Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Army											Date: February 2015	
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 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**Cost To Complete**	**Total Cost**
Total Program Element	-	43.497	24.566	48.339	-	48.339	59.983	45.709	35.515	31.323	Continuing	Continuing
194: *Engine Driven Gen Ed*	-	4.858	5.872	9.862	-	9.862	6.450	4.185	4.877	7.124	Continuing	Continuing
EC9: *Contingency Basing Infrastructure*	-	-	0.982	2.541	-	2.541	2.350	1.985	1.986	1.999	-	11.843
EJ9: *Maneuver Support Vessel (Light) (MSV(L))*	-	-	-	10.066	-	10.066	18.586	14.522	-	-	-	43.174
H01: *Combat Engineer Eq Ed*	-	2.099	1.038	1.139	-	1.139	2.503	3.928	3.600	-	Continuing	Continuing
H02: *Tactical Bridging - Engineering Development*	-	23.552	6.988	11.619	-	11.619	6.699	2.207	7.338	5.956	Continuing	Continuing
H14: *Materials Handling Equipment - Ed*	-	0.288	0.283	0.628	-	0.628	1.166	0.751	0.630	0.641	Continuing	Continuing
L39: *Field Sustainment Support Ed*	-	1.729	1.687	1.849	-	1.849	4.156	3.219	2.308	3.078	Continuing	Continuing
L41: *Water And Petroleum Distribution - Ed*	-	2.508	3.193	4.038	-	4.038	8.669	5.256	4.645	4.645	Continuing	Continuing
L43: *ENGINEER SUPPORT EQUIPMENT - ED*	-	-	0.575	1.246	-	1.246	1.259	1.260	1.766	0.666	Continuing	Continuing
L46: *Maintenance Support Equipment*	-	1.191	1.003	1.412	-	1.412	2.103	2.072	1.902	1.938	Continuing	Continuing
L47: *Improved Environmental Control Units Ed*	-	2.867	-	0.976	-	0.976	1.468	1.970	3.865	2.199	Continuing	Continuing
VR7: *Combat Service Support Systems*	-	4.405	2.945	2.963	-	2.963	4.574	4.354	2.598	3.077	Continuing	Continuing

A. Mission Description and Budget Item Justification

This Program Element (PE) provides system development and demonstration for various projects. This PE includes the development of military tactical bridging, material handling equipment, construction equipment, engineer support equipment, soldier support equipment (to include shelter systems, environmental control, field service equipment, camouflage systems and aerial delivery equipment), water purification equipment, petroleum distribution equipment, mobile electric power and water craft.

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Army	Date: February 2015
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604804A *I Logistics and Engineer Equipment - Eng Dev*

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

B. Program Change Summary ($ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	41.682	24.581	32.525	-	32.525
Current President's Budget	43.497	24.566	48.339	-	48.339
Total Adjustments	1.815	-0.015	15.814	-	15.814
• Congressional General Reductions	-	-0.015			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	3.200	-			
• SBIR/STTR Transfer	-1.385	-			
• Adjustments to Budget Years	-	-	15.814	-	15.814

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army			Date: February 2015
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
194: *Engine Driven Gen Ed*	-	4.858	5.872	9.862	-	9.862	6.450	4.185	4.877	7.124	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Improved Power Distribution Illumination Systems Electrical (IPDISE)funds in this project line are a realignment of funds from 0603804A Project G-11, due to the program transitioning into the EMD Phase.

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. FY16 funds will prepare the Improved Power Distribution Illumination Systems Electrical (IPDISE)/Microgrids performance specification and initiate the EMD phase. Funding in FY16 will also support the Small Tactical Electric Power (STEP) EMD phase.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: Large Advanced Mobile Power Sources (LAMPS) and Improved Power Distribution Illumination Systems Electrical (IPDISE)/ Microgrids Engineering & Manufacturing Development (EMD) Phase. ***Description:*** Prepare LAMPS and IPDISE/Microgrids performance specification and begin EMD Phase ***FY 2014 Accomplishments:*** Continue EMD Phase of LAMPS. ***FY 2015 Plans:*** Continue EMD Phase of LAMPS and IPDISE/Microgrids. ***FY 2016 Plans:*** Complete EMD Phase of LAMPS. Continue EMD Phase of IPDISE.	4.858	4.510	2.040
Title: Small Tactical Electric Power (STEP) Engineering & Manufacturing Development (EMD) Phase ***Description:*** Begin EMD Phase for the STEP program. ***FY 2015 Plans:***	-	1.362	7.822

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Initiate the EMD Phase for the STEP program. ***FY 2016 Plans:*** Continue EMD for the STEP prgram.			
Accomplishments/Planned Programs Subtotals	4.858	5.872	9.862

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• 643804.G11: *Logistics and Engineer Equipment - Adv Dev G11*	2.416	4.011	8.857	-	8.857	6.441	4.084	8.258	8.414	Continuing	Continuing
• MA9800: *Generators and Associated Equipment*	40.129	115.190	166.356	-	166.356	136.610	139.196	146.266	135.813	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 IPDISE program will enter the acquisition process at Milestone B, EMD. 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, EMD.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army		Date: February 2015
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*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Small Tactical Electric Power (STEP)	MIPR	PM E2S2 : Stafford, VA	0.000	-		-		0.500	Feb 2016	-		0.500	Continuing	Continuing	Continuing
Improved Power Distribution Illumination Systems Electrical (IPDISE)/Microgrids	MIPR	PM E2S2 : Ft. Belvoir	0.000	-		-		1.166	Feb 2016	-		1.166	Continuing	Continuing	Continuing
		Subtotal	0.000	-		-		1.666		-		1.666	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Improved Power Distribution Illumination Systems Electrical (IPDISE)/Microgrids	C/CPFF	TBD : TBD	0.000	-		-		0.874	Jan 2016	-		0.874	Continuing	Continuing	Continuing
Large Advanced Mobile Power Sources (LAMPS) (100-200kW)	C/FPIF	L-3 Communications, Westwood Corporation, Tulsa, OK : Various	28.118	-		-		-		-		-	Continuing	Continuing	Continuing
Small Tactical Electric Power (STEP)	C/CPFF	TBD : TBD	0.000	-		1.362		7.322	Jan 2016	-		7.322	Continuing	Continuing	Continuing
		Subtotal	28.118	-		1.362		8.196		-		8.196	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Large Advanced Mobile Power Sources (LAMPS) (100-200kW)	MIPR	CECOM LCMC : Aberdeen Proving Ground (APG), MD	3.485	-		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	3.485	-		-		-		-		-	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
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*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total 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	4.858	Mar 2014	4.510		-		-		-	Continuing	Continuing	Continuing
		Subtotal	0.000	4.858		4.510		-		-		-	-	-	-

	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	31.603	4.858		5.872		9.862		-		9.862	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
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*

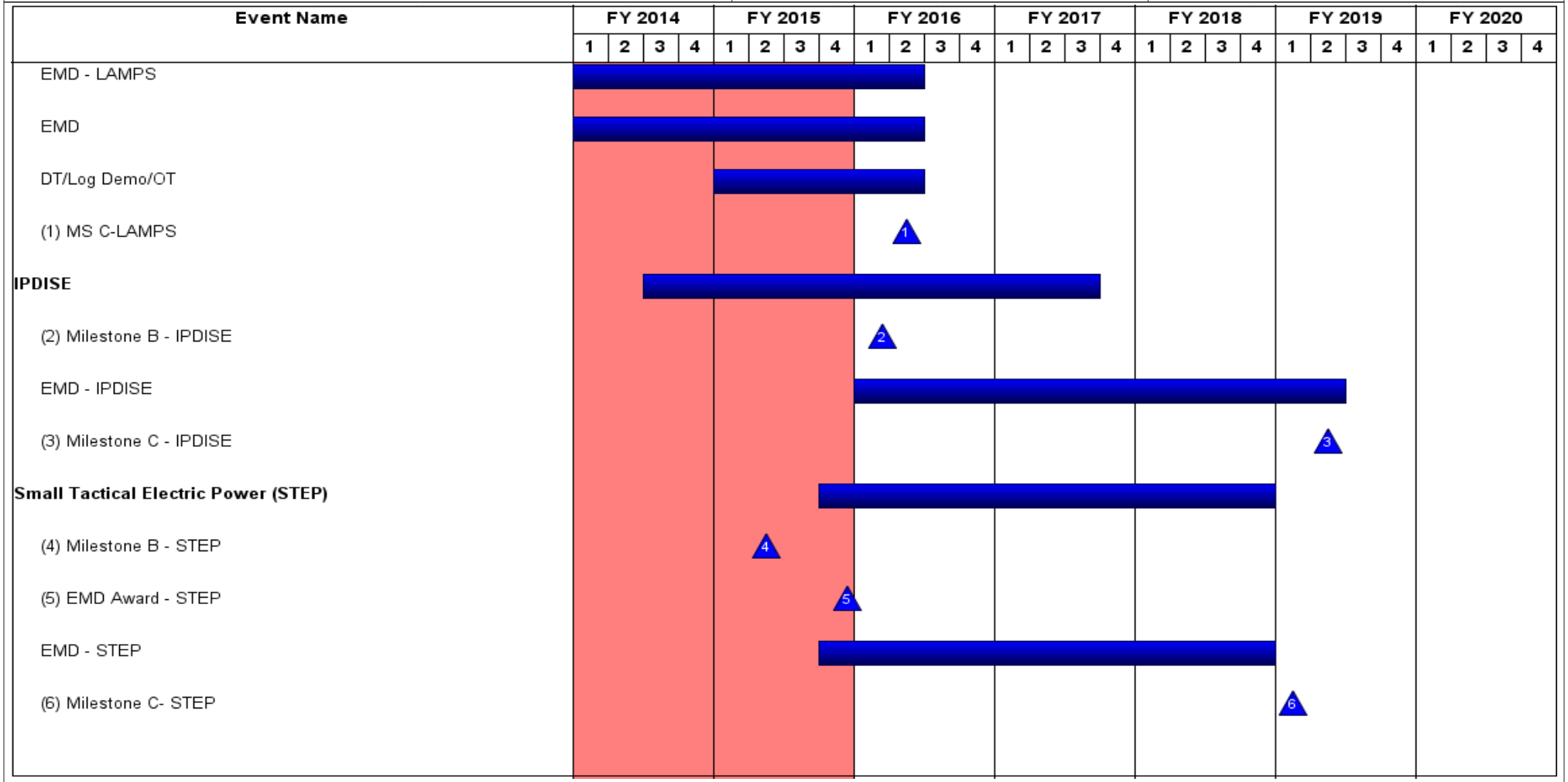

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** 194 / *Engine Driven Gen Ed*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
EMD - LAMPS	2	2011	2	2016
EMD	1	2013	2	2016
DT/Log Demo/OT	1	2015	2	2016
MS C-LAMPS	2	2016	2	2016
IPDISE	3	2014	3	2017
Milestone B - IPDISE	1	2016	1	2016
EMD - IPDISE	1	2016	2	2019
Milestone C - IPDISE	2	2019	2	2019
Small Tactical Electric Power (STEP)	4	2015	4	2018
Milestone B - STEP	2	2015	2	2015
EMD Award - STEP	4	2015	4	2015
EMD - STEP	4	2015	4	2018
Milestone C- STEP	1	2019	1	2019

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army			Date: February 2015
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
EC9: *Contingency Basing Infrastructure*	-	-	0.982	2.541	-	2.541	2.350	1.985	1.986	1.999	-	11.843
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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. 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 Warfighter effectiveness. CBIs analytical results will allow leadership to make fact based informed decisions on the acquisition and employment/deployment of equipment. This enables contingency bases to be established, operated and managed as a system (system of systems) and the equipment acquired for the base to be compatible and efficient while providing the maximum overall support to the Warfighter. This approach supports Program(s) of Record (PORs) to maximize improvements in Operational Energy and ensures efficiencies across all Areas of Responsibility (AOR).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: Contingency Base Infrastructure ***Description:*** Funding is provided for the following effort. ***FY 2015 Plans:*** Continue integration of Model-Based Systems Engineering principles to enable analysis of contingency bases as a system (system of systems). Continuation of development of the Base Camp Master Planning Tool - Contingency Base Interface to the Warfighter (CBIWar). Support Army investment decisions across the Contingency Base Infrastructure portfolio and development of Capability Sets and their associated delivery strategy.	-	0.982	-
Title: Toolset Development ***Description:*** Funding is provided for the following effort. ***FY 2016 Plans:***	-	-	0.481

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Continue model based systems engineering tool maturation of multiple analytical tools, Base Camp Master Planning Tool – Contingency Base Interface to the Warfighter (CBIWar) , and an Integrated - Preliminary Design Review (I-PDR).			
Title: Integrated Analysis and Design ***Description:*** Funding is provided for the following effort. ***FY 2016 Plans:*** Funding is planned to support Integrated Toolset Demonstration 2 that will support portfolio maturation, integration and analytical evaluation. And also support Army investment decisions across the Contingency Base Infrastructure portfolio.	-	-	0.972
Title: Capabilities Implementation and Materiel Requirements ***Description:*** Funding is provided for the following effort. ***FY 2016 Plans:*** Funding is planned to support the development of the design of different sized contingency base camps, capability sets, expansion and enhancements sets, and establishment of a configuration management plan to manage the base camp capability sets.	-	-	0.421
Title: Program Management ***Description:*** Funding is provided for the following effort. ***FY 2016 Plans:*** Oversight and management of integrated analysis and design, capabilities implementation and materiel requirements, and toolset development. Funding to support managing cost, schedule, performance, risk, personnel, and operational activities. Also oversight, analysis and management of operational energy related impacts and technology gaps.	-	-	0.667
Accomplishments/Planned Programs Subtotals	-	0.982	2.541

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Not applicable for this item.

