ	0.000	0.500	Dec 2011	-		-		-		-	0.000	0.500	0.000
JPADS 10K OT	Various	GSA:GSA	0.108	0.828	Dec 2011	-		-		-		-	0.000	0.936	Continuing
ACPRS	Various	Yuma Proving Ground, AZ:Yuma, AZ	0.000	-		0.500		-		-		-	0.000	0.500	0.000

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army													DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>							R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>					PROJECT L39: <i>Field Sustainment Support Ed</i>			

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
ALVADS-L&H	Various	YPG, AZ/ OTC, NC: YPG, AZ/ OTC, NC	2.642	0.896	Dec 2011	1.250		0.250		-		0.250	0.000	5.038	Continuing
Subtotal			11.829	2.895		1.750		0.250		0.000		0.250	0.000	16.724	

	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	37.542	4.094		2.550		1.789		0.000		1.789	0.000	45.975	

Remarks

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army			DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>		
			PROJECT L39: <i>Field Sustainment Support Ed</i>		

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	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
Milestone C (MS C) Joint Precision Airdrop System (JPADS) 10K																												
Milestone C on Advanced Cargo Parachute Release System (ACPRS)																												
Milestone C (MS C) on Helicopter External/Internal Cargo Delivery																												
Complete Advanced Low Velocity Airdrop System (ALVADS) DV Testing																												
Conduct Developmental Testing/Operational Testing DT/OT on ALVADS-L																												
Obtain MS C for Space Heater Convective 90K British Thermal Unit per hour																												
Conduct Design Validation ALVADS-L																												
Conduct follow on testing ACPRS P3I																												
Conduct MS C on ALVADS-L																												
Conduct MS C on ALVADS-H																												
Fabricate OT test assets/begin OT on HSCDS																												
Complete OT for HSCDS																												
Complete Milestone C/TC STD on HSCDS																												
Complete DT/OT/Milestone C on Next Generation LCADS																												

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L39: <i>Field Sustainment Support Ed</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Milestone C (MS C) Joint Precision Airdrop System (JPADS) 10K	3	2012	3	2012
Milestone C on Advanced Cargo Parachute Release System (ACPRS)	1	2013	1	2013
Milestone C (MS C) on Helicopter External/Internal Cargo Delivery	3	2017	3	2017
Complete Advanced Low Velocity Airdrop System (ALVADS) DV Testing	1	2014	1	2015
Conduct Developmental Testing/Operational Testing DT/OT on ALVADS-L	2	2015	3	2016
Obtain MS C for Space Heater Convective 90K British Thermal Unit per hour	4	2012	4	2012
Conduct Design Validation ALVADS-L	1	2013	2	2013
Conduct follow on testing ACPRS P3I	1	2013	4	2013
Conduct MS C on ALVADS-L	4	2016	4	2016
Conduct MS C on ALVADS-H	4	2016	4	2016
Fabricate OT test assets/begin OT on HSCDS	2	2016	4	2016
Complete OT for HSCDS	1	2017	4	2017
Complete Milestone C/TC STD on HSCDS	2	2018	2	2018
Complete DT/OT/Milestone C on Next Generation LCADS	3	2017	4	2018

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT L41: Water And Petroleum Distribution - Ed			
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
L41: Water And Petroleum Distribution - Ed	-	2.012	3.839	2.650	-	2.650	4.186	4.106	3.789	3.817	Continuing	Continuing
Quantity of RDT&E Articles												

[#] 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

Description: This project provides all services with ample supply of clean fuel and water. The Army has the mission to supply fuel for all land-based forces, including the Marines and the Air Force, and must supply bulk drinking water to the soldiers. This System Development and Demonstration (SDD) program enables the Army to improve maneuver sustainment operations to meet the demands of the Stryker Brigade Combat Teams and Future Force. The mission includes receiving and transferring petroleum from trucks, ships, pipelines and permanent and temporary storage facilities; moving petroleum from storage to and within corps and division areas; fuel quality surveillance testing; and dispensing in support of tactical operations, including rapid refueling of aircraft. The mission covers purification, storage, distribution, and quality control of water. The Army cannot fight without clean fuel and water. These Research and Development (R&D) missions support the development and enhancement of rapidly deployed Petroleum and Water equipment which enables the Army to achieve its vision by providing a highly mobile and self-sustaining system in hostile theaters of operation.

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

	FY 2012	FY 2013	FY 2014
Title: Water System Capability Improvements.	0.300	0.250	0.000
Articles:	0	0	
Description: Funding is provided for the following effort			
FY 2012 Accomplishments: Continue integration of product improvements and conduct system level testing and evaluation of improved Tactical Water Purification System (TWPS) and Lightweight Water Purification system (LWP) and Reverse Osmosis Water Purification Unit (ROWPU), Load Handling System Water Tank Rack (HIPPO) system and the Unit Water Pod (Camel II) system. Based on component testing results, perform engineering integration analysis and system design to incorporate in-line water quality monitoring and perform technical and operational testing on TWPS, LWPs and ROWPUs. Prepare technical data to incorporate improved components into production units and to support system modernization through spares.			
FY 2013 Plans: Continue integration of product improvements and conduct system level testing and evaluation of improved Tactical Water Purification System (TWPS) and Lightweight Water Purification system (LWP) and Reverse Osmosis Water Purification Unit			

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT L41: Water And Petroleum Distribution - Ed		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
(ROWPU), Load Handling System Water Tank Rack (HIPPO) system and the Unit Water Pod (Camel II) system. Based on component testing results, perform engineering integration analysis and system design to incorporate in-line water quality monitoring and perform technical and operational testing on TWPS, LWPs and ROWPUs. Prepare technical data to incorporate improved components into production units and to support system modernization through spares.				
Title: Fuel System Supply Point (FSSP) Improvements. Description: Funding is provided for the following effort FY 2012 Accomplishments: Common Pump testing. FY 2013 Plans: Market Investigation for Family of Meters and On Board Truck Capability. FY 2014 Plans: Address the Army's capability gap for automated gauging to capture fuel quantities in collapsible tanks in the Fuel System Supply Point (FSSP). This includes the development of a data device that will transmit and store the data internally and externally to higher command.		Articles: 0.550 0	0.624 0	0.500
Title: 3K Tactical Water Purification System (TWPS). Description: Funding is provided for the following effort FY 2013 Plans: Initiate the development of a 3K TWPS Technical Data Package (TDP); Begin fabrication.		Articles: 0.000	0.535 0	0.000
Title: Integration of component level improvements at the system level for the Fuel System Supply Point (FSSP). Description: Funding is provided for the following effort FY 2013 Plans: The Fuel System Supply Points (FSSPs) has two different pumps, the 350 Gallon Per Minute (GPM) and the 600 GPM . These pumps will be replaced with one common pump to provide commonality across the fleet. Build the common pump prototypes for testing. In line fuel monitoring testing. FY 2014 Plans:		Articles: 0.000	0.700 0	0.540

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT L41: Water And Petroleum Distribution - Ed
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			
Finalize the technical manuals and technical data package (drawing package). The technical data package will allow the Army to competitively procure the common pump in the future. Complete testing.		FY 2012	FY 2013
Title: Expeditionary Water Packaging System (EWPS). Articles: Description: Funding is provided for the following effort FY 2012 Accomplishments: Continue development of Expeditionary Water Packaging System (EWPS). FY 2013 Plans: Test automated EWPS and finalize Purchase Description (PD) and prepare Request for Proposal (RFP). FY 2014 Plans: Complete testing of automated EWPS. Prepare Milestone C decision documents and prepare for review. Develop production contract and supporting documentation.		0.600 0	0.524 0
Title: Modular Tactical Refueling System (MTRS) Articles: Description: Funding is provided for the following effort. FY 2012 Accomplishments: Test and evaluation of the Modular Tactical Refueling System (MTRS). FY 2013 Plans: Assemble two Modular Tactical Refueling Systems (MTRS) for testing. FY 2014 Plans: Complete test, technical manuals and technical data package (drawing package) . The technical data package will allow the Army to competitively procure the MTRS in the future.		0.500 0	0.700 0
Title: Camel II (800 gallon watertank) Articles: Description: Perform operational testing on Camel II prototypes FY 2013 Plans:		0.000	0.506 0
			0.000

