Department of Defense
Fiscal Year (FY) 2015 Budget Estimates

March 2014

Army

Justification Book

Research, Development, Test & Evaluation, Army

RDT&E − Volume II, Budget Activity 5B

RESEARCH, DEVELOPMENT, TEST AND EVALUATION, ARMY

APPROPRIATION LANGUAGE

For expenses necessary for basic and applied scientific research, development, test and evaluation, including maintenance, rehabilitation, lease, and operation of facilities and equipment, $6,593,898,000, to remain available for obligation until September 30, 2016.

The following Justification Books were prepared at a cost of $139,860.00: Aircraft (ACFT), Missile (MSLS), Weapons & Tracked Combat Vehicles (WTCV), Ammunition (AMMO), Other Procurement Army (OPA) 1 - Tactical & Support Vehicles, Other Procurement Army (OPA) 2 - Communications &Electronics, Other Procurement Army (OPA) 3 & 4 - Other Support Equipment & Spares, Research, Development, Test and Evaluation (RDTE) for: Budget Activity 1, Budget Activity 2, Budget Activity 3, Budget Activity 4, Budget Activity 5A, Budget Activity 5B, Budget Activity 6, and Budget Activity 7.

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Department of Defense
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Exhibit R-1 FY 2015 President's Budget
Total Obligational Authority
(Dollars in Thousands)

February 28, 2014

Appropriation	FY 2013 (Base & OCO)	FY 2014 Base Enacted	FY 2014 OCO Enacted	FY 2014 Total Enacted	FY 2015 Base
Research, Development, Test & Eval, Army	8,010,810	7,122,681	13,500	7,136,181	6,593,898
Total Research, Development, Test & Evaluation	8,010,810	7,122,681	13,500	7,136,181	6,593,898

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Summary Recap of Budget Activities	FY 2013 (Base & OCO)	FY 2014 Base Enacted	FY 2014 OCO Enacted	FY 2014 Total Enacted	FY 2015 Base
Basic Research	384,636	436,493		436,493	424,176
Applied Research	910,391	954,451		954,451	862,611
Advanced Technology Development	961,060	1,063,636		1,063,636	917,791
Advanced Component Development & Prototypes	421,655	408,552	6,500	415,052	323,156
System Development & Demonstration	2,785,237	2,052,576	7,000	2,059,576	1,719,374
RDT&E Management Support	1,241,684	1,163,091		1,163,091	1,000,430
Operational Systems Development	1,306,147	1,043,882		1,043,882	1,346,360
Total Research, Development, Test & Evaluation	8,010,810	7,122,681	13,500	7,136,181	6,593,898
Summary Recap of FYDP Programs					
Strategic Forces	142,508	83,406		83,406	54,076
General Purpose Forces	610,249	575,129		575,129	963,970
Intelligence and Communications	383,165	208,332		208,332	170,244
Research and Development	6,821,245	6,199,708	13,500	6,213,208	5,329,383
Central Supply and Maintenance	53,461	56,106		56,106	76,225
Administration and Associated Activities	182				
Total Research, Development, Test & Evaluation	8,010,810	7,122,681	13,500	7,136,181	6,593,898

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Appropriation: 2040A Research, Development, Test & Eval, Army

Line No	Program Element Number	Item	Act	FY 2013 (Base & OCO)	FY 2014 Base Enacted	FY 2014 OCO Enacted	FY 2014 Total Enacted	FY 2015 Base
1	0601101A	In-House Laboratory Independent Research	01	18,836	21,792		21,792	13,464
2	0601102A	Defense Research Sciences	01	197,690	221,783		221,783	238,167
3	0601103A	University Research Initiatives	01	72,243	79,317		79,317	69,808
4	0601104A	University and Industry Research Centers	01	95,867	113,601		113,601	102,737
	Basic Research			384,636	436,493		436,493	424,176
5	0602105A	Materials Technology	02	54,578	55,569		55,569	28,006
6	0602120A	Sensors and Electronic Survivability	02	40,842	43,148		43,148	33,515
7	0602122A	TRACTOR HIP	02	20,638	36,273		36,273	16,358
8	0602211A	Aviation Technology	02	46,828	55,586		55,586	63,433
9	0602270A	Electronic Warfare Technology	02	13,838	17,575		17,575	18,502
10	0602303A	Missile Technology	02	43,277	59,500		59,500	46,194
11	0602307A	Advanced Weapons Technology	02	23,140	26,148		26,148	28,528
12	0602308A	Advanced Concepts and Simulation	02	21,075	24,051		24,051	27,435
13	0602601A	Combat Vehicle and Automotive Technology	02	62,267	64,555		64,555	72,883
14	0602618A	Ballistics Technology	02	55,113	75,263		75,263	85,597
15	0602622A	Chemical, Smoke and Equipment Defeating Technology	02	4,010	4,487		4,487	3,971
16	0602623A	Joint Service Small Arms Program	02	6,378	7,814		7,814	6,853
17	0602624A	Weapons and Munitions Technology	02	46,097	52,778		52,778	38,069
18	0602705A	Electronics and Electronic Devices	02	85,099	58,990		58,990	56,435
19	0602709A	Night Vision Technology	02	48,069	43,403		43,403	38,445
20	0602712A	Countermine Systems	02	28,875	30,563		30,563	25,939

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Line No	Program Element Number	Item	Act	FY 2013 (Base & OCO)	FY 2014 Base Enacted	FY 2014 OCO Enacted	FY 2014 Total Enacted	FY 2015 Base
21	0602716A	Human Factors Engineering Technology	02	18,161	21,328		21,328	23,783
22	0602720A	Environmental Quality Technology	02	18,259	20,304		20,304	15,659
23	0602782A	Command, Control, Communications Technology	02	26,200	34,191		34,191	33,817
24	0602783A	Computer and Software Technology	02	8,886	10,434		10,434	10,764
25	0602784A	Military Engineering Technology	02	71,553	70,027		70,027	63,311
26	0602785A	Manpower/Personnel/Training Technology	02	15,979	17,645		17,645	23,295
27	0602786A	Warfighter Technology	02	53,206	31,529		31,529	25,751
28	0602787A	Medical Technology	02	98,023	93,290		93,290	76,068
		Applied Research		910,391	954,451		954,451	862,611
29	0603001A	Warfighter Advanced Technology	03	36,975	66,025		66,025	65,139
30	0603002A	Medical Advanced Technology	03	99,924	100,999		100,999	67,291
31	0603003A	Aviation Advanced Technology	03	57,364	81,037		81,037	88,990
32	0603004A	Weapons and Munitions Advanced Technology	03	69,788	73,885		73,885	57,931
33	0603005A	Combat Vehicle and Automotive Advanced Technology	03	128,463	146,992		146,992	110,031
34	0603006A	Space Application Advanced Technology	03	3,702	5,862		5,862	6,883
35	0603007A	Manpower, Personnel and Training Advanced Technology	03	8,756	7,796		7,796	13,580
36	0603008A	Electronic Warfare Advanced Technology	03	45,254	45,394		45,394	44,871
37	0603009A	TRACTOR HIKE	03	6,792	9,161		9,161	7,492
38	0603015A	Next Generation Training & Simulation Systems	03	15,404	13,620		13,620	16,749
39	0603020A	TRACTOR ROSE	03	8,762	10,662		10,662	14,483
40	0603105A	Military HIV Research	03	20,920				

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Line No	Program Element Number	Item	Act	FY 2013 (Base & OCO)	FY 2014 Base Enacted	FY 2014 OCO Enacted	FY 2014 Total Enacted	FY 2015 Base
41	0603125A	Combating Terrorism - Technology Development	03	9,199	15,046		15,046	24,270
42	0603130A	TRACTOR NAIL	03	3,207	3,192		3,192	3,440
43	0603131A	TRACTOR EGGS	03	2,560	2,366		2,366	2,406
44	0603270A	Electronic Warfare Technology	03	19,561	25,335		25,335	26,057
45	0603313A	Missile and Rocket Advanced Technology	03	80,379	83,975		83,975	44,957
46	0603322A	TRACTOR CAGE	03	12,026	11,077		11,077	11,105
47	0603461A	High Performance Computing Modernization Program	03	202,969	220,565		220,565	181,609
48	0603606A	Landmine Warfare and Barrier Advanced Technology	03	24,448	22,794		22,794	13,074
49	0603607A	Joint Service Small Arms Program	03	5,478	5,027		5,027	7,321
50	0603710A	Night Vision Advanced Technology	03	33,328	44,387		44,387	44,138
51	0603728A	Environmental Quality Technology Demonstrations	03	12,398	11,739		11,739	9,197
52	0603734A	Military Engineering Advanced Technology	03	30,503	23,705		23,705	17,613
53	0603772A	Advanced Tactical Computer Science and Sensor Technology	03	22,900	32,995		32,995	39,164
		Advanced Technology Development		961,060	1,063,636		1,063,636	917,791
54	0603305A	Army Missle Defense Systems Integration	04	22,340	23,289		23,289	12,797
55	0603308A	Army Space Systems Integration	04	9,038	13,584		13,584	13,999
56	0603619A	Landmine Warfare and Barrier - Adv Dev	04	4,089				
57	0603627A	Smoke, Obscurant and Target Defeating Sys-Adv Dev	04	2,430				
58	0603639A	Tank and Medium Caliber Ammunition	04	27,114	30,596		30,596	29,334
59	0603653A	Advanced Tank Armament System (ATAS)	04	11,116	49,963		49,963	
60	0603747A	Soldier Support and Survivability	04	15,936	5,185	6,500	11,685	9,602

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61	0603766A	Tactical Electronic Surveillance System - Adv Dev	04	7,960	6,890		6,890	8,953
62	0603774A	Night Vision Systems Advanced Development	04	9,556	9,061		9,061	3,052
63	0603779A	Environmental Quality Technology - Dem/Val	04	4,060	2,631		2,631	7,830
64	0603782A	Warfighter Information Network-Tactical - DEM/VAL	04	161,505	122,319		122,319	
65	0603790A	NATO Research and Development	04	4,393	3,872		3,872	2,954
66	0603801A	Aviation - Adv Dev	04	7,227	5,015		5,015	
67	0603804A	Logistics and Engineer Equipment - Adv Dev	04	13,028	11,549		11,549	13,386
68	0603805A	Combat Service Support Control System Evaluation and Analysis	04	4,499				
69	0603807A	Medical Systems - Adv Dev	04	22,514	15,594		15,594	23,659
70	0603827A	Soldier Systems - Advanced Development	04	30,793	14,152		14,152	6,830
71	0603850A	Integrated Broadcast Service	04	96	79		79	
72	0604100A	Analysis Of Alternatives	04					9,913
73	0604115A	Technology Maturation Initiatives	04	12,636	11,110		11,110	74,740
74	0604120A	Assured Positioning, Navigation and Timing (PNT)	04					9,930
75	0604131A	TRACTOR JUTE	04	54				
76	0604319A	Indirect Fire Protection Capability Increment 2-Intercept (IFPC2)	04	25,710	79,190		79,190	96,177
77	0604785A	Integrated Base Defense (Budget Activity 4)	04	3,604	4,473		4,473	
78	0305205A	Endurance UAVs	04	21,957				
		Advanced Component Development & Prototypes		421,655	408,552	6,500	415,052	323,156
79	0604201A	Aircraft Avionics	05	60,472	76,547		76,547	37,246
80	0604220A	Armed, Deployable Helos	05	80,934	69,807		69,807	

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81	0604270A	Electronic Warfare Development	05	102,812	144,543		144,543	6,002
82	0604280A	Joint Tactical Radio	05		31,809		31,809	9,832
83	0604290A	Mid-tier Networking Vehicular Radio (MNVR)	05	2,556	23,328		23,328	9,730
84	0604321A	All Source Analysis System	05	5,601	4,837		4,837	5,532
85	0604328A	TRACTOR CAGE	05	11,297	23,829		23,829	19,929
86	0604601A	Infantry Support Weapons	05	83,224	85,054		85,054	27,884
87	0604604A	Medium Tactical Vehicles	05	2,908	2,139		2,139	210
88	0604611A	JAVELIN	05	4,540	5,000		5,000	4,166
89	0604622A	Family of Heavy Tactical Vehicles	05	17,975	21,310	7,000	28,310	12,913
90	0604633A	Air Traffic Control	05	10,140	514		514	16,764
91	0604641A	Tactical Unmanned Ground Vehicle (TUGV)	05	2,795				6,770
92	0604710A	Night Vision Systems - Eng Dev	05	29,352	43,382		43,382	65,333
93	0604713A	Combat Feeding, Clothing, and Equipment	05	1,901	1,938		1,938	1,335
94	0604715A	Non-System Training Devices - Eng Dev	05	40,470	18,971		18,971	8,945
95	0604716A	Terrain Information - Eng Dev	05	928				
96	0604741A	Air Defense Command, Control and Intelligence - Eng Dev	05	42,876	18,284		18,284	15,906
97	0604742A	Constructive Simulation Systems Development	05	25,828	17,004		17,004	4,394
98	0604746A	Automatic Test Equipment Development	05	10,307	6,697		6,697	11,084
99	0604760A	Distributive Interactive Simulations (DIS) - Eng Dev	05	12,427	12,569		12,569	10,027
100	0604780A	Combined Arms Tactical Trainer (CATT) Core	05	16,005	27,619		27,619	42,430
101	0604798A	Brigade Analysis, Integration and Evaluation	05	191,065	99,947		99,947	105,279