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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*

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
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)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	Various	PM Force Projection : Warren, MI	0.000	-		0.315	Feb 2015	0.667	Feb 2016	-		0.667	-	0.982	-
		Subtotal	0.000	-		0.315		0.667		-		0.667	-	0.982	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Toolset Development	Various	Various : Various	0.000	-		0.292	Feb 2015	0.481	Feb 2016	-		0.481	-	0.773	Continuing
Integrated Analysis and Design	Various	Various : Various	0.000	-		0.200	Feb 2015	0.972	Feb 2016	-		0.972	-	1.172	Continuing
Capabilities Implementation and Materiel Requirements	Various	Various : Various	0.000	-		0.175	Feb 2015	0.421	Feb 2016	-		0.421	-	0.596	Continuing
		Subtotal	0.000	-		0.667		1.874		-		1.874	-	2.541	-

	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		0.982		2.541		-		2.541	-	3.523	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
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*

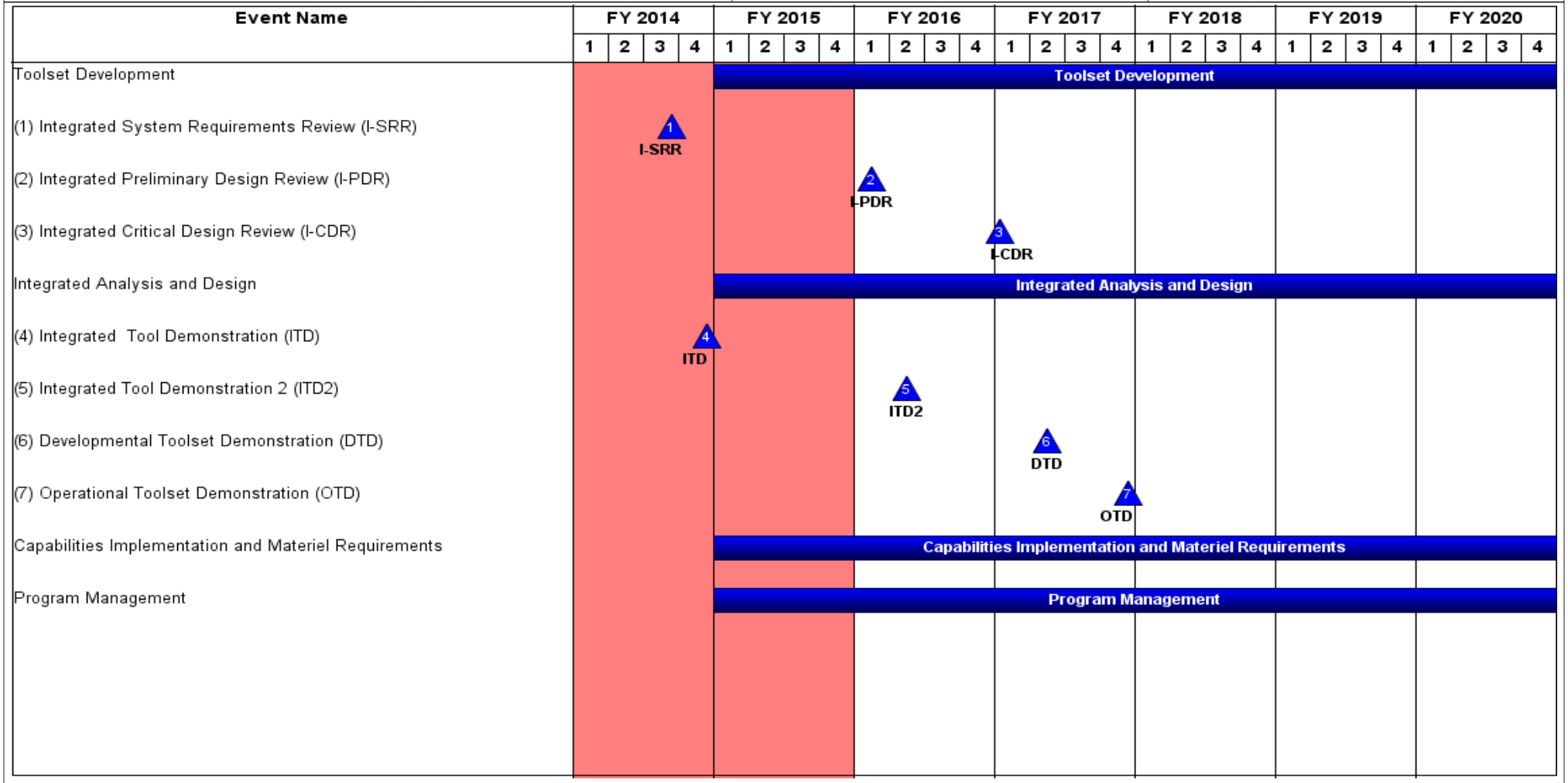

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** EC9 / *Contingency Basing Infrastructure*

Schedule Details

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

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army			Date: February 2015
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	Project (Number/Name) EJ9 / *Maneuver Support Vessel (Light) (MSV(L))*	

COST ($ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
EJ9: *Maneuver Support Vessel (Light) (MSV(L))*	-	-	-	10.066	-	10.066	18.586	14.522	-	-	-	43.174
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

The Maneuver Support Vessel (Light) (MSV(L)) is a new start program in FY16. APE 0603804, Project 526 provided resourcing for FY15 research and development support to this program".

A. Mission Description and Budget Item Justification

FY16 dollars in the amount of $10.066M support the initiation of the Engineering, Manufacturing, Development (EMD) phase for the Maneuver Support Vessel (Light)(MSV(L)). The MSV(L) is a non-developmental item (NDI) modified, multifunctional waterborne mobility platform, which will displace the current Landing Craft Mechanized-8 (LCM-8) with much greater payload and speed while being capable of operating in shallower water (improved draft), and also provide roll through capability via stern and bow ramps. The MSV(L) will provide a waterborne corridor for movement and maneuver; expeditionary delivery of combat configured equipment, troops, and logistics, in austere anti-access/area denial environments; and operational capability from ship to shore and along coastal waters, narrow inland water ways and rivers. It will be capable of transporting multiple combat configured ready-to-fight payloads with crew (i.e. an Abrams tank; two Strykers with bar armor; four Joint Light Tactical Vehicles (JLTVs) w/trailers; or a Heavy Expandable Mobility Tactical Truck (HEMTT) Load Handling System (LHS) and trailer). It will be able to operate fully loaded at a speed of 18 knots in Sea State 3 (SS3) conditions, while being survivable (seaworthy) in SS7 conditions. It will be furnished with a subsurface surveilance device, protection from small arms fire, and two Common Remotely Operated Weapon Stations (CROWS II) for vessel defense and force protection, and mitigate detection thorough reduction of thermal and acoustic signature. It will move combat configured forces and supplies more efficiently than the vessel it displaces.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: Systems Engineering / Program Management ***Description:*** Salaries for Core and Matrix personnel,includes SSEB. ***FY 2016 Plans:*** Program support for core and matrix personnel	-	-	2.811
Title: Government Furnished Equipment (GFE) ***Description:*** GFE for prototype vessel consist of Command, Control, Communications, Computers, Intelligence, Surveilance and Reconnaissance (C4ISR); and Remote Weapon Stations (RWS) ***FY 2016 Plans:***	-	-	1.122

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** EJ9 / *Maneuver Support Vessel (Light) (MSV(L))*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
GFE for prototype vessel consist of C4ISR and RWS			
Title: Engineering and Manufacturing Development (EMD) ***Description:*** EMD contract ***FY 2016 Plans:*** EMD contract	-	-	5.008
Title: Test ***Description:*** Modeling & Simulation; and Scale modeling testing ***FY 2016 Plans:*** Modeling & Simulation; and Scale modeling testing	-	-	1.125
Accomplishments/Planned Programs Subtotals	-	-	10.066

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• 643804526 Logistics and Engineer Eq: *643804 526 Logistics and Engineer Adv Dev*	2.748	2.602	2.546	-	2.546	4.221	4.389	3.478	3.501	-	23.485
• SSN R03050: *MSV Support Vessel (Light) MSV-L SSN R03050*	-	-	-	-	-	-	-	80.701	82.234	Continuing	Continuing

Remarks

D. Acquisition Strategy

Full and open competition, down select from paper design proposals to one contractor to build and test one prototype, and inform the Capability Production Document (CPD) development during the Engineering, Manufacturing, Development (EMD) Phase. Acquisition Strategy is to award one 10 year contract; 5 years EMD and LRIP Phase with 5 years Full Rate Production.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	Project (Number/Name) EJ9 / *Maneuver Support Vessel (Light) (MSV(L))*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Furnished Equipment (GFE)	MIPR	TBD : TBD	0.000	-		-		1.122	Nov 2015	-		1.122	-	1.122	-
Engineering and Manufacturing Development (EMD)	C/FP	TBD : TBD	0.000	-		-		5.008	Mar 2016	-		5.008	-	5.008	-
		Subtotal	0.000	-		-		6.130		-		6.130	-	6.130	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Salaries for Core and Matrix Personnel	MIPR	Various : Various	0.000	-		-		2.811	Oct 2015	-		2.811	Continuing	Continuing	-
		Subtotal	0.000	-		-		2.811		-		2.811	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Testing Modeling & Simulation and Scale Modeling	MIPR	NAVSEA Carderock : West Bethesda, MD	0.000	-		-		1.125	Mar 2016	-		1.125	-	1.125	-
		Subtotal	0.000	-		-		1.125		-		1.125	-	1.125	-

	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		-		10.066		-		10.066	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** EJ9 / *Maneuver Support Vessel (Light) (MSV(L))*

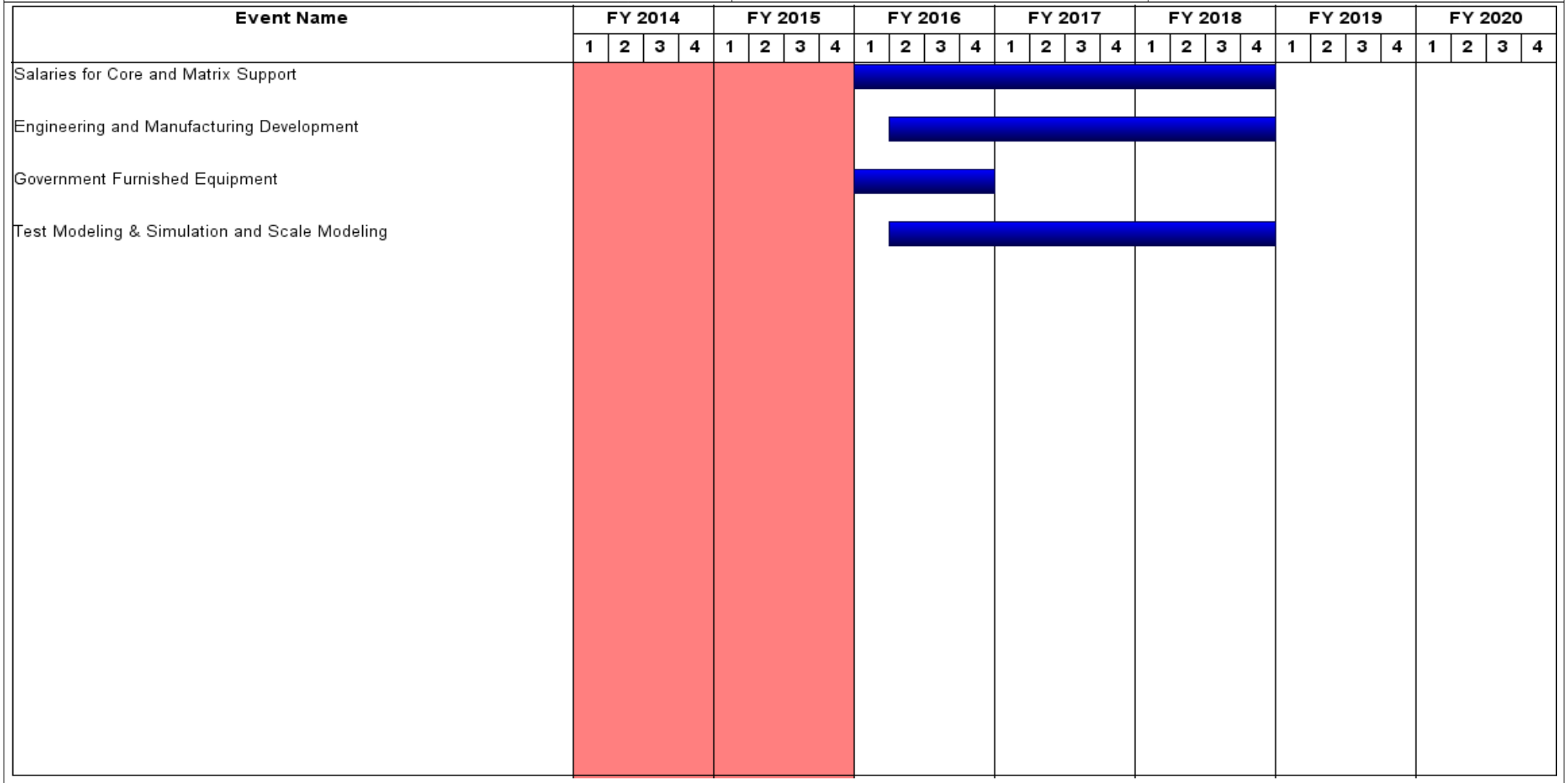

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** EJ9 / *Maneuver Support Vessel (Light) (MSV(L))*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Salaries for Core and Matrix Support	1	2016	4	2018
Engineering and Manufacturing Development	2	2016	4	2018
Government Furnished Equipment	1	2016	4	2016
Test Modeling & Simulation and Scale Modeling	2	2016	4	2018

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army			Date: February 2015
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
H01: *Combat Engineer Eq Ed*	-	2.099	1.038	1.139	-	1.139	2.503	3.928	3.600	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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)	FY 2014	FY 2015	FY 2016
Title: Drive Assist ***Description:*** Integrate and demonstrate COTS technologies enhancing CE operations. ***FY 2014 Accomplishments:*** Development of Robotics Research ***FY 2015 Plans:*** Focus on the inclusion of referenced technologies for integration on a 120M Grader. Technology will primarily be COTS equipment ***FY 2016 Plans:*** Focus additional reuse of technology from the 120M Grader effort applied to the FOD..	0.250	0.239	0.150
Title: CE Simulators ***Description:*** Labor, software, and hardware simulator development ***FY 2014 Accomplishments:*** Labor, software, and hardware simulator development	0.300	-	-
Title: Market Research/R&D Engineering Support ***Description:*** Market Research Survey	0.150	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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)	FY 2014	FY 2015	FY 2016
FY 2014 Accomplishments: Conduct market research and documentation preparation for all types of construction equipment.			
Title: Operational Efficiency ***Description:*** Improve Operational Efficiency/Reduce Maintenance Time ***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.	-	0.400	-
Title: Operational Energy/Duty Cycle ***Description:*** Operational Energy/Duty Cycle Monitoring ***FY 2014 Accomplishments:*** Instrumentation of vehicles in select units to monitor the usage and to establish training and operational usuage of the machine. This data, once analyzed will be used in requirements development.	1.058	-	-
Title: System Engineering/Program Management ***Description:*** Program Management ***FY 2014 Accomplishments:*** Program Management Support of R&D Program for CE ***FY 2015 Plans:*** Program Management Support of R&D Program for CE ***FY 2016 Plans:*** Program Management Support of R&D Program for CE	0.341	0.399	0.419
Title: Work Tool Enhancement ***Description:*** Develop prototype systems to provide additional machine capability. This may include sweepers, buckets, lift devices, fork enhancements, etc. ***FY 2016 Plans:*** Investigate the availability and commercial capability of the Family of Skid Steer Loaders (CASE M400 series). These attachments include Rock drill, Angle Boom, Roto Tiller, Vibratory Roller, Snow Blower, Dozer Blade, Sand Bagger, Backhoe	-	-	0.170

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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)	FY 2014	FY 2015	FY 2016
and Bridge Handling Equipment. Specific focus will be on attachments which improve the capability to improve the Rapid Airfield Repair (Vibratory Roller, Roto-tiller, Back-hoe). The Effort may include purchase/lease of hardware and demonstration of capacities which will enhance Rapid Airfield Repair.			
Title: Machine Product Improvement ***Description:*** Investigate technologies to enhance performance/safety of current systems. Examples of this may include track slip detection on the DEUCE, whole vehicle protection, SLEP technology insertion. ***FY 2016 Plans:*** Utilizing the list of vehicles entering the SLEP process, engage the user community to determine what product improvements are available to improve performance/component life. Specifically focusing on the DEUCE track slip detection/mitigation.	-	-	0.200
Title: Forced Entry (Airborne/Air Assault) Study/Development ***Description:*** Explore options of using Program of Record systems to meet Forced Entry requirements. ***FY 2016 Plans:*** Investigate the possibility of adapting the BHL for the Air Assault role. Also, research possible material solutions for the ERACC IV capability.	-	-	0.200
Accomplishments/Planned Programs Subtotals	2.099	1.038	1.139

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• High Mobility Engineer Excavator I: *High Mobility Engineer Excavator I*	21.465	-	2.656	-	2.656	1.771	-	-	-	-	25.892
• Grader, Mtzd, Hvy: *Grader, Mtzd, Hvy*	2.000	5.827	5.903	-	5.903	1.770	-	-	-	-	15.500
• Hydraulic Excavator: *Hydraulic Excavator*	17.001	4.938	-	-	-	-	-	-	-	-	21.939
• Plant, Asphalt Mixing: *Plant, Asphalt Mixing*	-	0.667	0.984	-	0.984	-	-	-	-	-	1.651
• Tractor Full Tracked, Med T-9: *Tractor Full Tracked, Med T-9*	28.828	34.071	27.156	-	27.156	-	-	-	-	-	90.055

