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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev							
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	45.135	41.682	24.581	-	24.581	32.525	27.430	26.320	31.967	Continuing	Continuing
194: Engine Driven Gen Ed	-	11.195	5.025	5.875	-	5.875	9.785	4.927	4.158	6.552	Continuing	Continuing
EC9: Contingency Basing Infrastructure	-	-	-	0.983	-	0.983	2.560	2.367	1.973	1.976	-	9.859
H01: Combat Engineer Eq Ed	-	3.929	2.171	1.039	-	1.039	-	-	-	-	Continuing	Continuing
H02: Tactical Bridging - Engineering Development	-	10.116	24.361	6.992	-	6.992	4.423	3.758	2.896	7.392	Continuing	Continuing
H14: Materials Handling Equipment - Ed	-	1.265	0.298	0.283	-	0.283	0.972	0.951	0.607	0.627	Continuing	Continuing
L39: Field Sustainment Support Ed	-	2.218	1.788	1.688	-	1.688	2.550	2.237	1.941	2.325	Continuing	Continuing
L41: Water And Petroleum Distribution - Ed	-	3.418	2.648	3.195	-	3.195	4.013	4.733	4.632	4.622	Continuing	Continuing
L43: ENGINEER SUPPORT EQUIPMENT - ED	-	1.855	-	0.575	-	0.575	1.268	1.282	1.282	1.798	Continuing	Continuing
L46: Maintenance Support Equipment	-	3.449	1.232	1.004	-	1.004	1.946	1.804	1.878	1.916	Continuing	Continuing
L47: Improved Environmental Control Units Ed	-	2.661	2.966	-	-	-	0.984	1.479	3.058	2.174	Continuing	Continuing
VR7: Combat Service Support Systems	-	5.029	1.193	2.947	-	2.947	4.024	3.892	3.895	2.585	Continuing	Continuing
# The FY 2015 OCO Request will be submitted at a later date.												
Note Change Summary Explanation: Funding - FY 2015: Adjustment for all projects within this PE.												
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												

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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>
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service equipment, camouflage systems and aerial delivery equipment), water purification equipment, petroleum distribution equipment, mobile electric power and water craft.

Decrease from FY 2015 BES to FY 2015 PB reflects adjustments to all projects within this PE.

B. Program Change Summary (\$ in Millions)	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015 Base</u>	<u>FY 2015 OCO</u>	<u>FY 2015 Total</u>
Previous President's Budget	43.706	41.703	49.811	-	49.811
Current President's Budget	45.135	41.682	24.581	-	24.581
Total Adjustments	1.429	-0.021	-25.230	-	-25.230
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	1.429	-0.021	-25.230	-	-25.230

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Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev				Project (Number/Name) 194 / Engine Driven Gen Ed			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
194: Engine Driven Gen Ed	-	11.195	5.025	5.875	-	5.875	9.785	4.927	4.158	6.552	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
# The FY 2015 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 Generating Sources (MEPGS) 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 MEPGS 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. FY14-15 funds continue the Engineering and Manufacturing Development (EMD) Phase for Large Advanced Mobile Power Sources (LAMPS) and will prepare the Improved Power Distribution Illumination Systems Electrical (IPDISE)/Microgrids performance specification and initiate the EMD phase. Funding in FY15 will also support the start of the Small Tactical Electric Power (STEP) EMD phase.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2013	FY 2014	FY 2015	
Title: Large Advanced Mobile Power Sources (LAMPS) and Improved Power Distribution Illumination Systems Electrical (IPDISE)/Microgrids Engineering & Manufacturing Development (EMD) Phase. Articles: Description: Prepare LAMPS and IPDISE/Microgrids performance specification and begin EMD Phase FY 2013 Accomplishments: Continue EMD Phase of LAMPS FY 2014 Plans: Continue EMD Phase of LAMPS. Prepare the IPDISE/Microgrids performance specification and initiate EMD phase. FY 2015 Plans: Continue EMD Phase of LAMPS and IPDISE/Microgrids.									11.195	5.025	4.513	
									-	-	-	
Title: Small Tactical Electric Power (STEP) Engineering & Manufacturing Development (EMD) Phase									-	-	1.362	

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Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>				Project (Number/Name) 194 / <i>Engine Driven Gen Ed</i>				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)										FY 2013	FY 2014	FY 2015
Description: Begin EMD Phase for the STEP program.												
FY 2015 Plans: Initiate the EMD Phase for the STEP program.												
Accomplishments/Planned Programs Subtotals										11.195	5.025	5.875
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost	
• 643804.G11: <i>Logistics and Engineer Equipment - Adv Dev G11</i>	3.512	2.499	4.013	-	4.013	9.559	5.933	3.748	8.218	Continuing	Continuing	
• MA9800: <i>Generators and Associated Equipment</i>	60.223	40.129	115.190	-	115.190	216.293	237.171	341.209	354.470	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 Target (FPI-FT) 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) will prepare the program's performance specification and initiate the EMD phase and Microgrids will design and test the Advanced Medium Mobile Power Sources (AMMPS) microgrid feeder distribution box(es) (Power Distribution Unit). The Small Tactical Electric Power (STEP) program will use a multi-phase acquisition strategy. STEP System Development and Demonstration (SDD) will be separated into two phases; Phase I is System Development and Phase II is System Demonstration. The STEP program will enter the acquisition process at Milestone B, Engineering and Manufacturing Development (EMD).												
E. Performance Metrics N/A												

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev				Project (Number/Name) 194 / Engine Driven Gen Ed					
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Large Advanced Mobile Power Sources (LAMPS) (100-200kW)	C/FPIF	L-3 Communications, Westwood Corporation, Tulsa, OK : Various	16.923	11.195		-		-		-		-	Continuing	Continuing	Continuing
Improved Power Distribution Illumination Systems Electrical (IPDISE)/Microgrids	C/FFP	TBD : TBD	0.000	-		3.000	Apr 2014	1.000	Jan 2015	-		1.000	-	4.000	-
Small Tactical Electric Power (STEP)	C/CPFF	TBD : TBD	0.000	-		-		1.362	Aug 2015	-		1.362	-	1.362	-
Subtotal			16.923	11.195		3.000		2.362		-		2.362	-	-	-
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Large Advanced Mobile Power Sources (LAMPS) (100-200kW)	Various	CECOM LCMC : Aberdeen Proving Ground (APG), MD	3.485	-		-		-		-		-	Continuing	Continuing	Continuing
Subtotal			3.485	-		-		-		-		-	-	-	-
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Large Advanced Mobile Power Sources (LAMPS) (100-200kW)	MIPR	Army Testing & Evaluation Ctr (ATEC) : APG, MD	0.000	-		2.025	Mar 2014	3.513	Jan 2015	-		3.513	Continuing	Continuing	Continuing
Subtotal			0.000	-		2.025		3.513		-		3.513	-	-	-

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Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev					Project (Number/Name) 194 / Engine Driven Gen Ed				
		Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		20.408	11.195		5.025		5.875		-		5.875	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army			Date: March 2014		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>			Project (Number/Name) 194 / <i>Engine Driven Gen Ed</i>

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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
EMD - LAMPS																												
EMD Phase 1																												
DT/Log Demo/OT																												
MS C-LAMPS																												
IPDISE/Microgrids																												
Milestone B - IPDISE/Microgrids																												
EMD Award - IPDISE/Microgrids																												
Phase 1 EMD - IPDISE/Microgrids																												
Small Tactical Electric Power (STEP)																												
Milestone B - STEP																												
EMD Award - STEP																												
Phase 1 EMD - STEP																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>	Project (Number/Name) 194 / <i>Engine Driven Gen Ed</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
EMD - LAMPS	2	2011	4	2015
EMD Phase 1	1	2013	4	2015
DT/Log Demo/OT	3	2014	4	2015
MS C-LAMPS	1	2016	1	2016
IPDISE/Microgrids	3	2014	3	2017
Milestone B - IPDISE/Microgrids	2	2015	2	2015
EMD Award - IPDISE/Microgrids	2	2015	2	2015
Phase 1 EMD - IPDISE/Microgrids	2	2015	3	2017
Small Tactical Electric Power (STEP)	4	2015	4	2018
Milestone B - STEP	2	2015	2	2015
EMD Award - STEP	4	2015	4	2015
Phase 1 EMD - STEP	4	2015	2	2017

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Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev				Project (Number/Name) EC9 / Contingency Basing Infrastructure				
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost	
EC9: Contingency Basing Infrastructure	-	-	-	0.983	-	0.983	2.560	2.367	1.973	1.976	-	9.859	
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-			
# The FY 2015 OCO Request will be submitted at a later date.													
Note FY15 is the first year of funding for this project.													
A. Mission Description and Budget Item Justification This project develops the tools and processes that will optimize recommendations for the materiel used to establish, operate, and maintain contingency bases. Considerations impacting materiel choices include: assigned missions; geopolitical environments; threats; and the logistical and tactical constraints where the bases are located. The project will increase the available knowledge at the base level and provide an analytical foundation for sound investment decision making. The continuous improvement modeling and simulation analysis tools will match the evolution of threats and technologies. Using a system of systems engineering approach, the Contingency Base Infrastructure Product Directorate's focus ensures optimum integration of materiel across the base camp to facilitate the maximizing of war fighter effectiveness. The results will enable the contingency base to be established, operated and managed as a system (system of systems) and enable the equipment acquired for the base to be compatible, efficient while providing the maximum overall support to the war fighter. This approach supports Program(s) of Record (PORs) to maximize improvements in Operation Energy and ensures efficiencies across any Area of Responsibility (AOR).													
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2013	FY 2014	FY 2015		
Title: Contingency Base Infrastructure									-	-	0.983		
Description: Funding is provided for the following effort.													
FY 2015 Plans: Continue integration of Model-Based Systems Engineering principles to enable evaluating contingency bases as a system (system of systems). This project will include model based systems engineering tool maturation of multiple analytical tools through an Integrated - Preliminary Design Review (I-PDR). An integrated toolset demonstration will be the culmination to support portfolio maturation, integration and analytical evaluation. This supports Army investment decisions across the Contingency Base Infrastructure portfolio.													
Accomplishments/Planned Programs Subtotals									-	-	0.983		
C. Other Program Funding Summary (\$ in Millions) N/A													

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev	Project (Number/Name) EC9 / Contingency Basing Infrastructure
C. Other Program Funding Summary (\$ in Millions)		
Remarks		
D. Acquisition Strategy Not applicable for this item.		
E. Performance Metrics N/A		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev				Project (Number/Name) EC9 / Contingency Basing Infrastructure					
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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 Management	Various	PM Force Projection : Warren, MI	0.000	-		-		0.316	Oct 2014	-		0.316	-	0.316	-
Subtotal			0.000	-		-		0.316		-		0.316	-	0.316	-
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Toolset Development	Various	Various : Various	0.000	-		-		0.292	Jan 2015	-		0.292	-	0.292	Continuing
Integrated Analysis and Design	Various	Various : Various	0.000	-		-		0.200	Oct 2014	-		0.200	-	0.200	Continuing
Capabilities Implementation and Materiel Requirements	Various	Various : Various	0.000	-		-		0.175	Oct 2014	-		0.175	-	0.175	Continuing
Subtotal			0.000	-		-		0.667		-		0.667	-	0.667	-
			Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	-		-		0.983		-		0.983	-	0.983	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army										Date: March 2014	
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev					Project (Number/Name) EC9 / Contingency Basing Infrastructure	