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102	0604802A	Weapons and Munitions - Eng Dev	05	12,999	15,712		15,712	15,006
103	0604804A	Logistics and Engineer Equipment - Eng Dev	05	45,135	41,682		41,682	24,581
104	0604805A	Command, Control, Communications Systems - Eng Dev	05	18,543	7,376		7,376	4,433
105	0604807A	Medical Materiel/Medical Biological Defense Equipment - Eng Dev	05	38,712	39,447		39,447	30,397
106	0604808A	Landmine Warfare/Barrier - Eng Dev	05	37,769	92,236		92,236	57,705
107	0604814A	Artillery Munitions - EMD	05	3,576	8,205		8,205	
108	0604818A	Army Tactical Command & Control Hardware & Software	05	50,279	22,945		22,945	29,683
109	0604820A	Radar Development	05	3,734	1,548		1,548	5,224
110	0604822A	General Fund Enterprise Business System (GFEBS)	05	24,742	226		226	
111	0604823A	Firefinder	05	18,303	20,210		20,210	37,492
112	0604827A	Soldier Systems - Warrior Dem/Val	05	28,358	18,467		18,467	6,157
113	0604854A	Artillery Systems - EMD	05	149,667	121,270		121,270	1,912
114	0604869A	Patriot/MEADS Combined Aggregate Program (CAP)	05	348,234				
115	0604870A	Nuclear Arms Control Monitoring Sensor Network	05	7,093				
116	0605013A	Information Technology Development	05	44,684	68,778		68,778	69,761
117	0605018A	Integrated Personnel and Pay System-Army (IPPS-A)	05	122,168	69,253		69,253	138,465
118	0605028A	Armored Multi-Purpose Vehicle (AMPV)	05		28,285		28,285	92,353
119	0605030A	Joint Tactical Network Center (JTNC)	05		68,112		68,112	8,440
120	0605031A	Joint Tactical Network (JTN)	05					17,999
121	0605035A	Common Infrared Countermeasures (CIRCM)	05					145,409
122	0605350A	WIN-T Increment 3 - Full Networking	05					113,210

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Line No	Program Element Number	Item	Act	FY 2013 (Base & OCO)	FY 2014 Base Enacted	FY 2014 OCO Enacted	FY 2014 Total Enacted	FY 2015 Base
123	0605380A	AMF Joint Tactical Radio System (JTRS)	05		10,213		10,213	6,882
124	0605450A	Joint Air-to-Ground Missile (JAGM)	05	9,686	15,119		15,119	83,838
125	0605456A	PAC-3/MSE Missile	05	63,123	68,807		68,807	35,009
126	0605457A	Army Integrated Air and Missile Defense (AIAMD)	05	247,407	369,452		369,452	142,584
127	0605625A	Manned Ground Vehicle	05	570,121	100,147		100,147	49,160
128	0605626A	Aerial Common Sensor	05	108,566	10,377		10,377	17,748
129	0605766A	National Capabilities Integration (MIP)	05		21,132		21,132	15,212
130	0605812A	Joint Light Tactical Vehicle (JLTV) Engineering and Manufacturing Development Ph	05	59,205	84,185		84,185	45,718
131	0605830A	Aviation Ground Support Equipment	05					10,041
132	0210609A	Paladin Integrated Management (PIM)	05					83,300
133	0303032A	TROJAN - RH12	05	3,892	3,463		3,463	983
134	0304270A	Electronic Warfare Development	05	12,828	10,801		10,801	8,961
		System Development & Demonstration		2,785,237	2,052,576	7,000	2,059,576	1,719,374
135	0604256A	Threat Simulator Development	06	16,409	23,921		23,921	18,062
136	0604258A	Target Systems Development	06	12,583	13,481		13,481	10,040
137	0604759A	Major T&E Investment	06	45,057	46,647		46,647	60,317
138	0605103A	Rand Arroyo Center	06	18,892	18,909		18,909	20,612
139	0605301A	Army Kwajalein Atoll	06	162,089	193,555		193,555	176,041
140	0605326A	Concepts Experimentation Program	06	24,720	22,246		22,246	19,439
141	0605502A	Small Business Innovative Research	06	169,555				
142	0605601A	Army Test Ranges and Facilities	06	334,087	340,477		340,477	275,025

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143	0605602A	Army Technical Test Instrumentation and Targets	06	61,711	66,025		66,025	45,596
144	0605604A	Survivability/Lethality Analysis	06	40,865	43,256		43,256	33,295
145	0605606A	Aircraft Certification	06	5,258	6,022		6,022	4,700
146	0605702A	Meteorological Support to RDT&E Activities	06	6,668	7,345		7,345	6,413
147	0605706A	Materiel Systems Analysis	06	18,622	19,799		19,799	20,746
148	0605709A	Exploitation of Foreign Items	06	5,501	5,938		5,938	7,015
149	0605712A	Support of Operational Testing	06	64,458	55,475		55,475	49,221
150	0605716A	Army Evaluation Center	06	57,037	65,240		65,240	55,039
151	0605718A	Army Modeling & Sim X-Cmd Collaboration & Integ	06	1,375	1,282		1,282	1,125
152	0605801A	Programwide Activities	06	75,662	81,993		81,993	64,169
153	0605803A	Technical Information Activities	06	48,995	33,835		33,835	32,319
154	0605805A	Munitions Standardization, Effectiveness and Safety	06	50,838	58,309		58,309	49,052
155	0605857A	Environmental Quality Technology Mgmt Support	06	4,276	5,191		5,191	2,612
156	0605898A	Management HQ - R&D	06	16,844	54,145		54,145	49,592
157	0909999A	Financing for Cancelled Account Adjustments	06	182				
		RDT&E Management Support		1,241,684	1,163,091		1,163,091	1,000,430
158	0603778A	MLRS Product Improvement Program	07	110,860	96,424		96,424	17,112
159	0607141A	Logistics Automation	07		3,715		3,715	3,654
160	0607664A	Biometric Enabling Capability (BEC)	07					1,332
161	0607865A	Patriot Product Improvement	07	44,581	35,034		35,034	152,991
162	0102419A	Aerostat Joint Project Office	07	142,508	83,406		83,406	54,076

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163	0203726A	Adv Field Artillery Tactical Data System	07	26,216	25,507		25,507	22,374
164	0203728A	Joint Automated Deep Operation Coordination System (JADOCS)	07					24,371
165	0203735A	Combat Vehicle Improvement Programs	07	189,396	177,437		177,437	295,177
166	0203740A	Maneuver Control System	07	60,948	36,475		36,475	45,092
167	0203744A	Aircraft Modifications/Product Improvement Programs	07	193,404	239,696		239,696	264,887
168	0203752A	Aircraft Engine Component Improvement Program	07	804	315		315	381
169	0203758A	Digitization	07	34,225	6,183		6,183	10,912
170	0203801A	Missile/Air Defense Product Improvement Program	07	17,863	1,577		1,577	5,115
171	0203802A	Other Missile Product Improvement Programs	07		62,067		62,067	49,848
172	0203808A	TRACTOR CARD	07	58,174	18,768		18,768	22,691
173	0205402A	Integrated Base Defense - Operational System Dev	07					4,364
174	0205410A	Materials Handling Equipment	07					834
175	0205412A	Environmental Quality Technology - Operational System Dev	07					280
176	0205456A	Lower Tier Air and Missile Defense (AMD) System	07					78,758
177	0205778A	Guided Multiple-Launch Rocket System (GMLRS)	07					45,377
178	0208053A	Joint Tactical Ground System	07	29,187	7,104		7,104	10,209
179	0208058A	Joint High Speed Vessel (JHSV)	07	32				
180	0301359A	Special Army Program	07					
181	0303028A	Security and Intelligence Activities	07	6,778	7,596		7,596	12,525
182	0303140A	Information Systems Security Program	07	14,314	9,351		9,351	14,175
183	0303141A	Global Combat Support System	07	108,506	41,203		41,203	4,527

Department of the Army
FY 2015 President's Budget
Exhibit R-1 FY 2015 President's Budget
Total Obligational Authority
(Dollars in Thousands)

February 28, 2014

Appropriation: 2040A Research, Development, Test & Eval, Army

Line No	Program Element Number	Item	Act	FY 2013 (Base & OCO)	FY 2014 Base Enacted	FY 2014 OCO Enacted	FY 2014 Total Enacted	FY 2015 Base
184	0303142A	SATCOM Ground Environment (SPACE)	07	14,101	18,188		18,188	11,011
185	0303150A	WWMCCS/Global Command and Control System	07	13,208	14,208		14,208	2,151
186	0304348A	Advanced Geospatial Intelligence (AGI)	07					
187	0305204A	Tactical Unmanned Aerial Vehicles	07	28,466	33,515		33,515	22,870
188	0305208A	Distributed Common Ground/Surface Systems	07	38,673	27,607		27,607	20,155
189	0305219A	MQ-1C Gray Eagle UAS	07	68,694	10,895		10,895	46,472
190	0305232A	RQ-11 UAV	07	3,716	2,320		2,320	
191	0305233A	RQ-7 UAV	07	28,554	12,025		12,025	16,389
192	0307665A	Biometrics Enabled Intelligence	07	15,225	12,443		12,443	1,974
193	0310349A	Win-T Increment 2 - Initial Networking	07					3,249
194	0708045A	End Item Industrial Preparedness Activities	07	53,461	56,106		56,106	76,225
		Operational Systems Development		1,306,147	1,043,882		1,043,882	1,346,360
		Total Research, Development, Test & Eval, Army		8,010,810	7,122,681	13,500	7,136,181	6,593,898

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Program Element Table of Contents (by Budget Activity then Line Item Number)

Budget Activity 05: System Development & Demonstration (SDD)
Appropriation 2040: Research, Development, Test & Evaluation, Army

Budget Activity 05: System Development & Demonstration (SDD)
Appropriation 2040: Research, Development, Test & Evaluation, Army

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Appropriation 2040: Research, Development, Test & Evaluation, Army

Budget Activity 05: System Development & Demonstration (SDD)
Appropriation 2040: Research, Development, Test & Evaluation, Army

Program Element Table of Contents (Alphabetically by Program Element Title)

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

The FY 2015 OCO Request will be submitted at a later date.

Note

Change Summary Explanation: Funding - FY 2015: Adjustment for all projects within this PE.

A. Mission Description and Budget Item Justification

This Program Element (PE) provides system development and demonstration for various projects. This PE includes the development of military tactical bridging, material handling equipment, construction equipment, engineer support equipment, soldier support equipment (to include shelter systems, environmental control, field

service equipment, camouflage systems and aerial delivery equipment), water purification equipment, petroleum distribution equipment, mobile electric power and water craft.

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

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

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	Project (Number/Name) 194 / *Engine Driven Gen Ed*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
194: *Engine Driven Gen Ed*	-	11.195	5.025	5.875	-	5.875	9.785	4.927	4.158	6.552	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Not applicable for this item.

A. Mission Description and Budget Item Justification

This project supports the Tactical Electric Power (TEP) program which is established to develop a Modernized, Standard Family of Mobile Electric Power Generating Sources (MEPGS) for all Services throughout the Department of Defense. Building on the device/component evaluations conducted in PE 0603804A project G11, this project supports the system development and demonstration of a series of innovative mobile electric power sources that are essential to the development and eventual fielding of modernized MEPGS from 0.5 kilowatt (kW) to 840kW. These sources will ensure compliance with federally mandated environmental statutes and significantly lower noise and thermal signatures (thereby improving battlefield survivability), improve fuel and electrical efficiency, reduce weight, enhance portability, improve reliability and maintainability, and reduce operational and support costs. FY14-15 funds continue the Engineering and Manufacturing Development (EMD) Phase for Large Advanced Mobile Power Sources (LAMPS) and will prepare the Improved Power Distribution Illumination Systems Electrical (IPDISE)/Microgrids performance specification and initiate the EMD phase. Funding in FY15 will also support the start of the Small Tactical Electric Power (STEP) EMD phase.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Large Advanced Mobile Power Sources (LAMPS) and Improved Power Distribution Illumination Systems Electrical (IPDISE)/ Microgrids Engineering & Manufacturing Development (EMD) Phase.	11.195	5.025	4.513
Articles:	-	-	-
Description: Prepare LAMPS and IPDISE/Microgrids performance specification and begin EMD Phase			
FY 2013 Accomplishments: Continue EMD Phase of LAMPS			
FY 2014 Plans: Continue EMD Phase of LAMPS. Prepare the IPDISE/Microgrids performance specification and initiate EMD phase.			
FY 2015 Plans: Continue EMD Phase of LAMPS and IPDISE/Microgrids.			
Title: Small Tactical Electric Power (STEP) Engineering & Manufacturing Development (EMD) Phase	-	-	1.362

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** 194 / *Engine Driven Gen Ed*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Description: Begin EMD Phase for the STEP program. ***FY 2015 Plans:*** Initiate the EMD Phase for the STEP program.			
Accomplishments/Planned Programs Subtotals	11.195	5.025	5.875

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• 643804.G11: *Logistics and Engineer Equipment - Adv Dev G11*	3.512	2.499	4.013	-	4.013	9.559	5.933	3.748	8.218	Continuing	Continuing
• MA9800: *Generators and Associated Equipment*	60.223	40.129	115.190	-	115.190	216.293	237.171	341.209	354.470	Continuing	Continuing

Remarks

D. Acquisition Strategy

LAMPS (Large Advanced Mobile Power Sources) Engineering & Manufacturing Development (EMD) Phase: A single competitive contract was awarded for the LAMPS EMD Phase. The EMD phase will be a Fixed Price Incentive-Firm Target (FPI-FT) contract. The EMD contract will require the vendor to integrate components and fabricate prototypes, verify prototype performance through contractor testing, deliver production representative generator sets and conduct Instructor and Key Personnel Training (I&KPT) for Government testing. Major data deliverables will include the Technical Data Package (TDP), provisioning data, logistics management information, technical manuals, test reports and cost data reporting. The Government will purchase the TDP from the vendor with the intent of using it in future competitive re-procurements for LAMPS. A Failure Mode, Effects and Criticality Analysis (FMECA), Level of Repair Analysis (LORA), Functional Configuration Audit (FCA) and a Physical Configuration Audit (PCA) will be completed to verify that the TDP accurately describes the qualified production sets. In addition, Improved Power Distribution Illumination Systems Electrical (IPDISE) will prepare the program's performance specification and initiate the EMD phase and Microgrids will design and test the Advanced Medium Mobile Power Sources (AMMPS) microgrid feeder distribution box(es) (Power Distribution Unit). The Small Tactical Electric Power (STEP) program will use a multi-phase acquisition strategy. STEP System Development and Demonstration (SDD) will be separated into two phases; Phase I is System Development and Phase II is System Demonstration. The STEP program will enter the acquisition process at Milestone B, Engineering and Manufacturing Development (EMD).