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army								DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L41: <i>Water And Petroleum Distribution - Ed</i>			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2012	FY 2013	FY 2014	
Perform operational testing on Camel II.											
Title: SBIR and STIR Description: Funding is provided for the following effort. FY 2012 Accomplishments: SBIR and STIR								Articles: 0.062 0	0.000	0.000	
Accomplishments/Planned Programs Subtotals								2.012	3.839	2.650	
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
• 0603804/K41: <i>RDTE, Logistics and Engineer Equipment - Advanced Development</i>	3.990	2.706	2.263		2.263	3.617	3.314	3.022	3.544	Continuing	Continuing
• MA6000: <i>OPA 3, Distribution Systems, Petroleum & Water</i>	75.457	38.385	60.612		60.612	63.364	66.259	61.996	56.038	Continuing	Continuing
Remarks											
D. Acquisition Strategy N/A											
E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>						R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>						PROJECT L41: <i>Water And Petroleum Distribution - Ed</i>			
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SBIR/STTR	TBD	TBD:TBD	0.000	0.062		-		-		-		-	0.000	0.062	0.000
Subtotal			0.000	0.062		0.000		0.000		0.000		0.000	0.000	0.062	0.000
Remarks not applicable															
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Water Systems Capability Improvements	Various	TARDEC:Warren, MI	0.124	0.060	Feb 2012	0.125		-		-		-	0.000	0.309	Continuing
FSSP Improvements	Various	TARDEC:Warren, MI	2.211	-		0.824		0.540	Jan 2014	-		0.540	0.000	3.575	Continuing
Water Systems Capability Improvements	Various	TBD:TBD	0.101	0.053	Feb 2012	0.025		-		-		-	0.000	0.179	Continuing
Expeditionary Water Packaging System (EWPS)	Various	TARDEC:Warren, MI	0.150	0.400	Feb 2012	0.424		0.960	Oct 2014	-		0.960	0.000	1.934	Continuing
3K Tactical Water Purification System (TWPS)	Various	NFESC:Pt. Huneme, CA	0.000	-		0.200		-		-		-	0.000	0.200	Continuing
3K Tactical Water Purification System (TWPS)	MIPR	TARDEC:Warren, MI	0.000	-		0.335		-		-		-	0.000	0.335	0.000
Modular Tactical Refueling System (MTRS)	MIPR	TARDEC:Warren, MI	0.000	0.237	Feb 2012	0.200		0.650	Jan 2014	-		0.650	0.000	1.087	0.000
Subtotal			2.586	0.750		2.133		2.150		0.000		2.150	0.000	7.619	

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>						R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>						PROJECT L41: <i>Water And Petroleum Distribution - Ed</i>			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Fuel System Supply Point (FSSP)	Various	TARDEC:Warren, MI	0.122	-		-		0.500	Jan 2014	-		0.500	0.000	0.622	Continuing
Water Purification Systems Improvements	Various	TARDEC:Warren, MI	0.000	-		0.100		-		-		-	0.000	0.100	Continuing
Subtotal			0.122	0.000		0.100		0.500		0.000		0.500	0.000	0.722	
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Fuel System Supply Point (FSSP)	MIPR	Yuma:Yuma Proving Ground, AZ	0.000	0.650	Feb 2012	0.500		-		-		-	0.000	1.150	Continuing
Water Systems Capability Improvements	Various	TARDEC:Warren, MI	0.265	0.050	Feb 2012	-		-		-		-	0.000	0.315	Continuing
Water Systems Capability Improvements	Various	NFESC:Port Hueneme, CA	0.626	0.100	Feb 2012	-		-		-		-	0.000	0.726	Continuing
Expeditionary Water Packaging System (EWPS)	Various	Aberdeen Proving Ground:APG, MD	0.630	0.200	Feb 2012	0.100		-		-		-	0.000	0.930	Continuing
Camel II	MIPR	Yuma Proving Ground:YPG, AZ	0.000	-		0.506		-		-		-	0.000	0.506	0.000
Modular Tactical Refueling System (MTRS)	Various	Yuma:Yuma Proving Ground, AZ	0.000	0.200	Feb 2012	0.500		-		-		-	0.000	0.700	Continuing
Subtotal			1.521	1.200		1.606		0.000		0.000		0.000	0.000	4.327	
			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			4.229	2.012		3.839		2.650		0.000		2.650	0.000	12.730	
Remarks															

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army			DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>		
			PROJECT L41: <i>Water And Petroleum Distribution - Ed</i>		

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	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
Fuel System Supply Points (FSSPs) Tank Gauging																												
Modular Tactical Refueling System (MTRS)																												
3K Tactical Water Purification System (3K TWPS)																												
Water Quality Monitoring																												
Unit Water Pod (Camel II)																												
Small Unit Water Purifier (SUWP)																												

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L41: <i>Water And Petroleum Distribution - Ed</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Fuel System Supply Points (FSSPs) Tank Gauging	4	2013	4	2014
Modular Tactical Refueling System (MTRS)	1	2013	4	2014
3K Tactical Water Purifictin System (3K TWPS)	3	2015	4	2016
Water Quality Monitoring	1	2015	4	2017
Unit Water Pod (Camel II)	2	2013	3	2013
Small Unit Water Purifier (SUWP)	4	2015	4	2018

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT L43: ENGINEER SUPPORT EQUIPMENT - ED			
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
L43: ENGINEER SUPPORT EQUIPMENT - ED	-	1.061	1.916	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles												
# 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												
Not applicable for this item.												
A. Mission Description and Budget Item Justification												
This project supports development, demonstration, testing and evaluation within the Engineering Support Equipment arena for the Hydraulic Electric Pneumatic Petroleum Operated Equipment (HEPPOE), Surveying, Firefighting Individual Requirements Equipment Support (FIRES), Concrete and Masonry, Electricians, Plumbers, Pipefitters, Field Lighting Sets, Diving Equipment, Surface Swimmer Support Sets, Surface Supplied Diving Set, procurement of new Technical/Special Tools, Pioneer Support Set, and the Pioneer Land Clearing and Building Erection Set. Funding will support the procurement of market samples and testing for Hazard ID & Marking, Pioneer Light Field Engineering, Deep Sea Set, Underwater Construction Set, Closed Circuit Scuba Set, the Family of Diving Air Compressors, Diver Propulsion Systems, Vertical Skills Engineer Construction Kit (VSECK), Family of Detainee Processing Evidence Collection Kit, Fire Protection Equipment (FPE) and Assault Boats and Outboard Motors. Efforts will also involve modernization of the Swimmer Support Sets and Individual Swimmer Support Sets as well as existing Sets, Kits, and Outfits (SKOs). Funding will develop Supervisor, Propulsion, Emergency and Recovery Set (SPEaRS), which supports Self Contained Underwater Breathing apparatus (SCUBA) teams conducting underwater reconnaissance, demolition, repair, light salvage and recovery missions to a maximum depth of 130 feet and includes a swift water package (Diver Propulsion System). This program will reduce the logistical footprint by eliminating obsolete equipment and reducing the number of programs.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014	
Title: Document Development									0.045	0.050	0.000	
									Articles: 0	0		
Description: Development of various capabilities documents and other documents												
FY 2012 Accomplishments:												
Coordinate to have ICDs, CDDs, and CPDs written for various programs												
FY 2013 Plans:												

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT L43: ENGINEER SUPPORT EQUIPMENT - ED		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2012	FY 2013	FY 2014
Continue development of ICDs, CDDs, and CPDs for various programs					
Title: Underwater Construction Sets Articles: Description: Research, Development, and Testing of Underwater Construction Sets FY 2012 Accomplishments: Procurement of Underwater Construction Set test articles FY 2013 Plans: Procure and test Underwater Construction Set articles			0.250 0	0.350 0	0.000
Title: Air Compressors for the Diving Program Articles: Description: Air Compressors for the Diving Program FY 2012 Accomplishments: Procurement of air compressor test articles			0.175 0	0.000	0.000
Title: Fire Protection Equipment (FPE) Articles: Description: Fire Protection Equipment FY 2012 Accomplishments: Procure FPE items FY 2013 Plans: Procure Type II and Type III FPE items			0.118 0	0.170 0	0.000
Title: Deep Sea Set Articles: Description: Development of the Deep Sea Set FY 2013 Plans: Create Computer Model of existing set /add enhancements to model /develop TDP in support of make-or-buy decision			0.000	0.221 0	0.000
Title: Assault Boats and Outboard Motors			0.160	0.625	0.000