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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
Toolset Development																												
Integrated System Requirements Review (I-SRR)																												
Integrated Preliminary Design Review (I-PDR)																												
Integrated Critical Design Review (I-CDR)																												
Integrated Analysis and Design																												
Integrated Tool Demonstration (ITD)																												
Integrated Tool Demonstration 2 (ITD2)																												
Developmental Toolset Demonstration (DTD)																												
Operational Toolset Demonstration (OTD)																												
Capabilities Implementation and Materiel Requirements																												
Program Management																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>	Project (Number/Name) EC9 / <i>Contingency Basing Infrastructure</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Toolset Development	1	2015	4	2020
Integrated System Requirements Review (I-SRR)	3	2014	3	2014
Integrated Preliminary Design Review (I-PDR)	1	2015	1	2015
Integrated Critical Design Review (I-CDR)	2	2016	2	2016
Integrated Analysis and Design	1	2015	4	2020
Integrated Tool Demonstration (ITD)	4	2014	4	2014
Integrated Tool Demonstration 2 (ITD2)	2	2015	2	2015
Developmental Toolset Demonstration (DTD)	4	2016	4	2016
Operational Toolset Demonstration (OTD)	4	2017	4	2017
Capabilities Implementation and Materiel Requirements	1	2015	4	2020
Program Management	1	2015	4	2020

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev				Project (Number/Name) H01 / Combat Engineer Eq Ed			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
H01: Combat Engineer Eq Ed	-	3.929	2.171	1.039	-	1.039	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
# The FY 2015 OCO Request will be submitted at a later date.												
A. Mission Description and Budget Item Justification												
This project supports the Engineering Manufacturing Development (EMD) 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 EMD 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 2013	FY 2014	FY 2015	
Title: CE Armor Articles: Description: Design armor kits for Combat Engineer Equipment. FY 2013 Accomplishments: Qualify alternative sources of supply for opaque & Transparent armor on existing CE equipment. Full Vehicle Armor Protection									0.483	-	-	
									-	-	-	
Title: Operator Assist Articles: Description: Development of systems to improve safety, situational awareness and operational effectiveness. Technologies such as blade control, brake assist, obstacle detection and vision systems will be investigated and integrated. FY 2013 Accomplishments: Development of Robotics Research FY 2014 Plans: Development of Robotics Research FY 2015 Plans:									0.214	0.250	0.239	
									-	-	-	

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Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>	Project (Number/Name) H01 / <i>Combat Engineer Eq Ed</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014
Development of systems to improve safety, situational awareness and operational effectiveness. Technologies such as blade control, brake assist, obstacle detection and vision systems will be investigated and integrated.			
Title: CE Simulators Description: Labor, software, and hardware simulator development FY 2013 Accomplishments: Labor, software, and hardware simulator development FY 2014 Plans: Labor, software, and hardware simulator development		Articles: 1.380 -	0.300 -
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 Accomplishments: Forced Entry (Airborne/Air Assault) HMEE, Grader, ERACC and Loader Type 1 Study/Development		Articles: 1.287 -	- -
Title: Market Research Description: Market Research Survey FY 2013 Accomplishments: 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.		Articles: 0.040 -	0.150 -
Title: Operational Efficiency Description: Improve Operational Efficiency/Reduce Maintenance Time FY 2013 Accomplishments:		Articles: 0.022 -	- -
			0.400 -

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Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev				Project (Number/Name) H01 / Combat Engineer Eq Ed			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2013	FY 2014	FY 2015
Using Government supplied vehicles (GFE), evaluate new technologies to be developed by private industry to improve the efficiency or reduce maintenance burden.											
FY 2015 Plans: Using Government supplied vehicles (GFE), evaluate new technologies to be developed by private industry to improve the efficiency or reduce maintenance burden.											
Title: Operational Energy/Duty Cycle									-	1.058	-
Articles:									-	-	-
Description: Operational Energy/Duty Cycle Monitoring											
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.											
Title: System Engineering/Program Management									0.503	0.413	0.400
Articles:									-	-	-
Description: Program Management											
FY 2013 Accomplishments: Program Management Support of R&D Program for CE											
FY 2014 Plans: Program Management Support of R&D Program for CE											
FY 2015 Plans: Program Management Support of R&D Program for CE											
Accomplishments/Planned Programs Subtotals									3.929	2.171	1.039
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• High Mobility Engineer Excavator	30.002	21.465	-	-	-	2.678	1.786	-	-	-	55.931
I: High Mobility Engineer Excavator I											
• Grader, Mtzd, Hvy:	2.430	2.000	5.827	-	5.827	5.952	1.786	-	-	-	17.995
Grader, Mtzd, Hvy											

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army									Date: March 2014		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev				Project (Number/Name) H01 / Combat Engineer Eq Ed			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• Hydraulic Excavator: Hydraulic Excavator	-	17.001	4.938	-	4.938	-	-	-	-	-	21.939
• Plant, Asphalt Mixing: Plant, Asphalt Mixing	3.674	-	0.667	-	0.667	0.992	-	-	-	Continuing	Continuing
• Tractor Full Tracked, Med T-9: Tractor Full Tracked, Med T-9	25.007	28.828	34.071	-	34.071	27.380	-	-	-	Continuing	Continuing
• All Terrain Cranes: All Terrain Cranes	3.498	2.613	4.938	-	4.938	23.093	70.350	14.534	22.588	Continuing	Continuing
• Scraper, Earthmoving: Scraper, Earthmoving	7.366	36.078	14.926	-	14.926	21.341	19.806	31.204	-	Continuing	Continuing
• EMMs: EMMs	25.359	-	-	-	-	-	-	-	-	-	25.359
• ERACC 4: ERACC IV	-	5.000	2.741	-	2.741	-	-	-	-	Continuing	Continuing
• ERACC 1: ERACC I SSA	-	-	2.378	-	2.378	2.551	-	-	-	-	4.929
• ERACC 2: ERACC 2 EE	-	-	8.365	-	8.365	-	-	-	-	-	8.365
• ERACC 3: ERACC III METL	-	-	1.440	-	1.440	12.523	11.014	-	-	-	24.977
• Const Equip ESP: SLEP	11.336	16.088	15.933	-	15.933	19.801	31.971	31.704	41.906	Continuing	Continuing
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											
N/A											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>						Project (Number/Name) H01 / <i>Combat Engineer Eq Ed</i>			
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	0.167	-		-		-		-		-	-	0.167	-
Subtotal			0.167	-		-		-		-		-	-	0.167	-
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	1.675	-		-		-		-		-	-	1.675	-
Development of Operational Assist for Combat Engineer	Various	TBD : TBD	1.719	0.214	Nov 2013	0.250	Mar 2014	0.239	Apr 2015	-		0.239	-	2.422	Continuing
Design armor kits for Combat Engineer	Various	TARDEC : Warren, MI	5.512	0.483	Sep 2013	-		-		-		-	-	5.995	Continuing
Development of Simulator	Various	PEO Stricom : PEO, Stricom, Orlando, FL	7.303	1.380	Apr 2014	0.300	Apr 2014	-		-		-	-	8.983	Continuing
Hazard Clearance at Speed	TBD	TARDEC : Warren, Michigan	0.001	-		-		-		-		-	-	0.001	-
Forced Entry: HMEE Type II, Grader, ERACC Type III and Loader Type I Study/ Development	Various	TARDEC : Warren, MI	8.239	1.287	Sep 2013	-		-		-		-	-	9.526	Continuing
Market Research	TBD	TARDEC : Warren, Michigan	0.000	0.040	Nov 2013	0.149	Mar 2014	-		-		-	-	0.189	-
Subtotal			24.449	3.404		0.699		0.239		-		0.239	-	28.791	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>						Project (Number/Name) H01 / <i>Combat Engineer Eq Ed</i>			
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	0.503	Jan 2013	0.413	Dec 2013	0.400	Jan 2015	-		0.400	-	1.316	-
Subtotal			0.000	0.503		0.413		0.400		-		0.400	-	1.316	-
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Efficiency	MIPR	TARDEC, Warren, Michigan : TARDEC, Warren, Michigan	0.000	0.022	Aug 2013	-		0.400	Jan 2015	-		0.400	-	0.422	-
Operational Energy/Duty Cycle Monitoring	TBD	TARDEC : Warren, Michigan	0.000	-		1.059	Jun 2014	-		-		-	-	1.059	-
Non Nuclear Soil Density Set Testing	TBD	TARDEC : Warren, MI	0.050	-		-		-		-		-	-	0.050	-
Subtotal			0.050	0.022		1.059		0.400		-		0.400	-	1.531	-
			Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			24.666	3.929		2.171		1.039		-		1.039	-	31.805	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army			Date: March 2014		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>			Project (Number/Name) H01 / <i>Combat Engineer Eq Ed</i>

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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																												
Design of Armor Kits																												
Operational Assist																												
Simulator Development for Construction Equipment																												
Force Entry: HMEE Type II, Grader, ERACC & Loader Type I Study/Development																												
Hazard Clearance at Speed																												
ERACC III integration																												
Market Research																												
System Engineer/Program Support																												
Operational Efficiency																												
Operational Energy/Duty Cycle Monitoring																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>	Project (Number/Name) 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
Design of Armor Kits	1	2012	4	2013
Operational Assist	1	2012	4	2016
Simulator Development for Construction Equipment	1	2012	4	2014
Force Entry: HMEE Type II, Grader, ERACC & Loader Type I Study/Development	1	2012	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	2016
Operational Efficiency	1	2013	4	2016
Operational Energy/Duty Cycle Monitoring	1	2013	4	2013