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	Project (Number/Name) 194 / *Engine Driven Gen Ed*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Large Advanced Mobile Power Sources (LAMPS) (100-200kW)	C/FPIF	L-3 Communications, Westwood Corporation, Tulsa, OK : Various	16.923	11.195		-		-		-		-	Continuing	Continuing	Continuing
Improved Power Distribution Illumination Systems Electrical (IPDISE)/Microgrids	C/FFP	TBD : TBD	0.000	-		3.000	Apr 2014	1.000	Jan 2015	-		1.000	-	4.000	-
Small Tactical Electric Power (STEP)	C/CPFF	TBD : TBD	0.000	-		-		1.362	Aug 2015	-		1.362	-	1.362	-
		Subtotal	16.923	11.195		3.000		2.362		-		2.362	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Large Advanced Mobile Power Sources (LAMPS) (100-200kW)	Various	CECOM LCMC : Aberdeen Proving Ground (APG), MD	3.485	-		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	3.485	-		-		-		-		-	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 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	-		2.025	Mar 2014	3.513	Jan 2015	-		3.513	Continuing	Continuing	Continuing
		Subtotal	0.000	-		2.025		3.513		-		3.513	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	Project (Number/Name) 194 / *Engine Driven Gen Ed*	

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	20.408	11.195		5.025		5.875		-		5.875	-	-	-

Remarks

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

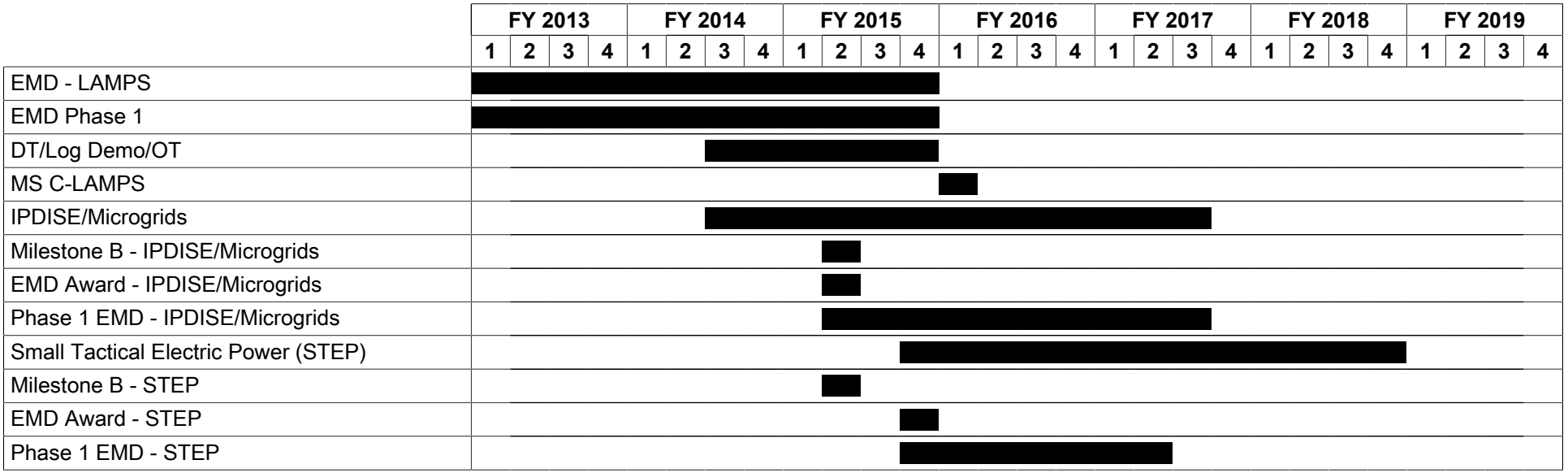

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** 194 / *Engine Driven Gen Ed*

Schedule Details

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

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	Project (Number/Name) EC9 / *Contingency Basing Infrastructure*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EC9: *Contingency Basing Infrastructure*	-	-	-	0.983	-	0.983	2.560	2.367	1.973	1.976	-	9.859
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

FY15 is the first year of funding for this project.

A. Mission Description and Budget Item Justification

This project develops the tools and processes that will optimize recommendations for the materiel used to establish, operate, and maintain contingency bases. Considerations impacting materiel choices include: assigned missions; geopolitical environments; threats; and the logistical and tactical constraints where the bases are located. The project will increase the available knowledge at the base level and provide an analytical foundation for sound investment decision making. The continuous improvement modeling and simulation analysis tools will match the evolution of threats and technologies. Using a system of systems engineering approach, the Contingency Base Infrastructure Product Directorate's focus ensures optimum integration of materiel across the base camp to facilitate the maximizing of war fighter effectiveness. The results will enable the contingency base to be established, operated and managed as a system (system of systems) and enable the equipment acquired for the base to be compatible, efficient while providing the maximum overall support to the war fighter. This approach supports Program(s) of Record (PORs) to maximize improvements in Operation Energy and ensures efficiencies across any Area of Responsibility (AOR).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Contingency Base Infrastructure	-	-	0.983
Description: Funding is provided for the following effort. ***FY 2015 Plans:*** Continue integration of Model-Based Systems Engineering principles to enable evaluating contingency bases as a system (system of systems). This project will include model based systems engineering tool maturation of multiple analytical tools through an Integrated - Preliminary Design Review (I-PDR). An integrated toolset demonstration will be the culmination to support portfolio maturation, integration and analytical evaluation. This supports Army investment decisions across the Contingency Base Infrastructure portfolio.			
Accomplishments/Planned Programs Subtotals	-	-	0.983

C. Other Program Funding Summary ($ in Millions)

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** EC9 / *Contingency Basing Infrastructure*

C. Other Program Funding Summary ($ in Millions)

Remarks

D. Acquisition Strategy

Not applicable for this item.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	Project (Number/Name) EC9 / *Contingency Basing Infrastructure*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	Various	PM Force Projection : Warren, MI	0.000	-		-		0.316	Oct 2014	-		0.316	-	0.316	-
		Subtotal	0.000	-		-		0.316		-		0.316	-	0.316	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Toolset Development	Various	Various : Various	0.000	-		-		0.292	Jan 2015	-		0.292	-	0.292	Continuing
Integrated Analysis and Design	Various	Various : Various	0.000	-		-		0.200	Oct 2014	-		0.200	-	0.200	Continuing
Capabilities Implementation and Materiel Requirements	Various	Various : Various	0.000	-		-		0.175	Oct 2014	-		0.175	-	0.175	Continuing
		Subtotal	0.000	-		-		0.667		-		0.667	-	0.667	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		-		0.983		-		0.983	-	0.983	-

Remarks

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

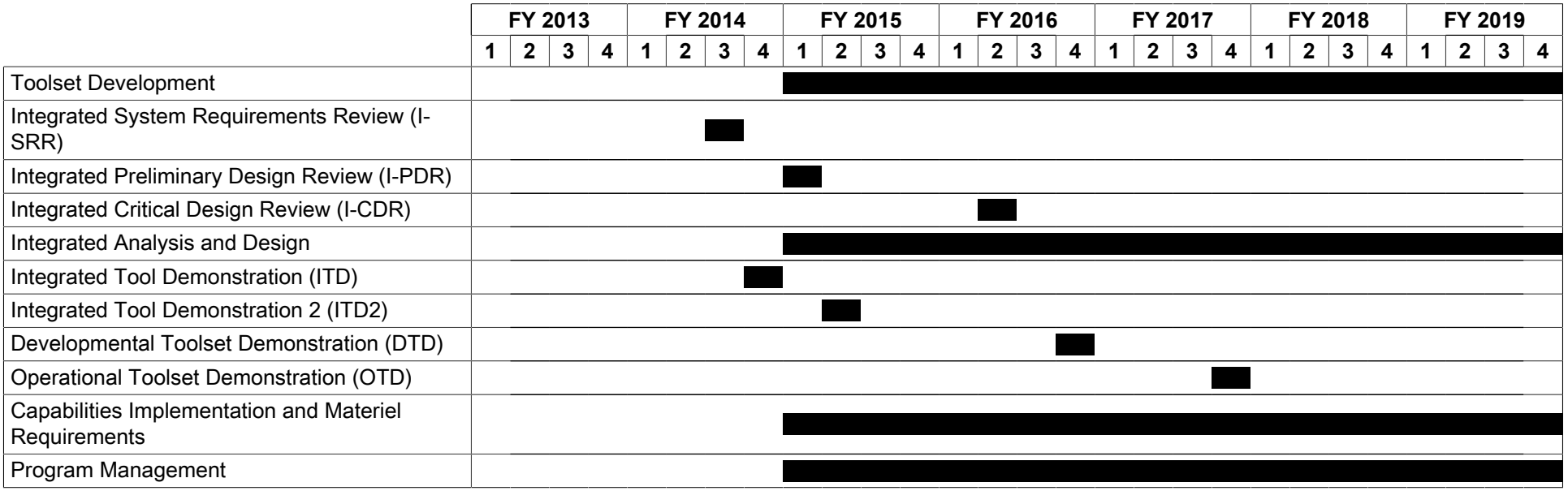

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** EC9 / *Contingency Basing Infrastructure*

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

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	Project (Number/Name) H01 / *Combat Engineer Eq Ed*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
H01: *Combat Engineer Eq Ed*	-	3.929	2.171	1.039	-	1.039	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This project supports the Engineering Manufacturing Development (EMD) of military Construction Equipment used in support of horizontal and vertical engineer construction tasks and to develop a variety of enabling systems that will support and improve mobility for Engineers in the Brigade Combat Teams (BCT) and Combat Support Brigades (CSB) forces. This project also supports the EMD of enabling systems to meet critical capabilities of joint interdependence through Air and Ground Line of Communication and Rapid Tactical Earthmoving repair and construction which increase the operational reach of modular forces. The BCT and CSB systems include: High Mobility Engineer Excavators, Scrapers, Scoop Loaders, Skid Steer Loaders, Dozers, Cranes and Graders. This project will also support the Research into the Deuce Replacement and the Energy Productivity Study.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: CE Armor	0.483	-	-
Articles:	-	-	-
Description: Design armor kits for Combat Engineer Equipment.			
FY 2013 Accomplishments: Qualify alternative sources of supply for opaque & Transparent armor on existing CE equipment. Full Vehicle Armor Protection			
Title: Operator Assist	0.214	0.250	0.239
Articles:	-	-	-
Description: Development of systems to improve safety, situational awareness and operational effectiveness. Technologies such as blade control, brake assist, obstacle detection and vision systems will be investigated and integrated.			
FY 2013 Accomplishments: Development of Robotics Research			
FY 2014 Plans: Development of Robotics Research			
FY 2015 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** H01 / *Combat Engineer Eq Ed*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Development of systems to improve safety, situational awareness and operational effectiveness. Technologies such as blade control, brake assist, obstacle detection and vision systems will be investigated and integrated.			
Title: CE Simulators	1.380	0.300	-
Articles:	-	-	-
Description: Labor, software, and hardware simulator development			
FY 2013 Accomplishments: Labor, software, and hardware simulator development			
FY 2014 Plans: Labor, software, and hardware simulator development			
Title: Forced Entry (Airborne/Air Assault) HMEE, Grader, ERACC Type 4 and Loader Type 1 Study/Development	1.287	-	-
Articles:	-	-	-
Description: Forced Entry (Airborne/Air Assault) HMEE, Grader, ERACC and Loader Type 1 Study/Development			
FY 2013 Accomplishments: Forced Entry (Airborne/Air Assault) HMEE, Grader, ERACC and Loader Type 1 Study/Development			
Title: Market Research	0.040	0.150	-
Articles:	-	-	-
Description: Market Research Survey			
FY 2013 Accomplishments: Conduct market research and documentation preparation for all types of construction equipment.			
FY 2014 Plans: Conduct market research and documentation preparation for all types of construction equipment.			
Title: Operational Efficiency	0.022	-	0.400
Articles:	-	-	-
Description: Improve Operational Efficiency/Reduce Maintenance Time			
FY 2013 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** H01 / *Combat Engineer Eq Ed*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Using Government supplied vehicles (GFE), evaluate new technologies to be developed by private industry to improve the efficiency or reduce maintenance burden. ***FY 2015 Plans:*** Using Government supplied vehicles (GFE), evaluate new technologies to be developed by private industry to improve the efficiency or reduce maintenance burden.			
Title: Operational Energy/Duty Cycle ***Articles:*** ***Description:*** Operational Energy/Duty Cycle Monitoring ***FY 2014 Plans:*** Instrumentation of vehicles in select units to monitor the usage and to establish training and operational usuage of the machine. This data, once analyzed will be used in requirements development.	- -	1.058 -	- -
Title: System Engineering/Program Management ***Articles:*** ***Description:*** Program Management ***FY 2013 Accomplishments:*** Program Management Support of R&D Program for CE ***FY 2014 Plans:*** Program Management Support of R&D Program for CE ***FY 2015 Plans:*** Program Management Support of R&D Program for CE	0.503 -	0.413 -	0.400 -
Accomplishments/Planned Programs Subtotals	3.929	2.171	1.039