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army			Date: February 2015
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• All Terrain Cranes: *All Terrain Cranes*	2.613	4.938	16.750	-	16.750	66.349	10.771	17.789	42.306	Continuing	Continuing
• Scraper, Earthmoving: *Scraper, Earthmoving*	36.078	14.926	26.125	-	26.125	16.661	28.948	-	-	-	122.738
• ERACC 4: *ERACC IV*	-	2.741	2.531	-	2.531	-	-	-	-	-	5.272
• ERACC 1: *ERACC I SSA*	-	2.378	-	-	-	-	-	-	-	-	2.378
• ERACC 2: *ERACC 2 EE*	5.000	8.365	-	-	-	-	-	-	-	-	13.365
• ERACC 3: *ERACC III METL*	-	1.440	-	-	-	-	-	-	-	-	1.440
• Const Equip ESP: *SLEP*	16.088	15.933	19.640	-	19.640	31.695	31.426	41.537	41.805	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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
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*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total 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)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total 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 Drive Assist for Combat Engineer	Various	TBD : TBD	1.933	0.250	Mar 2014	0.239		0.150	Mar 2016	-		0.150	-	2.572	Continuing
Design armor kits for Combat Engineer	Various	TARDEC : Warren, MI	5.995	-		-		-		-		-	-	5.995	Continuing
Development of Simulator	Various	PEO Stricom : PEO, Stricom, Olrando, FL	8.683	0.300	Apr 2014	-		-		-		-	-	8.983	Continuing
Hazard Clearance at Speed	TBD	TARDEC : Warren, Michigan	0.001	-		-		-		-		-	-	0.001	-
Forced Entry: (Airborne/ Air Assault) Study/ Development	TBD	TARDEC : Warren, MI	9.256	-		-		0.200	Mar 2016	-		0.200	-	9.456	Continuing
Market Research	TBD	TARDEC : Warren, Michigan	0.040	0.149	Mar 2014	-		-		-		-	-	0.189	-
Work Tool Enhancement	Various	Various : Various	0.000	-		-		0.170	Mar 2016	-		0.170	-	0.170	-
Machine Product Improvement	TBD	Caterpillar : Illinois	0.000	-		-		0.200	Jun 2016	-		0.200	-	0.200	-
		Subtotal	27.583	0.699		0.239		0.720		-		0.720	-	29.241	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
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*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering/ Program Management	MIPR	TARDEC/TACOM : Warren, Michigan	0.503	0.413	Dec 2013	0.399	Dec 2014	0.419	Dec 2015	-		0.419	-	1.734	-
		Subtotal	0.503	0.413		0.399		0.419		-		0.419	-	1.734	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Efficiency	MIPR	TARDEC, Warren, Michigan : TARDEC, Warren, Michigan	0.022	-		0.400		-		-		-	-	0.422	-
Operational Energy/Duty Cycle Monitoring	MIPR	TARDEC & ATC : Warren, Michigan	0.000	0.987	Jun 2014	-		-		-		-	-	0.987	-
Non Nuclear Soil Density Set Testing	TBD	TARDEC : Warren, MI	0.050	-		-		-		-		-	-	0.050	-
		Subtotal	0.072	0.987		0.400		-		-		-	-	1.459	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	28.325	2.099		1.038		1.139		-		1.139	-	32.601	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
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*

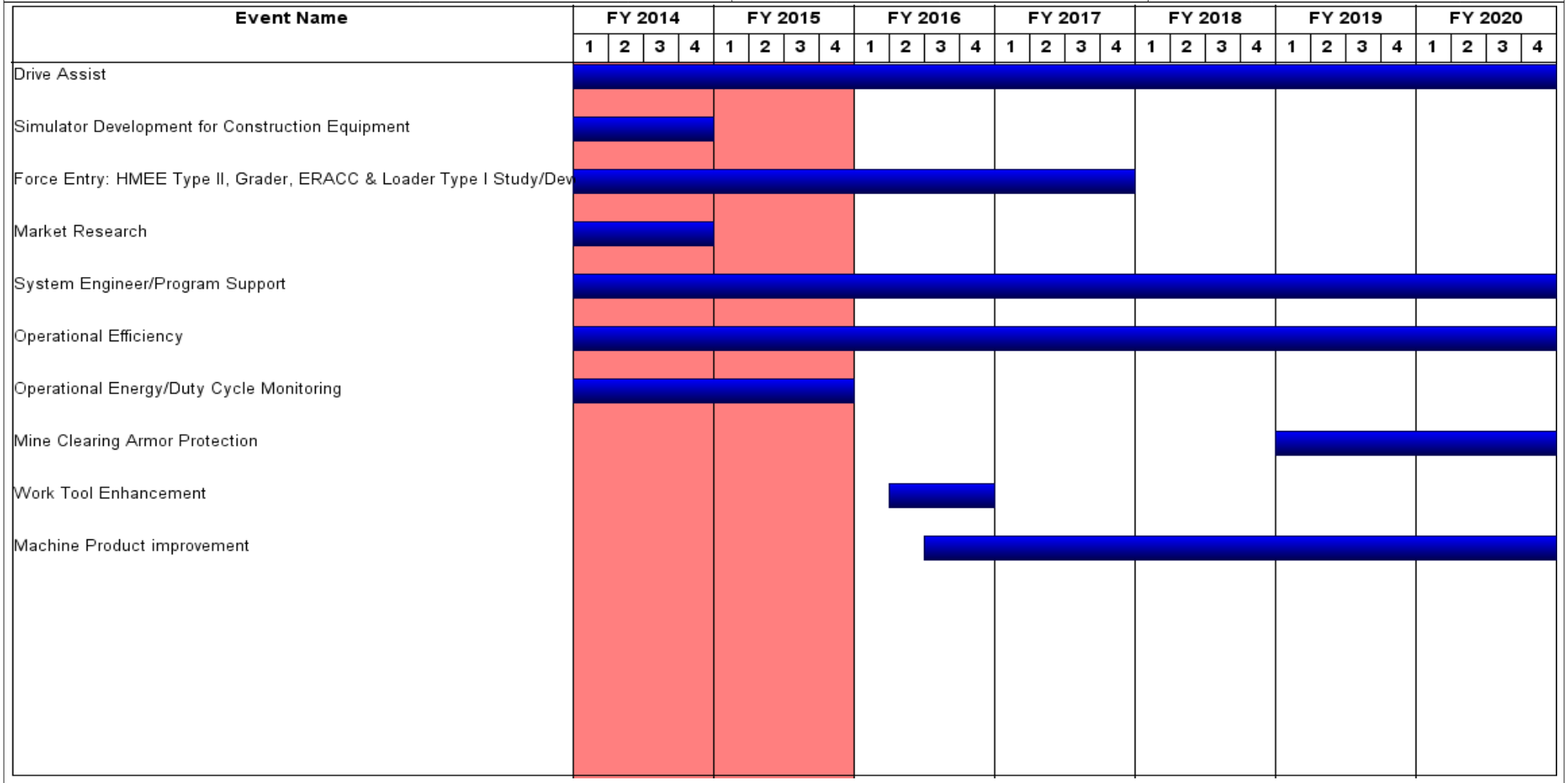

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** H01 / *Combat Engineer Eq Ed*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Drive Assist	1	2012	4	2021
Simulator Development for Construction Equipment	1	2012	4	2014
Force Entry: HMEE Type II, Grader, ERACC & Loader Type I Study/Development	1	2012	4	2017
Market Research	1	2013	4	2014
System Engineer/Program Support	1	2013	4	2021
Operational Efficiency	1	2013	4	2021
Operational Energy/Duty Cycle Monitoring	1	2013	4	2015
Mine Clearing Armor Protection	1	2019	4	2021
Work Tool Enhancement	2	2016	4	2016
Machine Product improvement	3	2016	4	2021

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army			Date: February 2015
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
H02: *Tactical Bridging - Engineering Development*	-	23.552	6.988	11.619	-	11.619	6.699	2.207	7.338	5.956	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project supports the engineering and manufacturing development and transition to procurement of Future Force Bridge Systems and support equipment. Funding supports the Engineering and Manufacturing Development phases of the Joint Assault Bridge (JAB) and Line of Communication Bridge (LOCB). This project also funds efforts to upgrade and modernize the bridging fleet through the development of new systems (Bridge Supplemental Set, Structural Health Monitoring, Stryker Launched Assault Bridge) and enhancement of existing systems (weight class upgrades/up-ratings).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: Joint Assault Bridge (JAB) Development and Testing	10.627	0.900	5.600
Description: JAB Development and Testing ***FY 2014 Accomplishments:*** Developmental Testing of the JAB ***FY 2015 Plans:*** JAB Testing ***FY 2016 Plans:*** Operational Testing and Live Fire Testing of the JAB			
Title: Rapidly Emplaced Bridge System (REBS) Auto Launch-Retrieve with the Common Bridge Transporter (CBT)	1.500	-	0.500
Description: Development, integration, and testing of REBS Auto Launch-Retrieve with the CBT ***FY 2014 Accomplishments:*** Completion of the development and integration of the REBS Auto Launch-Retrieve capability with the CBT ***FY 2016 Plans:*** Testing of the REBS Auto Launch-Retrieve capability with the CBT			
Title: Line of Communication Bridge (LOCB) Development and Testing	10.500	5.892	4.000
Description: Prototype development and developmental and operational testing of the LOCB			

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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)	FY 2014	FY 2015	FY 2016
FY 2014 Accomplishments: LOCB Development and Testing ***FY 2015 Plans:*** Continuation of testing of the LOCB System ***FY 2016 Plans:*** Completion of testing of the LOCB System			
Title: Structural Health Monitoring System ***Description:*** Develop and integrate a passive method to collect mobile military bridge system usage and health data and provide that information back to the user for informed decision making. System is targeted for use on the JAB, REBS, Dry Support Bridge (DSB), and LOCB and will reduce the requirement for in-field inspections. ***FY 2014 Accomplishments:*** Development of the Structural Health Monitoring system ***FY 2015 Plans:*** Continued development of the Structural Health Monitoring system ***FY 2016 Plans:*** Continued development and testing of the Structural Health Monitoring system	0.750	0.150	0.250
Title: Bridge Supplemental Set (BSS) ***Description:*** Develop a multi-functional, consolidated engineering set consisting of an anchorage system, access/egress traction improvement matting, power generation, tools, and a float bridge protection device. The BSS is targeted for use with multiple tactical bridging systems to include the LOCB, IRB, and the DSB. It will also increase the capability of the MRBC. ***FY 2014 Accomplishments:*** BSS Development ***FY 2015 Plans:*** Continuation of BSS Development	0.175	0.046	-
Title: Bridging Weight Classification Upgrades	-	-	1.269

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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)	FY 2014	FY 2015	FY 2016
Description: Investigate, analyze, and test solutions to increase the weight class (MIlitry Load Classification or MLC) of existing bridges to support the future, heavier, force. Developing solutions using existing bridges will eliminate the need to procure new bridges to support the future force. ***FY 2016 Plans:*** Begin investigation of solutions to increase the MLC of the Armored Vehicle Launch Bridge (AVLB)			
Accomplishments/Planned Programs Subtotals	23.552	6.988	11.619

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• OPA-3, MX0100: *OPA3, MX0100*	8.188	-	9.822	-	9.822	11.773	16.610	20.876	25.043	Continuing	Continuing
• OPA-3, G06520: *OPA-3, G06520*	-	-	4.959	-	4.959	3.965	4.956	3.965	-	-	17.845
• OPA-3, MA4504: *OPA-3, MA4504*	10.442	7.358	7.000	-	7.000	8.866	8.244	3.920	3.965	Continuing	Continuing
• WTCV, GZ3001: *WTCV, GZ3001*	2.002	39.362	33.455	-	33.455	85.478	119.040	168.281	188.193	Continuing	Continuing

Remarks

D. Acquisition Strategy

RDT&E efforts to support testing and follow-on production.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
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)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Support	MIPR	Various : Various	0.000	2.987	Mar 2014	1.523		1.000	Apr 2016	-		1.000	Continuing	Continuing	-
		Subtotal	0.000	2.987		1.523		1.000		-		1.000	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JAB Development	C/FFP	DRS/GDLS : Saint Louis, MO/Sterling Hts, MI	50.652	-		-		-		-		-	Continuing	Continuing	Continuing
LOCB Development	MIPR	Rock Island Arsenal (RIA) : Rock Island, IL	11.010	6.485	Mar 2014	-		-		-		-	Continuing	Continuing	Continuing
Bridge Supplemental Set	MIPR	TBD : TBD	0.000	0.050	Jun 2014	0.050	May 2015	-		-		-	-	0.100	-
Structural Health Monitoring	MIPR	TARDEC : Warren, MI	0.000	0.750	Jun 2014	0.100	May 2015	0.150	Apr 2016	-		0.150	-	1.000	-
REBS Auto Launch-Retrieve	SS/FFP	TBD : TBS	0.000	1.500	Aug 2014	-		-		-		-	-	1.500	-
Bridging Weight Classification Upgrades	TBD	TBD : TBD	0.000	-		-		0.519	Apr 2016	-		0.519	-	0.519	-
		Subtotal	61.662	8.785		0.150		0.669		-		0.669	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government In-House	MIPR	TACOM : Warren, MI	8.100	-		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	8.100	-		-		-		-		-	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
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*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JAB Testing	MIPR	Aberdeen Proving Grounds (APG) : APG, Maryland	2.541	9.780	Feb 2014	0.900		5.550	Apr 2016	-		5.550	Continuing	Continuing	Continuing
REBS Testing (Auto Launch-Retrieve)	MIPR	Aberdeen Proving Grounds (APG) : APG, MD	1.100	-		-		0.400	Apr 2016	-		0.400	-	1.500	-
LOCB Testing	MIPR	ATEC : Aberdeen, MD	4.800	2.000	May 2014	4.415	May 2015	4.000	Apr 2016	-		4.000	-	15.215	-
		Subtotal	8.441	11.780		5.315		9.950		-		9.950	-	-	-

	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	78.203	23.552		6.988		11.619		-		11.619	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
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*

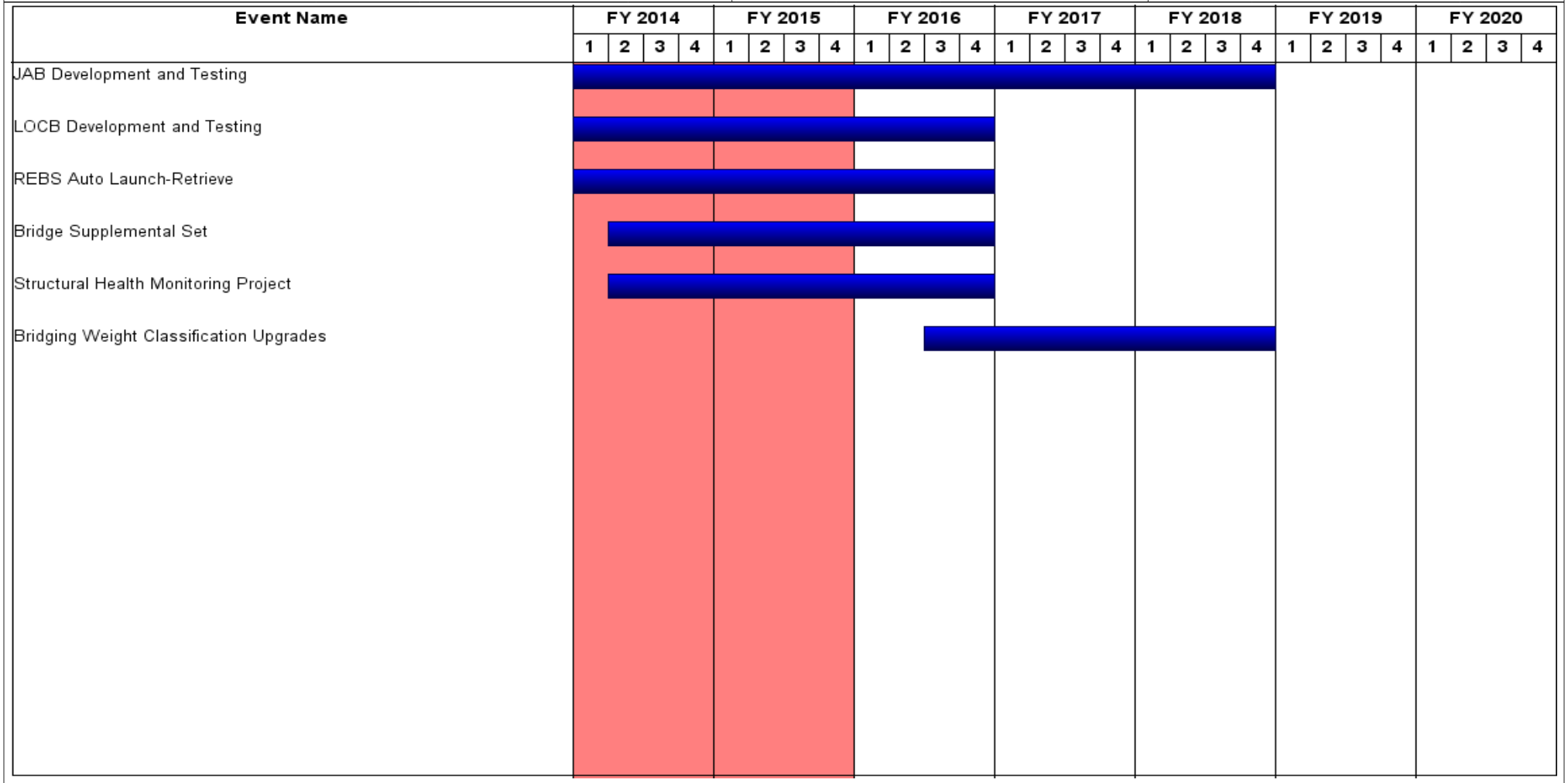

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** H02 / *Tactical Bridging - Engineering Development*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
JAB Development and Testing	2	2012	4	2018
LOCB Development and Testing	2	2012	4	2016
REBS Auto Launch-Retrieve	3	2012	4	2016
Bridge Supplemental Set	2	2014	4	2016
Structural Health Monitoring Project	2	2014	4	2016
Bridging Weight Classification Upgrades	3	2016	4	2018