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev				Project (Number/Name) H02 / Tactical Bridging - Engineering Development			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
H02: Tactical Bridging - Engineering Development	-	10.116	24.361	6.992	-	6.992	4.423	3.758	2.896	7.392	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
# The FY 2015 OCO Request will be submitted at a later date.												
A. Mission Description and Budget Item Justification												
This project supports the engineering and manufacturing development and transition to procurement of Future Force Tactical Bridge Systems and support equipment. Funding supports the Engineering Manufacturing Development phases of the Joint Assault Bridge (JAB) and Line of Communications Bridge (LOCB). Other efforts supported include High Performance Material Transition to assess composite materials for lighter but stronger bridges, the Bridge Supplemental Set to enhance support of bridging operations with access/egress matting, assorted power tools, bridge repair equipment and float bridge anchorage and protection devices. This project also supports development of a Structural Bridge Health Monitoring system which will provide the capability to passively gather condition based maintenance data remotely and alert the user of unsafe (overload/critical damage) conditions.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2013	FY 2014	FY 2015	
Title: JAB Development and Testing Articles: Description: JAB Development and Testing FY 2013 Accomplishments: JAB Development/Testing FY 2014 Plans: JAB Testing. FY 2015 Plans: JAB Testing.									7.625	11.300	0.900	
									-	-	-	
Title: Development, integration, and testing of REBS Auto Launch-Retrieve with Common Bridge Transporter (CBT) Articles: Description: Development, integration, and testing of REBS Auto Launch-Retrieve with Common Bridge Transporter (CBT) FY 2013 Accomplishments:									1.400	2.000	-	
									-	-	-	

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014		
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev	Project (Number/Name) H02 / Tactical Bridging - Engineering Development			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2013	FY 2014	FY 2015
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: Completion of the development, integration and testing of the Rapidly Emplaced Bridge System Auto Launch-Retrieve capability with the Common Bridge Transporter (CBT).					
Title: LOCB Development and Testing			1.091	9.735	5.892
Articles:			-	-	-
Description: LOCB Development					
FY 2013 Accomplishments: LOCB Development					
FY 2014 Plans: LOCB Development and Testing					
FY 2015 Plans: LOCB Testing					
Title: Structural Health Monitoring			-	0.750	0.100
Articles:			-	-	-
Description: Develop a passive method to collect mobile military bridge system usage and health data for remote monitoring.					
FY 2014 Plans: Structural Health Monitoring					
FY 2015 Plans: Structural Health Monitoring					
Title: Bridge Supplemental Set			-	0.576	0.050
Articles:			-	-	-
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:					

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army								Date: March 2014			
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>				Project (Number/Name) H02 / <i>Tactical Bridging - Engineering Development</i>			

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Bridge Supplemental Set			
<i>FY 2015 Plans:</i> Bridge Supplemental Set			
<i>Title:</i> High Performance Material Transition	-	-	0.050
<i>Description:</i> Development and test of the Advanced Modular Composite Bridge (AMCB). Development of the Composite Joint Assault Bridge (CJAB). Structural testing of the Composite Army Bridge (CAB) to determine effect of prolonged environmental exposure.			
<i>FY 2015 Plans:</i> High Performance Material Transition			
Accomplishments/Planned Programs Subtotals	10.116	24.361	6.992

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• OPA3, MX0100: <i>OPA3, MX0100</i>	2.957	14.188	-	-	-	11.903	15.875	21.757	18.481	Continuing	Continuing
• WTCV, GZ3001: <i>WTCV, GZ3001</i>	18.458	2.002	49.462	-	49.462	43.931	89.291	119.501	99.817	Continuing	Continuing
Remarks											
D. Acquisition Strategy RDT&E efforts to support testing and follow-on production.											
E. Performance Metrics N/A											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev				Project (Number/Name) H02 / Tactical Bridging - Engineering Development					
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	-		2.987	Mar 2014	1.527	Nov 2014	-		1.527	-	4.514	-
Subtotal			0.000	-		2.987		1.527		-		1.527	-	4.514	-
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	48.128	2.524	Aug 2013	-		-		-		-	Continuing	Continuing	Continuing
LOCB Development	MIPR	Rock Island Arsenal (RIA)/Anniston Army Depot (ANAD) : Rock Island, IL/Anniston, AL	6.418	4.592	Jul 2013	6.485	Mar 2014	-		-		-	Continuing	Continuing	Continuing
Bridge Supplemental Set	MIPR	TBD : TBD	0.000	-		0.326	Jun 2014	0.050	May 2015	-		0.050	-	0.376	-
Structural Health Monitoring	MIPR	TARDEC : Warren, MI	0.000	-		0.500	Jun 2014	0.100	May 2015	-		0.100	-	0.600	-
REBS Testing (Auto Launch-Retrieve	SS/FFP	General Dynamics European Land Systems : Kaiserslautern, Germany	0.000	-		1.000	Aug 2014	-		-		-	-	1.000	-
High Performance Material Transition	MIPR	TARDEC : Warren, MI	0.000	-		-		0.050	May 2015	-		0.050	-	0.050	-
Subtotal			54.546	7.116		8.311		0.200		-		0.200	-	-	-
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Government In-House	MIPR	TACOM : Warren, MI	5.100	3.000	Apr 2013	-		-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army													Date: March 2014		
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>				Project (Number/Name) H02 / <i>Tactical Bridging - Engineering Development</i>					
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			5.100	3.000		-		-		-		-	-	-	-
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	-		10.063	Jun 2014	0.900	May 2015	-		0.900	Continuing	Continuing	Continuing
REBS Testing (Auto Launch-Retrieve)	TBD	Aberdeen Proving Grounds (APG) : APG, MD	1.100	-		1.000	Feb 2014	-		-		-	-	2.100	-
LOCB Testing	MIPR	ATEC : Aberdeen, MD	4.800	-		2.000	May 2014	4.365	Jan 2015	-		4.365	-	11.165	-
Subtotal			8.441	-		13.063		5.265		-		5.265	-	-	-
			Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			68.087	10.116		24.361		6.992		-		6.992	-	-	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army			Date: March 2014		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>		Project (Number/Name) H02 / <i>Tactical Bridging - Engineering Development</i>	

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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
JAB Development and Testing																												
LOCB Development and Testing																												
REBS Auto Launch-Retrieve																												
Bridge Supplemental Set																												
Structural Health Monitoring Project																												
High Performance Material Transition																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>	Project (Number/Name) H02 / <i>Tactical Bridging - Engineering Development</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
JAB Development and Testing	2	2011	4	2018
LOCB Development and Testing	2	2012	4	2016
REBS Auto Launch-Retrieve	3	2012	4	2015
Bridge Supplemental Set	2	2014	4	2015
Structural Health Monitoring Project	2	2014	4	2016
High Performance Material Transition	2	2015	4	2017

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014			
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev				Project (Number/Name) H14 / Materials Handling Equipment - Ed				
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost	
H14: Materials Handling Equipment - Ed	-	1.265	0.298	0.283	-	0.283	0.972	0.951	0.607	0.627	Continuing	Continuing	
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-			
# The FY 2015 OCO Request will be submitted at a later date.													
A. Mission Description and Budget Item Justification													
This project supports engineering, manufacturing, and development 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 2013	FY 2014	FY 2015	
Title: Material Handling Equipment (MHE) System Improvement Description: System Improvements for Light Capability Rough Terrain Forklift (LCRTF) for Tactical Operations FY 2013 Accomplishments: Design and test air drop configuration package for the LCRTF. FY 2014 Plans: Integrate and test add-on hardware for reliable cold starting. FY 2015 Plans: Investigate lightweight armor solution for LCRTF										Articles:	0.505	0.155	0.207
											-	-	-
Title: Material Handling Equipment (MHE) Armor Kits Description: Lightweight Armor for All Terrain Lifter Army System (ATLAS) II FY 2013 Accomplishments: Investigate alternative armor solutions to eliminate known performance degradation when operated with current add on armor. FY 2014 Plans:										Articles:	0.460	0.143	-
											-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>				Project (Number/Name) H14 / <i>Materials Handling Equipment - Ed</i>				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)												
										FY 2013	FY 2014	FY 2015
Conduct evaluation of armor solution at test-site for both performance and survivability												
Title: Sling Load Attachment for Rough Terrain Container Handler (RTCH) Articles:										0.300 -	- -	- -
Description: Sling Load Attachment for Rough Terrain Container Handler (RTCH)												
FY 2013 Accomplishments: Conduct demonstrations and evaluations of proposed Sling Load Attachment to assess operational suitability and value added capability.												
Title: Investigate high-speed towing for LCRTF Description: Investigate high-speed towing for LCRTF										-	-	0.076
FY 2015 Plans: LCRTF high-speed towing development												
Accomplishments/Planned Programs Subtotals										1.265	0.298	0.283
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost	
• OPA M41200: <i>Rough Terrain Container Handler</i>	-	1.250	-	-	-	-	-	-	-	-	1.250	
• OPA M41800: <i>All Terrain Lifting Army System</i>	-	2.500	-	-	-	-	-	-	-	-	2.500	
• OPA G41002: <i>Light Capacity Rough Terrain (LCRT) Forklift</i>	5.887	5.760	14.327	-	14.327	14.390	14.821	15.256	15.550	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.												

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev	Project (Number/Name) H14 / Materials Handling Equipment - Ed
E. Performance Metrics N/A		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev						Project (Number/Name) H14 / Materials Handling Equipment - Ed			
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	Dec 2013	-		-		-	-	0.037	-
SBIR + STTR	TBD	TBD : TBD	0.032	-		-		-		-		-	-	0.032	-
Subtotal			0.032	-		0.037		-		-		-	-	0.069	-
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	SS/FFP	Kalmar Rt : Cibolo, TX	2.555	-		-		-		-		-	Continuing	Continuing	Continuing
System Improvements for LCRTF for Tactical Operations	Various	TARDEC : Warren, MI	0.000	0.200	Apr 2013	0.155	Jun 2014	0.207	Jun 2015	-		0.207	-	0.562	-
Lightweight Armor for ATLAS II	MIPR	TARDEC : Warren, MI	0.000	0.350	Dec 2012	-		-		-		-	-	0.350	-
Sling Load Attachment for RTCH	C/FFP	Kalmar RT Center : Cibolo, TX	0.000	0.100	Dec 2012	-		-		-		-	-	0.100	-
Subtotal			2.555	0.650		0.155		0.207		-		0.207	-	-	-
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	Apr 2013	-		-		-		-	-	0.055	-
Lightweight Armor for ATLAS II	MIPR	TARDEC : Warren, MI	0.000	0.110	Dec 2012	-		-		-		-	-	0.110	-
Subtotal			0.000	0.165		-		-		-		-	-	0.165	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army													Date: March 2014		
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>				Project (Number/Name) H14 / <i>Materials Handling Equipment - Ed</i>					
Test and Evaluation (\$ in Millions)															
				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	Jan 2014	-		-		-	-	0.106	-
System Improvements for LCRTF for Tactical Operations	TBD	TBD : TBD	0.000	0.250	Apr 2013	-		-		-		-	-	0.250	-
Sling Load Attachment for RTCH	MIPR	Various : Various	0.000	0.200	Dec 2012	-		-		-		-	-	0.200	-
Investigate high speed towing for LCRTF	TBD	TBD : TBD	0.000	-		-		0.076	Mar 2015	-		0.076	-	0.076	-
Subtotal			0.000	0.450		0.106		0.076		-		0.076	-	0.632	-
			Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			2.587	1.265		0.298		0.283		-		0.283	-	-	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army			Date: March 2014		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>			Project (Number/Name) H14 / <i>Materials Handling Equipment - Ed</i>