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>		PROJECT L43: <i>ENGINEER SUPPORT EQUIPMENT - ED</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2012	FY 2013	FY 2014
Articles: Description: Development of various Assault Boats and Outboard Motors FY 2012 Accomplishments: Procurement of Assault Boats and Outboard Motors test articles FY 2013 Plans: Testing of 7-man and 15-man boats and testing of motors			0 0	0 0	
Title: Engineering and Quality Assurance Description: Engineering and Quality Assurance of engineering SKOs FY 2012 Accomplishments: Engineering and Quality Assurance dedicated to the development and quality of Assault Boats, Outboard Motors, Diving Equipment, and other engineering sets FY 2013 Plans: Engineering and Quality Assurance dedicated to the development and quality of Assault Boats, Outboard Motors, Diving Equipment, Soldier Portable, Firefighting and other engineering sets			0.156 0	0.300 0	0.000
Title: Vertical Skills Engineer Construction Kit (VSECK) Description: Research, Development, and Testing of Vertical Skills Engineer Construction Kit (VSECK) FY 2012 Accomplishments: Purchase and analysis of VSECK market samples FY 2013 Plans: Procure and test VSECK			0.020 0	0.125 0	0.000
Title: Detainee Kit Description: Research, Development, and Testing of Detainee Kit FY 2012 Accomplishments:			0.044 0	0.075 0	0.000

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army									DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT L43: ENGINEER SUPPORT EQUIPMENT - ED			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014
Purchase and analysis of Detainee Kit market samples											
FY 2013 Plans: Procure and test Detainee Kits											
Title: Diver Propulsion System									0.060	0.000	0.000
Articles:									0		
Description: Purchase of Diver Propulsion Systems											
FY 2012 Accomplishments: Purchase Diver Propulsion test articles											
Title: SBIR/STTR									0.033	0.000	0.000
Articles:									0		
Description: Withheld for SBIR/STTR											
FY 2012 Accomplishments: SBIR/STTR withhold											
Accomplishments/Planned Programs Subtotals									1.061	1.916	0.000
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
• OPA 3 ML5325: OPA 3 ML5325, Items Less than \$5.0M (Engineering Support)	12.482	14.093	5.859		5.859	6.359	6.209	6.359	6.359	Continuing	Continuing
• OPA 3 R70110: OPA 3 R70110, Hydraulic Electric Pneumatic Petroleum Operated Equipment (HEPPOE)	28.949	5.889	13.350		13.350	13.350	13.350	13.350	9.700	Continuing	Continuing
• OPA 3 R70120: OPA 3 R70120, Urban Operations, Platoon Set	13.760	13.434	11.641		11.641	11.641	11.641	11.641	11.641	Continuing	Continuing
• OPA 3 R70130: OPA 3 R70130, Urban Operations, Squad Set	11.481	12.250	13.150		13.150	13.139	10.199	3.709	2.917	Continuing	Continuing

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army										DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>					R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>			PROJECT L43: <i>ENGINEER SUPPORT EQUIPMENT - ED</i>			
C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u> <u>Base</u>	<u>FY 2014</u> <u>OCO</u>	<u>FY 2014</u> <u>Total</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
Remarks											
D. Acquisition Strategy Progression of Programs will be developed by the completion of the Initial Capabilities Document, Capability Development Document, Capability Production Document, and Description For Purchase continuing into Low Rate Initial Production. Modernization and Optimization of existing tools and testing of market samples will progress from System Development and Demonstration (SDD) and transition into production.											
E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>						R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>						PROJECT L43: <i>ENGINEER SUPPORT EQUIPMENT - ED</i>			
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SBIR/STTR	TBD	Various:Various	0.000	0.033		-		-		-		-	0.000	0.033	0.000
Subtotal			0.000	0.033		0.000		0.000		0.000		0.000	0.000	0.033	0.000
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Surface Supplied Diving Set and Deep Sea Set	C/FP	PM SKOT/ECBC/TBS:(IL, MI, TBS)	0.296	-		-		-		-		-	Continuing	Continuing	Continuing
Underwater Construction Set market research and purchase of test articles	C/FP	PM SKOT/Edgewood Chemical and Biological Center (ECBC)/TBS:(IL, MI, TBS)	0.143	0.167	Dec 2011	0.250	Dec 2012	-		-		-	Continuing	Continuing	Continuing
Market Samples of Soldier Portable Sets and Support Equipment	SS/FP	PM SKOT:Harrison, MI	0.586	-		-		-		-		-	Continuing	Continuing	Continuing
Assault Boats and Outboard Motors test articles	C/FP	TBS:TBS	0.000	0.160	Dec 2011	-		-		-		-	Continuing	Continuing	Continuing
Market Samples for Detainee Kit	C/FP	PM SKOT:Harrison, MI	0.000	0.044	Dec 2011	0.050	Nov 2012	-		-		-	Continuing	Continuing	Continuing
Market Samples of Vertical Skills Engineer Construction Kit (VSECK)	C/FP	PM SKOT:Harrison, MI	0.000	0.020	Feb 2012	0.100	Dec 2012	-		-		-	Continuing	Continuing	Continuing
Deep Sea Set Computer Modeling and TDP Development	MIPR	ECBC:Rock Island, IL	0.000	-		0.221	Oct 2012	-		-		-	Continuing	Continuing	Continuing
Procure Fire Protection Equipment (Type I, II and III)	C/FP	PM SKOT:Harrison, MI	0.000	0.118	Dec 2011	0.170	Dec 2012	-		-		-	Continuing	Continuing	Continuing

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>						R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>						PROJECT L43: <i>ENGINEER SUPPORT EQUIPMENT - ED</i>			
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Diver Propulsion System Market Samples	C/FP	Patriot 3 Maritime:Fredericksburg, VA	0.000	0.060	Feb 2012	-		-		-		-	Continuing	Continuing	Continuing
XLDS	SS/FP	TBS:TBS	0.000	0.050	Feb 2012	-		-		-		-	0.000	0.050	0.000
Develop Air Compressors for Diving Program	C/FP	TBS:TBS	0.000	0.175	Dec 2011	-		-		-		-	Continuing	Continuing	Continuing
Subtotal			1.025	0.794		0.791		0.000		0.000		0.000			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Modernization Analyses for modularity of Soldier Portable/Shelter Mounted SKOs	SS/FP	Armament Research Development and Engineering Center (ARDEC):Rock Island, IL	0.056	-		-		-		-		-	Continuing	Continuing	Continuing
Engineering Support Equipment Configuration Analyses and document development support	MIPR	Combined Arms Support Command (CASCOM)/ Maneuver Support Center (MANSCEN): (VA, MO)	0.125	0.045	Dec 2011	0.050	Oct 2012	-		-		-	Continuing	Continuing	Continuing
Engineering and Quality Assurance of engineering SKOs (Soldier Portable)	MIPR	ECBC/ARDEC:Rock Island, IL	0.000	0.089	Dec 2011	0.200	Nov 2012	-		-		-	Continuing	Continuing	Continuing
Engineering and Quality Assurance (Boats and Motors)	MIPR	ECBC:Rock Island, IL	0.000	0.100	Dec 2011	0.100	Oct 2012	-		-		-	Continuing	Continuing	Continuing
Subtotal			0.181	0.234		0.350		0.000		0.000		0.000			

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>							R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L43: <i>ENGINEER SUPPORT EQUIPMENT - ED</i>			

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Redevelopment and testing of state of the art Deep Sea Set	MIPR	PM SKOT/ ECBC:Rock Island, IL	0.375	-		-		-		-		-	Continuing	Continuing	Continuing
Underwater Construction Test	C/FP	Navy/ PM SKOT:FL, MI	0.000	-		0.100	Jan 2013	-		-		-	Continuing	Continuing	Continuing
Testing of Boats and Motors	MIPR	NAVSEA:VA	0.000	-		0.625	Dec 2012	-		-		-	Continuing	Continuing	Continuing
Testing of Soldier Portable Sets	MIPR	ECBC/ATEC:IL, VA	0.000	-		0.050	Jan 2013	-		-		-	Continuing	Continuing	Continuing
Subtotal			0.375	0.000		0.775		0.000		0.000		0.000			

	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	1.581	1.061		1.916		0.000		0.000		0.000			

Remarks

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army			DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE		PROJECT	
2040: Research, Development, Test & Evaluation, Army		PE 0604804A: Logistics and Engineer		L43: ENGINEER SUPPORT EQUIPMENT -	
BA 5: System Development & Demonstration (SDD)		Equipment - Eng Dev		ED	

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	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
Procurement of test articles and testing of Assault Boats & Outboard Motors																												
Procurement of test articles & testing of Soldier Portable Sets & Support Equip																												

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L43: <i>ENGINEER SUPPORT EQUIPMENT - ED</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Procurement of test articles and testing of Assault Boats & Outboard Motors	2	2012	4	2014
Procurement of test articles & testing of Soldier Portable Sets & Support Equip	2	2013	4	2014