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• High Mobility Engineer Excavator I: *High Mobility Engineer Excavator I*	30.002	21.465	-	-	-	2.678	1.786	-	-	-	55.931
• Grader, Mtzd, Hvy: *Grader, Mtzd, Hvy*	2.430	2.000	5.827	-	5.827	5.952	1.786	-	-	-	17.995

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** H01 / *Combat Engineer Eq Ed*	

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• Hydraulic Excavator: *Hydraulic Excavator*	-	17.001	4.938	-	4.938	-	-	-	-	-	21.939
• Plant, Asphalt Mixing: *Plant, Asphalt Mixing*	3.674	-	0.667	-	0.667	0.992	-	-	-	Continuing	Continuing
• Tractor Full Tracked, Med T-9: *Tractor Full Tracked, Med T-9*	25.007	28.828	34.071	-	34.071	27.380	-	-	-	Continuing	Continuing
• All Terrain Cranes: *All Terrain Cranes*	3.498	2.613	4.938	-	4.938	23.093	70.350	14.534	22.588	Continuing	Continuing
• Scraper, Earthmoving: *Scraper, Earthmoving*	7.366	36.078	14.926	-	14.926	21.341	19.806	31.204	-	Continuing	Continuing
• EMMs: *EMMs*	25.359	-	-	-	-	-	-	-	-	-	25.359
• ERACC 4: *ERACC IV*	-	5.000	2.741	-	2.741	-	-	-	-	Continuing	Continuing
• ERACC 1: *ERACC I SSA*	-	-	2.378	-	2.378	2.551	-	-	-	-	4.929
• ERACC 2: *ERACC 2 EE*	-	-	8.365	-	8.365	-	-	-	-	-	8.365
• ERACC 3: *ERACC III METL*	-	-	1.440	-	1.440	12.523	11.014	-	-	-	24.977
• Const Equip ESP: *SLEP*	11.336	16.088	15.933	-	15.933	19.801	31.971	31.704	41.906	Continuing	Continuing

Remarks

D. Acquisition Strategy

Conduct research, development, and investigations on future Construction Equipment (CE) and identify the path forward for programs to be transitioned for PEO program management. Identify technical advancements that can improve reliability, survivability, transportability, availability, maintainability and reduce the logistical footprints for future CE equipment.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	Project (Number/Name) H01 / *Combat Engineer Eq Ed*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 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 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 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 Operational Assist for Combat Engineer	Various	TBD : TBD	1.719	0.214	Nov 2013	0.250	Mar 2014	0.239	Apr 2015	-		0.239	-	2.422	Continuing
Design armor kits for Combat Engineer	Various	TARDEC : Warren, MI	5.512	0.483	Sep 2013	-		-		-		-	-	5.995	Continuing
Development of Simulator	Various	PEO Stricom : PEO, Stricom, Olrando, FL	7.303	1.380	Apr 2014	0.300	Apr 2014	-		-		-	-	8.983	Continuing
Hazard Clearance at Speed	TBD	TARDEC : Warren, Michigan	0.001	-		-		-		-		-	-	0.001	-
Forced Entry: HMEE Type II, Grader, ERACC Type III and Loader Type I Study/ Development	Various	TARDEC : Warren, MI	8.239	1.287	Sep 2013	-		-		-		-	-	9.526	Continuing
Market Research	TBD	TARDEC : Warren, Michigan	0.000	0.040	Nov 2013	0.149	Mar 2014	-		-		-	-	0.189	-
		Subtotal	24.449	3.404		0.699		0.239		-		0.239	-	28.791	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** H01 / *Combat Engineer Eq Ed*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering/ Program Mgmt	MIPR	TARDEC/TACOM : Warren, Michigan	0.000	0.503	Jan 2013	0.413	Dec 2013	0.400	Jan 2015	-		0.400	-	1.316	-
		Subtotal	0.000	0.503		0.413		0.400		-		0.400	-	1.316	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Efficiency	MIPR	TARDEC, Warren, Michigan : TARDEC, Warren, Michigan	0.000	0.022	Aug 2013	-		0.400	Jan 2015	-		0.400	-	0.422	-
Operational Energy/Duty Cycle Monitoring	TBD	TARDEC : Warren, Michigan	0.000	-		1.059	Jun 2014	-		-		-	-	1.059	-
Non Nuclear Soil Density Set Testing	TBD	TARDEC : Warren, MI	0.050	-		-		-		-		-	-	0.050	-
		Subtotal	0.050	0.022		1.059		0.400		-		0.400	-	1.531	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	24.666	3.929		2.171		1.039		-		1.039	-	31.805	-

Remarks

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

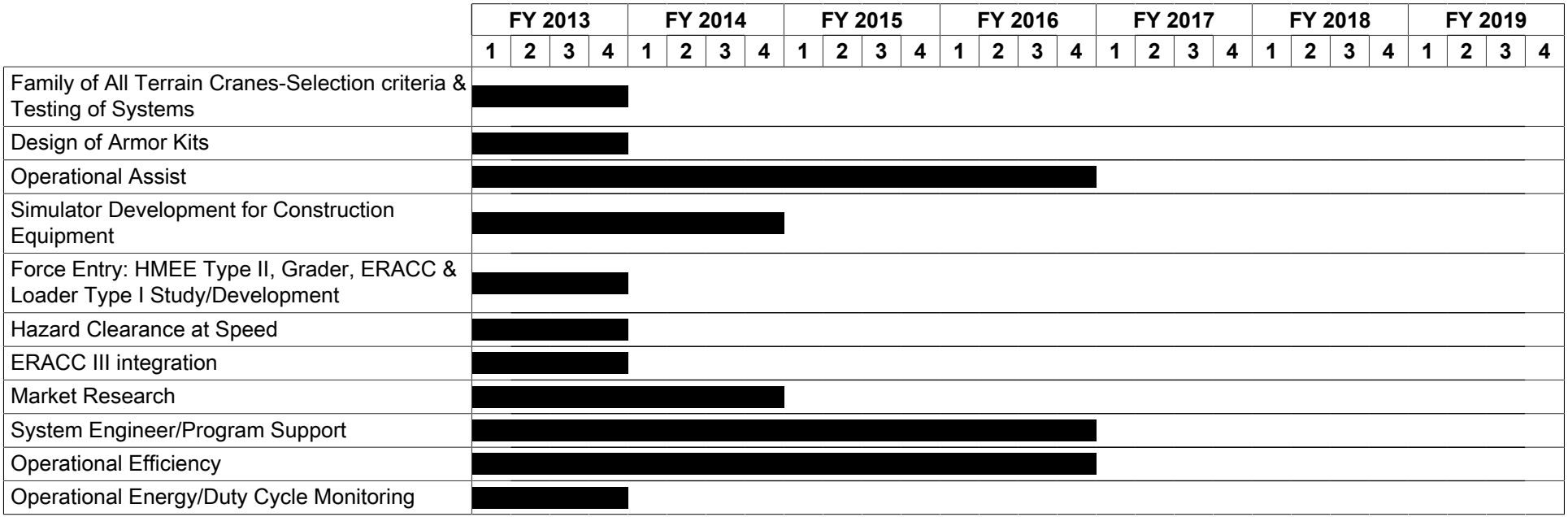

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** H01 / *Combat Engineer Eq Ed*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Family of All Terrain Cranes-Selection criteria & Testing of Systems	1	2013	4	2013
Design of Armor Kits	1	2012	4	2013
Operational Assist	1	2012	4	2016
Simulator Development for Construction Equipment	1	2012	4	2014
Force Entry: HMEE Type II, Grader, ERACC & Loader Type I Study/Development	1	2012	4	2013
Hazard Clearance at Speed	1	2013	4	2013
ERACC III integration	1	2013	4	2013
Market Research	1	2013	4	2014
System Engineer/Program Support	1	2013	4	2016
Operational Efficiency	1	2013	4	2016
Operational Energy/Duty Cycle Monitoring	1	2013	4	2013

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

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
H02: *Tactical Bridging - Engineering Development*	-	10.116	24.361	6.992	-	6.992	4.423	3.758	2.896	7.392	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This project supports the engineering and manufacturing development and transition to procurement of Future Force Tactical Bridge Systems and support equipment. Funding supports the Engineering Manufacturing Development phases of the Joint Assault Bridge (JAB) and Line of Communications Bridge (LOCB). Other efforts supported include High Performance Material Transition to assess composite materials for lighter but stronger bridges, the Bridge Supplemental Set to enhance support of bridging operations with access/egress matting, assorted power tools, bridge repair equipment and float bridge anchorage and protection devices. This project also supports development of a Structural Bridge Health Monitoring system which will provide the capability to passively gather condition based maintenance data remotely and alert the user of unsafe (overload/critical damage) conditions.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: JAB Development and Testing	7.625	11.300	0.900
Articles:	-	-	-
Description: JAB Development and Testing			
FY 2013 Accomplishments: JAB Development/Testing			
FY 2014 Plans: JAB Testing.			
FY 2015 Plans: JAB Testing.			
Title: Development, integration, and testing of REBS Auto Launch-Retrieve with Common Bridge Transporter (CBT)	1.400	2.000	-
Articles:	-	-	-
Description: Development, integration, and testing of REBS Auto Launch-Retrieve with Common Bridge Transporter (CBT)			
FY 2013 Accomplishments:			

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

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Completion of the development, integration and testing of the Rapidly Emplaced Bridge System Auto Launch-Retrieve capability with the Common Bridge Transporter (CBT). ***FY 2014 Plans:*** Completion of the development, integration and testing of the Rapidly Emplaced Bridge System Auto Launch-Retrieve capability with the Common Bridge Transporter (CBT).			
Title: LOCB Development and Testing ***Articles:*** ***Description:*** LOCB Development ***FY 2013 Accomplishments:*** LOCB Development ***FY 2014 Plans:*** LOCB Development and Testing ***FY 2015 Plans:*** LOCB Testing	1.091 -	9.735 -	5.892 -
Title: Structural Health Monitoring ***Articles:*** ***Description:*** Develop a passive method to collect mobile military bridge system usage and health data for remote monitoring. ***FY 2014 Plans:*** Structural Health Monitoring ***FY 2015 Plans:*** Structural Health Monitoring	- -	0.750 -	0.100 -
Title: Bridge Supplemental Set ***Articles:*** ***Description:*** Multi-functional consolidated engineering set consisting of a multi-functional anchorage system targeted for use with multiple tactical bridging systems to include the Line of Communication Bridge (LOCB), Improved Ribbon Bridge (IRB), and the Dry Support Bridge (DSB). ***FY 2014 Plans:***	- -	0.576 -	0.050 -

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

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

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• OPA3, MX0100: *OPA3, MX0100*	2.957	14.188	-	-	-	11.903	15.875	21.757	18.481	Continuing	Continuing
• WTCV, GZ3001: *WTCV, GZ3001*	18.458	2.002	49.462	-	49.462	43.931	89.291	119.501	99.817	Continuing	Continuing