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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
Design and test LCRTF air drop configuration package																												
Integrate and test LCRTF cold weather start kit																												
Investigate alternative armor solution for ATLAS II																												
Conduct evaluation of armor solution at test-site for ATLAS II																												
LCRTF Lightweight armor development																												
LCRTF high speed towing development																												
Investigate MHE attachments																												
Conduct market research for MHE system replacement																												
Engineer R&D support																												
SLEP/RESET analysis for fielded systems																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>	Project (Number/Name) 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	2014
Integrate and test LCRTF cold weather start kit	1	2014	1	2014
Investigate alternative armor solution for ATLAS II	1	2013	3	2014
Conduct evaluation of armor solution at test-site for ATLAS II	3	2014	4	2014
LCRTF Lightweight armor development	3	2015	1	2016
LCRTF high speed towing development	2	2015	4	2015
Investigate MHE attachments	1	2016	4	2019
Conduct market research for MHE system replacement	1	2016	4	2019
Engineer R&D support	1	2016	4	2019
SLEP/RESET analysis for fielded systems	1	2016	4	2019

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev				Project (Number/Name) L39 / Field Sustainment Support Ed			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
L39: Field Sustainment Support Ed	-	2.218	1.788	1.688	-	1.688	2.550	2.237	1.941	2.325	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
# The FY 2015 OCO Request will be submitted at a later date.												
A. Mission Description and Budget Item Justification												
This project supports the Engineering and Manufacturing Development (EMD) of critical capabilities for cargo aerial delivery for 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. 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 2013	FY 2014	FY 2015	
Title: Advanced Low Velocity Airdrop System (ALVADS) - Light and Heavy Articles: Description: ALVADS - Light and Heavy are capable of airdrop operations at an altitude down to 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 Accomplishments: Conduct Design Validation (DV) for ALVADS-L. FY 2014 Plans: Complete DV. FY 2015 Plans: Down select to technically mature ALVADS assets for DT. Initiate DT.									1.141	1.516	1.688	
									-	-	-	
Title: Advanced Cargo Parachute Release System (ACPRS) Articles:									0.166 -	- -	- -	

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev	Project (Number/Name) L39 / Field Sustainment Support Ed		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2013	FY 2014	FY 2015
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 Accomplishments: Obtain Milestone C on ACPRS and initiate pre-planned product improvement effort.					
Title: Joint Precision Aerial Delivery System (JPADS)			0.678	-	-
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. It's two primary components, a decelerator and an Autonomous Guidance Unit (AGU) interface to the US Air Force JPADS mission planner and has a gross rigged weight of 2,400 - 10,000 pounds.					
FY 2013 Accomplishments: Conduct Preplanned Product Improvement (P3I) testing. Extraction at high altitude longer platform testing and improved system accuracy testing.					
Title: Low Cost Aerial Delivery System (LCADS)			0.233	0.272	-
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 US 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 2013 Accomplishments: Conduct Preplanned Product Improvement (P3I) testing. Single material Low Cost-High Velocity (LC-HV) parachute and Cargo Delivery System (CDS) ration testing					
FY 2014 Plans: Complete Preplanned Product Improvement (P3I) testing. Low Cost Low Altitude/High Velocity (LCLA/HV) flight testing.					
Accomplishments/Planned Programs Subtotals			2.218	1.788	1.688

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014	
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev				Project (Number/Name) L39 / Field Sustainment Support Ed			
C. Other Program Funding Summary (\$ in Millions)											
			<u>FY 2015</u>	<u>FY 2015</u>	<u>FY 2015</u>					<u>Cost To</u>	
<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>Base</u>	<u>OCO</u>	<u>Total</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Complete</u>	<u>Total Cost</u>
• MA7806: Precision Airdrop, OPA 3, MA7806	6.577	9.500	2.198	-	2.198	2.208	1.947	2.210	2.217	Continuing	Continuing
• 643804 K39: Field Sustainment Support AD, 643804 K39	2.649	2.160	0.534	-	0.534	0.558	1.155	-	-	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
Accelerate product development and testing to transition into production.											
E. Performance Metrics											
N/A											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev				Project (Number/Name) L39 / Field Sustainment Support Ed					
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	2.193	0.617	Apr 2013	0.757	Mar 2014	0.183	Nov 2014	-		0.183	-	3.750	Continuing
SBIR+STTR	TBD	Various : Various	0.129	-		-		-		-		-	-	0.129	-
Subtotal			2.322	0.617		0.757		0.183		-		0.183	-	3.879	-
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
ACPRS	Various	PM FSS, Natick : Various	3.867	0.076	Jan 2013	-		-		-		-	-	3.943	-
ALVADS-L&H	Various	Various : Various	14.003	0.213	Mar 2014	0.416	Jul 2014	0.705	Dec 2014	-		0.705	-	15.337	Continuing
JPADS P3I	Various	Various : Various	5.770	0.100	Jan 2013	-		-		-		-	-	5.870	Continuing
LCADS P3I efforts	Various	Various : Various	0.950	0.016	Jan 2013	-		-		-		-	-	0.966	Continuing
Subtotal			24.590	0.405		0.416		0.705		-		0.705	-	26.116	-
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
LCADS	Various	Yuma Proving Ground (YPG), AZ, AEC : AZ	9.750	0.147	Apr 2013	0.215	Mar 2014	-		-		-	-	10.112	Continuing
JPADS P3I	Various	Yuma Proving Ground, AZ : Yuma, AZ	0.500	0.451	Apr 2013	-		-		-		-	-	0.951	-
JPADS 10K OT	Various	GSA : GSA	0.936	-		-		-		-		-	-	0.936	Continuing
ACPRS	Various	Yuma Proving Ground, AZ : Yuma, AZ	0.005	-		-		-		-		-	-	0.005	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014		
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>				Project (Number/Name) L39 / <i>Field Sustainment Support Ed</i>				

Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	3.538	0.598	Mar 2014	0.400	Jul 2014	0.800	Dec 2014	-		0.800	-	5.336	Continuing
Subtotal			14.729	1.196		0.615		0.800		-		0.800	-	17.340	-

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	41.641	2.218	1.788	1.688	-	1.688	-	47.335	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army			Date: March 2014		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>			Project (Number/Name) L39 / <i>Field Sustainment Support Ed</i>

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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 on Advanced Cargo Parachute Release System (ACPRS)	■																											
Complete Advanced Low Velocity Airdrop System L&H (ALVADS) DV Testing								■																				
Conduct Developmental Testing/Operational Testing DT/OT on ALVADS-L&H													■															
Milestone C ALVADS																				■								
Conduct follow on testing ACPRS P3I	■																											
Conduct MS B on EHLSCDS													■															
Fabricate OT test assets/begin OT on EHLSCDS																					■							
Complete OT for EHLSCDS																								■				
Complete DT/OT on Next Generation LCADS																	■											
Conduct DT on EHLSCDS																	■											
Conduct MS C on Next Generation LCADS																									■			

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>	Project (Number/Name) L39 / <i>Field Sustainment Support Ed</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Milestone C on Advanced Cargo Parachute Release System (ACPRS)	1	2013	1	2013
Complete Advanced Low Velocity Airdrop System L&H (ALVADS) DV Testing	3	2014	3	2015
Conduct Developmental Testing/Operational Testing DT/OT on ALVADS-L&H	1	2016	2	2017
Milestone C ALVADS	4	2017	4	2017
Conduct follow on testing ACPRS P3I	1	2013	4	2013
Conduct MS B on EHLSCDS	4	2016	4	2016
Fabricate OT test assets/begin OT on EHLSCDS	2	2018	4	2018
Complete OT for EHLSCDS	1	2019	2	2019
Complete DT/OT on Next Generation LCADS	3	2017	4	2018
Conduct DT on EHLSCDS	2	2017	4	2017
Conduct MS C on Next Generation LCADS	2	2019	2	2019

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev				Project (Number/Name) L41 / Water And Petroleum Distribution - Ed			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
L41: Water And Petroleum Distribution - Ed	-	3.418	2.648	3.195	-	3.195	4.013	4.733	4.632	4.622	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
# The FY 2015 OCO Request will be submitted at a later date.												
A. Mission Description and Budget Item Justification												
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. These Engineering and Manufacturing Development programs enable the Army to improve maneuver sustainment operations to meet the demands of the Stryker Brigade Combat Teams and the 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 joint operations areas.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2013	FY 2014	FY 2015	
Title: Fuel System Supply Point (FSSP) Improvements. Articles: Description: Funding is provided for the following effort FY 2013 Accomplishments: Market Investigation for Family of Meters and On Board Truck Capability. Address the Army's capability gap for automated gauging to capture fuel quantities in collapsible tanks in the FSSP. This includes the development of a data device that will transmit and store the data internally and externally to other command networks and systems.									0.608	-	-	
									-	-	-	
Title: Contingency Basing Infrastructure (CBI) Articles: Description: Funding Provided for the following effort FY 2013 Accomplishments: This funding supports the CBI Product Management office to fund Defense Technical Information Center (DTIC) contract.									0.284	-	-	
									-	-	-	
Title: 3K Tactical Water Purification System (TWPS).									-	1.138	-	

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev	Project (Number/Name) L41 / Water And Petroleum Distribution - Ed		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
Articles: Description: Funding is provided for the following effort FY 2014 Plans: Design, fabricate and test 3K TWPS International Standard Organization (ISO) shelter. Develop a design for system strainer and identify a possible backup high pressure pump.		-	-	-
Title: Integration of component level improvements at the system level for the Fuel System Supply Point (FSSP). Articles: Description: Funding is provided for the following effort FY 2013 Accomplishments: FSSP 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: 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.		0.771 -	0.500 -	- -
Title: Expeditionary Water Packaging System (EWPS). Articles: Description: Funding is provided for the following effort FY 2013 Accomplishments: Evaluate commercial off-the-shelf water packaging systems to inform requirement process and initiate development of a purchase description. FY 2014 Plans: Prepare Material Development Decision (MDD) and initiate preparation of Milestone C program documentation. Evaluate a commercial automated packaging system from Conteno Corp, finalize Purchase Description (PD) and prepare Request for Proposal (RFP). FY 2015 Plans:		0.955 -	0.510 -	0.311 -