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army									DATE: April 2013								
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT L46: Maintenance Support Equipment								
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					
L46: Maintenance Support Equipment	-	3.064	3.697	1.232	-	1.232	2.045	1.976	1.829	1.903	Continuing	Continuing					
Quantity of RDT&E Articles																	
# 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 Not applicable for this item.																	
A. Mission Description and Budget Item Justification This project supports requirements generation for Sets, Kits, and Outfits (SKOs) and the subsequent creation of technical data as well as purchase descriptions. Funding will support the modernization of Mobile Maintenance Equipment Shop Set Shelters for the next generation armored vehicle in order to lower the weight of enclosure to accommodate required tool load. Efforts will continue on deploying SKOs to support rapid emerging missions including joint efforts. Support equipment items including Special Tool Sets and Load Banks will be acquired and tested. This project will fund efforts to include development of the Next Generation Shop Equipment Welding (SEW), additional modules and the Next Generation Standard Automotive Tool Set (SATS), the Metalworking and Machining Shop Set (MWMSS), as well as the Armament Repair Shop Set (ARSS) that support the merging of Military Occupational Specialties (MOS). Research, development, and testing of Fire Suppression bottle refill systems and investigation feasibility of Joint Modular Container Systems for SKOs will also be performed.																	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014						
Title: Develop the Next Generation Shop Equipment Welding (SEW) Articles: Description: Design, Build, and Test the Next Generation SEW, incorporating new technology and a new platform FY 2013 Plans: Concept design and development of the Next Generation SEW on a new platform									0.000	0.900 0	0.000						
Title: Develop Next Generation Standard Automotive Tool Set (SATS) Articles: Description: Design, Develop, Build, and Test SATS Future Field Modules FY 2013 Plans:									0.000	0.403 0	0.485						

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT L46: Maintenance Support Equipment		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
Develop Next Generation SATS prototypes				
FY 2014 Plans: Procure Next Generation SATS prototypes, SATS future field modules and special tools.				
Title: Metalworking & Machining Shop Set (MWMSS) Description: Design, Develop, Build, and Test Metalworking & Machining Shop Set (MWMSS) configurations FY 2012 Accomplishments: Additional Testing of MWMSS FY 2013 Plans: Additional Testing/Re-testing MWMSS		Articles: 0.175 0	0.100 0	0.000
Title: Mobile Maintenance Equipment Shop Set Description: Modernization / Redesign efforts of mobile shelters for next generation of vehicles FY 2012 Accomplishments: Purchase of a next generation vehicle chassis, and integration and testing of the next generation vehicle platform variant FY 2013 Plans: Vehicular SKO Modernization to include SECM FY 2014 Plans: Modernization and development efforts of truck/trailer transported shelters for next generation of vehicles, to include the Shop Equipment Contact Maintenance (SECM) tool load and other vehicle-mounted maintenance SKOs		Articles: 0.300 0	0.389 0	0.522
Title: Support for Requirements Generation Description: Support for requirements generation of future SKOs FY 2012 Accomplishments: Document development support for future requirements FY 2013 Plans:		Articles: 0.122 0	0.125 0	0.125

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT L46: Maintenance Support Equipment		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
Document development supporting future requirements SKOs				
FY 2014 Plans: Document development supporting future requirements SKOs				
Title: Rapid Deployment SKOs Articles: Description: Develop Rapid Deployment Sets, Kits, and Outfits (SKOs) - Special Tool Initiative and support to Mine Resistance Ambush Protection (MRAP) and other vehicles FY 2013 Plans: Develop and test various Soldier Portable Tool Kits based on the maintenance requirements of current and future platforms. FY 2014 Plans: Develop and test various Soldier Portable Tool Kits based on the maintenance requirements of current and future platforms.		0.000	0.275 0	0.050
Title: Engineering and Quality Assurance Articles: Description: Engineering and Quality Assurance in support of SKOs FY 2012 Accomplishments: Engineering and Quality Assurance of the Armament Shop Set (ARSS), Special Tool Sets, and other maintenance SKOs FY 2013 Plans: Engineering and Quality Assurance dedicated to the development and quality of maintenance SKOs		0.306 0	0.450 0	0.000
Title: Armament Shop Set (ARSS) Articles: Description: Armament Shop Set upgrades FY 2012 Accomplishments: Purchase of ARSS prototypes FY 2013 Plans: Test of ARSS prototypes and development of Technical Manuals		2.065 0	1.055 0	0.000
Title: Acquisition of Support Equipment		0.000	0.000	0.050

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev					PROJECT L46: Maintenance Support Equipment		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)										FY 2012	FY 2013	FY 2014
Description: Support Equipment												
FY 2014 Plans: Procure and test Support Equipment (standalone lathes, mills, load banks, etc.) formerly known as nonstandard												
Title: SBIR/STTR Articles:										0.096 0	0.000	0.000
Description: Withheld for SBIR/STTR												
FY 2012 Accomplishments: SBIR/STTR withhold												
Accomplishments/Planned Programs Subtotals										3.064	3.697	1.232
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	
• OPA 3 M61500: OPA 3 M61500, Shop Equipment, Contact Maintenance (SECM)	20.428									Continuing	Continuing	
• OPA 3 MA9650: OPA 3 MA9650, Standard Automotive Tool Set (SATS)	8.377									Continuing	Continuing	
• OPA 3 G32101: OPA 3 G32101, Items Less Than \$5.0M (MAINTENANCE EQUIPMENT)	3.852	0.030	3.860		3.860	3.861	3.858	3.859	3.859	Continuing	Continuing	
• OPA 3 G05302: OPA 3 G05302, Forward Repair System (FRS)	8.376									0.000	8.376	
• OPA 3 G39200: OPA 3 G39200, Hydraulic Systems Test and Repair Unit (HSTRU)	4.520	2.923	0.400		0.400					Continuing	Continuing	
• OPA 3 G05315: OPA 3 G05315, Metalworking and Machining Shop Set (MWMSS)			15.000		15.000	15.237	17.200	15.231	15.231	Continuing	Continuing	

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army										DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>					R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>			PROJECT L46: <i>Maintenance Support Equipment</i>			
C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u> <u>Base</u>	<u>FY 2014</u> <u>OCO</u>	<u>FY 2014</u> <u>Total</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• OPA 3 G05330: <i>OPA 3 G05330, Armament Repair Shop Set</i>			4.027		4.027	12.420	12.420	14.420	12.400	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
Programs will progress from requirements generation through market research, development, market samples and testing. Efforts will support two level maintenance concept utilizing commercial technologies and incorporating them into SKO to support next generation weapon and support systems.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>						R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>						PROJECT L46: <i>Maintenance Support Equipment</i>			
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SBIR/STTR	TBD	Various:Various	0.000	0.096		-		-		-		-	0.000	0.096	0.000
Subtotal			0.000	0.096		0.000		0.000		0.000		0.000	0.000	0.096	0.000
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Maintenance Support Equipment Life Cycle Configuration Analyses and ICD Development Support	MIPR	PM SKOT/ Army Test & Evaluation Command (ATEC)/ Combined Arms Support Command (CASCOM):(IL, MI, MD, VA)	1.431	-		-		0.125	Oct 2013	-		0.125	Continuing	Continuing	Continuing
Next Generation Shop Equipment Welding (SEW) concept design and development	MIPR	ECBC:Rock Island, IL	0.000	-		0.900	Nov 2012	-		-		-	Continuing	Continuing	Continuing
Modernization/Redesign efforts of Truck/Trailer transported shelters for next generation vehicles	MIPR	ECBC:Rock Island, IL	0.000	0.300	Dec 2011	0.389	Dec 2012	0.522	Dec 2013	-		0.522	Continuing	Continuing	Continuing
Expedited Modernization Initiative Procedure (EMIP) Procurement of new Technical Tools	SS/FP	Multiple CONUS: (GA, CA, IL, WI, MI)	0.012	-		-		-		-		-	Continuing	Continuing	Continuing
Develop Rapid Deployment Sets, Kits, & Outfits - Special Tool Initiative.	MIPR	ECBC:Rock Island, IL	0.100	-		0.150	Oct 2012	0.050	Dec 2013	-		0.050	Continuing	Continuing	Continuing
Procure Special Tools in support of Ground Combat System	MIPR	PM SKOT:Harrison, MI	0.000	-		-		-		-		-	Continuing	Continuing	Continuing