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army			Date: February 2015
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
H14: *Materials Handling Equipment - Ed*	-	0.288	0.283	0.628	-	0.628	1.166	0.751	0.630	0.641	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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)	FY 2014	FY 2015	FY 2016
Title: Material Handling Equipment (MHE) System Improvement ***Description:*** System Improvements for Light Capability Rough Terrain Forklift (LCRTF) for Tactical Operations ***FY 2014 Accomplishments:*** Integrate and test add-on hardware for reliable cold starting. ***FY 2015 Plans:*** Investigate lightweight armor solution for LCRTF	0.155	0.207	-
Title: Material Handling Equipment (MHE) Armor Kits ***Description:*** Lightweight Armor for All Terrain Lifter Army System (ATLAS) II ***FY 2014 Accomplishments:*** Conduct evaluation of armor solution at test-site for both performance and survivability	0.133	-	-
Title: Investigate high-speed towing for LCRTF ***Description:*** Investigate high-speed towing for LCRTF ***FY 2015 Plans:*** LCRTF high-speed towing development	-	0.076	-
Title: Platform Safety	-	-	0.330

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Description: Research and Demonstrate technologies which would enhance and improve the safe operation of Material Handling Equipment to include sensors and cameras. ***FY 2016 Plans:*** Integrate technologies onto a Rough Terrain Container Handler (RTCH) which would help the driver be aware of obstacles.			
Title: Work Tool Enhancement ***Description:*** Develop prototype systems to provide additional machine capability. This may include sweepers, buckets, lift devices, fork enhancements, etc. ***FY 2016 Plans:*** Finalize the instructions and documentation for the ATLAS 8 foot Fork and Light Capacity Rough Terrain Fortlikft (LCRTF) Vertical Lift Attachment.	-	-	0.298
Accomplishments/Planned Programs Subtotals	0.288	0.283	0.628

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• OPA M41200: *Rough Terrain Container Handler*	1.250	-	-	-	-	-	-	-	-	-	1.250
• OPA M41800: *All Terrain Lifting Army System*	2.500	-	-	-	-	-	-	-	-	-	2.500
• OPA G41002: *Light Capacity Rough Terrain (LCRT) Forklift*	7.517	14.327	27.982	-	27.982	17.843	18.199	18.555	17.916	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. Develop additional capabilities for existing systems such as the LCRFT, RTCH and ATLAS. Award contracts with vehicle or attachment/technology OEMs to integrate existing commercial attachments/technologies onto the platforms to improve operator function and system usefulness. Testing will be conducted at Aberdeen Proving Grounds, MD.

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
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)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SBIR + STTR	TBD	TBD : TBD	0.032	-		-		-		-		-	-	0.032	-
		Subtotal	0.032	-		-		-		-		-	-	0.032	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total 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	0.200	-		0.207		-		-		-	-	0.407	-
Lightweight Armor for ATLAS II	MIPR	TARDEC : Warren, MI	0.350	-		-		-		-		-	-	0.350	-
Sling Load Attachment for RTCH	C/FFP	Kalmar RT Center : Cibolo, TX	0.100	-		-		-		-		-	-	0.100	-
Platform Safety	SS/FFP	Contract : Texas	0.000	-		-		0.330	Mar 2016	-		0.330	-	0.330	-
Work Tool Enhancement	SS/FFP	TACOM : Michigan	0.000	-		-		0.298	Mar 2016	-		0.298	-	0.298	-
		Subtotal	3.205	-		0.207		0.628		-		0.628	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Improvements for LCRTF for Tactical Operations	MIPR	TARDEC : Warren, MI	0.055	-		-		-		-		-	-	0.055	-
Lightweight Armor for ATLAS II	MIPR	TARDEC : Warren, MI	0.110	-		-		-		-		-	-	0.110	-
		Subtotal	0.165	-		-		-		-		-	-	0.165	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
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*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Lightweight Armor for ATLAS II	TBD	TBD : TBD	0.000	0.133	Jan 2014	-		-		-		-	-	0.133	-
System Improvements for LCRTF for Tactical Operations	TBD	TBD : TBD	0.250	0.155		-		-		-		-	-	0.405	-
Investigate high speed towing for LCRTF	TBD	TBD : TBD	0.000	-		0.076		-		-		-	-	0.076	-
		Subtotal	0.250	0.288		0.076		-		-		-	-	0.614	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	3.652	0.288		0.283		0.628		-		0.628	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
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*

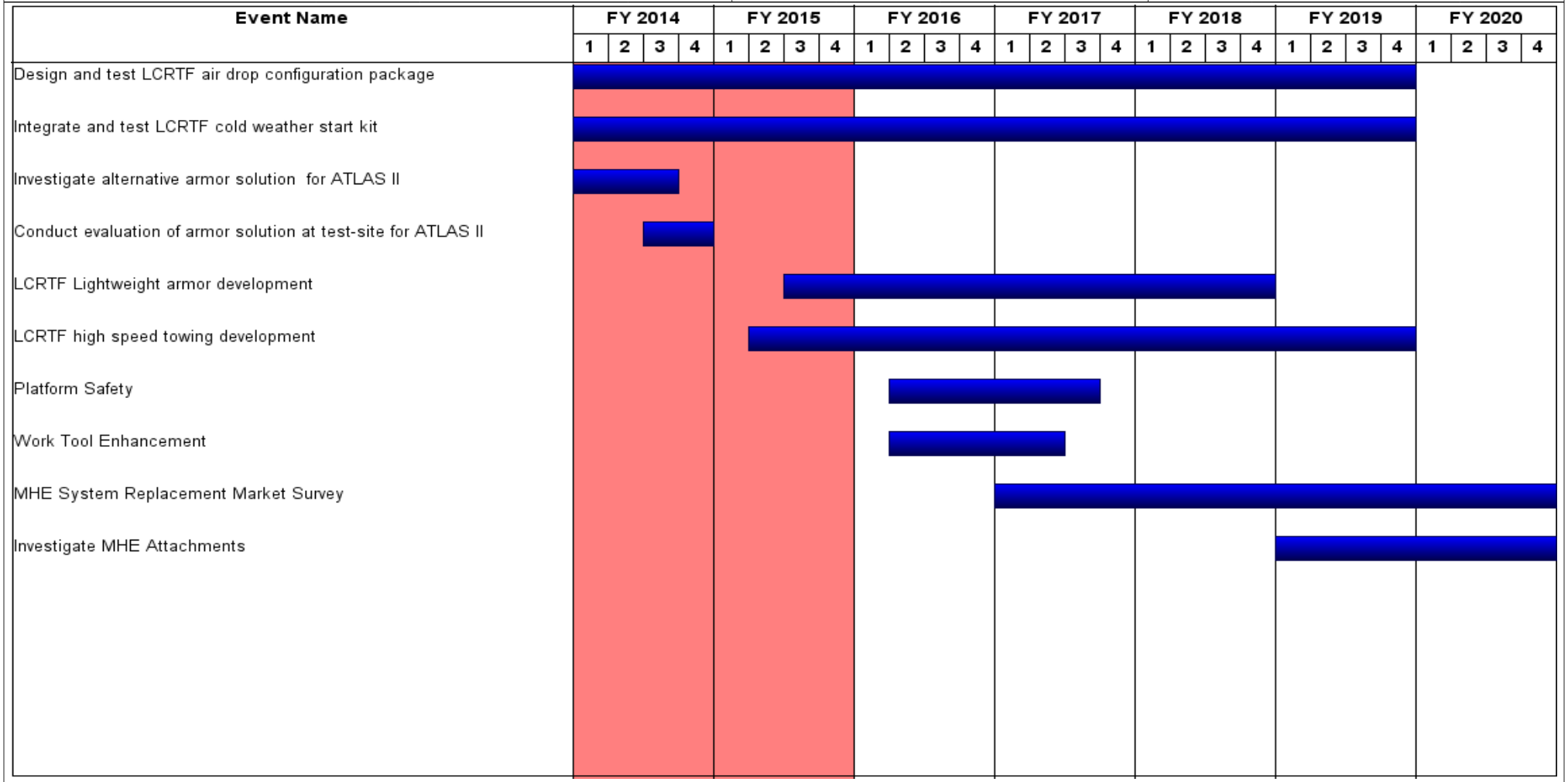

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** H14 / *Materials Handling Equipment - Ed*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Design and test LCRTF air drop configuration package	3	2013	4	2019
Integrate and test LCRTF cold weather start kit	1	2014	4	2019
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	4	2018
LCRTF high speed towing development	2	2015	4	2019
Platform Safety	2	2016	3	2017
Work Tool Enhancement	2	2016	2	2017
MHE System Replacement Market Survey	1	2017	4	2021
Investigate MHE Attachments	1	2019	4	2021

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army			Date: February 2015
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
L39: *Field Sustainment Support Ed*	-	1.729	1.687	1.849	-	1.849	4.156	3.219	2.308	3.078	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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)	FY 2014	FY 2015	FY 2016
Title: Advanced Low Velocity Airdrop System (ALVADS) - Light and Heavy	1.489	1.687	1.849
Description: ALVADS - Light and Heavy are capable of airdrop operations at an altitude down to 750-ft Above Ground Level (AGL) for ALVADS-L and 975-ft AGL for ALVADS-H, while retaining the objective altitude of 500-ft AGL for both 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 2014 Accomplishments:*** Transitioned ALVADS program into Engineering and Manufacturing Development (EMD) and continued Design Validation (DV) testing on military aircraft at Yuma Proving Ground. ***FY 2015 Plans:*** Complete DV. Down select to technically mature ALVADS assets for Developmental Testing (DT). Initiate DT. ***FY 2016 Plans:*** Conduct and complete DT and initiate Operational Testing (OT).			
Title: Low Cost Aerial Delivery System (LCADS)	0.240	-	-
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			

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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)	FY 2014	FY 2015	FY 2016
equipment. LCADS is a proven means to execute critical resupply missions without having to place soldiers and ground vehicle convoys on the road. ***FY 2014 Accomplishments:*** Completed Preplanned Product Improvement (P3I) testing. Low Cost Low Altitude/High Velocity (LCLA/HV) flight testing.			
Accomplishments/Planned Programs Subtotals	1.729	1.687	1.849

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• MA7806: *Precision Airdrop, OPA 3, MA7806*	9.500	4.778	2.890	-	2.890	1.930	2.191	2.197	2.240	Continuing	Continuing
• 643804 K39: *Field Sustainment Support AD, 643804 K39*	2.088	0.534	1.875	-	1.875	2.856	2.453	2.531	1.886	Continuing	Continuing

Remarks

D. Acquisition Strategy

Accelerate product development and testing to transition into production.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army		Date: February 2015
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)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management Support	Various	PM FSS, Natick : Natick, MA	2.810	0.757	Mar 2014	0.382		0.400		-		0.400	-	4.349	Continuing
SBIR+STTR	TBD	Various : Various	0.129	-		-		-		-		-	-	0.129	-
		Subtotal	2.939	0.757		0.382		0.400		-		0.400	-	4.478	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ACPRS	Various	PM FSS, Natick : Various	3.943	-		-		-		-		-	-	3.943	-
ALVADS-L&H	Various	Various : Various	14.216	0.389	Jul 2014	0.505		0.600		-		0.600	-	15.710	Continuing
JPADS P3I	Various	Various : Various	5.870	-		-		-		-		-	-	5.870	Continuing
LCADS P3I efforts	Various	Various : Various	0.966	-		-		-		-		-	-	0.966	Continuing
EHLSCDS	Various	Various : Various	0.000	-		-		0.100		-		0.100	-	0.100	-
		Subtotal	24.995	0.389		0.505		0.700		-		0.700	-	26.589	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
LCADS	Various	Yuma Proving Ground (YPG), AZ, AEC : AZ	9.897	0.183	Mar 2014	-		-		-		-	-	10.080	Continuing
JPADS P3I	Various	Yuma Proving Ground, AZ : Yuma, AZ	0.951	-		-		-		-		-	-	0.951	-
JPADS 10K OT	Various	GSA : GSA	0.936	-		-		-		-		-	-	0.936	Continuing
ALVADS-L&H	Various	YPG, AZ/ OTC, NC : YPG, AZ/ OTC, NC	4.136	0.400	Jul 2014	0.800		0.749		-		0.749	-	6.085	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
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*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	15.920	0.583		0.800		0.749		-		0.749	-	18.052	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	43.854	1.729		1.687		1.849		-		1.849	-	49.119	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
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*