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army								Date: March 2014			
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev				Project (Number/Name) L41 / Water And Petroleum Distribution - Ed			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2013	FY 2014	FY 2015	
Finalize and staff Milestone C program documents; Release Request for Proposal (RFP) and hold a Source Selection Evaluation Board (SSEB) to award EWPS production contract.											
Title: Modular Tactical Retail Refueling System (MTRRS)								0.800	0.500	1.000	
Articles:								-	-	-	
Description: Funding is provided for the following effort.											
FY 2013 Accomplishments: Market investigation for MTRRS solution. Develop Computer Automated Drawing (CAD) models for Finite Element Analysis of stress.											
FY 2014 Plans: Prepare documentation for Milestone C. Develop Computer-Aided Design models for Finite Element Analysis of stress. Prepare Systems Engineering Plan. Secure MDD decision.											
FY 2015 Plans: Initiate test, technical manuals and technical data package (drawing package). The technical data package will allow the Army to competitively procure the MTRRS in the future.											
Title: Early Entry Fluid Distribution System (E2FDS).								-	-	1.884	
Description: Funding is provided for the following effort											
FY 2015 Plans: Achieve Milestone B approval. Release RFP for Engineering and Manufacturing Development (EMD) contract. Source Selection Evaluation Board (SSEB) for EMD contract. Award EMD contract.											
Accomplishments/Planned Programs Subtotals								3.418	2.648	3.195	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• 0603804/K41: RDTE, Logistics and Engineer Equipment - Advanced Development	2.413	2.262	3.545	-	3.545	3.935	3.757	4.465	4.847	Continuing	Continuing
• MA6000: OPA 3, Distribution Systems, Petroleum & Water	36.218	42.288	40.692	-	40.692	38.518	38.875	28.001	26.631	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army							Date: March 2014		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>			Project (Number/Name) L41 / <i>Water And Petroleum Distribution - Ed</i>		

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

<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u> <u>Base</u>	<u>FY 2015</u> <u>OCO</u>	<u>FY 2015</u> <u>Total</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
Remarks											

D. Acquisition Strategy

Develop engineering prototypes for the 3K TWPS and MTRRS and select Non-Development Item based on market surveys and proposals from industry for the E2FDS and other water and fuel systems. Based on market research, will award either competitive or sole source contracts.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev						Project (Number/Name) L41 / Water And Petroleum Distribution - Ed			
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	0.062	-		-		-		-		-	-	0.062	-
Subtotal			0.062	-		-		-		-		-	-	0.062	-
Remarks not applicable															
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	0.184	-		-		-		-		-	-	0.184	Continuing
FSSP Improvements	Various	TARDEC : Warren, MI	2.211	1.000	Mar 2013	-		-		-		-	-	3.211	Continuing
Water Systems Capability Improvements	Various	TBD : TBD	0.154	-		-		-		-		-	-	0.154	Continuing
Expeditionary Water Packaging System (EWPS)	Various	TARDEC : Warren, MI	0.550	0.300	Jun 2013	0.110	Feb 2014	0.311	Dec 2014	-		0.311	-	1.271	Continuing
3K Tactical Water Purification System (TWPS)	Various	NFESC : Pt. Hueneme, CA	0.000	-		0.200	Feb 2014	-		-		-	-	0.200	Continuing
Early Entry fluid Distribution System (E2FDS)	TBD	TBD : TBD	0.000	-		-		0.984	Jan 2015	-		0.984	-	0.984	-
Modular Tactical Retail Refueling System (MTRRS)	MIPR	TARDEC : Warren, MI	0.237	0.800	Feb 2013	0.500	Mar 2014	0.200	May 2015	-		0.200	-	1.737	-
3K Tactical Water Purification System (TWPS)	MIPR	TARDEC : Warren, MI	0.000	-		0.638	Mar 2014	-		-		-	-	0.638	-
Subtotal			3.336	2.100		1.448		1.495		-		1.495	-	8.379	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev				Project (Number/Name) L41 / Water And Petroleum Distribution - Ed					
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	0.379	Mar 2013	0.500	Feb 2014	-		-		-	-	1.001	Continuing
Early Entry Fluid Distribution System (E2FDS)	TBD	TBD : TBD	0.000	-		-		0.900	Jan 2014	-		0.900	-	0.900	-
Expeditionary Water Packaging System (EWPS)	Various	TARDEC : Warren, MI	0.000	0.100	Jun 2013	-		-		-		-	-	0.100	Continuing
Contingency Based Infrastructure (CBI)	SS/FFP	PEO, CS&CSS, PM, CBI : Warren, MI	0.000	0.284	Mar 2013	-		-		-		-	-	0.284	-
Subtotal			0.122	0.763		0.500		0.900		-		0.900	-	2.285	-
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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, AZ	0.650	-		-		-		-		-	-	0.650	Continuing
Expeditionary Water Packaging system (EWPS)	Various	TARDEC : Warren, MI	0.000	0.255	Dec 2012	0.300	Mar 2014	-		-		-	-	0.555	Continuing
Expeditionary Water Packaging System (EWPS)	Various	NFESC : Port Hueneme, CA	0.000	0.300	Feb 2013	0.100	Dec 2013	-		-		-	-	0.400	-
3K Tactical Water Purification System (TWPS)	MIPR	TARDEC : Warren, MI	0.000	-		0.300	Feb 2014	-		-		-	-	0.300	-
Modular Tactical Retail Refueling System (MTRRS)	Various	Yuma : Yuma Proving Ground, AZ	0.000	-		-		0.800	Jan 2015	-		0.800	-	0.800	Continuing
Subtotal			0.650	0.555		0.700		0.800		-		0.800	-	2.705	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army											Date: March 2014				
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev					Project (Number/Name) L41 / Water And Petroleum Distribution - Ed					
			Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			4.170	3.418		2.648		3.195		-		3.195	-	13.431	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army			Date: March 2014		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>			Project (Number/Name) L41 / <i>Water And Petroleum Distribution - Ed</i>

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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) Common Pumps																												
Fuel System Supply Points (FSSPs) Tank Gauging																												
Modular Tactical Retail Refueling System (MTRRS)																												
Expeditionary Water Packaging System (EWPS)																												
3K Tactical Water Purification System (3K TWPS)																												
Unit Water Pod (Camel II)																												
Man Portable Water Purifier (MPWP)																												
Early Entry Fluid Distribution System (E2FDS)																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>	Project (Number/Name) L41 / <i>Water And Petroleum Distribution - Ed</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Fuel System Supply Points (FSSPs) Common Pumps	4	2012	4	2014
Fuel System Supply Points (FSSPs) Tank Gauging	1	2013	4	2013
Modular Tactical Retail Refueling System (MTRRS)	1	2013	4	2015
Expeditionary Water Packaging System (EWPS)	1	2011	4	2015
3K Tactical Water Purification System (3K TWPS)	1	2018	4	2019
Unit Water Pod (Camel II)	2	2013	3	2013
Man Portable Water Purifier (MPWP)	1	2019	4	2019
Early Entry Fluid Distribution System (E2FDS)	1	2015	4	2019

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev				Project (Number/Name) L43 / ENGINEER SUPPORT EQUIPMENT - ED			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
L43: ENGINEER SUPPORT EQUIPMENT - ED	-	1.855	-	0.575	-	0.575	1.268	1.282	1.282	1.798	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
# The FY 2015 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 Combat Engineer and Construction Support Equipment arena. These items include critical life support equipment such as diving, fire fighting, fire suppression, urban operations, breathable air compressors, and emergency and recovery sets. The Combat Engineer and Construction equipment consists of the 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 Soldier Portable SKO, and critical life support equipment such as the Deep Sea Set, Underwater Construction Set, Closed Circuit Scuba Set, the Family of High Pressure Breathable Air Compressors (FOHPBAC), Vertical Skills Engineer Construction Kit (VSECK), Fire Protection Equipment (FPE) and Family of Boats and Motors (FOBAM). All of these programs are in the Engineering and Manufacturing Development Phase. BUDGET ITEM JUSTIFICATION: These systems provide state-of-the-art deployable, critical life support and combat engineer and construction equipment supporting the joint warfighter. This program will minimize transportation requirements and reduce the logistical footprint by eliminating obsolete equipment and reducing the number of programs. Funding shall allow for development of dual use systems that support wartime use by soldiers to include Special Forces and peacetime operations that include national disaster relief and homeland security operations. Much of this equipment has an inherent short Economic Useful Life (EUL). Investments used to revise, update and obtain equipment within this portfolio has resulted in reductions in footprint, and increases in safety, effectiveness, and readiness.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2013	FY 2014	FY 2015	
Title: Family of Boats and Motors (FOBAM) Articles: Description: Development of various Assault Boats and Outboard Motors FY 2013 Accomplishments: Testing of 7-man and 15-man boats and testing of motors FY 2015 Plans:									0.605	-	0.525	
									-	-	-	

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev	Project (Number/Name) L43 / ENGINEER SUPPORT EQUIPMENT - ED		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2013	FY 2014	FY 2015
Purchase and Test the Rigid Inflatable and 3-man Boats					
Title: Supervisory Propulsion, Emergency and Recovery Set (SPEARS) Description: Market Research for the SPEARS FY 2015 Plans: Market Research			-	-	0.050
Title: Document Development Description: Development of various capabilities documents and other documents FY 2013 Accomplishments: Continue development of ICDs, CDDs, and CPDs for various programs			0.048 Articles: -	- -	- -
Title: Underwater Construction Sets Description: Research, Development, and Testing of Underwater Construction Sets FY 2013 Accomplishments: Procure and test Underwater Construction Set articles			0.339 Articles: -	- -	- -
Title: Fire Protection Equipment (FPE) Description: Fire Protection Equipment FY 2013 Accomplishments: Procure Type II and Type III FPE items			0.165 Articles: -	- -	- -
Title: Deep Sea Set Description: Development of the Deep Sea Set FY 2013 Accomplishments: Create Computer Model of existing set /add enhancements to model /develop TDP in support of make-or-buy decision			0.214 Articles: -	- -	- -
Title: Engineering and Quality Assurance			0.290	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>	Project (Number/Name) L43 / <i>ENGINEER SUPPORT EQUIPMENT - ED</i>	

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Articles: Description: Engineering and Quality Assurance of engineering SKOs FY 2013 Accomplishments: Engineering and Quality Assurance dedicated to the development and quality of Assault Boats, Outboard Motors, Diving Equipment, Soldier Portable, Firefighting and other engineering sets	-	-	-
Title: Vertical Skills Engineer Construction Kit (VSECK) Description: Research, Development, and Testing of Vertical Skills Engineer Construction Kit (VSECK) FY 2013 Accomplishments: Procure and test VSECK	0.121 -	- -	- -
Title: Kits for Evidence Collection and Detainee Processing Description: Research, Development, and Testing of Kits for Evidence Collection and Detainee Processing FY 2013 Accomplishments: Procure and test Kits for Evidence Collection and Detainee Processing	0.073 -	- -	- -
Accomplishments/Planned Programs Subtotals	1.855	-	0.575

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

<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u> <u>Base</u>	<u>FY 2015</u> <u>OCO</u>	<u>FY 2015</u> <u>Total</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• OPA 3 ML5325: OPA 3 ML5325, Items Less than \$5.0M (Engineering Support)	14.093	5.859	20.090	-	20.090	9.535	6.309	9.712	13.528	Continuing	Continuing

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 Engineering and Manufacturing Development (EMD) and transition into production.