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)						R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev						PROJECT L46: Maintenance Support Equipment			
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Armament Repair Shop Set (ARSS) market research and prototypes	MIPR	ECBC- PIF:Edgewood, MD	0.050	1.969	Feb 2012	-		-		-		-	Continuing	Continuing	Continuing
Subtotal			1.593	2.269		1.439		0.697		0.000		0.697			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Life Cycle Configuration Analyses & Support to Initial Capabilities Document Development	MIPR	PM SKOT Rock Island/ CASCOM / Maneuver Support Center (MANSCEN): (IL, VA, MO)	0.496	0.122	Feb 2012	0.125	Dec 2012	-		-		-	Continuing	Continuing	Continuing
Modernization of Tool Loads based on Field Feedback	MIPR	PM SKOT:Harrison, MI	0.300	-		-		-		-		-	Continuing	Continuing	Continuing
Engineer and Quality Assurance in support of SKOs	MIPR	ECBC / ARDEC / PM SKOT:(IL, MI)	0.578	0.402	Dec 2011	0.450	Nov 2012	-		-		-	Continuing	Continuing	Continuing
Subtotal			1.374	0.524		0.575		0.000		0.000		0.000			
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Special Tool Kits	MIPR	ECBC / ATEC:(IL, MD)	0.000	-		0.125		-		-		-	Continuing	Continuing	Continuing
Testing of the Metalworking & Machining Shop Set (MWMSS)	MIPR	ATEC:Aberdeen, MD	2.446	0.175	Dec 2011	0.100	Dec 2012	-		-		-	Continuing	Continuing	Continuing

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army													DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>							R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L46: <i>Maintenance Support Equipment</i>				
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Armament Repair Shop Set (ARSS)	MIPR	ATEC:Aberdeen, MD	0.000	-		1.055	Dec 2012	-		-		-	Continuing	Continuing	Continuing
Further develop SATS Field Maintenance Module & viability of adding Load Handling System capability	MIPR	PM SKOT:Harrison, MI	0.263	-		0.403	Nov 2012	0.485	Nov 2013	-		0.485	Continuing	Continuing	Continuing
Procure and Test standalone support equipment items	MIPR	ATEC:Aberdeen, MD	0.000	-		-		0.050	Dec 2013	-		0.050	Continuing	Continuing	Continuing
Subtotal			2.709	0.175		1.683		0.535		0.000		0.535			
			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			5.676	3.064		3.697		1.232		0.000		1.232			
Remarks															

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army																DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY								R-1 ITEM NOMENCLATURE								PROJECT			
2040: Research, Development, Test & Evaluation, Army								PE 0604804A: Logistics and Engineer								L46: Maintenance Support Equipment			
BA 5: System Development & Demonstration (SDD)								Equipment - Eng Dev											

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L46: <i>Maintenance Support Equipment</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Joint Modular Intermodal Containerizing of Soldier Portable & Special Tools Sets	1	2014	4	2017

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT L47: Improved Environmental Control Units Ed			
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
L47: Improved Environmental Control Units Ed	-	0.000	2.976	2.968	-	2.968	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles												
# 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 Not applicable for this item.												
A. Mission Description and Budget Item Justification The Improved Environmental Control Units (IECU) program will provide a new generation of ECUs that use environmentally approved refrigerants, with zero ozone-depleting chemicals (ODCs) to replace the current Military Standard (MIL-STD) Family of Environmental Control Units (ECUs). The IECUs will provide improved cooling, heating, and dehumidification to soldiers and materiel systems in combat, combat support and combat service support units. The IECUs are required to replace currently fielded environmental control units in order to comply with statutory and regulatory restrictions on the use of Class II ODCs and to improve the performance of military ECUs. They are form, fit and function replacements to the current MIL-STD ECUs. Technical improvements over existing military-standard ECUs will yield significant fuel and weight savings, reduction in scheduled maintenance, and increased reliability. 9, 18, and 36K BTU/H IECUs: The 9, 18 and 36K BTU/H IECUs will be a replacement for the current MIL-STD-ECU variants. The new family of IECUs will utilize a new refrigerant which complies with mandated EPA (Environmental Protection Agency) requirements (non-global warming). FY13 and FY14 funds Engineering and Manufacturing Development (EMD) Phase activities for the 9, 18 and 36K development, as well as further IECU variants which include multiple trailer-mounted systems and 18K vertical configurations (current family under development does not have a vertical 18; additional users have been identified as requiring this configuration). In addition, the field has identified an emerging requirement for an integrated fuel-fired heating/cooling system. These further variants will further standardize cooling units in the field, enable cooling of larger shelters and structures, offer increased mobility, and may be used to cool multiple tents with one unit.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014	
Title: Technology Development									0.000	2.000	0.524	
Articles:										0		
Description: Engineering and Manufacturing Development (EMD) for 9/18/36K BTUH IECU, multiple trailer-mounted variants, 18K Vertical configuration and integrated heating/cooling systems.												
FY 2013 Plans:												

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>		PROJECT L47: <i>Improved Environmental Control Units Ed</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2012	FY 2013	FY 2014
Support continuing EMD effort for 9/18/36K BTUH IECU. Complete final engineering requirements for 9/18/36K IECUs. Develop prototypes for multiple trailer-mounted variants, 18K Vertical configuration and integrated heating/cooling units to meet emerging user needs. FY 2014 Plans: Support continuing EMD effort for 9/18/36K BTUH IECU. Complete final engineering requirements for 9/18/36K IECUs. Develop prototypes for multiple trailer-mounted variants, 18K Vertical configuration and integrated heating/cooling units to meet emerging user needs.					
Title: Government System Test and Evaluation Description: Testing for prototype performance for the trailer mounted variants of the IECUs. FY 2013 Plans: Testing for prototype performance for the trailer mounted variants of the IECUs. FY 2014 Plans: Conduct reliability testing, Limited User Test, and logistics verification for 18K Vertical IECU, as well as trailer mounted variants. Conduct performance tests on integrated heating/cooling units.			Articles: 0.000	0.199 0	1.500
Title: Other Contract and Government Agency Description: Support engineering, logistics, and testing efforts for multiple trailer-mounted variants, as well as 18 K Vertical configuration and integrated heating/cooling units. Support EMD effort on 9/18/36K IECU family. FY 2013 Plans: Support engineering, logistics, and testing efforts for multiple trailer-mounted variants, as well as 18K Vertical configuration and integrated heating/cooling units. Support EMD effort on 9/18/36K IECU family. FY 2014 Plans: Support engineering, logistics, and testing efforts for multiple trailer-mounted variants, as well as 18K Vertical configuration and integrated heating/cooling units. Support EMD effort on 9/18/36K IECU family.			Articles: 0.000	0.344 0	0.444
Title: Government Program Management Articles:			0.000	0.433 0	0.500

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army							DATE: April 2013				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>			PROJECT L47: <i>Improved Environmental Control Units Ed</i>				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)							FY 2012	FY 2013	FY 2014		
Description: Oversight and management of engineering, logistics, contracts, and testing efforts for 9/18/36 IECU family, multiple trailer-mounted variants, as well as 18K Vertical configurations. Transition to production. Provide oversight and management of integrated heating/cooling units. FY 2013 Plans: Oversight and management of engineering, logistics, contracts, and testing efforts for 9/18/36K IECU family, multiple trailer-mounted variants, as well as 18K Vertical configurations. Transition to production. Provide oversight and management of integrated heating/cooling units. FY 2014 Plans: Oversight and management of engineering, logistics, contracts, and testing efforts for 9/18/36 IECU family, multiple trailer-mounted variants, as well as 18K Vertical configurations. Transition to production. Provide oversight and management of integrated heating/cooling units.											
Accomplishments/Planned Programs Subtotals							0.000	2.976	2.968		
C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u> <u>Base</u>	<u>FY 2014</u> <u>OCO</u>	<u>FY 2014</u> <u>Total</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• MF9303: <i>OPA 3, Improved Environmental Control Units , MF9303</i>	10.109	10.689	7.269		7.269	22.351	24.321	25.671		Continuing	Continuing
Remarks											
D. Acquisition Strategy											
Complete Engineering and Manufacturing Development (EMD) for the 9/18/36K IECU variants and transition to production. Begin EMD for level efforts in support of multiple trailer-mounted IECU variants as well as a vertical configuration of the 18K IECU. The initial prototypes of the trailer-mounted variants will be assembled in house, with eventual production via depot-level integration of GFE from existing production contracts. The 18K vertical EMD prototype effort will be acquired in a single-contract, single-contractor award, via a CPFF 2 year EMD contract. A follow-on production contract will be planned for later acquisition. Initial prototypes of the integrated fuel-fired heating and cooling systems will be procured off-the-shelf through third party vendors for assessment. This assessment will support development of a PD for eventual competitive procurement.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)						R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT L47: Improved Environmental Control Units Ed					
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
9,18 and 36K IECU	Various	PM-MEP:various	1.124	-		-		0.050	Nov 2013	-		0.050	0.000	1.174	Continuing
Trailer Variants	Various	PM-MEP:various	0.000	-		0.433	Nov 2012	0.075	Nov 2013	-		0.075	0.000	0.508	Continuing
18K Vertical	Various	PM-MEP:various	0.000	-		-		0.050	Nov 2013	-		0.050	0.000	0.050	0.000
Integrated heating/cooling units	Various	PM-MEP:various	0.000	-		-		0.025	Nov 2013	-		0.025	0.000	0.025	0.000
SBIR/STTR	Various	various:various	0.137	-		-		-		-		-	0.000	0.137	0.000
Subtotal			1.261	0.000		0.433		0.200		0.000		0.200	0.000	1.894	
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
9 ,18 and 36K IECU	C/CPFF	Mainstream Engineering:Vero Beach, FL	2.064	-		-		-		-		-	0.000	2.064	Continuing
Trailer Mounted variants	MIPR	CERDEC Night Vision Lab:Ft Belvoir, VA	0.000	-		-		0.400	Mar 2014	-		0.400	0.000	0.400	0.000
18K Vertical	C/CPFF	TBD:TBD	0.000	-		2.000	Jun 2013	0.600	Mar 2014	-		0.600	0.000	2.600	0.000
Subtotal			2.064	0.000		2.000		1.000		0.000		1.000	0.000	5.064	
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
9, 18 and 36K IECU	MIPR	CERDEC:Fort Belvoir, VA	1.642	-		-		0.500	Mar 2014	-		0.500	0.000	2.142	0.000
18K Vertical	Various	CERDEC:Fort Belvoir, VA	3.507	-		-		0.200	Mar 2014	-		0.200	0.000	3.707	0.000
Trailer variants	MIPR	CERDEC:Fort Belvoir, VA	0.000	-		0.344	Oct 2012	0.300	Nov 2013	-		0.300	0.000	0.644	0.000