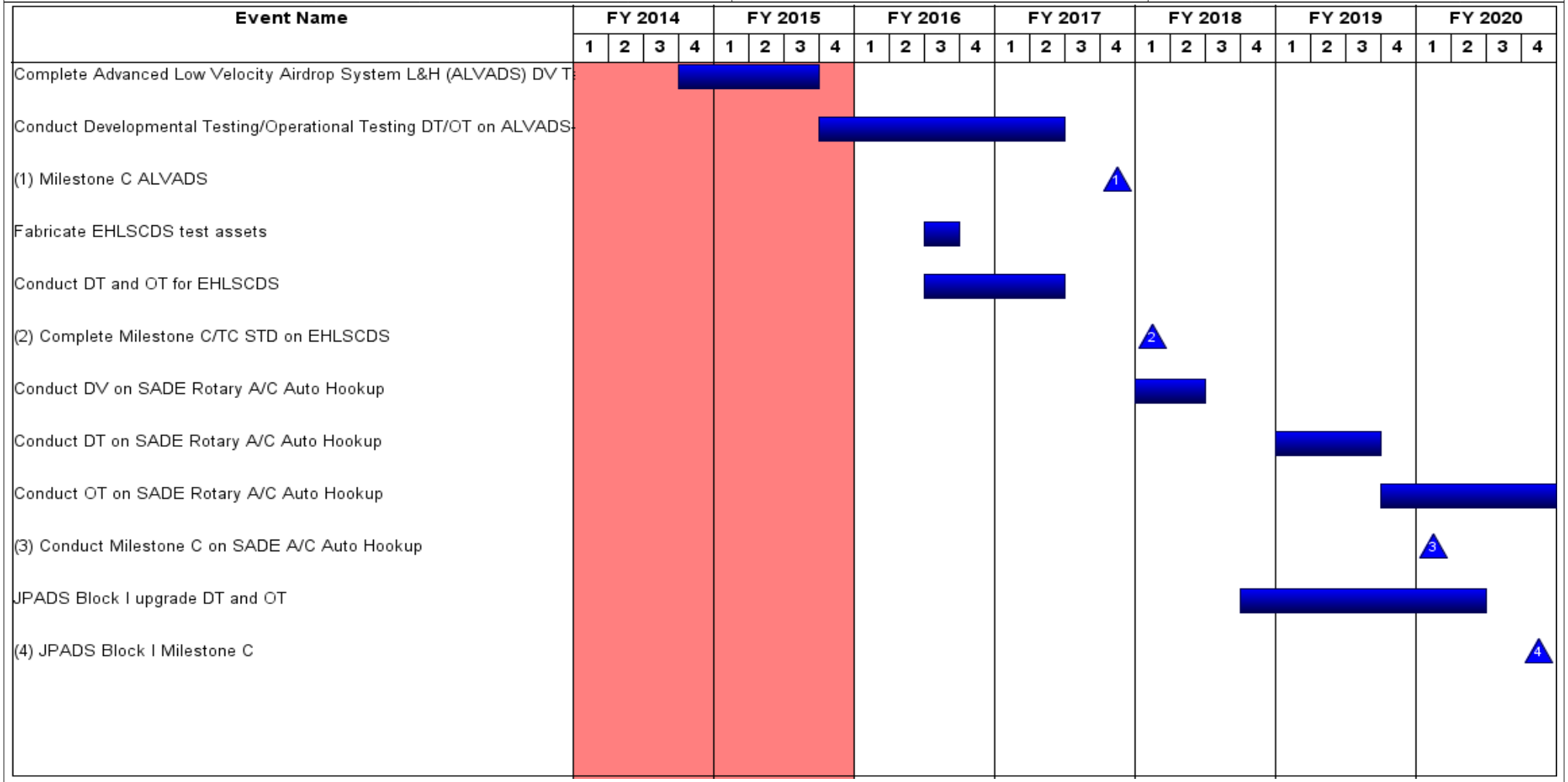

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** L39 / *Field Sustainment Support Ed*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Complete Advanced Low Velocity Airdrop System L&H (ALVADS) DV Testing	4	2014	3	2015
Conduct Developmental Testing/Operational Testing DT/OT on ALVADS-L&H	4	2015	2	2017
Milestone C ALVADS	4	2017	4	2017
Fabricate EHLSCDS test assets	3	2016	3	2016
Conduct DT and OT for EHLSCDS	3	2016	2	2017
Complete Milestone C/TC STD on EHLSCDS	1	2018	1	2018
Conduct DV on SADE Rotary A/C Auto Hookup	1	2018	2	2018
Conduct DT on SADE Rotary A/C Auto Hookup	1	2019	3	2019
Conduct OT on SADE Rotary A/C Auto Hookup	4	2019	1	2021
Conduct Milestone C on SADE A/C Auto Hookup	1	2020	1	2020
JPADS Block I upgrade DT and OT	4	2018	2	2020
JPADS Block I Milestone C	4	2020	4	2020

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army			Date: February 2015
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
L41: *Water And Petroleum Distribution - Ed*	-	2.508	3.193	4.038	-	4.038	8.669	5.256	4.645	4.645	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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)	FY 2014	FY 2015	FY 2016
Title: 3K Tactical Water Purification System (TWPS). ***Description:*** Funding is provided for the following effort ***FY 2014 Accomplishments:*** Design, fabricate and test 3K TWPS in a International Standard Organization (ISO) shelter. Develop a design for system strainer and identify a possible back-up high pressure pump. ***FY 2016 Plans:*** Start fabrication of prototype 3K TWPS. Start development of Level II Technical Data Package (TDP). Complete Critical Design Review (CDR) in support of the prototype.	1.138	-	1.025
Title: Integration of component level improvements at the system level for the Fuel System Supply Point (FSSP). ***Description:*** Funding is provided for the following effort ***FY 2014 Accomplishments:*** 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.	0.500	-	-
Title: Expeditionary Water Packaging System (EWPS).	0.440	0.311	-

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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)	FY 2014	FY 2015	FY 2016
Description: Funding is provided for the following effort ***FY 2014 Accomplishments:*** 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:*** 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) ***Description:*** Funding is provided for the following effort. ***FY 2014 Accomplishments:*** 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 and initiate prototype testing. ***FY 2016 Plans:*** Continue prototype testing from FY15. Refine technical manuals and technical data package (drawing package). Begin transistioning technical data to program manager for competitive procurement. Prepare Milestone C documentation and develop RFP.	0.430	1.000	0.800
Title: Early Entry Fluid Distribution System (E2FDS). ***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. ***FY 2016 Plans:***	-	1.882	2.213

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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)	FY 2014	FY 2015	FY 2016
Award EMD contract. Complete initial design of E2FDS. Initiate the Critical Design Review of the E2FDS prototype. Initiate fabrication of prototypes for testing under EMD phase.			
Accomplishments/Planned Programs Subtotals	2.508	3.193	4.038

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• 0603804/K41: *RDTE, Logistics and Engineer Equipment - Advanced Development*	2.187	3.543	3.764	-	3.764	4.392	4.773	4.871	4.963	Continuing	Continuing
• MA6000: *OPA 3, Distribution Systems, Petroleum & Water*	42.288	40.692	35.381	-	35.381	37.949	42.169	39.112	40.843	Continuing	Continuing

Remarks

D. Acquisition Strategy

Develop engineering prototypes for the 3K Tactical Water Purification System (3K TWPS), Modular Tactical Retail Refueling System (MTRRS), Early Entry Fluid Distribution System (E2FDS) and select Non-Development Item (NDI) based on market surveys and proposals from industry. Based on market research, will award either competitive or sole source contracts.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
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Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total 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)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Water System Capability Improvements	Various	TARDEC : Warren, MI	0.184	-		-		-		-		-	-	0.184	Continuing
FSSP Improvements	Various	TARDEC : Warren, MI	3.211	-		-		-		-		-	-	3.211	Continuing
Water Systems Capability Improvements	Various	TBD : TBD	0.154	-		-		-		-		-	-	0.154	Continuing
Expeditionary Water Packaging System (EWPS)	Various	TARDEC : Warren, MI	0.850	0.110	Feb 2014	0.311		-		-		-	-	1.271	Continuing
3K Tactical Water Purification System (3K TWPS)	Various	NFESC : Pt. Hueneme, CA	0.000	0.220	Feb 2014	-		0.150	Oct 2015	-		0.150	-	0.370	Continuing
Early Entry Fluid Distribution System (E2FDS)	C/FFP	TBD : TBD	0.000	-		0.984		1.800	Mar 2016	-		1.800	-	2.784	Continuing
Modular Tactical Retail Refueling System (MTRRS)	MIPR	TARDEC : Warren, MI	1.037	0.360	Mar 2014	0.200		0.350	Mar 2016	-		0.350	-	1.947	Continuing
3K Tactical Water Purification System (3K TWPS)	MIPR	TARDEC : Warren, MI	0.000	0.638	Mar 2014	-		0.706	Oct 2015	-		0.706	-	1.344	Continuing
		Subtotal	5.436	1.328		1.495		3.006		-		3.006	-	11.265	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
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)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Fuel System Supply Point (FSSP)	Various	TARDEC : Warren, MI	0.501	0.480	Feb 2014	-		-		-		-	-	0.981	Continuing
Early Entry Fluid Distribution System (E2FDS)	MIPR	TBD : TBD	0.000	-		0.898		0.382	Oct 2015	-		0.382	-	1.280	Continuing
Expeditionary Water Packaging System (EWPS)	Various	TARDEC : Warren, MI	0.100	-		-		-		-		-	-	0.100	Continuing
Contingency Based Infrastructure (CBI)	SS/FFP	PEO, CS&CSS, PM, CBI : Warren, MI	0.284	-		-		-		-		-	-	0.284	-
		Subtotal	0.885	0.480		0.898		0.382		-		0.382	-	2.645	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Fuel System Supply Point (FSSP)	MIPR	YUMA : Yuma, AZ	0.650	-		-		-		-		-	-	0.650	-
Expeditionary Water Packaging system (EWPS)	Various	TARDEC : Warren, MI	0.255	0.300	Mar 2014	-		-		-		-	-	0.555	Continuing
Expeditionary Water Packaging System (EWPS)	Various	NFESC : Port Hueneme, CA	0.300	0.100	Dec 2013	-		-		-		-	-	0.400	-
3K Tactical Water Purification System (3K TWPS)	MIPR	TARDEC : Warren, MI	0.000	0.300	Feb 2014	-		0.200	Oct 2015	-		0.200	-	0.500	Continuing
Modular Tactical Retail Refueling System (MTRRS)	Various	Yuma : Yuma Proving Ground, AZ	0.000	-		0.800		0.450	Mar 2016	-		0.450	-	1.250	Continuing
		Subtotal	1.205	0.700		0.800		0.650		-		0.650	-	3.355	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
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 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	7.588	2.508		3.193		4.038		-		4.038	-	17.327	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
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*

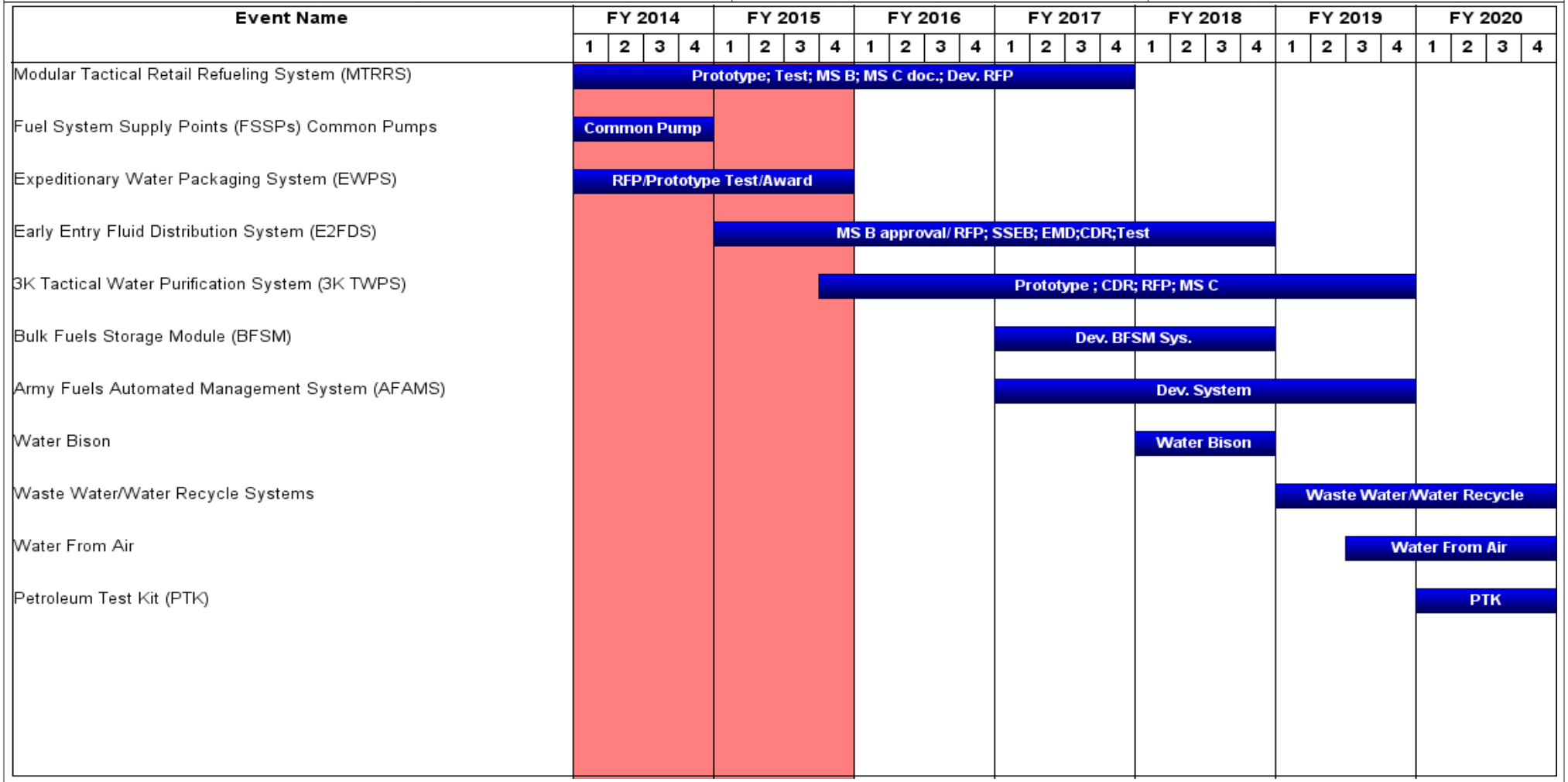

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** L41 / *Water And Petroleum Distribution - Ed*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Modular Tactical Retail Refueling System (MTRRS)	1	2014	4	2017
Fuel System Supply Points (FSSPs) Common Pumps	4	2012	4	2014
Expeditionary Water Packaging System (EWPS)	1	2011	4	2015
Early Entry Fluid Distribution System (E2FDS)	1	2015	4	2018
3K Tactical Water Purification System (3K TWPS)	4	2015	4	2019
Bulk Fuels Storage Module (BFSM)	1	2017	4	2018
Army Fuels Automated Management System (AFAMS)	1	2017	4	2019
Water Bison	1	2018	4	2018
Waste Water/Water Recycle Systems	1	2019	4	2021
Water From Air	3	2019	4	2021
Petroleum Test Kit (PTK)	1	2020	4	2021

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army			Date: February 2015
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
L43: *ENGINEER SUPPORT EQUIPMENT - ED*	-	-	0.575	1.246	-	1.246	1.259	1.260	1.766	0.666	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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 along with engineer safety and special unit support equipment. The Combat Engineer and Construction equipment consists of the Surveying, Firefighting Individual Requirements Equipment Support (FIRES), Urban Search and Rescue (USR), Fire Protection Equipment Type I, II and III, Tactical Fire Fighting Truck Tools (TFTT), Family of Electrical Personal Protective Equipment (FoEPPE) Family of Power Utility Kits (FoPUK), Distribution Utility Construction Kits (DUCT) and Soldier Portable Kits, Lineman's Tool Kit, Concrete and Masonry, Electricians, Plumbers, Pipefitters, Family of Light Sets (FoLS), 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, Supervisor Propulsion Emergency and Recovery SCUBA (SPEaRS), Divers' Supplemental Issue Set(DSIS), Vertical Skills Engineer Construction Kit (VSECK), 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 along with engineer safety and special unit support equipment supporting the joint warfighter. These programs 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)	FY 2014	FY 2015	FY 2016
Title: Family of Boats and Motors (FOBAM)	-	0.525	0.180
Description: Development of various Assault Boats and Outboard Motors			
FY 2015 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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)	FY 2014	FY 2015	FY 2016
Purchase and Test the Rigid Inflatable Boat ***FY 2016 Plans:*** Support for logistics support plans and Full Rate Production Decision (Milestone C, Type Classification, Full Material Release)			
Title: Supervisory Propulsion, Emergency and Recovery Set (SPEARS) ***Description:*** Market Research for the SPEARS ***FY 2015 Plans:*** Market Research	-	0.050	-
Title: Engineering and Quality Assurance ***Description:*** Engineering and Quality Assurance of engineering SKOs ***FY 2016 Plans:*** Engineering Spt- 75K for Boats, Motors, Diving; 200K for Soldier Portable QA Support- 25K for Boats, Motors, Diving; 100K for Soldier Portable	-	-	0.400
Title: Vertical Skills Engineer Construction Kit (VSECK) ***Description:*** Research, Development, and Testing of Vertical Skills Engineer Construction Kit (VSECK) ***FY 2016 Plans:*** Procure market samples for Type 1 through Type 6 kits	-	-	0.406
Title: Support for Requirements Generation ***Description:*** Support for Requirements Generation of Future SKOs ***FY 2016 Plans:*** Document Development Supporting Fututre Requirements SKOs	-	-	0.260
Accomplishments/Planned Programs Subtotals	-	0.575	1.246