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev	Project (Number/Name) L43 / ENGINEER SUPPORT EQUIPMENT - ED

E. Performance Metrics
N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev						Project (Number/Name) L43 / ENGINEER SUPPORT EQUIPMENT - ED			
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	0.033	-		-		-		-		-	-	0.033	-
Subtotal			0.033	-		-		-		-		-	-	0.033	-
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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)	0.310	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
Rigid Inflatable Boats test articles	C/FP	TBS : TBS	0.000	-		-		0.250	Dec 2014	-		0.250	Continuing	Continuing	Continuing
3-man boat test articles	C/FP	TBS : TBS	0.000	-		-		0.060	Dec 2014	-		0.060	Continuing	Continuing	Continuing
Market Samples for Supervisory, Propulsion, Emergency and Recovery Set (SPEARS)	C/FP	TBS : TBS	0.000	-		-		0.050	Jan 2015	-		0.050	Continuing	Continuing	Continuing
Market Samples of Vertical Skills Engineer Construction Kit (VSECK)	C/FP	PM SKOT : Harrison, MI	0.020	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	0.118	0.170	Dec 2012	-		-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>						Project (Number/Name) L43 / <i>ENGINEER SUPPORT EQUIPMENT - ED</i>			
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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 : Fredricksburg, VA	0.060	-		-		-		-		-	Continuing	Continuing	Continuing
XLDS	SS/FP	TBS : TBS	0.050	-		-		-		-		-	-	0.050	-
Develop Family of High Pressure Breathing Air Compressors (FOHPBAC)	C/FP	TBS : TBS	0.175	-		-		-		-		-	Continuing	Continuing	Continuing
Subtotal			1.615	0.741		-		0.360		-		0.360	-	-	-
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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)	0.170	0.050	Oct 2012	-		-		-		-	Continuing	Continuing	Continuing
Engineering and Quality Assurance of engineering SKOs (Soldier Portable)	MIPR	ECBC/ARDEC : Rock Island, IL	0.089	0.189	Nov 2012	-		-		-		-	Continuing	Continuing	Continuing
Engineering and Quality Assurance (Boats and Motors)	MIPR	ECBC : Rock Island, IL	0.100	0.100	Oct 2012	-		-		-		-	Continuing	Continuing	Continuing
Subtotal			0.415	0.339		-		-		-		-	-	-	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>				Project (Number/Name) L43 / <i>ENGINEER SUPPORT EQUIPMENT - ED</i>					
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	-		0.215	Jun 2015	-		0.215	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	0.775		-		0.215		-		0.215	-	-	-
			Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			2.438	1.855		-		0.575		-		0.575	-	-	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>	Project (Number/Name) L43 / <i>ENGINEER SUPPORT EQUIPMENT - ED</i>
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	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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
Design, develop, build, and test Underwater Construction and Deep Sea Sets																												
Procurement of test articles and testing of Assault Boats & Outboard Motors																												
Procurement of test articles and testing of Rigid Inflatable and 3-man boats																												
Procurement of test articles & testing of Soldier Portable Sets & Support Equip																												
Procurement of Test Articles and Testing of Vertical Skills Engineering Construc																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>	Project (Number/Name) L43 / <i>ENGINEER SUPPORT EQUIPMENT - ED</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Design, develop, build, and test Underwater Construction and Deep Sea Sets	2	2011	4	2013
Procurement of test articles and testing of Assault Boats & Outboard Motors	2	2012	4	2013
Procurement of test articles and testing of Rigid Inflatable and 3-man boats	1	2015	1	2016
Procurement of test articles & testing of Soldier Portable Sets & Support Equip	2	2013	4	2013
Procurement of Test Articles and Testing of Vertical Skills Engineering Construc	1	2016	3	2017

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev				Project (Number/Name) L46 / Maintenance Support Equipment			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
L46: Maintenance Support Equipment	-	3.449	1.232	1.004	-	1.004	1.946	1.804	1.878	1.916	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
# The FY 2015 OCO Request will be submitted at a later date.												
Note Not applicable for this item.												
A. Mission Description and Budget Item Justification Mobile Maintenance Equipment provides state of the art, deployable, vehicle-mounted and containerized shelter tool systems supporting the Joint warfighter. These systems are equipped with industrial quality tools required for Two Level Maintenance that reduce common tool redundancy, provide tool standardization, minimize transportation requirements, reduces logistical footprint, and are backed by a Lifetime Warranty/Replacement Program which reduces sustainment costs. This is accomplished by employing a system of systems approach to maintenance acquisition. The system of systems approach builds a maintenance capability upon each system, allowing a logical and natural approach to the Army's overall two level maintenance strategy. These inter-connected systems distributed throughout the Army at multiple levels and echelons provide a holistic repair capability in all scenarios and environments. These systems provide the Maintenance and Combat Commanders an unprecedented capability to repair wheeled, tracked, aviation, ground support and weapons systems on site at one location at one time. This approach to maintenance acquisition increases efficiencies and supports the current force while providing modular configurations designed to meet the specific needs of the Army maintainer in today's complex transforming environment. All of these programs are in the Engineering and Manufacturing Development Phase.												
BUDGET ITEM JUSTIFICATION: The need to develop and maintain a System of System maintenance approach is critical due to the growing complexity of today's military equipment, operational tempo, modularity, and current and evolving Tactics Techniques and Procedures (TTPs). The individual maintenance systems are comprehensive, interconnected and capable of solving and repairing any maintenance problems. The System of Systems approach does not advocate specific tools, methods or practices; instead it seeks to promote a streamlined comprehensive set of systems for solving maintenance challenges where the interactions of doctrine, technology, time and tactics techniques and procedures are the primary drivers. Funding for projects shall include test article procurement and testing of soldier portable maintenance SKOs and load banks; investigation of new technologies for next generation mobile maintenance equipment shop sets including the Shop Equipment Welding (SEW) and Shop Equipment Contact Maintenance (SECM); development of additional SATS maintenance modules, Special Tools initiatives; packaging development; and technical support for emerging JCIDS materiel requirements documents.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2013	FY 2014	FY 2015	
Title: Develop the Next Generation Shop Equipment Welding (SEW)									0.900	-	-	
									Articles: -	-	-	
Description: Design, Build, and Test the Next Generation SEW, incorporating new technology and a new platform												

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev	Project (Number/Name) L46 / Maintenance Support Equipment		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
FY 2013 Accomplishments: Concept design and development of the Next Generation SEW on a new platform				
Title: Fire Suppression Refill System (FSRS) Description: Design, Develop, Build, and Test SATS Future Field Modules FY 2013 Accomplishments: Develop Next Generation SATS prototypes FY 2014 Plans: Develop Fire Suppression Refill System		Articles: 0.403 -	0.485 -	- -
Title: Metal Working & Machining Shop Set (MWMSS) Description: Design, Develop, Build, and Test Metal Working & Machining Shop Set (MWMSS) configurations FY 2013 Accomplishments: Additional Testing/Re-testing MWMSS		Articles: 0.100 -	- -	- -
Title: Mobile Maintenance Equipment Shop Set Description: Modernization / Redesign efforts of maintenance support equipment in support of technological advances, environmental/safety constraints and to support emerging systems FY 2013 Accomplishments: Vehicular SKO Modernization to include SECM FY 2014 Plans: Next Generation Ordnance SKO FY 2015 Plans: Next generation Ordnance SKO		Articles: 0.389 -	0.522 -	0.450 -
Title: Support for Requirements Generation		Articles: 0.125 -	0.125 -	0.104 -

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev	Project (Number/Name) L46 / Maintenance Support Equipment		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
Description: Support for requirements generation of future SKOs FY 2013 Accomplishments: Document development supporting future requirements SKOs FY 2014 Plans: Document development supporting future requirements SKOs FY 2015 Plans: Document development supporting future requirements SKOs				
Title: Special Tools Initiative Articles:		0.275 -	0.050 -	0.300 -
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 Accomplishments: 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. FY 2015 Plans: Develop and test various Soldier Portable Tool Kits based on the maintenance requirements of current and future platforms.				
Title: Engineering and Quality Assurance Articles:		0.202 -	- -	- -
Description: Engineering and Quality Assurance in support of SKOs FY 2013 Accomplishments: Engineering and Quality Assurance dedicated to the development and quality of maintenance SKOs				
Title: Armament Repair Shop Set (ARSS) Articles:		1.055 -	- -	- -
Description: Armament Repair Shop Set upgrades FY 2013 Accomplishments:				

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev				Project (Number/Name) L46 / Maintenance Support Equipment				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)										FY 2013	FY 2014	FY 2015
Test of ARSS prototypes and development of Technical Manuals												
Title: Acquisition of Support Equipment										-	0.050	-
Articles:										-	-	-
Description: Support Equipment												
FY 2014 Plans:												
Procure and test Support Equipment (standalone lathes, mills, load banks, etc.) formerly known as nonstandard												
Title: Packaging Support										-	-	0.150
Description: Full Packaging Program Support and Packaging Data Management												
FY 2015 Plans:												
Develop and Maintain Logistics Packaging, Packing and Palletization data												
Accomplishments/Planned Programs Subtotals										3.449	1.232	1.004
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost	
• OPA 3 ML5345: OPA 3 ML5345, Items Less Than \$5.0M (MAINTENANCE EQUIPMENT)	0.030	3.860	2.789	-	2.789	2.783	2.783	2.784	2.692	Continuing	Continuing	
• OPA 3 G39200: OPA 3 G39200, Hydraulic Systems Test and Repair Unit (HSTRU)	2.920	0.150	-	-	-	-	-	-	-	-	3.070	
• OPA 3 G05315: OPA 3 G05315, Metalworking and Machining Shop Set (MWMSS)	-	9.267	9.350	-	9.350	9.419	9.418	9.420	9.451	Continuing	Continuing	
• OPA 3 G05330: OPA 3 G05330, Armament Repair Shop Set (ARSS)	-	2.760	10.426	-	10.426	10.472	11.477	10.435	11.837	Continuing	Continuing	
• OPA 3 G05320: OPA 3 G05320, Fire Suppression Refill System (FSRS)	-	-	3.982	-	3.982	5.587	4.582	3.937	6.753	Continuing	Continuing	

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>				Project (Number/Name) L46 / <i>Maintenance Support Equipment</i>				
C. Other Program Funding Summary (\$ in Millions)												
	<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u> <u>Base</u>	<u>FY 2015</u> <u>OCO</u>	<u>FY 2015</u> <u>Total</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
Remarks												
D. Acquisition Strategy												
Programs will progress from requirements generation through market research, development, market samples and testing. Efforts will support the two level maintenance concept utilizing commercial technologies and incorporating them into SKO to support next generation weapon and support systems.												
E. Performance Metrics												
N/A												