Remarks

D. Acquisition Strategy

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

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	Project (Number/Name) H02 / *Tactical Bridging - Engineering Development*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Support	MIPR	Various : Various	0.000	-		2.987	Mar 2014	1.527	Nov 2014	-		1.527	-	4.514	-
		Subtotal	0.000	-		2.987		1.527		-		1.527	-	4.514	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JAB Development	C/FFP	DRS/GDLS : Saint Louis, MO/Sterling Hts, MI	48.128	2.524	Aug 2013	-		-		-		-	Continuing	Continuing	Continuing
LOCB Development	MIPR	Rock Island Arsenal (RIA)/Anniston Army Depot (ANAD) : Rock Island, IL/Anniston, AL	6.418	4.592	Jul 2013	6.485	Mar 2014	-		-		-	Continuing	Continuing	Continuing
Bridge Supplemental Set	MIPR	TBD : TBD	0.000	-		0.326	Jun 2014	0.050	May 2015	-		0.050	-	0.376	-
Structural Health Monitoring	MIPR	TARDEC : Warren, MI	0.000	-		0.500	Jun 2014	0.100	May 2015	-		0.100	-	0.600	-
REBS Testing (Auto Launch-Retrieve	SS/FFP	General Dynamics European Land Systems : Kaiserslautern, Germany	0.000	-		1.000	Aug 2014	-		-		-	-	1.000	-
High Performance Material Transition	MIPR	TARDEC : Warren, MI	0.000	-		-		0.050	May 2015	-		0.050	-	0.050	-
		Subtotal	54.546	7.116		8.311		0.200		-		0.200	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government In-House	MIPR	TACOM : Warren, MI	5.100	3.000	Apr 2013	-		-		-		-	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	Project (Number/Name) H02 / *Tactical Bridging - Engineering Development*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	5.100	3.000		-		-		-		-	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JAB Testing	MIPR	Aberdeen Proving Grounds (APG) : APG, Maryland	2.541	-		10.063	Jun 2014	0.900	May 2015	-		0.900	Continuing	Continuing	Continuing
REBS Testing (Auto Launch-Retrieve)	TBD	Aberdeen Proving Grounds (APG) : APG, MD	1.100	-		1.000	Feb 2014	-		-		-	-	2.100	-
LOCB Testing	MIPR	ATEC : Aberdeen, MD	4.800	-		2.000	May 2014	4.365	Jan 2015	-		4.365	-	11.165	-
		Subtotal	8.441	-		13.063		5.265		-		5.265	-	-	-

	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	68.087	10.116		24.361		6.992		-		6.992	-	-	-

Remarks

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

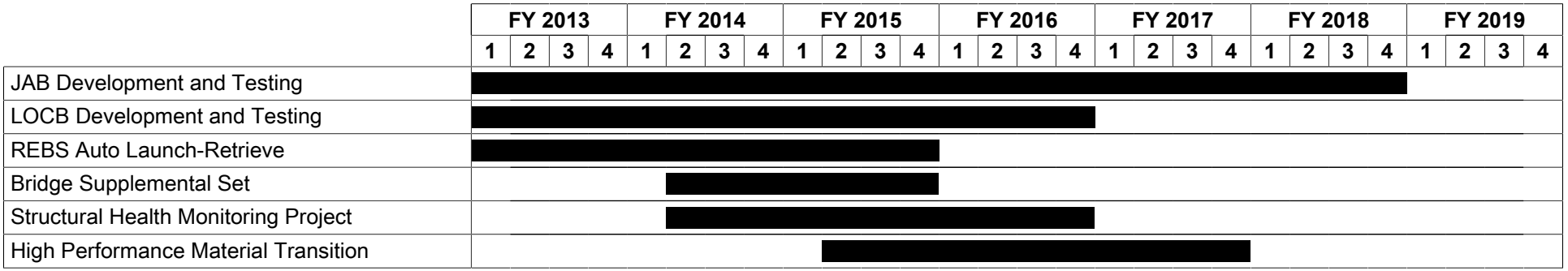

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** H02 / *Tactical Bridging - Engineering Development*

Schedule Details

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

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

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
H14: *Materials Handling Equipment - Ed*	-	1.265	0.298	0.283	-	0.283	0.972	0.951	0.607	0.627	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This project supports engineering, manufacturing, and development of Material Handling Equipment (MHE) including Rough Terrain Forklifts, Container Handling Equipment, and other cargo handling related items to enable Combat Service Support units to rapidly and efficiently move and deliver critical supplies worldwide to the Soldier. Efforts performed under this project include conducting market research, supporting operational requirements identification and validation, conducting trade studies, generating life cycle cost estimates, performing system engineering, developing performance specifications, conducting pre-production test and evaluation, and preparing program management and acquisition documents.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Material Handling Equipment (MHE) System Improvement	0.505	0.155	0.207
Articles:	-	-	-
Description: System Improvements for Light Capability Rough Terrain Forklift (LCRTF) for Tactical Operations			
FY 2013 Accomplishments: Design and test air drop configuration package for the LCRTF.			
FY 2014 Plans: Integrate and test add-on hardware for reliable cold starting.			
FY 2015 Plans: Investigate lightweight armor solution for LCRTF			
Title: Material Handling Equipment (MHE) Armor Kits	0.460	0.143	-
Articles:	-	-	-
Description: Lightweight Armor for All Terrain Lifter Army System (ATLAS) II			
FY 2013 Accomplishments: Investigate alternative armor solutions to eliminate known performance degradation when operated with current add on armor.			
FY 2014 Plans:			

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

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Conduct evaluation of armor solution at test-site for both performance and survivability			
Title: Sling Load Attachment for Rough Terrain Container Handler (RTCH)	0.300	-	-
Articles:	-	-	-
Description: Sling Load Attachment for Rough Terrain Container Handler (RTCH) ***FY 2013 Accomplishments:*** Conduct demonstrations and evaluations of proposed Sling Load Attachment to assess operational suitability and value added capability.			
Title: Investigate high-speed towing for LCRTF	-	-	0.076
Description: Investigate high-speed towing for LCRTF ***FY 2015 Plans:*** LCRTF high-speed towing development			
Accomplishments/Planned Programs Subtotals	1.265	0.298	0.283

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• OPA M41200: *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*	5.887	5.760	14.327	-	14.327	14.390	14.821	15.256	15.550	Continuing	Continuing

Remarks

D. Acquisition Strategy

Develop specifications for LCRTF improvements, award contracts to produce test items for production verification testing. Testing LCRTF improvements to be performed using Army test facilities. Design lightweight armor solution for ATLAS using U.S. Army TARDEC's Center for Ground Vehicle Development and Integration. Test armored ATLAS at Aberdeen Proving Ground, MD. Procure RTCH Sling Load Attachment, obtain safety confirmation and conduct user demonstrations to valid requirements.

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

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	Project (Number/Name) H14 / *Materials Handling Equipment - Ed*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering/ Program Management	MIPR	TARDEC : Warren, MI	0.000	-		0.037	Dec 2013	-		-		-	-	0.037	-
SBIR + STTR	TBD	TBD : TBD	0.032	-		-		-		-		-	-	0.032	-
		Subtotal	0.032	-		0.037		-		-		-	-	0.069	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 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	0.000	0.200	Apr 2013	0.155	Jun 2014	0.207	Jun 2015	-		0.207	-	0.562	-
Lightweight Armor for ATLAS II	MIPR	TARDEC : Warren, MI	0.000	0.350	Dec 2012	-		-		-		-	-	0.350	-
Sling Load Attachment for RTCH	C/FFP	Kalmar RT Center : Cibolo, TX	0.000	0.100	Dec 2012	-		-		-		-	-	0.100	-
		Subtotal	2.555	0.650		0.155		0.207		-		0.207	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Improvements for LCRTF for Tactical Operations	MIPR	TARDEC : Warren, MI	0.000	0.055	Apr 2013	-		-		-		-	-	0.055	-
Lightweight Armor for ATLAS II	MIPR	TARDEC : Warren, MI	0.000	0.110	Dec 2012	-		-		-		-	-	0.110	-
		Subtotal	0.000	0.165		-		-		-		-	-	0.165	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	Project (Number/Name) H14 / *Materials Handling Equipment - Ed*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Lightweight Armor for ATLAS II	TBD	TBD : TBD	0.000	-		0.106	Jan 2014	-		-		-	-	0.106	-
System Improvements for LCRTF for Tactical Operations	TBD	TBD : TBD	0.000	0.250	Apr 2013	-		-		-		-	-	0.250	-
Sling Load Attachment for RTCH	MIPR	Various : Various	0.000	0.200	Dec 2012	-		-		-		-	-	0.200	-
Investigate high speed towing for LCRTF	TBD	TBD : TBD	0.000	-		-		0.076	Mar 2015	-		0.076	-	0.076	-
		Subtotal	0.000	0.450		0.106		0.076		-		0.076	-	0.632	-

	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	2.587	1.265		0.298		0.283		-		0.283	-	-	-

Remarks

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

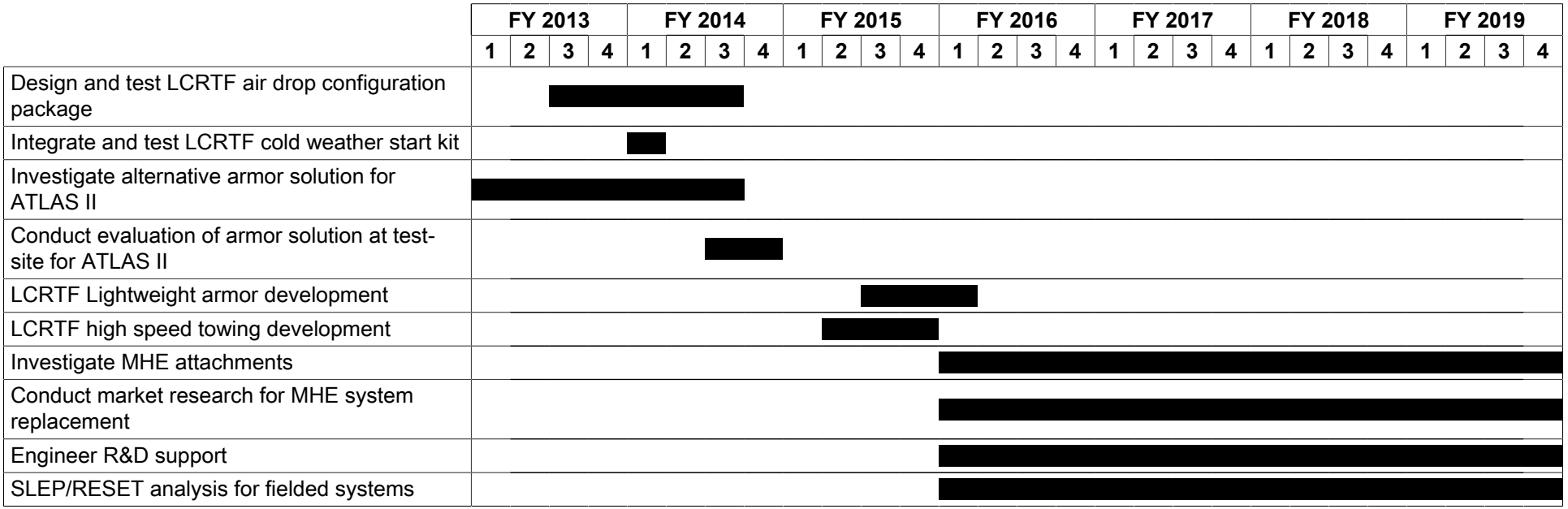

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** H14 / *Materials Handling Equipment - Ed*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Design and test LCRTF air drop configuration package	3	2013	3	2014
Integrate and test LCRTF cold weather start kit	1	2014	1	2014
Investigate alternative armor solution for ATLAS II	1	2013	3	2014
Conduct evaluation of armor solution at test-site for ATLAS II	3	2014	4	2014
LCRTF Lightweight armor development	3	2015	1	2016
LCRTF high speed towing development	2	2015	4	2015
Investigate MHE attachments	1	2016	4	2019
Conduct market research for MHE system replacement	1	2016	4	2019
Engineer R&D support	1	2016	4	2019
SLEP/RESET analysis for fielded systems	1	2016	4	2019

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	Project (Number/Name) L39 / *Field Sustainment Support Ed*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
L39: *Field Sustainment Support Ed*	-	2.218	1.788	1.688	-	1.688	2.550	2.237	1.941	2.325	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This project supports the Engineering and Manufacturing Development (EMD) of critical capabilities for cargo aerial delivery for identified theater distribution and services capability gaps, improve unit sustainability, and increase combat effectiveness. Project supports the demonstration of engineering development models and Type Classification of cargo parachutes, airdrop containers and other aerial delivery equipment to improve safety, effectiveness, and efficiency of airborne operations. This project develops critical enablers that support the Quartermaster (QM) Force Transformation Strategy and the Army's Modular Force Capabilities by maintaining readiness through fielding and integrating new equipment. This project also ensures Army Expeditionary Forces are capable of rapid deployment by providing aerial delivery initiatives. These reduce sustainment requirements, related Combat Support/Combat Service Support (CS/CSS), lift demands, the combat zone footprint, and costs for logistical support.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Advanced Low Velocity Airdrop System (ALVADS) - Light and Heavy	1.141	1.516	1.688
Articles:	-	-	-
Description: ALVADS - Light and Heavy are capable of airdrop operations at an altitude down to 500-ft Above Ground Level (AGL) with increased aircraft survivability, and improved accuracy. Light-Gross rigged weight of 2,520-22,000 lbs and Heavy-Gross rigged weight of 22,001-42,000 lbs. ***FY 2013 Accomplishments:*** Conduct Design Validation (DV) for ALVADS-L. ***FY 2014 Plans:*** Complete DV. ***FY 2015 Plans:*** Down select to technically mature ALVADS assets for DT. Initiate DT.			
Title: Advanced Cargo Parachute Release System (ACPRS)	0.166	-	-
Articles:	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** L39 / *Field Sustainment Support Ed*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Description: The ACPRS will replace the existing M-1 and M-2 cargo parachute release and is intended to decrease the number of inoperable payloads due to rollovers, while also providing a capability to airdrop loads at 500 ft Above Ground Level (AGL). ***FY 2013 Accomplishments:*** Obtain Milestone C on ACPRS and initiate pre-planned product improvement effort.			
Title: Joint Precision Aerial Delivery System (JPADS)	0.678	-	-
Articles:	-	-	-
Description: JPADS is a precision guided airdrop system that autonomously navigates along a predetermined glide and flight path to accurately deliver supplies and equipment. It's two primary components, a decelerator and an Autonomous Guidance Unit (AGU) interface to the US Air Force JPADS mission planner and has a gross rigged weight of 2,400 - 10,000 pounds. ***FY 2013 Accomplishments:*** Conduct Preplanned Product Improvement (P3I) testing. Extraction at high altitude longer platform testing and improved system accuracy testing.			
Title: Low Cost Aerial Delivery System (LCADS)	0.233	0.272	-
Articles:	-	-	-
Description: LCADS is a modular suite of low cost, expendable parachute/container air items that can be used in lieu of current low and high velocity systems. System includes a low-cost container, high-velocity parachute (70-90 Feet Per Second (FPS)) and low velocity parachute (less than 28.5 FPS). System is compatible with US Air Force Aircraft (USAF A/C) and aerial port handling equipment. LCADS is a proven means to execute critical resupply missions without having to place soldiers and ground vehicle convoys on the road. ***FY 2013 Accomplishments:*** Conduct Preplanned Product Improvement (P3I) testing. Single material Low Cost-High Velocity (LC-HV) parachute and Cargo Delivery System (CDS) ration testing ***FY 2014 Plans:*** Complete Preplanned Product Improvement (P3I) testing. Low Cost Low Altitude/High Velocity (LCLA/HV) flight testing.			
Accomplishments/Planned Programs Subtotals	2.218	1.788	1.688