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army			Date: February 2015
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*	

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• OPA 3 ML5325: *OPA 3 ML5325, Items Less than $5.0M (Engineering Support)*	5.859	20.090	0.595	-	0.595	-	-	-	-	Continuing	Continuing
• OPA 3 R70001: *OPA 3 R70001, Family of Engineering Combat and Construction Sets*	38.141	41.967	34.544	-	34.544	31.272	32.667	34.796	28.612	Continuing	Continuing
• OPA 3 R12001: *OPA 3 R12001, Family of Boats and Motors*	-	-	8.429	-	8.429	3.224	4.348	6.019	7.620	-	29.640
• OPA 3 R07005: *OPA 3 R07005, Family of Diver Support Equipment*	-	-	0.446	-	0.446	-	-	-	-	-	0.446
• OPA 3 W01103: *OPA 3 W01103, Protective Systems*	-	-	0.248	-	0.248	1.761	1.647	1.707	-	-	5.363

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.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
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)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total 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)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Rigid Inflatable Boats test articles	C/FP	TBS : TBS	0.000	-		0.250	Dec 2014	-		-		-	Continuing	Continuing	Continuing
3-man boat test articles	C/FP	TBS : TBS	0.000	-		0.060	Jan 2015	-		-		-	Continuing	Continuing	Continuing
Market Samples for Supervisory, Propulsion, Emergency and Recovery Set (SPEARS)	C/FP	TBS : TBS	0.000	-		0.050	Feb 2015	-		-		-	Continuing	Continuing	Continuing
Market Samples of Vertical Skills Engineer Construction Kit (VSECK)	C/FP	TBS : TBS	0.120	-		-		0.406	Jan 2016	-		0.406	Continuing	Continuing	Continuing
Engineer Support Equipment Life Cycle Configuration Analyses and ICD, CDD, CPD Development Support	MIPR	PM SKOT/ Army Test & Evaluation Command (ATEC)/ Manuever Support Center of Excellence (MSCoE) : IL, MI, MD, MO	0.000	-		-		0.260	Nov 2015	-		0.260	Continuing	Continuing	Continuing
		Subtotal	0.120	-		0.360		0.666		-		0.666	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Rigid Inflatable Boat	MIPR	ECBC : Rock Island, IL	0.000	-		-		0.180	Dec 2015	-		0.180	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army		Date: February 2015
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*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering and Quality Assurance of engineering SKOs (Soldier Portable)	MIPR	ECBC/ARDEC : Rock Island, IL	0.278	-		-		0.300	Nov 2015	-		0.300	Continuing	Continuing	Continuing
Engineering and Quality Assurance (Boats and Motors)	MIPR	ECBC : Rock Island, IL	0.200	-		-		0.100	Nov 2015	-		0.100	Continuing	Continuing	Continuing
		Subtotal	0.478	-		-		0.580		-		0.580	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Testing of Boats and Motors	MIPR	NAVSEA : VA	0.625	-		0.215	Mar 2015	-		-		-	Continuing	Continuing	Continuing
		Subtotal	0.625	-		0.215		-		-		-	-	-	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	1.256	-		0.575		1.246		-		1.246	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
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*

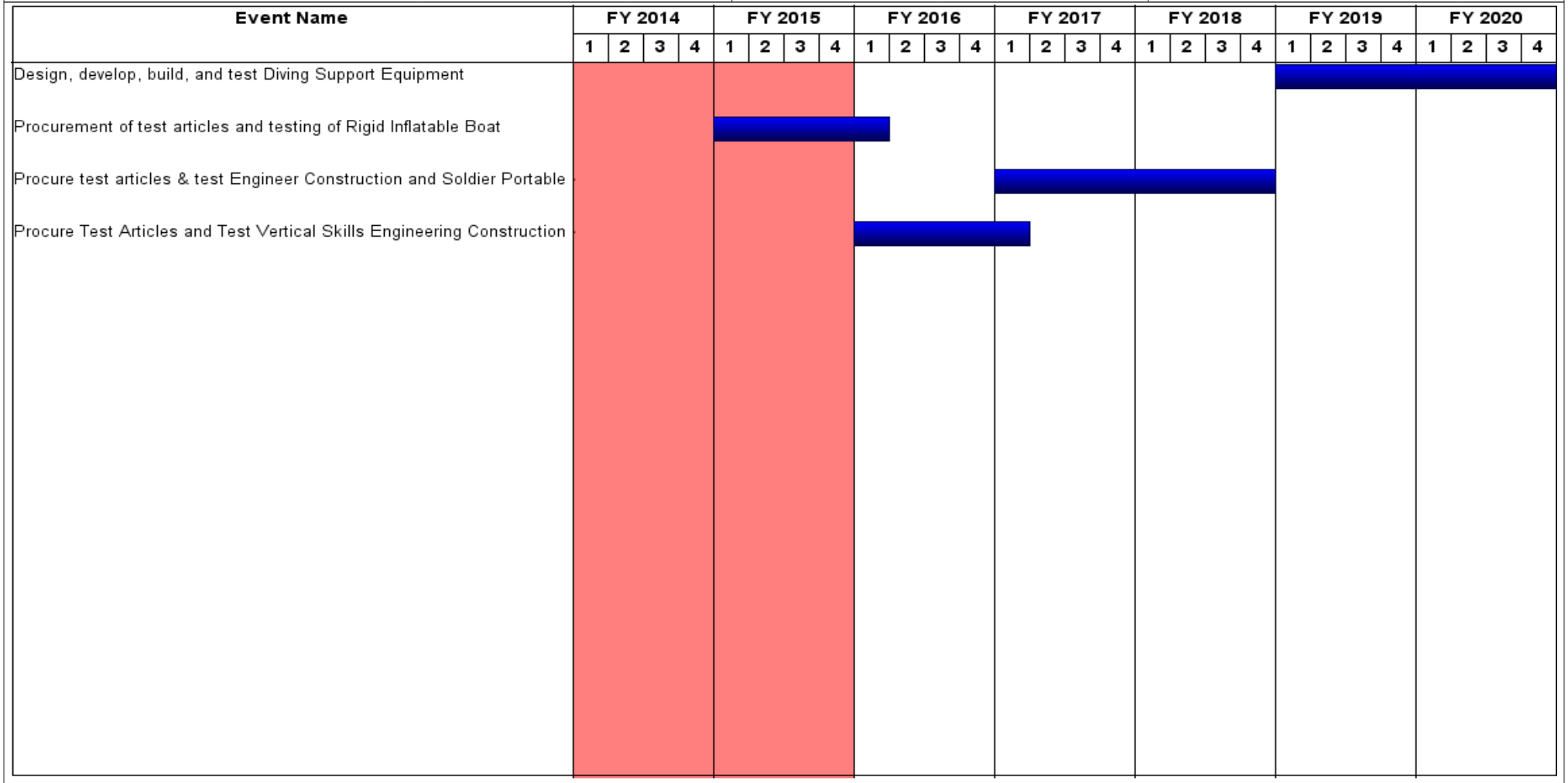

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** L43 / *ENGINEER SUPPORT EQUIPMENT - ED*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Design, develop, build, and test Diving Support Equipment	1	2019	4	2020
Procurement of test articles and testing of Rigid Inflatable Boat	1	2015	1	2016
Procure test articles & test Engineer Construction and Soldier Portable Kits	1	2017	4	2018
Procure Test Articles and Test Vertical Skills Engineering Construction Kit	1	2016	1	2017

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army			Date: February 2015
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
L46: *Maintenance Support Equipment*	-	1.191	1.003	1.412	-	1.412	2.103	2.072	1.902	1.938	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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. Upgrades to existing shelter mounted systems to include a 3-D printing/ additive manufacturing capability. Modernization upgrades to increase effectiveness while improving efficiency, reliability and maintainability while supporting emerging Army systems to include the Joint Light Tactical Vehicle (JLTV).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: Next Generation Shop Equipment, Welding (SEW)	-	-	0.747
Description: Develop and Test new components of Shop Equipment, Welding			

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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)	FY 2014	FY 2015	FY 2016
FY 2016 Plans: Buying Production Representative Sample			
Title: Next Generation Shop Equipment, Contact Maintenance (SECM) ***Description:*** Design, Develop, Procure and Test Next Generation SECM, designed for Joint Light Tactical Vehicle (JLTV) platform ***FY 2016 Plans:*** Design improved SECM for JLTV platform	-	-	0.200
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 2014 Accomplishments:*** Next Generation Ordnance SKO ***FY 2015 Plans:*** Next generation Ordnance SKO ***FY 2016 Plans:*** Next generation Ordnance SKO	0.522	0.449	0.050
Title: Support for Requirements Generation ***Description:*** Support for requirements generation of future SKOs ***FY 2014 Accomplishments:*** Document development supporting future requirements SKOs ***FY 2015 Plans:*** Document development supporting future requirements SKOs ***FY 2016 Plans:*** Document development supporting future requirements SKOs	0.125	0.104	0.102
Title: Special Tools Initiative	0.050	0.300	0.050

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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)	FY 2014	FY 2015	FY 2016
Description: Develop Rapid Deployment Sets, Kits, and Outfits (SKOs) - Special Tool Initiative and support to Tactical Wheeled Vehicles and other vehicle platforms ***FY 2014 Accomplishments:*** 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. ***FY 2016 Plans:*** Develop and test various Soldier Portable Tool Kits based on the maintenance requirements of current and future platforms			
Title: Refrigeration Tool Kit (RTK) ***Description:*** Develop and Test RTK ***FY 2016 Plans:*** Develop RTK	-	-	0.263
Title: Packaging Support ***Description:*** Full Packaging Program Support and Packaging Data Management ***FY 2014 Accomplishments:*** Full Packaging Program Support and Packaging Data Management ***FY 2015 Plans:*** Develop and Maintain Logistics Packaging, Packing and Palletization data	0.050	0.150	-
Title: Fire Suppression Refill System (FSRS) ***Description:*** Design, Develop, Build, and Test SATS Future Field Modules ***FY 2014 Accomplishments:*** Develop Fire Suppression Refill System	0.444	-	-
Accomplishments/Planned Programs Subtotals	1.191	1.003	1.412

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• OPA 3 ML5345: *OPA 3 ML5345, Items Less Than $5.0M (MAINTENANCE EQUIPMENT)*	3.860	2.789	2.760	-	2.760	2.759	2.759	2.767	3.771	Continuing	Continuing
• OPA 3 G05301: *OPA 3 G05301, Mobile Maintenance Equipment Systems*	12.177	23.758	25.270	-	25.270	24.317	23.675	27.853	28.382	Continuing	Continuing

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army		Date: February 2015
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)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total 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)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total 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	0.900	-		-		0.747	Nov 2015	-		0.747	Continuing	Continuing	Continuing
Modernization/Redesign efforts of Truck/Trailer transported shelters for next generation systems	MIPR	ECBC : Rock Island, IL	0.689	0.522	Dec 2013	0.449	Dec 2014	0.050	Feb 2016	-		0.050	Continuing	Continuing	Continuing
Develop Rapid Deployment Sets, Kits, & Outfits - Special Tool Initiative.	MIPR	ECBC : Rock Island, IL	0.250	0.050	Jun 2014	-		0.050	Jan 2016	-		0.050	Continuing	Continuing	Continuing
Procure Ground Based Special Tools in support of Tactical Wheeled Vehicles	MIPR	PM SKOT : Harrison, MI	0.000	-		0.300	Jan 2016	-		-		-	Continuing	Continuing	Continuing
Refrigeration Tool Kit (RTK)	TBD	TBD : TBD	0.000	-		-		0.263	Jan 2016	-		0.263	Continuing	Continuing	Continuing
Next Generation Shop Equipment Contact Maintenance (SECM)	C/TBD	TBD : TBD	0.000	-		-		0.200	Dec 2015	-		0.200	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
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*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	3.270	0.697		0.749		1.310		-		1.310	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total 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)	0.743	-		0.122	Jan 2015	0.102	Dec 2015	-		0.102	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)	1.182	-		-		-		-		-	Continuing	Continuing	Continuing
Packaging Support	MIPR	ARDEC : Rock Island, IL	0.000	-		0.132	Jan 2015	-		-		-	Continuing	Continuing	Continuing
		Subtotal	2.225	-		0.254		0.102		-		0.102	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Further develop SATS Field Maintenance Module & viability of adding Load Handling System capability	MIPR	PM SKOT : Harrison, MI	0.666	0.444	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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army		Date: February 2015
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)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.666	0.494		-		-		-		-	-	-	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	6.257	1.191		1.003		1.412		-		1.412	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
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*

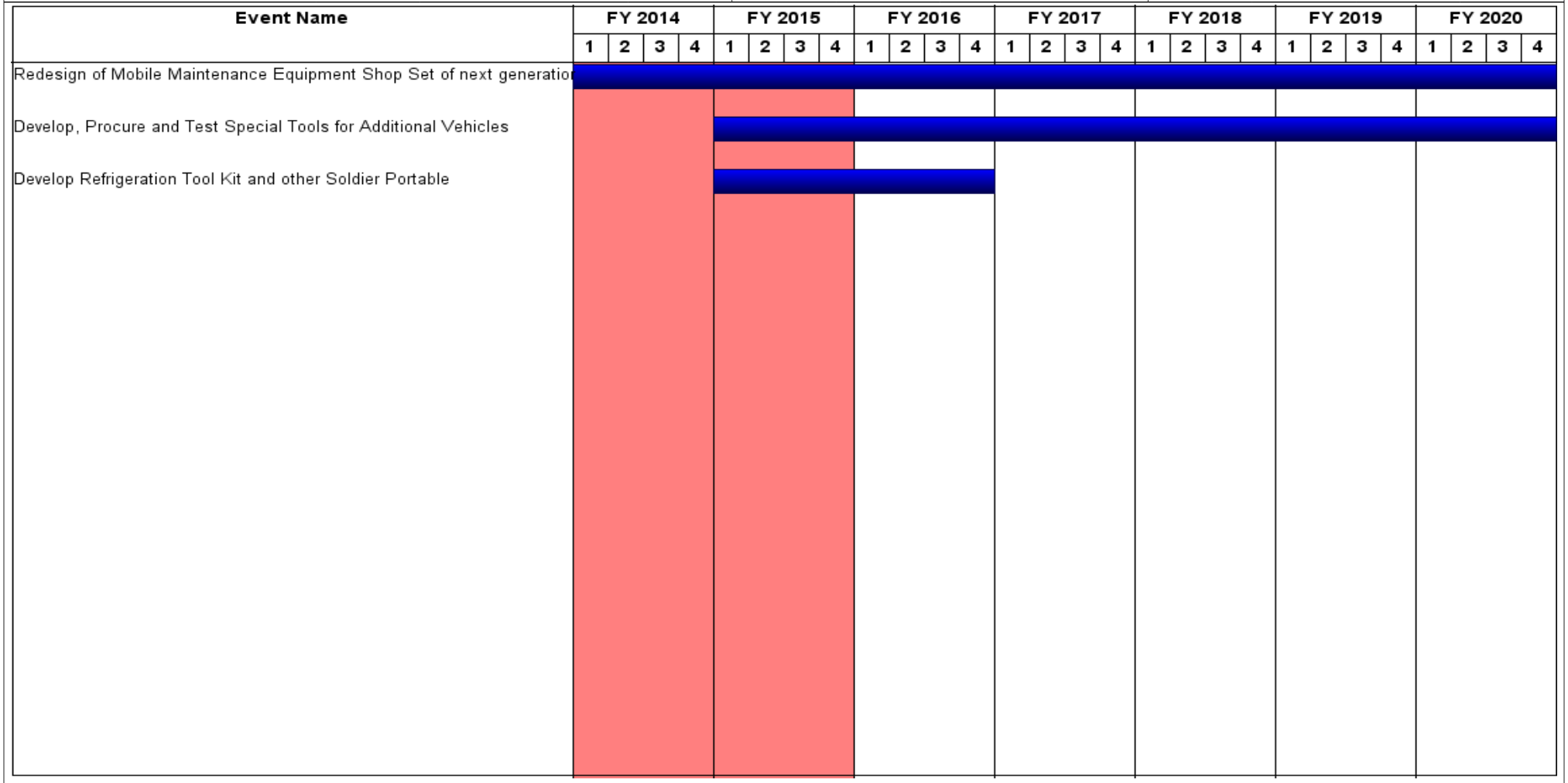

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** L46 / *Maintenance Support Equipment*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Redesign of Mobile Maintenance Equipment Shop Set of next generation vehicle	1	2007	4	2020
Develop, Procure and Test Special Tools for Additional Vehicles	1	2015	4	2020
Develop Refrigeration Tool Kit and other Soldier Portable	1	2015	4	2016

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army			Date: February 2015
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
L47: *Improved Environmental Control Units Ed*	-	2.867	-	0.976	-	0.976	1.468	1.970	3.865	2.199	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Not applicable for this item.