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev						Project (Number/Name) L46 / Maintenance Support Equipment			
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	0.096	-		-		-		-		-	-	0.096	-
Subtotal			0.096	-		-		-		-		-	-	0.096	-
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	Jun 2014	-		-		-	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 systems	MIPR	ECBC : Rock Island, IL	0.300	0.389	Dec 2012	0.522	Dec 2013	0.450	Nov 2014	-		0.450	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	Jun 2014	-		-		-	Continuing	Continuing	Continuing
Procure Ground Based Special Tools in support of Tactical Wheeled Vehicles	MIPR	PM SKOT : Harrison, MI	0.000	-		-		0.300	Oct 2014	-		0.300	Continuing	Continuing	Continuing
Subtotal			1.831	1.439		0.697		0.750		-		0.750	-	-	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>						Project (Number/Name) L46 / <i>Maintenance Support Equipment</i>			
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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)	0.618	0.125	Dec 2012	-		0.122	Jan 2015	-		0.122	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)	0.980	0.202	Nov 2012	-		-		-		-	Continuing	Continuing	Continuing
Packaging Support	MIPR	ARDEC : Rock Island, IL	0.000	-		-		0.132	Jan 2015	-		0.132	Continuing	Continuing	-
Subtotal			1.898	0.327		-		0.254		-		0.254	-	-	-
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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 Metal Working & Machining Shop Set (MWMSS)	MIPR	ATEC : Aberdeen, MD	2.621	0.100	Dec 2012	-		-		-		-	Continuing	Continuing	Continuing
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	Apr 2014	-		-		-	Continuing	Continuing	Continuing
Procure and Test standalone support equipment items	MIPR	ATEC : Aberdeen, MD	0.000	-		0.050	Apr 2014	-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014				
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev					Project (Number/Name) L46 / Maintenance Support Equipment						
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost		Cost To Complete	Total Cost	Target Value of Contract
Subtotal			2.884	1.683		0.535		-		-		-		-	-	-
			Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals			6.709	3.449		1.232		1.004		-		1.004	-	-	-	
Remarks																

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army			Date: March 2014		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>			Project (Number/Name) L46 / <i>Maintenance Support Equipment</i>

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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
Redesign of Mobile Maintenance Equipment Shop Set of next generation vehicle																												
Design, Develop, Build and Test MetalWorking & Machining Shop Set Configurations																												
Design, Develop, Build and Test Armament Repair Shop Set (ARSS)																												
Develop, Procure and Test Special Tools for Additional Vehicles																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>	Project (Number/Name) L46 / <i>Maintenance Support Equipment</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Redesign of Mobile Maintenance Equipment Shop Set of next generation vehicle	1	2007	4	2019
Design, Develop, Build and Test MetalWorking & Machining Shop Set Configurations	1	2008	4	2013
Design, Develop, Build and Test Armament Repair Shop Set (ARSS)	2	2011	4	2013
Develop, Procure and Test Special Tools for Additional Vehicles	1	2015	4	2019

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev				Project (Number/Name) L47 / Improved Environmental Control Units Ed			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
L47: Improved Environmental Control Units Ed	-	2.661	2.966	-	-	-	0.984	1.479	3.058	2.174	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
# The FY 2015 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 Environmental Control Units (ECUs) that use environmentally approved refrigerants, with zero Ozone-Depleting Chemicals (ODCs) to replace the current Military Standard (MIL-STD) Family of 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 (such as HCFC-22) 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 Environmental Protection Agency (EPA) requirements (non-global warming). FY14 funding supports 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. In addition, the field has identified an emerging requirement for an integrated fuel-fired heating/cooling system. These 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. FY14 funding also supports continued evaluation of IECUs and variants at Network Integration Evaluation (NIE) to support new operational concepts. There are no FY15 base dollars.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2013	FY 2014	FY 2015	
Title: Technology Development Articles:									1.685	1.000	-	
									-	-	-	
Description: Engineering and Manufacturing Development (EMD) for 9/18/36K BTUH Improved Environmental Control Unit (IECU), multiple trailer-mounted variants and integrated heating/cooling systems.												
FY 2013 Accomplishments: 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 and integrated heating/cooling units to meet emerging user needs.												
FY 2014 Plans:												

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>		Project (Number/Name) L47 / <i>Improved Environmental Control Units Ed</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2013	FY 2014	FY 2015
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 and integrated heating/cooling units to meet emerging user needs.					
Title: Government System Test and Evaluation			0.199	0.678	-
Articles:			-	-	-
Description: Testing for prototype performance for the trailer mounted variants of the Improved Environmental Control Units (IECUs).					
FY 2013 Accomplishments: 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 trailer mounted variants to support type classification. Conduct performance tests on integrated heating/cooling units.					
Title: Other Contract and Government Agency			0.344	1.090	-
Articles:			-	-	-
Description: Support engineering, logistics, and testing efforts for multiple trailer-mounted variants, as well as integrated heating/cooling units. Support Engineering and Manufacturing Development (EMD) effort on 9/18/36K Improved Environmental Control Unit (IECU) family.					
FY 2013 Accomplishments: Support engineering, logistics, and testing efforts for multiple trailer-mounted variants 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 and integrated heating/cooling units. Support EMD effort on 9/18/36K IECU family.					
Title: Government Program Management			0.433	0.198	-
Articles:			-	-	-
Description: Oversight and management of engineering, logistics, contracts, and testing efforts for 9/18/36 Improved Environmental Control Unit (IECU) family and multiple trailer-mounted variants. Transition to production. Provide oversight and management of integrated heating/cooling units.					
FY 2013 Accomplishments:					

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army								Date: March 2014			
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev				Project (Number/Name) L47 / Improved Environmental Control Units Ed			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2013	FY 2014	FY 2015	
Oversight and management of engineering, logistics, contracts, and testing efforts for 9/18/36K IECU family and multiple trailer-mounted variants. 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 and multiple trailer-mounted variants. Transition to production. Provide oversight and management of integrated heating/cooling units.											
Accomplishments/Planned Programs Subtotals								2.661	2.966	-	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• MF9303: OPA 3, Improved Environmental Control Units , MF9303	12.194	6.269	9.235	-	9.235	19.031	26.665	12.008	18.878	Continuing	Continuing
Remarks											
D. Acquisition Strategy Complete Engineering and Manufacturing Development (EMD) for the 9/18/36K Improved Environmental Control Unit (IECU) variants and transition to production. Begin EMD for level efforts in support of multiple trailer-mounted IECU variants. 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. 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 N/A											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev				Project (Number/Name) L47 / Improved Environmental Control Units Ed					
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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 Improved Environmental Control Unit (IECU)	Various	PM-MEP : various	1.124	-		0.050	Feb 2014	-		-		-	-	1.174	Continuing
Trailer Variants	Various	PM-MEP : various	0.000	0.433	Nov 2012	0.073	Feb 2014	-		-		-	-	0.506	Continuing
18K Vertical	Various	PM-MEP : various	0.000	-		0.050	Feb 2014	-		-		-	-	0.050	-
Integrated heating/cooling units	Various	PM-MEP : various	0.000	-		0.025	Feb 2014	-		-		-	-	0.025	-
SBIR/STTR	Various	various : various	0.137	-		-		-		-		-	-	0.137	-
Subtotal			1.261	0.433		0.198		-		-		-	-	1.892	-
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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 Improved Environmental Control Unit (IECU)	C/CPFF	Mainstream Engineering : Vero Beach, FL	2.064	-		-		-		-		-	-	2.064	Continuing
Trailer Mounted variants	MIPR	CERDEC Night Vision Lab : Ft Belvoir, VA	0.000	-		0.400	Apr 2014	-		-		-	-	0.400	-
18K Vertical	C/CPFF	TBD : TBD	0.000	1.685	Jun 2013	0.400	Apr 2014	-		-		-	-	2.085	-
Integrated heating/cooling units	MIPR	CERDEC Night Vision Lab : Ft. Belvoir, VA	0.000	-		0.200	Apr 2014	-		-		-	-	0.200	-
Subtotal			2.064	1.685		1.000		-		-		-	-	4.749	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev				Project (Number/Name) L47 / Improved Environmental Control Units Ed					
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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 Improved Environmental Control Unit (IECU)	MIPR	CERDEC : Fort Belvoir, VA	1.642	-		0.500	Dec 2013	-		-		-	-	2.142	-
18K Vertical	Various	CERDEC : Fort Belvoir, VA	3.507	-		0.200	Dec 2013	-		-		-	-	3.707	-
Trailer variants	MIPR	CERDEC : Fort Belvoir, VA	0.000	0.344	Oct 2012	0.300	Dec 2013	-		-		-	-	0.644	-
Integrated heating/cooling units	MIPR	CERDEC : Fort Belvoir, VA	0.000	-		0.090	Dec 2013	-		-		-	-	0.090	-
Subtotal			5.149	0.344		1.090		-		-		-	-	6.583	-
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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 Improved Environmental Control Unit (IECU)	MIPR	ATEC : APG, MD	0.300	-		0.178	Apr 2014	-		-		-	-	0.478	-
Trailer Variants	MIPR	ATEC : APG, MD	0.000	0.199	Nov 2012	0.150	Apr 2014	-		-		-	-	0.349	Continuing
18K Vertical	MIPR	ATEC : APG, MD	0.000	-		0.200	Apr 2014	-		-		-	-	0.200	-
Integrated heating/cooling units	MIPR	ATEC : APG, MD	0.000	-		0.150	Apr 2014	-		-		-	-	0.150	-
Subtotal			0.300	0.199		0.678		-		-		-	-	1.177	-
			Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			8.774	2.661		2.966		-		-		-	-	14.401	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army			Date: March 2014		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>			Project (Number/Name) L47 / <i>Improved Environmental Control Units Ed</i>

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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
9, 18 and 36K BTU/H IECU																												
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																												
Integrated Heating/Cooling Units																												
Procure Off-The-Shelf Units																												
Test Systems																												
Develop PD																												
Follow-on IECU (FIECU)																												
Assess Technologies to Meet Gaps																												
Test Technologies to Meet Gaps																												
Complete Proof of Principle Prototype (Commercial Components)																												
Complete Test and Evaluation - Commercial FIECU																												
Test Ruggedized FIECU																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army																					Date: March 2014																				
Appropriation/Budget Activity 2040 / 5										R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev								Project (Number/Name) L47 / Improved Environmental Control Units Ed																							
										FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019							
										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				
Transfer to Engineering and Manufacturing Development																																									
Preliminary Design Review - FIECU																																									
Design and Fabrication - FIECU																																									
CDR FIECU																																									
Test Phase - FIECU																																									
Production Readiness Review - FIECU																																									

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>	Project (Number/Name) L47 / <i>Improved Environmental Control Units Ed</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
9, 18 and 36K BTU/H IECU	1	2009	4	2015
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
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
Follow-on IECU (FIECU)	1	2017	4	2019
Assess Technologies to Meet Gaps	1	2016	4	2017
Test Technologies to Meet Gaps	1	2016	4	2017
Complete Proof of Principle Prototype (Commercial Components)	4	2016	4	2016
Complete Test and Evaluation - Commercial FIECU	2	2017	2	2017