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)						R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev						PROJECT L47: Improved Environmental Control Units Ed			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated heating/cooling units	MIPR	CERDEC:Fort Belvoir, VA	0.000	-		-		0.090	Mar 2014	-		0.090	0.000	0.090	0.000
Subtotal			5.149	0.000		0.344		1.090		0.000		1.090	0.000	6.583	0.000
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
9,18 and 36K IECU	MIPR	ATEC:APG, MD	0.300	-		-		0.278	Mar 2014	-		0.278	0.000	0.578	0.000
Trailer Variants	MIPR	ATEC:APG, MD	0.000	-		0.199	Nov 2012	0.150	Mar 2014	-		0.150	0.000	0.349	Continuing
18K Vertical	MIPR	ATEC:APG, MD	0.000	-		-		0.200	Mar 2014	-		0.200	0.000	0.200	0.000
Integrated heating/cooling units	MIPR	ATEC:APG, MD	0.000	-		-		0.050		-		0.050	0.000	0.050	0.000
Subtotal			0.300	0.000		0.199		0.678		0.000		0.678	0.000	1.177	
			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			8.774	0.000		2.976		2.968		0.000		2.968	0.000	14.718	
Remarks															

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

2040: *Research, Development, Test & Evaluation, Army*
BA 5: *System Development & Demonstration (SDD)*

R-1 ITEM NOMENCLATURE

PE 0604804A: *Logistics and Engineer Equipment - Eng Dev*

PROJECT

L47: *Improved Environmental Control Units Ed*

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	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
Production Qualification Test																												
Conduct User Evaluation																												
Logistics Demonstration																												
Milestone C/LRIP Decision																												
LRIP/TC Std/FMR Work																												
Full Rate Production Decision																												
Trailer Variants IECU																												
Preliminary Design Review																												
Design and Fabrication																												
CDR Trailers																												
Test Phase																												
Production Readiness Review																												
18K Vertical Development																												
Preliminary Design Review II																												
Design and Fabrication II																												
Test Phase II																												
User Test																												
Production Readiness Review II																												
Integrated Heating/Cooling Units																												
Procure Off-The-Shelf Units																												
Test Systems																												
Develop PD																												

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

2040: *Research, Development, Test & Evaluation, Army*
BA 5: *System Development & Demonstration (SDD)*

R-1 ITEM NOMENCLATURE

PE 0604804A: *Logistics and Engineer Equipment - Eng Dev*

PROJECT

L47: *Improved Environmental Control Units Ed*

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Production Qualification Test	2	2012	2	2013
Conduct User Evaluation	1	2013	2	2013
Logistics Demonstration	2	2013	4	2013
Milestone C/LRIP Decision	2	2013	2	2013
LRIP/TC Std/FMR Work	2	2013	2	2014
Full Rate Production Decision	2	2014	2	2014
Trailer Variants IECU	1	2013	4	2014
Preliminary Design Review	1	2013	1	2013
Design and Fabrication	1	2013	2	2013
CDR Trailers	3	2013	3	2013
Test Phase	3	2013	2	2014
Production Readiness Review	2	2014	2	2014
18K Vertical Development	1	2013	2	2015
Preliminary Design Review II	3	2013	3	2013
Design and Fabrication II	3	2013	3	2014
Test Phase II	2	2014	4	2014
User Test	1	2015	1	2015
Production Readiness Review II	2	2015	2	2015
Integrated Heating/Cooling Units	1	2013	4	2014
Procure Off-The-Shelf Units	4	2013	4	2013
Test Systems	1	2014	3	2014
Develop PD	3	2014	4	2014

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT L50: JOINT LIGHT TACTICAL VEHICLES (JLTV) - SDD			
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
L50: JOINT LIGHT TACTICAL VEHICLES (JLTV) - SDD	-	84.500	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles												
# 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												
Transition of funding from PE 0604804A, Project L50 to PE 0605812A, Project VU9 occurs in FY 2013 and outyears.												
FY 2008 - FY 2011 funding for the Joint Light Tactical Vehicles (JLTV) program is under Program Element (PE) 0603804A, Project L04.												
A. Mission Description and Budget Item Justification												
Funding supports the development and testing of the Joint Light Tactical Vehicle (JLTV) Family of Vehicles (FoV), which is a joint program between the U.S. Army and the U.S. Marine Corps. The JLTV goal is a FoV capable of performing multiple mission roles that will be designed to provide protected, sustained, networked mobility for personnel and payloads across the full range of military operations. JLTV objectives include increased protection and performance over the current fleet; minimizing ownership costs by maximizing commonality, fuel efficiency, reliability, and maintaining effective competition throughout the life cycle. Commonality of components, maintenance procedures, training, etc., between vehicles is expected to be inherent in FoV solutions across mission variants to minimize total ownership cost. Unique service requirements have been minimized.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)										FY 2012	FY 2013	FY 2014
Title: Joint Light Tactical Vehicles (JLTV) Program Management Support Articles: Description: Funding is provided for the support of program management government operations. FY 2012 Accomplishments: Various costs to provide effort during the Engineering and Manufacturing Development (EMD) phase and contract source selection board.										4.910 0	0.000	0.000
Title: Engineering and Manufacturing Development (EMD) Prototype Contract and Support for Development and Fabrication. Articles: Description: Funding is provided for EMD prototype Joint Light Tactical Vehicle development and fabrication. FY 2012 Accomplishments:										73.026 0	0.000	0.000

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army									DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT L50: JOINT LIGHT TACTICAL VEHICLES (JLTV) - SDD			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014
Funding is provided for EMD prototype Joint Light Tactical Vehicle development and fabrication.											
Title: Engineering and Manufacturing Developmental Test and Evaluation				Articles:					1.763 0	0.000	0.000
Description: Funding is provided for Engineering and Manufacturing Development test support to include the start of coupon testing.											
FY 2012 Accomplishments: Engineering and Manufacturing Development testing.											
Title: Government Furnished Equipment and Management.				Articles:					4.801 0	0.000	0.000
Description: Government furnished equipment for Joint Light Tactical Vehicles (JLTV) Engineering, Manufacturing, and Development contract phase.											
FY 2012 Accomplishments: Government furnished equipment for Joint Light Tactical Vehicles (JLTV) Engineering and Manufacturing Development contract phase.											
Accomplishments/Planned Programs Subtotals									84.500	0.000	0.000
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
• PM JLTV PROJECT VU9: Joint Light Tactical Vehicles (JLTV), 0605812A, Army RDTE Project VU9		72.295	84.230		84.230	34.700	33.224	26.123	3.281	Continuing	Continuing
• PM JLTV PRODUCTION D15603: Joint Light Tactical Vehicles (JLTV), D15603, Army OPA 1						178.305	312.866	606.299	846.919	Continuing	Continuing
• PM JLTV PROJECT 3209 0603635M: Marine Corps Ground	45.945									0.000	45.945