A. Mission Description and Budget Item Justification

The Improved Environmental Control Units (IECU) program will provide updates that support the 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. FY16 base dollars will be used to support development and test efforts for follow-on IECU systems.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: Technology Development	1.000	-	0.200
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 2014 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 2016 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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)	FY 2014	FY 2015	FY 2016
Support continuing technology insertions and demonstration of prototypes for follow-on IECU variants.			
Title: Government System Test and Evaluation ***Description:*** Testing for prototype performance for the trailer mounted variants of the Improved Environmental Control Units (IECUs). ***FY 2014 Accomplishments:*** 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. ***FY 2016 Plans:*** Conduct performance tests on follow-on IECU systems.	0.678	-	0.100
Title: Other Contract and Government Agency ***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 2014 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 2016 Plans:*** Support engineering, logistics, and testing efforts for follow-on IECU variants.	0.991	-	0.626
Title: Government Program Management ***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 2014 Accomplishments:*** 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. ***FY 2016 Plans:***	0.198	-	0.050

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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)	FY 2014	FY 2015	FY 2016
Oversight and management of engineering, logistics, contracts, and testing efforts for follow-on IECU variants.			
Accomplishments/Planned Programs Subtotals	2.867	-	0.976

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• MF9303: *OPA 3, Improved Environmental Control Units , MF9303*	6.269	9.235	18.876	-	18.876	26.434	11.903	1.523	1.552	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 Government Furnished Equipment (GFE) from existing production contracts. Initial prototypes of the integrated fuel-fired heating and cooling systems will be procured via GFE and off-the-shelf components through third party vendors for assessment. This assessment will support development of a revised PD for eventual competitive procurement. Support technology insertions required to adapt IECUs to support future integrated Command Post heating and cooling requirements in support of Force 2025 and the Command Post ICD. Support development and evaluation of follow-on IECU variants.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army		Date: February 2015
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)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
9,18 and 36K Improved Environmental Control Unit (IECU)	Various	PM E2S2 : various	1.124	0.050	Feb 2014	-		-		-		-	-	1.174	Continuing
Trailer Variants	Various	PM E2S2 : various	0.433	0.073	Feb 2014	-		0.025	Dec 2015	-		0.025	-	0.531	Continuing
18K Vertical	Various	PM E2S2 : various	0.000	0.050	Feb 2014	-		-		-		-	-	0.050	-
Integrated heating/cooling units	Various	PM E2S2 : various	0.000	0.025	Feb 2014	-		0.025	Dec 2015	-		0.025	-	0.050	-
SBIR/STTR	Various	various : various	0.137	-		-		-		-		-	-	0.137	-
		Subtotal	1.694	0.198		-		0.050		-		0.050	-	1.942	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total 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	-		0.100	Feb 2016	-		0.100	-	0.500	-
18K Vertical	C/CPFF	TBD : TBD	1.685	0.400	Apr 2014	-		-		-		-	-	2.085	-
Integrated heating/cooling units	MIPR	CERDEC Night Vision Lab : Ft. Belvoir, VA	0.000	0.200	Apr 2014	-		0.100	Feb 2016	-		0.100	-	0.300	-
		Subtotal	3.749	1.000		-		0.200		-		0.200	-	4.949	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
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)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total 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	0.475	Dec 2013	-		-		-		-	-	2.117	-
18K Vertical	Various	CERDEC : Fort Belvoir, VA	3.507	0.175	Dec 2013	-		-		-		-	-	3.682	-
Trailer variants	MIPR	CERDEC : Fort Belvoir, VA	0.344	0.276	Dec 2013	-		0.300	Feb 2016	-		0.300	-	0.920	-
Integrated heating/cooling units	MIPR	CERDEC : Fort Belvoir, VA	0.000	0.065	Dec 2013	-		0.326	Feb 2016	-		0.326	-	0.391	-
		Subtotal	5.493	0.991		-		0.626		-		0.626	-	7.110	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total 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	0.199	0.150	Apr 2014	-		0.025	Feb 2016	-		0.025	-	0.374	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	-		0.075	Feb 2016	-		0.075	-	0.225	-
		Subtotal	0.499	0.678		-		0.100		-		0.100	-	1.277	-

	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	11.435	2.867		-		0.976		-		0.976	-	15.278	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
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*

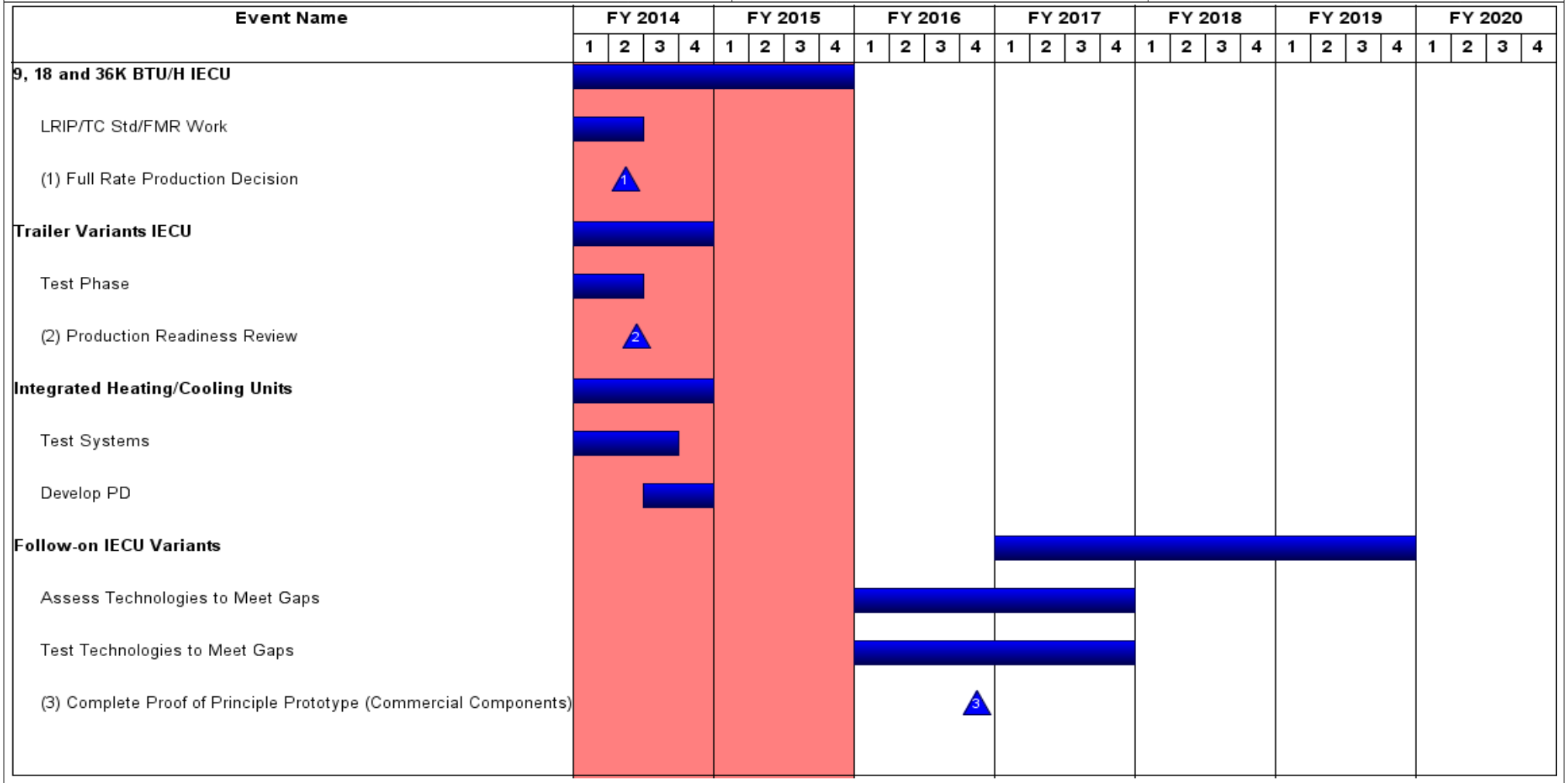

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** L47 / *Improved Environmental Control Units Ed*

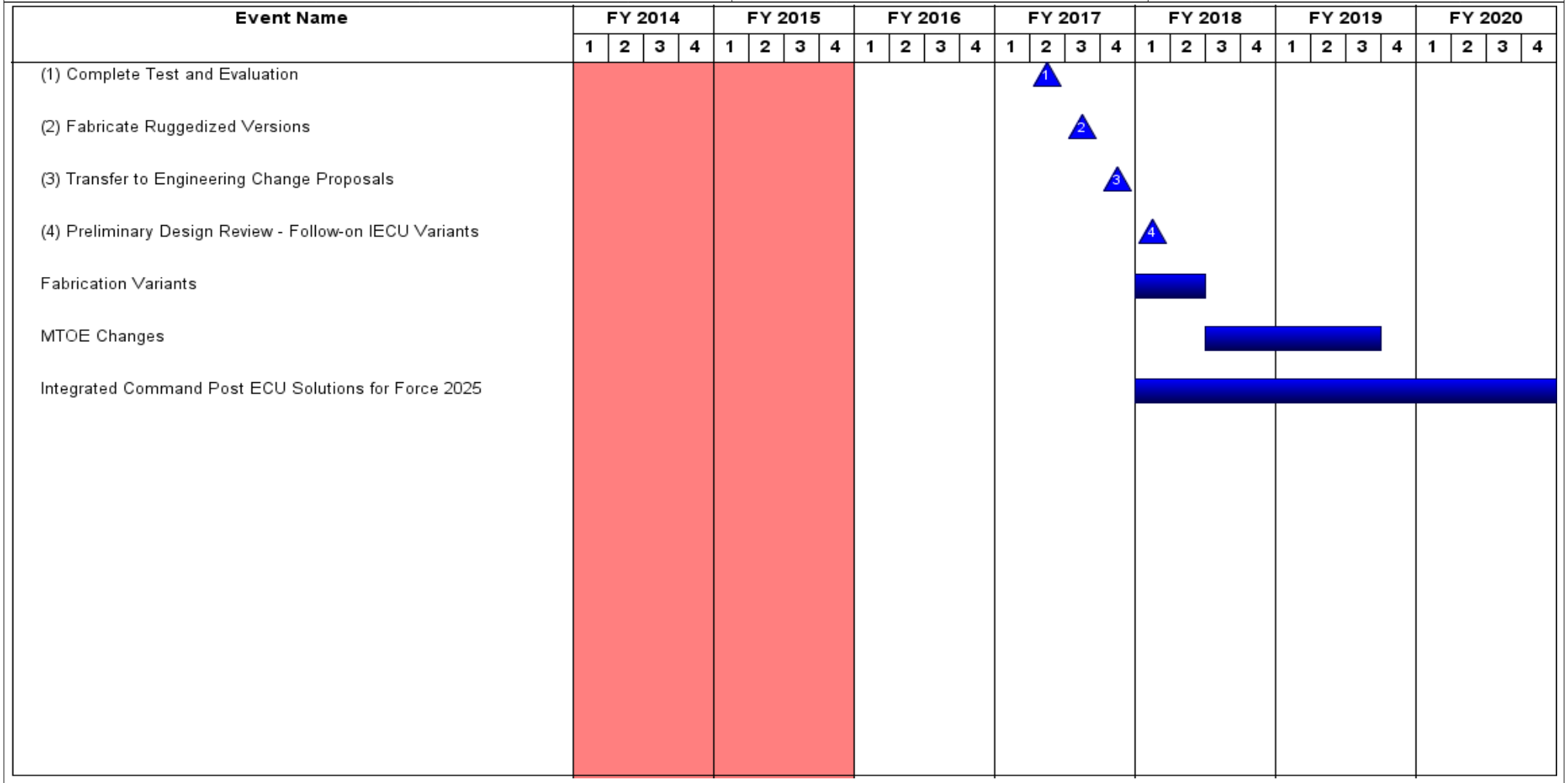

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** L47 / *Improved Environmental Control Units Ed*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
9, 18 and 36K BTU/H IECU	1	2009	4	2015
LRIP/TC Std/FMR Work	2	2013	2	2014
Full Rate Production Decision	2	2014	2	2014
Trailer Variants IECU	1	2013	4	2014
Test Phase	3	2013	2	2014
Production Readiness Review	2	2014	2	2014
Integrated Heating/Cooling Units	1	2013	4	2014
Test Systems	1	2014	3	2014
Develop PD	3	2014	4	2014
Follow-on IECU Variants	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	2	2017	2	2017
Fabricate Ruggedized Versions	3	2017	3	2017
Transfer to Engineering Change Proposals	4	2017	4	2017
Preliminary Design Review - Follow-on IECU Variants	1	2018	1	2018
Fabrication Variants	1	2018	2	2018
MTOE Changes	3	2018	3	2019
Integrated Command Post ECU Solutions for Force 2025	1	2018	4	2020

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army			Date: February 2015
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
VR7: *Combat Service Support Systems*	-	4.405	2.945	2.963	-	2.963	4.574	4.354	2.598	3.077	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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)	FY 2014	FY 2015	FY 2016
Title: Expeditionary Shelter Protection System (ESPS) ***Description:*** ESPS is a lightweight, rapidly deployable and reusable ballistic protection system that can be integrated with 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. ***FY 2015 Plans:*** Award EMD contract, procure test items and initiate logistics requirements for ESPS to support transition to production. ***FY 2016 Plans:*** Complete EMD testing, logistics requirements and initiate Milestone C documentation for ESPS to support transition into production in FY17.	-	0.550	0.861
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 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.	0.150	0.150	0.150