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army			Date: March 2014	
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev		Project (Number/Name) L47 / Improved Environmental Control Units Ed	
	Start		End	
Events	Quarter	Year	Quarter	Year
Test Ruggedized FIECU	3	2017	3	2017
Transfer to Engineering and Manufacturing Development	4	2017	4	2017
Preliminary Design Review - FIECU	1	2018	1	2018
Design and Fabrication - FIECU	1	2018	2	2018
CDR FIECU	3	2018	3	2018
Test Phase - FIECU	3	2018	2	2019
Production Readiness Review - FIECU	2	2019	2	2019

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev				Project (Number/Name) VR7 / Combat Service Support Systems			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
VR7: Combat Service Support Systems	-	5.029	1.193	2.947	-	2.947	4.024	3.892	3.895	2.585	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
# The FY 2015 OCO Request will be submitted at a later date.												
A. Mission Description and Budget Item Justification												
This project supports the Engineering and Manufacturing Development (EMD) 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, improve resource and energy efficiency 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 2013	FY 2014	FY 2015	
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 2013 Accomplishments: Completed Developmental Testing and initiated procurement of interim transfer case.									0.215	-	-	
									-	-	-	
Title: Modular Ballistic Protection System (MBPS) Articles: 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.									-	0.368	0.550	
									-	-	-	
FY 2014 Plans:												

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev	Project (Number/Name) VR7 I Combat Service Support Systems		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
Procure mature test items and obtain acquisition decision to conduct SDD of MBPS Stand-alone (Threshold) to support FPE and transition to production. FY 2015 Plans: Complete SDD testing and logistics of MBPS Stand-alone (Threshold), and prepare documentation to support Milestone C decision and transition to production.				
Title: Family of Space Heaters 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. FY 2013 Accomplishments: Completed DT for P3I improvements to Army Space Heater (ASH) and updated performance specification to support next procurement. FY 2015 Plans: Conduct FAT and logistics of IASH Type II to support transition to production and Type Classification decision.		Articles: 0.089 -	- -	0.150 -
Title: Net-Zero Energy Efficiency Solutions 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, material and power requirements to sustain operations in the field. Effort includes reducing site preparation, maintenance and spare parts requirements. Operating a base camp such as Force Provider requires a significant amount of logistics support and also produces an 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 2013 Accomplishments: 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:		Articles: 1.207 -	0.825 -	1.980 -

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army							Date: March 2014				
Appropriation/Budget Activity 2040 / 5			R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev			Project (Number/Name) VR7 / Combat Service Support Systems					
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)							FY 2013	FY 2014	FY 2015		
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. FY 2015 Plans: Conduct evaluation on Net-Zero energy efficiency solutions for Force Provider. Complete DT/OT on Force Provider 150-Soldier module with integrated Advanced Medium-sized Mobile Power Source (AMMPS), solar hot water heating, and mature expeditionary shelter energy efficiency upgrades. Transition proven and validated capabilities into full-rate production.											
Title: Advanced Laundry System (LADS) Description: Provides an enhanced capability for field laundry with improved hot and cold weather performance, better compatibility with current and future combat clothing, and increased reliability, maintainability and ease of operation. FY 2015 Plans: Conduct Developmental Testing (DT) and initiate Operational Testing (OT) of prototype system.							-	-	0.267		
Title: Contingency Basing Infrastructure (CBI) Articles: Description: Develop an integrated toolset that serves as the backbone for the analysis and interface to the field allowing commanders, acquisition activities and procurement organizations information necessary to make informed decisions leading to improved power, fuel, water, and waste management efficiency on contingency bases. FY 2013 Accomplishments: Provide M&S support to demonstrate effectiveness and value of applying systems engineering fundamentals to life cycle management of base camps and provide system of systems (SoS) modeling capability to assess Base Camp performance to include: base camp system functional performance; energy (power), water and fuel usage; and energy, water, and waste production. Evaluate proposed technology solutions for impacts on Base Camp sustainment metrics.							3.518 -	- -	- -		
Accomplishments/Planned Programs Subtotals							5.029	1.193	2.947		
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• 643804 VR8: Combat Service Support Systems AD,	1.791	1.612	2.691	-	2.691	4.582	4.386	4.390	2.585	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>				Project (Number/Name) VR7 / <i>Combat Service Support Systems</i>				
C. Other Program Funding Summary (\$ in Millions)												
	<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u> <u>Base</u>	<u>FY 2015</u> <u>OCO</u>	<u>FY 2015</u> <u>Total</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
Remarks												
D. Acquisition Strategy												
Accelerate product development and testing to transition into production.												
E. Performance Metrics												
N/A												

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev				Project (Number/Name) VR7 / Combat Service Support Systems					
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	0.160	0.162	Mar 2013	0.125	Mar 2014	0.264	Dec 2014	-		0.264	Continuing	Continuing	-
SBIR+STTR	TBD	Various : Various	0.077	-		-		-		-		-	-	0.077	-
CBI Support	Various	PD CBI : Warren, MI	0.000	3.284	Jun 2013	-		-		-		-	-	3.284	-
Subtotal			0.237	3.446		0.125		0.264		-		0.264	-	-	-
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	1.246	0.897	Apr 2013	0.453	May 2014	1.138	Mar 2015	-		1.138	Continuing	Continuing	-
Subtotal			1.246	0.897		0.453		1.138		-		1.138	-	-	-
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	0.982	0.686	Mar 2013	0.615	Mar 2014	1.545	May 2015	-		1.545	Continuing	Continuing	-
Subtotal			0.982	0.686		0.615		1.545		-		1.545	-	-	-
			Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			2.465	5.029		1.193		2.947		-		2.947	-	-	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army			Date: March 2014		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>			Project (Number/Name) VR7 / <i>Combat Service Support Systems</i>

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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 DT/OT and transition Zero-Footprint Base capabilities to Joint Base Camp																												
Conduct Milestone B for the Modular Ballistic Protection System (MBPS)																												
Produce MBPS prototypes																												
Conduct DT/OT on MBPS																												
Conduct Milestone C for the MBPS																												
Conduct Laundry Advanced System Modification DT/OT																												
Conduct Milestone B for the small base camp Solid Waste Disposal System																												
Produce Solid Waste Disposal System prototypes																												
Conduct DT/OT on the small base camp Solid Waste Disposal System																												
Conduct Milestone C for the Solid Waste Disposal System																												
Conduct Milestone B for the Waste-to-Energy System																												
Produce Waste-to-Energy System prototypes																												
Conduct DT/OT on the Waste-to-Energy System																												
Conduct Milestone B for the small base camp black waste elimination system																												
Produce small base camp black waste elimination system prototypes																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army

Date: March 2014

Appropriation/Budget Activity

2040 / 5

R-1 Program Element (Number/Name)

PE 0604804A / Logistics and Engineer
Equipment - Eng Dev

Project (Number/Name)

VR7 / Combat Service Support Systems

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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 DT/OT on the small base camp black waste elimination system																												
Conduct Milestone C for the small base camp black waste elimination system																												
Conduct MS B for the Renewable Energy/ Energy Storage System for Force Provider																												
Produce Renewable Energy/Energy Storage System prototypes																												
Conduct DT/OT on Renewable Energy/Energy Storage Sys integrated to Force Provide																												
Conduct DT/OT on the HRTC2																												
Conduct Milestone C for the HRTC2																												
Conduct MS B for black waste elimination system for large base camps																												
Conduct Milestone B for the Family of Vehicle Mounted Rigid Wall Shelters (RWS)																												
Conduct DT/OT on the Family of Vehicle Mounted RWS																												
Conduct Milestone B for the Family of Expandable/Non-Expandable ISO 20																												
Conduct DT/OT on the Family of Expandable/ Non-Expandable ISO 20																												
Develop ULCANS arctic/snow variant and conduct DT/OT																												
Develop ULCANS urban variant and conduct DT/OT																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / <i>Logistics and Engineer Equipment - Eng Dev</i>	Project (Number/Name) VR7 / <i>Combat Service Support Systems</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Conduct DT/OT and transition Zero-Footprint Base capabilities to Joint Base Camp	1	2013	4	2016
Conduct Milestone B for the Modular Ballistic Protection System (MBPS)	2	2015	2	2015
Produce MBPS prototypes	3	2015	4	2015
Conduct DT/OT on MBPS	1	2016	3	2016
Conduct Milestone C for the MBPS	1	2017	1	2017
Conduct Laundry Advanced System Modification DT/OT	1	2015	1	2016
Conduct Milestone B for the small base camp Solid Waste Disposal System	3	2015	3	2015
Produce Solid Waste Disposal System prototypes	1	2016	2	2016
Conduct DT/OT on the small base camp Solid Waste Disposal System	2	2016	1	2017
Conduct Milestone C for the Solid Waste Disposal System	3	2017	3	2017
Conduct Milestone B for the Waste-to-Energy System	1	2018	2	2018
Produce Waste-to-Energy System prototypes	2	2018	4	2018
Conduct DT/OT on the Waste-to-Energy System	1	2019	3	2019
Conduct Milestone B for the small base camp black waste elimination system	2	2016	3	2016
Produce small base camp black waste elimination system prototypes	3	2016	1	2017
Conduct DT/OT on the small base camp black waste elimination system	2	2017	4	2017
Conduct Milestone C for the small base camp black waste elimination system	2	2018	2	2018
Conduct MS B for the Renewable Energy/Energy Storage System for Force Provider	1	2017	1	2017
Produce Renewable Energy/Energy Storage System prototypes	2	2017	1	2018
Conduct DT/OT on Renewable Energy/Energy Storage Sys integrated to Force Provide	2	2018	3	2019
Conduct DT/OT on the HRTC2	4	2016	2	2017
Conduct Milestone C for the HRTC2	4	2017	4	2017

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army			Date: March 2014		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604804A / Logistics and Engineer Equipment - Eng Dev		Project (Number/Name) VR7 / Combat Service Support Systems	
		Start		End	
Events		Quarter	Year	Quarter	Year
Conduct MS B for black waste elimination system for large base camps		4	2019	4	2019
Conduct Milestone B for the Family of Vehicle Mounted Rigid Wall Shelters (RWS)		3	2016	3	2016
Conduct DT/OT on the Family of Vehicle Mounted RWS		3	2017	4	2018
Conduct Milestone B for the Family of Expandable/Non-Expandable ISO 20		3	2017	3	2017
Conduct DT/OT on the Family of Expandable/Non-Expandable ISO 20		3	2018	2	2019
Develop ULCANS arctic/snow variant and conduct DT/OT		4	2015	2	2017
Develop ULCANS urban variant and conduct DT/OT		4	2017	2	2019