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** L39 / *Field Sustainment Support Ed*	

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• MA7806: *Precision Airdrop, OPA 3, MA7806*	6.577	9.500	2.198	-	2.198	2.208	1.947	2.210	2.217	Continuing	Continuing
• 643804 K39: *Field Sustainment Support AD, 643804 K39*	2.649	2.160	0.534	-	0.534	0.558	1.155	-	-	Continuing	Continuing

Remarks

D. Acquisition Strategy

Accelerate product development and testing to transition into production.

E. Performance Metrics

N/A

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

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management Support	Various	PM FSS, Natick : Natick, MA	2.193	0.617	Apr 2013	0.757	Mar 2014	0.183	Nov 2014	-		0.183	-	3.750	Continuing
SBIR+STTR	TBD	Various : Various	0.129	-		-		-		-		-	-	0.129	-
		Subtotal	2.322	0.617		0.757		0.183		-		0.183	-	3.879	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ACPRS	Various	PM FSS, Natick : Various	3.867	0.076	Jan 2013	-		-		-		-	-	3.943	-
ALVADS-L&H	Various	Various : Various	14.003	0.213	Mar 2014	0.416	Jul 2014	0.705	Dec 2014	-		0.705	-	15.337	Continuing
JPADS P3I	Various	Various : Various	5.770	0.100	Jan 2013	-		-		-		-	-	5.870	Continuing
LCADS P3I efforts	Various	Various : Various	0.950	0.016	Jan 2013	-		-		-		-	-	0.966	Continuing
		Subtotal	24.590	0.405		0.416		0.705		-		0.705	-	26.116	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
LCADS	Various	Yuma Proving Ground (YPG), AZ, AEC : AZ	9.750	0.147	Apr 2013	0.215	Mar 2014	-		-		-	-	10.112	Continuing
JPADS P3I	Various	Yuma Proving Ground, AZ : Yuma, AZ	0.500	0.451	Apr 2013	-		-		-		-	-	0.951	-
JPADS 10K OT	Various	GSA : GSA	0.936	-		-		-		-		-	-	0.936	Continuing
ACPRS	Various	Yuma Proving Ground, AZ : Yuma, AZ	0.005	-		-		-		-		-	-	0.005	-

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

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ALVADS-L&H	Various	YPG, AZ/ OTC, NC : YPG, AZ/ OTC, NC	3.538	0.598	Mar 2014	0.400	Jul 2014	0.800	Dec 2014	-		0.800	-	5.336	Continuing
		Subtotal	14.729	1.196		0.615		0.800		-		0.800	-	17.340	-

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

Remarks

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

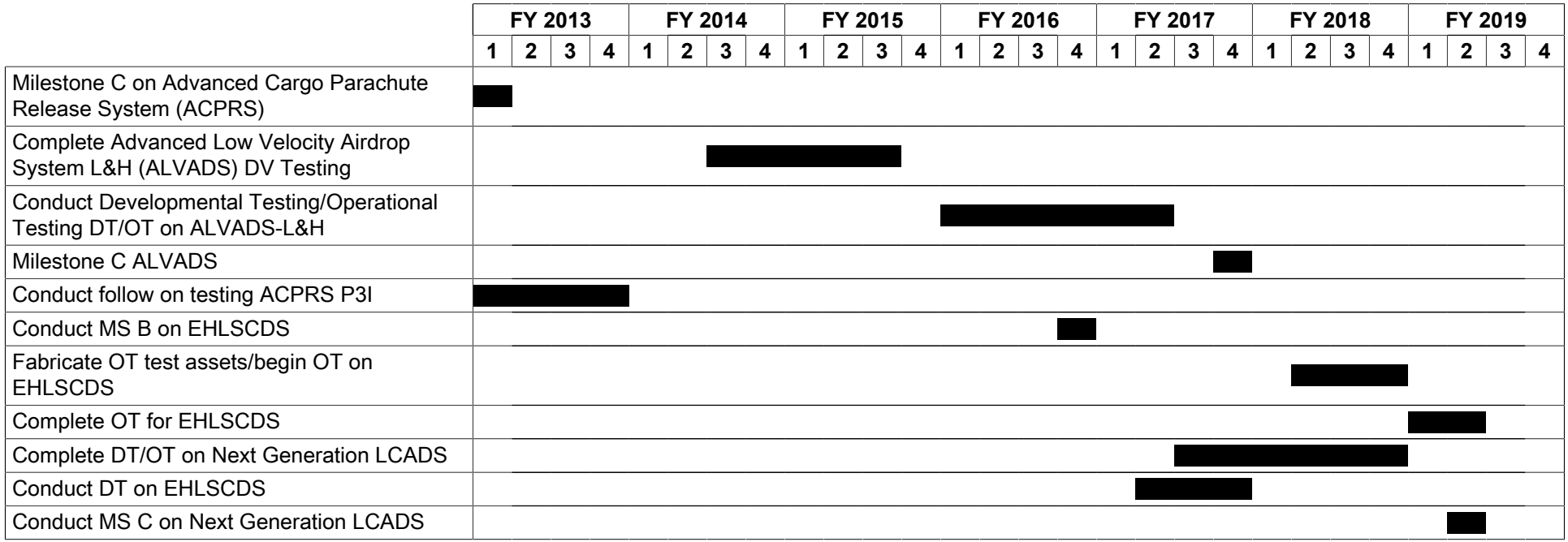

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** L39 / *Field Sustainment Support Ed*

Schedule Details

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

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*				Project (Number/Name) L41 / *Water And Petroleum Distribution - Ed*			
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
L41: *Water And Petroleum Distribution - Ed*	-	3.418	2.648	3.195	-	3.195	4.013	4.733	4.632	4.622	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

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

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Fuel System Supply Point (FSSP) Improvements.	0.608	-	-
Articles:	-	-	-
Description: Funding is provided for the following effort ***FY 2013 Accomplishments:*** Market Investigation for Family of Meters and On Board Truck Capability. Address the Army's capability gap for automated gauging to capture fuel quantities in collapsible tanks in the FSSP. This includes the development of a data device that will transmit and store the data internally and externally to other command networks and systems.			
Title: Contingency Basing Infrastructure (CBI)	0.284	-	-
Articles:	-	-	-
Description: Funding Provided for the following effort ***FY 2013 Accomplishments:*** This funding supports the CBI Product Management office to fund Defense Technical Information Center (DTIC) contract.			
Title: 3K Tactical Water Purification System (TWPS).	-	1.138	-

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

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Articles:	-	-	-
Description: Funding is provided for the following effort ***FY 2014 Plans:*** Design, fabricate and test 3K TWPS International Standard Organization (ISO) shelter. Develop a design for system strainer and identify a possible backup high pressure pump.			
Title: Integration of component level improvements at the system level for the Fuel System Supply Point (FSSP).	0.771	0.500	-
Articles:	-	-	-
Description: Funding is provided for the following effort ***FY 2013 Accomplishments:*** FSSP has two different pumps, the 350 Gallon Per Minute (GPM) and the 600 GPM. These pumps will be replaced with one common pump to provide commonality across the fleet. Build the common pump prototypes for testing. In line fuel monitoring testing. ***FY 2014 Plans:*** Finalize the technical manuals and technical data package (drawing package). The technical data package will allow the Army to competitively procure the common pump in the future. Complete testing.			
Title: Expeditionary Water Packaging System (EWPS).	0.955	0.510	0.311
Articles:	-	-	-
Description: Funding is provided for the following effort ***FY 2013 Accomplishments:*** Evaluate commercial off-the-shelf water packaging systems to inform requirement process and initiate development of a purchase description. ***FY 2014 Plans:*** Prepare Material Development Decision (MDD) and initiate preparation of Milestone C program documentation. Evaluate a commercial automated packaging system from Conteno Corp, finalize Purchase Description (PD) and prepare Request for Proposal (RFP). ***FY 2015 Plans:***			

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

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Finalize and staff Milestone C program documents; Release Request for Proposal (RFP) and hold a Source Selection Evaluation Board (SSEB) to award EWPS production contract.			
Title: Modular Tactical Retail Refueling System (MTRRS) ***Articles:*** ***Description:*** Funding is provided for the following effort. ***FY 2013 Accomplishments:*** Market investigation for MTRRS solution. Develop Computer Automated Drawing (CAD) models for Finite Element Analysis of stress. ***FY 2014 Plans:*** Prepare documentation for Milestone C. Develop Computer-Aided Design models for Finite Element Analysis of stress. Prepare Systems Engineering Plan. Secure MDD decision. ***FY 2015 Plans:*** Initiate test, technical manuals and technical data package (drawing package). The technical data package will allow the Army to competitively procure the MTRRS in the future.	0.800 -	0.500 -	1.000 -
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.	-	-	1.884
Accomplishments/Planned Programs Subtotals	3.418	2.648	3.195

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• 0603804/K41: *RDTE, Logistics and Engineer Equipment - Advanced Development*	2.413	2.262	3.545	-	3.545	3.935	3.757	4.465	4.847	Continuing	Continuing
• MA6000: *OPA 3, Distribution Systems, Petroleum & Water*	36.218	42.288	40.692	-	40.692	38.518	38.875	28.001	26.631	Continuing	Continuing

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

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost

Remarks

D. Acquisition Strategy

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

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	Project (Number/Name) L41 / *Water And Petroleum Distribution - Ed*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 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 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Water Systems Capability Improvements	Various	TARDEC : Warren, MI	0.184	-		-		-		-		-	-	0.184	Continuing
FSSP Improvements	Various	TARDEC : Warren, MI	2.211	1.000	Mar 2013	-		-		-		-	-	3.211	Continuing
Water Systems Capability Improvements	Various	TBD : TBD	0.154	-		-		-		-		-	-	0.154	Continuing
Expeditionary Water Packaging System (EWPS)	Various	TARDEC : Warren, MI	0.550	0.300	Jun 2013	0.110	Feb 2014	0.311	Dec 2014	-		0.311	-	1.271	Continuing
3K Tactical Water Purification System (TWPS)	Various	NFESC : Pt. Hueneme, CA	0.000	-		0.200	Feb 2014	-		-		-	-	0.200	Continuing
Early Entry fluid Distribution System (E2FDS)	TBD	TBD : TBD	0.000	-		-		0.984	Jan 2015	-		0.984	-	0.984	-
Modular Tactical Retail Refueling System (MTRRS)	MIPR	TARDEC : Warren, MI	0.237	0.800	Feb 2013	0.500	Mar 2014	0.200	May 2015	-		0.200	-	1.737	-
3K Tactical Water Purification System (TWPS)	MIPR	TARDEC : Warren, MI	0.000	-		0.638	Mar 2014	-		-		-	-	0.638	-
		Subtotal	3.336	2.100		1.448		1.495		-		1.495	-	8.379	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	Project (Number/Name) L41 / *Water And Petroleum Distribution - Ed*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Fuel System Supply Point (FSSP)	Various	TARDEC : Warren, MI	0.122	0.379	Mar 2013	0.500	Feb 2014	-		-		-	-	1.001	Continuing
Early Entry Fluid Distribution System (E2FDS)	TBD	TBD : TBD	0.000	-		-		0.900	Jan 2014	-		0.900	-	0.900	-
Expeditionary Water Packaging System (EWPS)	Various	TARDEC : Warren, MI	0.000	0.100	Jun 2013	-		-		-		-	-	0.100	Continuing
Contingency Based Infrastructure (CBI)	SS/FFP	PEO, CS&CSS, PM, CBI : Warren, MI	0.000	0.284	Mar 2013	-		-		-		-	-	0.284	-
		Subtotal	0.122	0.763		0.500		0.900		-		0.900	-	2.285	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Fuel System Supply Point (FSSP)	MIPR	Yuma : Yuma, AZ	0.650	-		-		-		-		-	-	0.650	Continuing
Expeditionary Water Packaging system (EWPS)	Various	TARDEC : Warren, MI	0.000	0.255	Dec 2012	0.300	Mar 2014	-		-		-	-	0.555	Continuing
Expeditionary Water Packaging System (EWPS)	Various	NFESC : Port Hueneme, CA	0.000	0.300	Feb 2013	0.100	Dec 2013	-		-		-	-	0.400	-
3K Tactical Water Purification System (TWPS)	MIPR	TARDEC : Warren, MI	0.000	-		0.300	Feb 2014	-		-		-	-	0.300	-
Modular Tactical Retail Refueling System (MTRRS)	Various	Yuma : Yuma Proving Ground, AZ	0.000	-		-		0.800	Jan 2015	-		0.800	-	0.800	Continuing
		Subtotal	0.650	0.555		0.700		0.800		-		0.800	-	2.705	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	Project (Number/Name) L41 / *Water And Petroleum Distribution - Ed*	