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
FY 2014 Accomplishments: Completed Improved Army Space Heater (IASH) Type II prototype and conducted Developmental Test (DT). Prepared performace based specification. ***FY 2015 Plans:*** Complete contract documentation, award contract, procure test items and initiate Production Qualification Testing (PQT) for IASH Type II. ***FY 2016 Plans:*** Complete PQT, logistics requirements, and prepare Type Classification documentation for IASH Type II to support transition to production in FY17.			
Title: Net-Zero Energy Efficiency Solutions	1.055	1.980	0.740
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, sustainment, 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 2014 Accomplishments:*** Conduct OT on Force Provider 150-Soldier module with integrated Advanced Medium-sized Mobile Power Source (AMMPS). Completed evaluation on waste reduction technologies, energy saving solar shades, insulating liners, and power grid reconfiguration. ***FY 2015 Plans:*** Conduct evaluation on Net-Zero energy efficiency solutions for Force Provider. Initiate DT/OT on Force Provider resource and energy efficient Rigid-Wall Shelter Based 150-Soldier Module with integrated state-of-the-art energy saving appliances and mature expeditionary shelter energy efficiency upgrades. Conduct technical testing on solar hot water heating and mature expeditionary shelter energy efficiency upgrades. Transition proven and validated capabilities into full-rate production. ***FY 2016 Plans:*** Conduct evaluation on Net-Zero energy efficiency solutions for Force Provider. Complete DT/OT on Force Provider Resource and Energy Efficient Rigid-Wall Shelter based 150-Soldier module with integrated state-of-the-art energy saving appliances and mature expeditionary shelter energy efficiency upgrades. Transition Rigid-Wall Shelter camp into production. Complete DT on			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Force Provider 150-Soldier module with integrated Advanced Medium-sized Mobile Power Source (AMMPS) microgrid. Transition proven and validated capabilities into full-rate production.			
Title: Laundry System Improvement ***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:*** Develop test prototypes of key laundry subsystems incorporating component replacements and upgrades to address identified field problems and equipment issues. ***FY 2016 Plans:*** Conduct Developmental Testing (DT) on prototype subsystems and components. Prepare Technical Data Packages (TDP) for modification kits and transition into production.	-	0.265	0.225
Title: Solid Waste Disposal for Small Base Camps ***Description:*** Provides an integrated waste management (reduction, treatment or disposal process) add-on capability that can safely process 1,000 lbs or more of mixed solid waste in a single day on site. Mixed solid waste produced on a single 150 person site must be properly managed through reduction, reuse, recycling, treatment, or disposal. Most of the waste is nonhazardous solid waste. Provides a substantial improvement over the current practice of burn pits that poses a health risk to Soldiers and/or the backhaul logistics burden. ***FY 2016 Plans:*** Complete Milestone B (MS B) for the Solid Waste Disposal Systems and obtain required environmental permits for test and operation. Prepare prototype and conduct Developmental Testing (DT).	-	-	0.685
Title: Containerized Ice Making System ***Description:*** Develops an add-on ice making capability that automatically dispenses and seals 10 lbs bags at a rate of a minimum of 3,600 pounds of ice per day. This capability is based upon Army current operational requirements for ice which is four pounds per Soldier per day. This capability enables support for up to 900 personnel. Current operations require external support to provide personnel with ice for cooling drinking water in extremely arid environments. This capability will reduce the sustainment risk and cost associated with transporting this commodity from external sources. The objective requirement enables stockage of ice to assist with surge operations. ***FY 2016 Plans:***	-	-	0.302

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Award contract for development of test prototype Containerized Ice Making Systems and conduct Developmental Testing (DT).			
Title: Contingency Basing Infrastructure (CBI) ***Description:*** Provide systems engineering support to contingency base camp infrastructure; support investment decisions; support materiel recommendations responsive to operational commander needs; establish and deliver a standardized CBI set of systems as a capability; provide Doctrine, Organization, Training, Materiel, Leadership and education, Personnel, Facilities, and Policy (DOTMLPF-P) considerations for operational requirements and to improve mission effectiveness and efficiency. ***FY 2014 Accomplishments:*** Continued to develop the tool set and knowledge base that will ultimately provide theater commanders with the information and recommendations to make optimal materiel choices and identify any impacts. Executed an Integrated System Requirements Review (I-SRR) for the development of the Contingency Base Interface to the Warfighter (CBIWar). Developed a new Desktop Analysis Tool based on MS Excel that enables base camp system definition and resource consumption estimates to be produced very quickly and efficiently using a common desktop computer. Developed new analytical capability for optimizing base camp designs by adapting a proven Whole System Trade Analysis Tool (WSTAT) previously developed and used for Ground Combat Vehicles to assess base camps. Expanded the capability/utilization of the System of Systems Analysis Toolset (SoSAT) for base camp analysis. Developed a base camp cluster model for an Infantry Brigade Combat Team to assess the impacts of individual system trades across a Ground Line of Communications cluster consisting of one medium base camp, five small base camps and twelve extra-small base camps. Conducted assessments of base camp system portfolios to define candidate systems found in current operational base camps. These candidate systems comprise the current base camp Materiel Baseline. Ongoing efforts will utilize these candidate systems to create base camp cluster models from which base camp performance improvements/ efficiencies can be measured. Program transitions to Budget Activity 654715 EC9 in FY15.	3.200	-	-
Accomplishments/Planned Programs Subtotals	4.405	2.945	2.963

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• 643804 VR8: *Combat Service Support Systems AD,*	1.558	2.690	4.048	-	4.048	4.654	4.557	2.566	3.020	Continuing	Continuing

Remarks

D. Acquisition Strategy

Accelerate product development and testing to transition into production.

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E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
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Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management Support	Various	PM Force Sustainment Systems : Natick, MA	0.322	0.137	Mar 2014	0.262		0.366		-		0.366	Continuing	Continuing	-
CBI Support	Various	PD CBI : Warren, MI	3.284	0.463		-		-		-		-	-	3.747	-
SBIR+STTR	TBD	Various : Various	0.077	-		-		-		-		-	-	0.077	-
		Subtotal	3.683	0.600		0.262		0.366		-		0.366	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Soldier Support Equipment	TBD	Various : Various	2.143	0.453	May 2014	1.138		1.017		-		1.017	Continuing	Continuing	-
Contingency Basing Infrastructure	Various	Various : Various	0.000	1.531		-		-		-		-	-	1.531	-
		Subtotal	2.143	1.984		1.138		1.017		-		1.017	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Soldier Support Equipment	Various	Various : Various	1.668	0.615	Mar 2014	1.545		1.580		-		1.580	Continuing	Continuing	-
Contingency Basing Infrastructure	Various	Various : Various	0.000	1.206		-		-		-		-	-	1.206	-
		Subtotal	1.668	1.821		1.545		1.580		-		1.580	-	-	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	7.494	4.405		2.945		2.963		-		2.963	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
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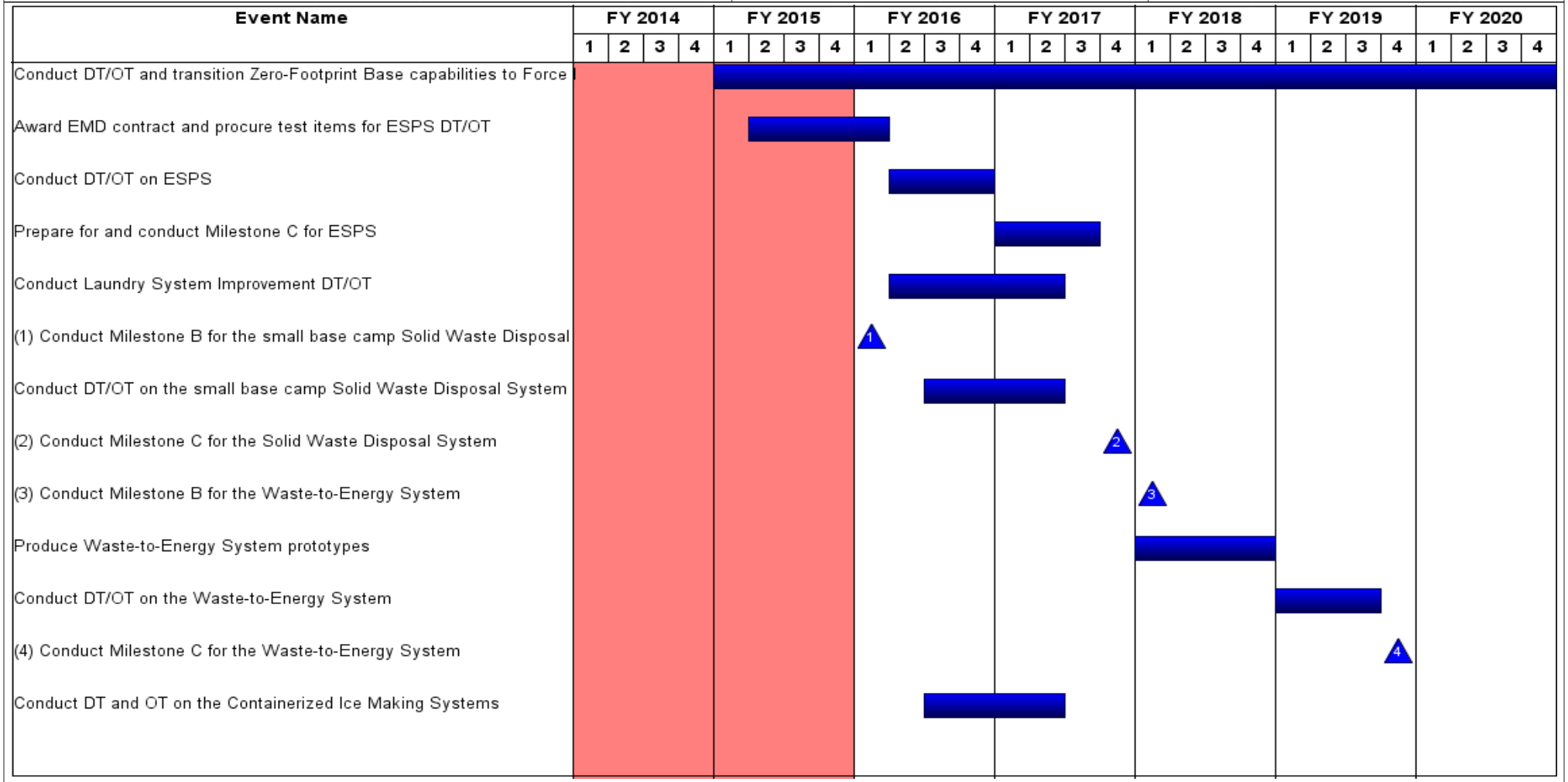

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
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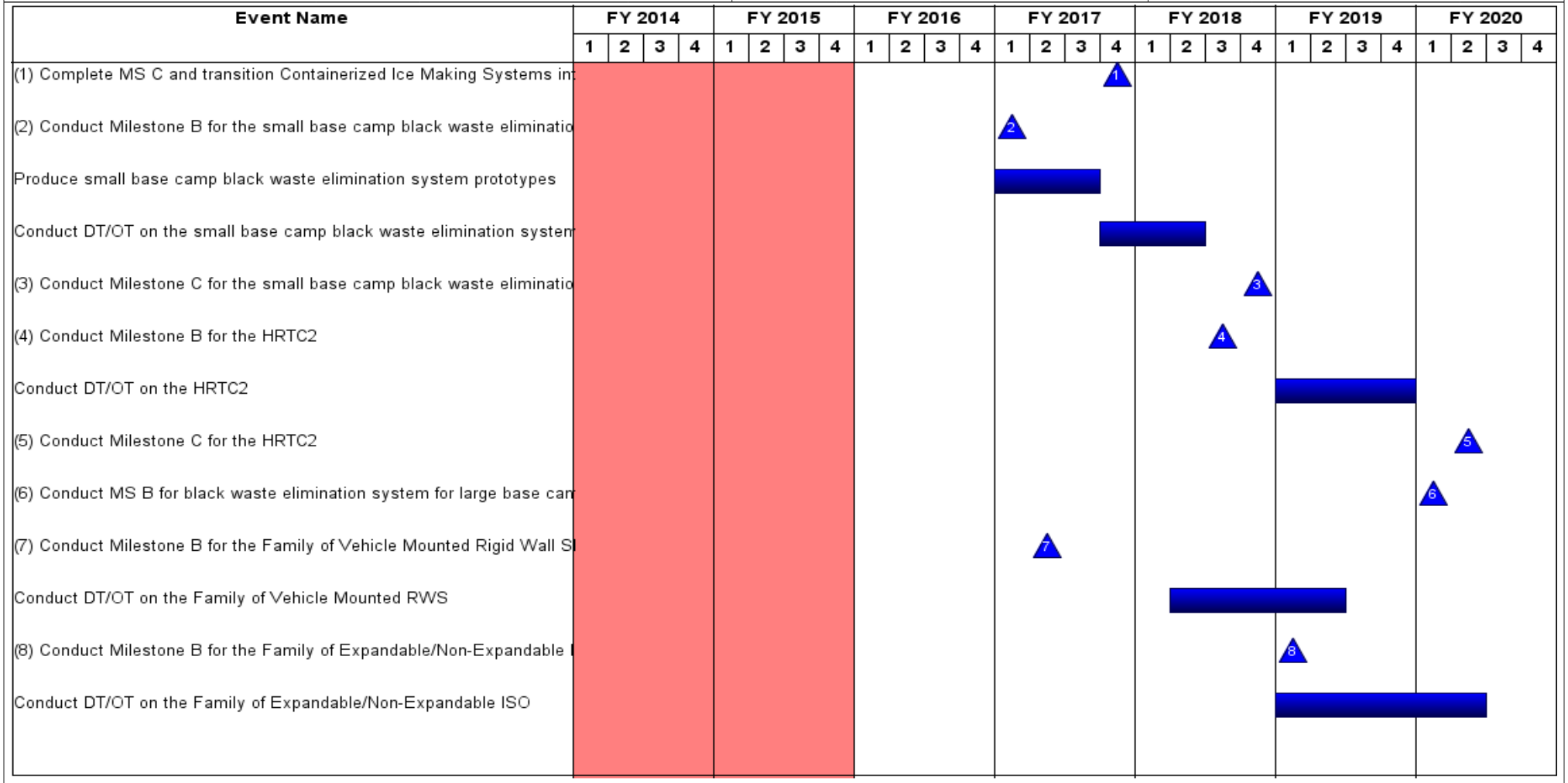

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
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Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Conduct DT/OT and transition Zero-Footprint Base capabilities to Force Provider.	1	2015	4	2020
Award EMD contract and procure test items for ESPS DT/OT	2	2015	1	2016
Conduct DT/OT on ESPS	2	2016	4	2016
Prepare for and conduct Milestone C for ESPS	1	2017	3	2017
Conduct Laundry System Improvement DT/OT	2	2016	2	2017
Conduct Milestone B for the small base camp Solid Waste Disposal System	1	2016	1	2016
Conduct DT/OT on the small base camp Solid Waste Disposal System	3	2016	2	2017
Conduct Milestone C for the Solid Waste Disposal System	4	2017	4	2017
Conduct Milestone B for the Waste-to-Energy System	1	2018	1	2018
Produce Waste-to-Energy System prototypes	1	2018	4	2018
Conduct DT/OT on the Waste-to-Energy System	1	2019	3	2019
Conduct Milestone C for the Waste-to-Energy System	4	2019	4	2019
Conduct DT and OT on the Containerized Ice Making Systems	3	2016	2	2017
Complete MS C and transition Containerized Ice Making Systems into production	4	2017	4	2017
Conduct Milestone B for the small base camp black waste elimination system	1	2017	1	2017
Produce small base camp black waste elimination system prototypes	1	2017	3	2017
Conduct DT/OT on the small base camp black waste elimination system	4	2017	2	2018
Conduct Milestone C for the small base camp black waste elimination system	4	2018	4	2018
Conduct Milestone B for the HRTC2	3	2018	3	2018
Conduct DT/OT on the HRTC2	1	2019	4	2019
Conduct Milestone C for the HRTC2	2	2020	2	2020
Conduct MS B for black waste elimination system for large base camps	1	2020	1	2020

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
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	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Conduct Milestone B for the Family of Vehicle Mounted Rigid Wall Shelters (RWS)	2	2017	2	2017
Conduct DT/OT on the Family of Vehicle Mounted RWS	2	2018	2	2019
Conduct Milestone B for the Family of Expandable/Non-Expandable ISO	1	2019	1	2019
Conduct DT/OT on the Family of Expandable/Non-Expandable ISO	1	2019	2	2020
Conduct Milestone B for the Family of Collapsible and Panelized RWS	4	2020	4	2020
Develop ULCANS arctic/snow variant and conduct DT/OT	1	2017	2	2018
Develop ULCANS urban variant and conduct DT/OT	3	2017	4	2019
Develop ESPS Overhead Protection System and conduct DT and OT	1	2020	4	2021
Award EMD contract and conduct PQT for IASH Type II	2	2015	4	2015
Complete PQT and prepare TC-STD documentation for IASH Type II	1	2016	4	2016