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army									DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT L50: JOINT LIGHT TACTICAL VEHICLES (JLTV) - SDD			
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
Combat/Support Systems, RDTE Project 3209 0603635M											
• PM JLTV PROJECT 3209		44.500	50.362		50.362	16.606	33.058	23.938	2.372	Continuing	Continuing
0605812M: Marine Corps Ground Combat/Support Systems, RDTE Project 3209 0605812M											
• PM JLTV PRODUCTION 5095:						30.521	99.536	143.062	520.468	Continuing	Continuing
Marine Corps Ground Combat/ Support Systems, Production 5095											
Remarks											
D. Acquisition Strategy											
Joint Light Tactical Vehicles (JLTV) is a Joint Services Program with the U.S. Army and U.S. Marine Corps as the two main components. In addition, the Navy anticipates procuring JLTV vehicles upon successful Low-Rate Initial Production (LRIP) testing. The program will use an evolutionary approach to deliver capabilities in increments based on program priorities. All technologies entering the current Engineering, Manufacturing and Development (EMD) phase shall be no less than Technology Readiness Level 6 to achieve Capabilities Development Document (CDD) requirements.											
The program revised the acquisition strategy in the first quarter FY 2012 addressing Better Buying Power Initiatives, and reduced the schedule by 15 months to enable a 33-month Non-Developmental Item approach for EMD with Milestone B approved on 9 August 2012.											
Increment I will produce two Mission Role Variant (MRV) configurations (Combat Tactical Vehicle (CTV) and Combat Support Vehicle (CSV)) with mission packages (General Purpose, Heavy Guns Carrier, Close Combat Weapons Carrier, and Utility/Shelter Carrier). EMD vendors will fabricate representative mission packages from both MRVs, which the Government will fully test during the EMD phase. Agreement was reached between the PM and user community to eliminate two mission packages, the Special Purpose (SP) and Command and Control On-The Move (C2OTM) vehicles which integrated Warfighter Information Network-Tactical (WIN-T) systems for the Army. Eliminating these unique vehicles reduces technical risk and cost of the JLTV EMD effort. It also eliminates duplicate development and relies on the WIN-T program's existing efforts to fund, integrate, and test their capabilities on other vehicles during the JLTV EMD schedule.											
Through a full and open competition, the program awarded three firm-fixed price contracts for the EMD phase on 22 August 2012. Unless future market research identifies a valid non-EMD vendor capable of delivering the required capabilities, there will be a down-select from the EMD contractors to enter into the Production and Deployment phase. The down-select will result in a fixed-price type contract with a base LRIP quantity, LRIP options, full-rate production options, and a Technical Data Package option.											

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L50: <i>JOINT LIGHT TACTICAL VEHICLES (JLTV) - SDD</i>

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>						R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>						PROJECT L50: <i>JOINT LIGHT TACTICAL VEHICLES (JLTV) - SDD</i>			
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Contract Service Support	SS/CPFF	Booz-Allen Hamilton,;McLean, VA	0.000	2.681	Apr 2012	-		-		-		-	Continuing	Continuing	Continuing
Contract Service Support	SS/CPFF	Camber Corporation,;Huntsville, AL	0.000	0.251	Sep 2012	-		-		-		-	Continuing	Continuing	Continuing
Subtotal			0.000	2.932		0.000		0.000		0.000		0.000			
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Joint Light Tactical Vehicle (JLTV) Engineering and Manufacturing Development Contract	C/FFP	Oshkosh Corporation,;Oshkosh, WI	0.000	25.703	Aug 2012	-		-		-		-	30.175	55.878	55.878
JLTV Engineering and Manufacturing Development Contract	C/FFP	AM General,;South Bend, IN	0.000	23.515	Aug 2012	-		-		-		-	40.365	63.880	63.880
Engineering and Manufacturing Development Contract	C/FFP	Lockheed Martin,;Grand Prairie, TX	0.000	14.548	Aug 2012	-		-		-		-	50.452	65.000	65.000
Subtotal			0.000	63.766		0.000		0.000		0.000		0.000	120.992	184.758	184.758
Remarks The Joint Light Tactical Vehicle (JLTV) is a Joint Services Program with the U.S. Army and U.S. Marine Corps as the two main components. Contract awards will continue to be funded through FY 2015 under U.S. Army PE 0605812A Project VU9 and U.S. Marine Corps under PE 0605812M Project 3209.															

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>						R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>						PROJECT L50: <i>JOINT LIGHT TACTICAL VEHICLES (JLTV) - SDD</i>			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
JLTV Program Management	Various	TACOM Life Cycle Management Command (LCMC),:Harrison Township, MI	0.000	4.240	Dec 2011	-		-		-		-	Continuing	Continuing	0.000
JLTV Program Prototype for Engineering and Manufacturing Development (EMD) Phase	MIPR	Tank-Automotive Research, Development, and Engineering Center - TARDEC,:Warren, MI	0.000	3.948	Feb 2012	-		-		-		-	Continuing	Continuing	0.000
JLTV Prototype for EMD Phase - Cost and Systems, Legal, Budget, Safety, Security, Contracting, ILSC	MIPR	TACOM Life Cycle Management Command (LCMC),:Warren, MI	0.000	2.170	Feb 2012	-		-		-		-	Continuing	Continuing	0.000
Government Furnished Equipment (GFE) / GFE Management	Various	Various:Various	0.000	4.801	Feb 2012	-		-		-		-	0.000	4.801	0.000
JLTV Source Selection Evaluation Board	MIPR	Various:Various	0.000	0.210	Mar 2012	-		-		-		-	0.000	0.210	0.000
Engineering and Manufacturing Development (EMD) Analysis and Evaluation	MIPR	Tank-Automotive Research, Development, and Engineering Center - TARDEC,:Warren, MI	0.000	0.670	Jul 2012	-		-		-		-	0.000	0.670	0.000
Subtotal			0.000	16.039		0.000		0.000		0.000		0.000			0.000

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army													DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>						R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L50: <i>JOINT LIGHT TACTICAL VEHICLES (JLTV) - SDD</i>					
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
JLTV EMD Phase Test and Evaluation - initiation of coupon test	MIPR	Tank-Automotive Research, Development, and Engineering Center - TARDEC, Warren, MI	0.000	0.088	Oct 2012	-		-		-		-	0.000	0.088	0.088
JLTV EMD Phase Coupons - bid samples and coupons preparation	MIPR	Aberdeen Test Center, Aberdeen Proving Ground, MD	0.000	0.250	May 2012	-		-		-		-	0.000	0.250	0.250
JLTV EMD Phase Ballistic Planning	MIPR	Army Research Laboratory, Aberdeen Proving Ground, MD	0.000	1.090	Nov 2012	-		-		-		-	Continuing	Continuing	Continuing
EMD Phase Information Assurance (IA) Certification and Interoperability, Health Hazard Assessments.	MIPR	Various:Various	0.000	0.335	Sep 2012	-		-		-		-	0.000	0.335	0.340
Subtotal			0.000	1.763		0.000		0.000		0.000		0.000			
Project Cost Totals			0.000	84.500		0.000		0.000		0.000		0.000			
Remarks															

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army																DATE: April 2013												
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)									R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev								PROJECT L50: JOINT LIGHT TACTICAL VEHICLES (JLTV) - SDD											
	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	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
Joint Capability Development Document (CDD) Approved																												
Engineering and Manufacturing Development (EMD) Request For Proposal release																												
Source Selection Evaluation Board (SSEB)																												
Milestone B (MS B)																												
EMD Contract Award																												
EMD Contract																												
EMD Test and Validation / Report																												

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L50: <i>JOINT LIGHT TACTICAL VEHICLES (JLTV) - SDD</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Joint Capability Development Document (CDD) Approved	2	2012	2	2012
Engineering and Manufacturing Development (EMD) Request For Proposal release	2	2012	2	2012
Source Selection Evaluation Board (SSEB)	2	2012	4	2012
Milestone B (MS B)	4	2012	4	2012
EMD Contract Award	4	2012	4	2012
EMD Contract	4	2012	4	2013
EMD Test and Validation / Report	1	2013	4	2013