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	4.170	3.418		2.648		3.195		-		3.195	-	13.431	-

Remarks

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

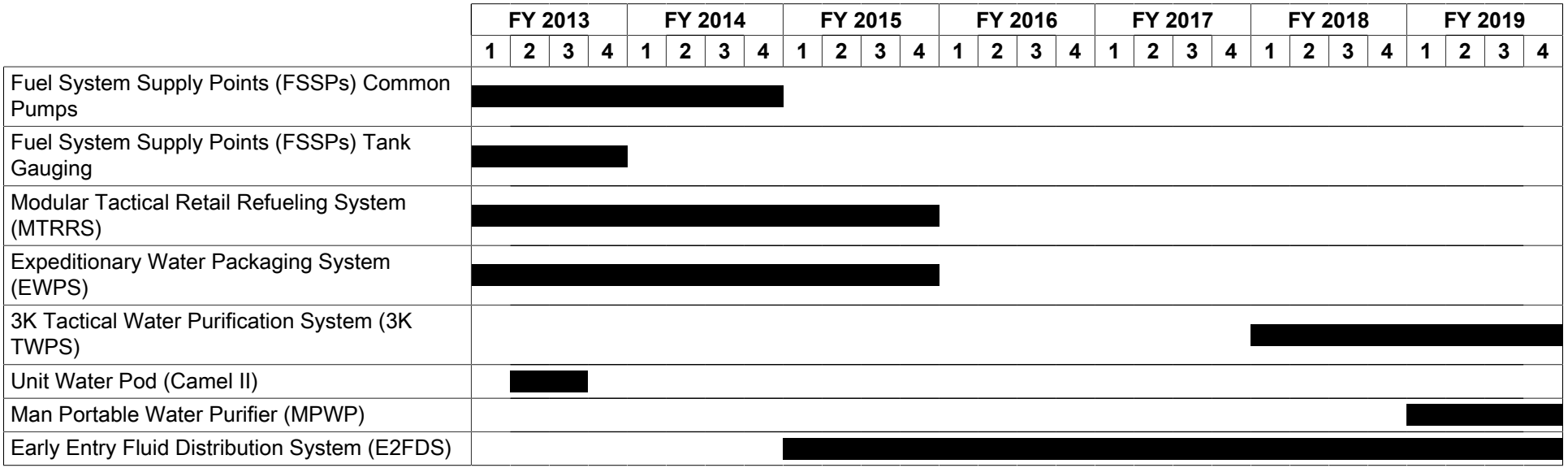

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** L41 / *Water And Petroleum Distribution - Ed*

Schedule Details

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

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

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
L43: *ENGINEER SUPPORT EQUIPMENT - ED*	-	1.855	-	0.575	-	0.575	1.268	1.282	1.282	1.798	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Not applicable for this item.

A. Mission Description and Budget Item Justification

This project supports development, demonstration, testing and evaluation within the Combat Engineer and Construction Support Equipment arena. These items include critical life support equipment such as diving, fire fighting, fire suppression, urban operations, breathable air compressors, and emergency and recovery sets. The Combat Engineer and Construction equipment consists of the Surveying, Firefighting Individual Requirements Equipment Support (FIRES), Concrete and Masonry, Electricians, Plumbers, Pipefitters, Field Lighting Sets, Diving Equipment, Surface Swimmer Support Sets, Surface Supplied Diving Set, procurement of new Technical/ Special Tools, Pioneer Support Set, and the Pioneer Land Clearing and Building Erection Set. Funding will support the procurement of market samples and testing for Soldier Portable SKO, and critical life support equipment such as the Deep Sea Set, Underwater Construction Set, Closed Circuit Scuba Set, the Family of High Pressure Breathable Air Compressors (FOHPBAC), Vertical Skills Engineer Construction Kit (VSECK), Fire Protection Equipment (FPE) and Family of Boats and Motors (FOBAM). All of these programs are in the Engineering and Manufacturing Development Phase.

BUDGET ITEM JUSTIFICATION: These systems provide state-of-the-art deployable, critical life support and combat engineer and construction equipment supporting the joint warfighter. This program will minimize transportation requirements and reduce the logistical footprint by eliminating obsolete equipment and reducing the number of programs. Funding shall allow for development of dual use systems that support wartime use by soldiers to include Special Forces and peacetime operations that include national disaster relief and homeland security operations. Much of this equipment has an inherent short Economic Useful Life (EUL). Investments used to revise, update and obtain equipment within this portfolio has resulted in reductions in footprint, and increases in safety, effectiveness, and readiness.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Family of Boats and Motors (FOBAM)	0.605	-	0.525
Articles:	-	-	-
Description: Development of various Assault Boats and Outboard Motors			
FY 2013 Accomplishments: Testing of 7-man and 15-man boats and testing of motors			
FY 2015 Plans:			

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

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Articles:	-	-	-
Description: Engineering and Quality Assurance of engineering SKOs ***FY 2013 Accomplishments:*** Engineering and Quality Assurance dedicated to the development and quality of Assault Boats, Outboard Motors, Diving Equipment, Soldier Portable, Firefighting and other engineering sets			
Title: Vertical Skills Engineer Construction Kit (VSECK)	0.121	-	-
Articles:	-	-	-
Description: Research, Development, and Testing of Vertical Skills Engineer Construction Kit (VSECK) ***FY 2013 Accomplishments:*** Procure and test VSECK			
Title: Kits for Evidence Collection and Detainee Processing	0.073	-	-
Articles:	-	-	-
Description: Research, Development, and Testing of Kits for Evidence Collection and Detainee Processing ***FY 2013 Accomplishments:*** Procure and test Kits for Evidence Collection and Detainee Processing			
Accomplishments/Planned Programs Subtotals	1.855	-	0.575

C. Other Program Funding Summary ($ in Millions)

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

Remarks

D. Acquisition Strategy

Progression of Programs will be developed by the completion of the Initial Capabilities Document, Capability Development Document, Capability Production Document, and Description For Purchase continuing into Low Rate Initial Production. Modernization and Optimization of existing tools and testing of market samples will progress from Engineering and Manufacturing Development (EMD) and transition into production.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
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E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
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Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 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 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Surface Supplied Diving Set and Deep Sea Set	C/FP	PM SKOT/ECBC/ TBS : (IL, MI, TBS)	0.296	-		-		-		-		-	Continuing	Continuing	Continuing
Underwater Construction Set market research and purchase of test articles	C/FP	PM SKOT/Edgewood Chemical and Biological Center (ECBC)/TBS : (IL, MI, TBS)	0.310	0.250	Dec 2012	-		-		-		-	Continuing	Continuing	Continuing
Market Samples of Soldier Portable Sets and Support Equipment	SS/FP	PM SKOT : Harrison, MI	0.586	-		-		-		-		-	Continuing	Continuing	Continuing
Rigid Inflatable Boats test articles	C/FP	TBS : TBS	0.000	-		-		0.250	Dec 2014	-		0.250	Continuing	Continuing	Continuing
3-man boat test articles	C/FP	TBS : TBS	0.000	-		-		0.060	Dec 2014	-		0.060	Continuing	Continuing	Continuing
Market Samples for Supervisory, Propulsion, Emergency and Recovery Set (SPEARS)	C/FP	TBS : TBS	0.000	-		-		0.050	Jan 2015	-		0.050	Continuing	Continuing	Continuing
Market Samples of Vertical Skills Engineer Construction Kit (VSECK)	C/FP	PM SKOT : Harrison, MI	0.020	0.100	Dec 2012	-		-		-		-	Continuing	Continuing	Continuing
Deep Sea Set Computer Modeling and TDP Development	MIPR	ECBC : Rock Island, IL	0.000	0.221	Oct 2012	-		-		-		-	Continuing	Continuing	Continuing
Procure Fire Protection Equipment (Type I, II and III)	C/FP	PM SKOT : Harrison, MI	0.118	0.170	Dec 2012	-		-		-		-	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Diver Propulsion System Market Samples	C/FP	Patriot 3 Maritime : Fredricksburg, VA	0.060	-		-		-		-		-	Continuing	Continuing	Continuing
XLDS	SS/FP	TBS : TBS	0.050	-		-		-		-		-	-	0.050	-
Develop Family of High Pressure Breathing Air Compressors (FOHPBAC)	C/FP	TBS : TBS	0.175	-		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	1.615	0.741		-		0.360		-		0.360	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Modernization Analyses for modularity of Soldier Portable/Shelter Mounted SKOs	SS/FP	Armament Research Development and Engineering Center (ARDEC) : Rock Island, IL	0.056	-		-		-		-		-	Continuing	Continuing	Continuing
Engineering Support Equipment Configuration Analyses and document development support	MIPR	Combined Arms Support Command (CASCOM)/ Maneuver Support Center (MANSCEN) : (VA, MO)	0.170	0.050	Oct 2012	-		-		-		-	Continuing	Continuing	Continuing
Engineering and Quality Assurance of engineering SKOs (Soldier Portable)	MIPR	ECBC/ARDEC : Rock Island, IL	0.089	0.189	Nov 2012	-		-		-		-	Continuing	Continuing	Continuing
Engineering and Quality Assurance (Boats and Motors)	MIPR	ECBC : Rock Island, IL	0.100	0.100	Oct 2012	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	0.415	0.339		-		-		-		-	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
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Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Redevelopment and testing of state of the art Deep Sea Set	MIPR	PM SKOT/ECBC : Rock Island, IL	0.375	-		-		-		-		-	Continuing	Continuing	Continuing
Underwater Construction Test	C/FP	Navy/ PM SKOT : FL, MI	0.000	0.100	Jan 2013	-		-		-		-	Continuing	Continuing	Continuing
Testing of Boats and Motors	MIPR	NAVSEA : VA	0.000	0.625	Dec 2012	-		0.215	Jun 2015	-		0.215	Continuing	Continuing	Continuing
Testing of Soldier Portable Sets	MIPR	ECBC/ATEC : IL, VA	0.000	0.050	Jan 2013	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	0.375	0.775		-		0.215		-		0.215	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	2.438	1.855		-		0.575		-		0.575	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
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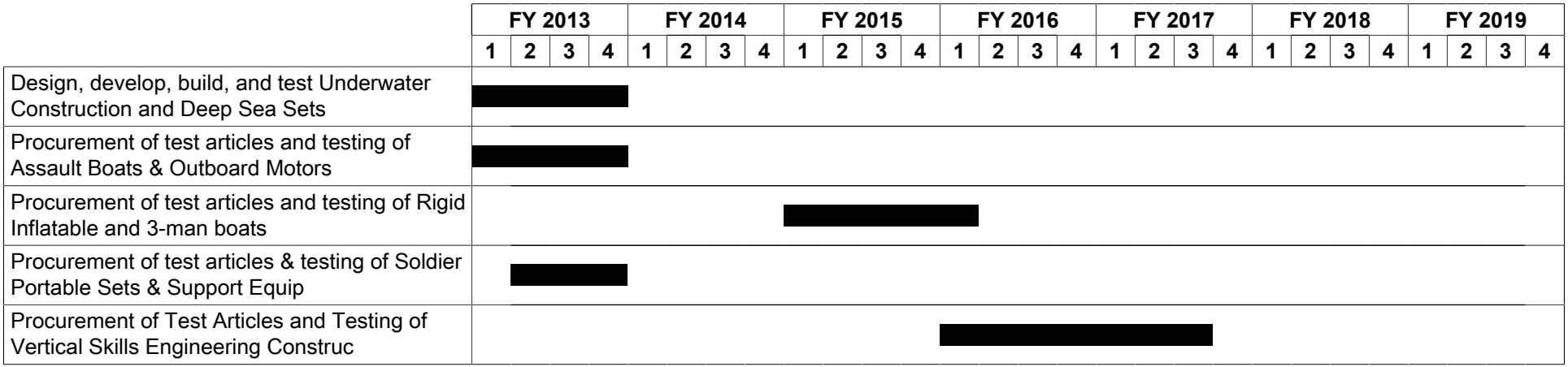

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** L43 / *ENGINEER SUPPORT EQUIPMENT - ED*

Schedule Details

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

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	Project (Number/Name) L46 / *Maintenance Support Equipment*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
L46: *Maintenance Support Equipment*	-	3.449	1.232	1.004	-	1.004	1.946	1.804	1.878	1.916	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Not applicable for this item.