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army									DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT VR7: Combat Service Support Systems			
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
VR7: Combat Service Support Systems	-	2.465	1.745	1.193	-	1.193	1.965	2.054	1.915	1.915	Continuing	Continuing
Quantity of RDT&E Articles												
# 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 project supports the System Development and Demonstration (SDD) of critical distribution and sustainment capabilities to include base camp subsystems, field shelters, showers, latrines, heaters, mortuary affairs systems, camouflage systems, organizational equipment, and other combat service support equipment to fill identified theater distribution and services capability gaps, improve unit sustainability, and increase combat effectiveness. Project supports development of expeditionary tactical field systems and support equipment to improve safety, effectiveness, and efficiency of deployed soldiers. This project develops critical enablers that support the Quartermaster (QM) Force Transformation Strategy and the Army's Modular Force Capabilities by maintaining readiness through fielding and integrating new equipment. This project also ensures Army Expeditionary Forces are capable of rapid deployment and reduces sustainment requirements, related Combat Support/Combat Service Support (CS/CSS), lift demands, the combat zone footprint, and costs for logistical support.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014	
Title: Human Remains Temperature Controlled Transfer Case (HRTC2) Articles: Description: The HRTC2 is a replacement for the current aluminum case for transporting remains from a theater of operation to CONUS that incorporates insulation and refrigeration to provide optimal temperature control and eliminate use of ice and the need for re-icing in route. FY 2012 Accomplishments: Conduct testing and develop documentation for Milestone C Type Classification. FY 2013 Plans: Complete Milestone C and award the production contract.									0.600	0.600	0.000	
									0	0		
Title: Modular Ballistic Protection System (MBPS) Articles:									0.571	0.378	0.368	
									0	0		

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev	PROJECT VR7: Combat Service Support Systems		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
<p>Description: MBPS is a lightweight, rapidly deployable and reusable ballistic protection system that can be installed in commonly used military shelters in expeditionary and remote base camps and outposts where more robust forms of ballistic protection (i.e. sandbags, concrete barriers) are not readily available or logistically feasible.</p> <p>FY 2012 Accomplishments: Conduct Operational Testing (OT) on Tent Extendable Modular Personnel (TEMPER) version of the MBPS.</p> <p>FY 2013 Plans: Conduct OT for MBPS stand-alone variant, prepare for Milestone C and transition to production.</p> <p>FY 2014 Plans: Award development contract to procure test items for MBPS stand-alone variant. Prepare documentation to support Milestone C production decision and initiate transition to production.</p>				
<p>Title: Family of Space Heaters</p> <p style="text-align: right;">Articles:</p> <p>Description: The family of Army Space Heaters support soldiers operating in basic, cold and extreme cold environments with a safe, portable, lightweight, multi-fueled, self-powered, space heaters for use in multiple tents and/or expeditionary shelters that do not require an external power source. These heaters provide the much needed capability of providing heated air effectively and efficiently while eliminating the shortcomings of the antiquated, dangerous and inefficient heaters they are replacing in the inventory.</p> <p>FY 2012 Accomplishments: Execute Pre-Planned Product Improvement (P3I) effort on the family of Space Heaters to improve on fuel efficiency</p> <p>FY 2013 Plans: Complete Developmental and Operational Test on P3I improvements to Army Space Heater and update procurement specification.</p>		0.148 0	0.100 0	0.000
<p>Title: Net-Zero Energy Efficiency Solutions</p> <p style="text-align: right;">Articles:</p> <p>Description: Net-Zero Energy Efficiency Solutions reduce the operational energy and logistics footprint of the expeditionary base camp system, with the goal being a significant reduction in fuel, water, and power requirements to sustain operations in the field. Operating a base camp such as Force Provider requires a significant amount of logistics support and also produces an</p>		1.069 0	0.667 0	0.825

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army									DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604804A: Logistics and Engineer Equipment - Eng Dev				PROJECT VR7: Combat Service Support Systems			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014
enormous amount of by products, both of which cost money, human effort (that means a risk in the form of soldiers on the road), and represents a potential vulnerability.											
FY 2012 Accomplishments: Complete Development of Energy Efficiency (E2) shelter kit solutions for Force Provider modules and conduct Developmental Testing (DT)											
FY 2013 Plans: Conduct Operational Testing (OT) on Energy Efficiency (E2) shelter kit solutions for Force Provider modules. Obtain full material release of E2 kits and transition into production.											
FY 2014 Plans: Conduct OT on Force Provider 150-Soldier module with integrated Advanced Medium-sized Mobile Power Source (AMMPS) Micro-grid. Obtain material release and transition into production. Provide technical support to Contingency Basing Infrastructure initiative to transition applicable technology to Force Provider.											
Title: SBIR+STTR									0.077	0.000	0.000
Articles:									0		
Description: SBIR+STTR											
FY 2012 Accomplishments: SBIR+STTR											
Accomplishments/Planned Programs Subtotals									2.465	1.745	1.193
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
• 643804 K39: Field Sustainment AD,	2.857	2.970	2.161		2.161	3.061	3.434	2.727	2.801	Continuing	Continuing
• 643804 VR8: Combat Service Support Systems AD,	1.977	2.023	1.613		1.613	2.405	2.619	2.415	2.415	Continuing	Continuing
• 654804 L39: Field Sustainment Support ED,	4.094	2.550	1.789		1.789	2.753	2.588	2.269	2.456	Continuing	Continuing
Remarks											

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT VR7: <i>Combat Service Support Systems</i>
D. Acquisition Strategy Accelerate product development and testing to transition into production.		
E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.		

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY						R-1 ITEM NOMENCLATURE					PROJECT				
2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)						PE 0604804A: Logistics and Engineer Equipment - Eng Dev					VR7: Combat Service Support Systems				
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management Support	Various	PM Force Sustainment Systems:Natick, MA	0.000	0.160		0.162		0.125		-		0.125	Continuing	Continuing	0.000
SBIR+STTR	TBD	Various:Various	0.000	0.077		-		-		-		-	0.000	0.077	0.000
Subtotal			0.000	0.237		0.162		0.125		0.000		0.125			0.000
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Soldier Support Equipment	TBD	Various:Various	0.000	1.246		0.897		0.453		-		0.453	Continuing	Continuing	0.000
Subtotal			0.000	1.246		0.897		0.453		0.000		0.453			0.000
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Soldier Support Equipment	Various	Various:Various	0.000	0.982		0.686		0.615		-		0.615	Continuing	Continuing	0.000
Subtotal			0.000	0.982		0.686		0.615		0.000		0.615			0.000
			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	2.465		1.745		1.193		0.000		1.193			0.000
Remarks															

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army			DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>		
			PROJECT VR7: <i>Combat Service Support Systems</i>		

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	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
Conduct testing on HRTC2																												
Transition Zero-Footprint Base Camp capabilities into Joint Base Camp systems																												
Obtain Milestone C for MBPS stand alone																												
Transition MBPS capability into Base Camp systems																												
Obtain Milestone C TC on Mobile Integrated Shop Shelter System																												
Conduct OT SoS Base Camp Efficiency & Environ Combat Outpost																												
Obtain MS C TC SoS Base Camp Efficiency & Environ Combat Outpost																												
Conduct Technology Improvements and development of other variants for ULCANS																												
Conduct DT & OT on Net-Zero Energy Efficiency Solution & transition to production																												
Transition Army Space Heater P3I effort into production																												
Conduct DV on Force Provider Renewable Energy Kits																												
Conduct DT/OT on Microgrid Loadshedding Kit for Force Provider																												
Conduct DT/OT on Force Provider Renewable Energy Kits																												

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT VR7: <i>Combat Service Support Systems</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Conduct testing on HRTC2	4	2012	2	2013
Transition Zero-Footprint Base Camp capabilities into Joint Base Camp systems	1	2014	4	2016
Obtain Milestone C for MBPS stand alone	3	2015	3	2015
Transition MBPS capability into Base Camp systems	4	2015	1	2016
Obtain Milestone C TC on Mobile Integrated Shop Shelter System	2	2018	2	2018
Conduct OT SoS Base Camp Efficiency & Environ Combat Outpost	1	2016	4	2016
Obtain MS C TC SoS Base Camp Efficiency & Environ Combat Outpost	2	2017	2	2017
Conduct Technology Improvements and development of other variants for ULCANS	1	2015	4	2018
Conduct DT & OT on Net-Zero Energy Efficiency Solution & transition to production	2	2013	4	2016
Transition Army Space Heater P3I effort into production	4	2013	4	2013
Conduct DV on Force Provider Renewable Energy Kits	3	2017	4	2017
Conduct DT/OT on Microgrid Loadshedding Kit for Force Provider	3	2017	1	2018
Conduct DT/OT on Force Provider Renewable Energy Kits	1	2018	4	2018