A. Mission Description and Budget Item Justification

Mobile Maintenance Equipment provides state of the art, deployable, vehicle-mounted and containerized shelter tool systems supporting the Joint warfighter. These systems are equipped with industrial quality tools required for Two Level Maintenance that reduce common tool redundancy, provide tool standardization, minimize transportation requirements, reduces logistical footprint, and are backed by a Lifetime Warranty/Replacement Program which reduces sustainment costs. This is accomplished by employing a system of systems approach to maintenance acquisition.The system of systems approach builds a maintenance capability upon each system, allowing a logical and natural approach to the Army's overall two level maintenance strategy. These inter-connected systems distributed throughout the Army at multiple levels and echelons provide a holistic repair capability in all scenarios and environments. These systems provide the Maintenance and Combat Commanders an unprecedented capability to repair wheeled, tracked, aviation, ground support and weapons systems on site at one location at one time. This approach to maintenance acquisition increases efficiencies and supports the current force while providing modular configurations designed to meet the specific needs of the Army maintainer in today's complex transforming environment. All of these programs are in the Engineering and Manufacturing Development Phase.

BUDGET ITEM JUSTIFICATION: The need to develop and maintain a System of System maintenance approach is critical due to the growing complexity of today's military equipment, operational tempo, modularity, and current and evolving Tactics Techniques and Procedures (TTPs). The individual maintenance systems are comprehensive, interconnected and capable of solving and repairing any maintenance problems. The System of Systems approach does not advocate specific tools, methods or practices; instead it seeks to promote a streamlined comprehensive set of systems for solving maintenance challenges where the interactions of doctrine, technology, time and tactics techniques and procedures are the primary drivers. Funding for projects shall include test article procurement and testing of soldier portable maintenance SKOs and load banks; investigation of new technologies for next generation mobile maintenance equipment shop sets including the Shop Equipment Welding (SEW) and Shop Equipment Contact Maintenance (SECM); development of additional SATS maintenance modules, Special Tools initiatives; packaging development; and technical support for emerging JCIDS materiel requirements documents.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Develop the Next Generation Shop Equipment Welding (SEW)	0.900	-	-
Articles:	-	-	-
Description: Design, Build, and Test the Next Generation SEW, incorporating new technology and a new platform			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** L46 / *Maintenance Support Equipment*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
FY 2013 Accomplishments: Concept design and development of the Next Generation SEW on a new platform				
Title: Fire Suppression Refill System (FSRS)		0.403	0.485	-
	Articles:	-	-	-
Description: Design, Develop, Build, and Test SATS Future Field Modules ***FY 2013 Accomplishments:*** Develop Next Generation SATS prototypes ***FY 2014 Plans:*** Develop Fire Suppression Refill System				
Title: Metal Working & Machining Shop Set (MWMSS)		0.100	-	-
	Articles:	-	-	-
Description: Design, Develop, Build, and Test Metal Working & Machining Shop Set (MWMSS) configurations ***FY 2013 Accomplishments:*** Additional Testing/Re-testing MWMSS				
Title: Mobile Maintenance Equipment Shop Set		0.389	0.522	0.450
	Articles:	-	-	-
Description: Modernization / Redesign efforts of maintenance support equipment in support of technological advances, environmental/safety constraints and to support emerging systems ***FY 2013 Accomplishments:*** Vehicular SKO Modernization to include SECM ***FY 2014 Plans:*** Next Generation Ordnance SKO ***FY 2015 Plans:*** Next generation Ordnance SKO				
Title: Support for Requirements Generation		0.125	0.125	0.104
	Articles:	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Description: Support for requirements generation of future SKOs ***FY 2013 Accomplishments:*** Document development supporting future requirements SKOs ***FY 2014 Plans:*** Document development supporting future requirements SKOs ***FY 2015 Plans:*** Document development supporting future requirements SKOs			
Title: Special Tools Initiative	0.275	0.050	0.300
Articles:	-	-	-
Description: Develop Rapid Deployment Sets, Kits, and Outfits (SKOs) - Special Tool Initiative and support to Mine Resistance Ambush Protection (MRAP) and other vehicles ***FY 2013 Accomplishments:*** Develop and test various Soldier Portable Tool Kits based on the maintenance requirements of current and future platforms. ***FY 2014 Plans:*** Develop and test various Soldier Portable Tool Kits based on the maintenance requirements of current and future platforms. ***FY 2015 Plans:*** Develop and test various Soldier Portable Tool Kits based on the maintenance requirements of current and future platforms.			
Title: Engineering and Quality Assurance	0.202	-	-
Articles:	-	-	-
Description: Engineering and Quality Assurance in support of SKOs ***FY 2013 Accomplishments:*** Engineering and Quality Assurance dedicated to the development and quality of maintenance SKOs			
Title: Armament Repair Shop Set (ARSS)	1.055	-	-
Articles:	-	-	-
Description: Armament Repair Shop Set upgrades ***FY 2013 Accomplishments:***			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** L46 / *Maintenance Support Equipment*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Test of ARSS prototypes and development of Technical Manuals			
Title: Acquisition of Support Equipment	-	0.050	-
Articles:	-	-	-
Description: Support Equipment ***FY 2014 Plans:*** Procure and test Support Equipment (standalone lathes, mills, load banks, etc.) formerly known as nonstandard			
Title: Packaging Support	-	-	0.150
Description: Full Packaging Program Support and Packaging Data Management ***FY 2015 Plans:*** Develop and Maintain Logistics Packaging, Packing and Palletization data			
Accomplishments/Planned Programs Subtotals	3.449	1.232	1.004

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• OPA 3 ML5345: *OPA 3 ML5345, Items Less Than $5.0M (MAINTENANCE EQUIPMENT)*	0.030	3.860	2.789	-	2.789	2.783	2.783	2.784	2.692	Continuing	Continuing
• OPA 3 G39200: *OPA 3 G39200, Hydraulic Systems Test and Repair Unit (HSTRU)*	2.920	0.150	-	-	-	-	-	-	-	-	3.070
• OPA 3 G05315: *OPA 3 G05315, Metalworking and Machining Shop Set (MWMSS)*	-	9.267	9.350	-	9.350	9.419	9.418	9.420	9.451	Continuing	Continuing
• OPA 3 G05330: *OPA 3 G05330, Armament Repair Shop Set (ARSS)*	-	2.760	10.426	-	10.426	10.472	11.477	10.435	11.837	Continuing	Continuing
• OPA 3 G05320: *OPA 3 G05320, Fire Suppression Refill System (FSRS)*	-	-	3.982	-	3.982	5.587	4.582	3.937	6.753	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** L46 / *Maintenance Support Equipment*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost

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 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	Project (Number/Name) L46 / *Maintenance Support Equipment*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 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 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 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	0.000	0.900	Nov 2012	-		-		-		-	Continuing	Continuing	Continuing
Modernization/Redesign efforts of Truck/Trailer transported shelters for next generation systems	MIPR	ECBC : Rock Island, IL	0.300	0.389	Dec 2012	0.522	Dec 2013	0.450	Nov 2014	-		0.450	Continuing	Continuing	Continuing
Develop Rapid Deployment Sets, Kits, & Outfits - Special Tool Initiative.	MIPR	ECBC : Rock Island, IL	0.100	0.150	Oct 2012	0.050	Jun 2014	-		-		-	Continuing	Continuing	Continuing
Procure Ground Based Special Tools in support of Tactical Wheeled Vehicles	MIPR	PM SKOT : Harrison, MI	0.000	-		-		0.300	Oct 2014	-		0.300	Continuing	Continuing	Continuing
		Subtotal	1.831	1.439		0.697		0.750		-		0.750	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	Project (Number/Name) L46 / *Maintenance Support Equipment*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 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)	0.618	0.125	Dec 2012	-		0.122	Jan 2015	-		0.122	Continuing	Continuing	Continuing
Modernization of Tool Loads based on Field Feedback	MIPR	PM SKOT : Harrison, MI	0.300	-		-		-		-		-	Continuing	Continuing	Continuing
Engineer and Quality Assurance in support of SKOs	MIPR	ECBC / ARDEC / PM SKOT : (IL, MI)	0.980	0.202	Nov 2012	-		-		-		-	Continuing	Continuing	Continuing
Packaging Support	MIPR	ARDEC : Rock Island, IL	0.000	-		-		0.132	Jan 2015	-		0.132	Continuing	Continuing	-
		Subtotal	1.898	0.327		-		0.254		-		0.254	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Special Tool Kits	MIPR	ECBC / ATEC : (IL, MD)	0.000	0.125		-		-		-		-	Continuing	Continuing	Continuing
Testing of the Metal Working & Machining Shop Set (MWMSS)	MIPR	ATEC : Aberdeen, MD	2.621	0.100	Dec 2012	-		-		-		-	Continuing	Continuing	Continuing
Test Armament Repair Shop Set (ARSS)	MIPR	ATEC : Aberdeen, MD	0.000	1.055	Dec 2012	-		-		-		-	Continuing	Continuing	Continuing
Further develop SATS Field Maintenance Module & viability of adding Load Handling System capability	MIPR	PM SKOT : Harrison, MI	0.263	0.403	Nov 2012	0.485	Apr 2014	-		-		-	Continuing	Continuing	Continuing
Procure and Test standalone support equipment items	MIPR	ATEC : Aberdeen, MD	0.000	-		0.050	Apr 2014	-		-		-	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	Project (Number/Name) L46 / *Maintenance Support Equipment*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	2.884	1.683		0.535		-		-		-	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	6.709	3.449		1.232		1.004		-		1.004	-	-	-

Remarks

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

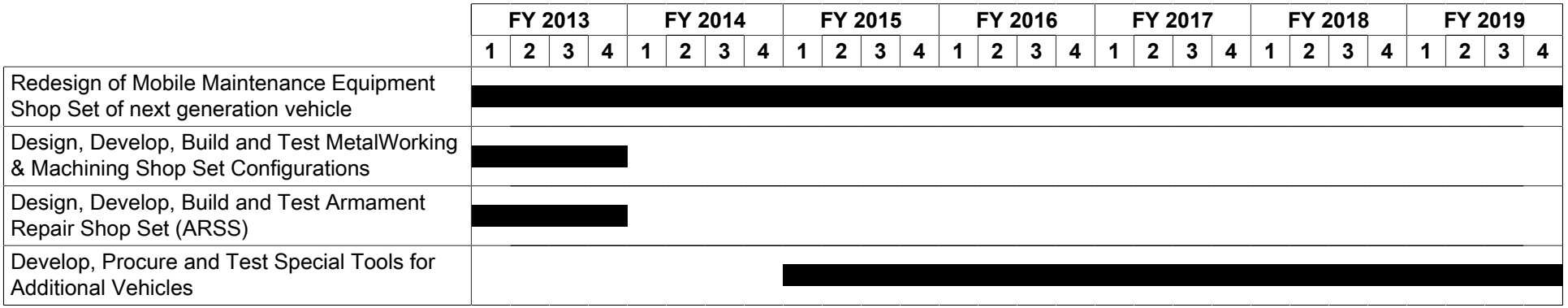

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** L46 / *Maintenance Support Equipment*

Schedule Details

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

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	Project (Number/Name) L47 / *Improved Environmental Control Units Ed*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
L47: *Improved Environmental Control Units Ed*	-	2.661	2.966	-	-	-	0.984	1.479	3.058	2.174	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Not applicable for this item.

A. Mission Description and Budget Item Justification

The Improved Environmental Control Units (IECU) program will provide a new generation of Environmental Control Units (ECUs) that use environmentally approved refrigerants, with zero Ozone-Depleting Chemicals (ODCs) to replace the current Military Standard (MIL-STD) Family of ECUs. The IECUs will provide improved cooling, heating and dehumidification to soldiers and materiel systems in combat, combat support and combat service support units. The IECUs are required to replace currently fielded environmental control units in order to comply with statutory and regulatory restrictions on the use of Class II ODCs (such as HCFC-22) and to improve the performance of military ECUs. They are form, fit and function replacements to the current MIL-STD ECUs. Technical improvements over existing military-standard ECUs will yield significant fuel and weight savings, reduction in scheduled maintenance and increased reliability. 9, 18, and 36K BTU/H IECUs: The 9, 18 and 36K BTU/H IECUs will be a replacement for the current MIL-STD-ECU variants. The new family of IECUs will utilize a new refrigerant which complies with mandated Environmental Protection Agency (EPA) requirements (non-global warming). FY14 funding supports Engineering and Manufacturing Development (EMD) Phase activities for the 9, 18 and 36K development, as well as further IECU variants which include multiple trailer-mounted systems. In addition, the field has identified an emerging requirement for an integrated fuel-fired heating/cooling system. These variants will further standardize cooling units in the field, enable cooling of larger shelters and structures, offer increased mobility, and may be used to cool multiple tents with one unit. FY14 funding also supports continued evaluation of IECUs and variants at Network Integration Evaluation (NIE) to support new operational concepts. There are no FY15 base dollars.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Technology Development	1.685	1.000	-
Articles:	-	-	-
Description: Engineering and Manufacturing Development (EMD) for 9/18/36K BTUH Improved Environmental Control Unit (IECU), multiple trailer-mounted variants and integrated heating/cooling systems.			
FY 2013 Accomplishments: Support continuing EMD effort for 9/18/36K BTUH IECU. Complete final engineering requirements for 9/18/36K IECUs. Develop prototypes for multiple trailer-mounted variants and integrated heating/cooling units to meet emerging user needs.			
FY 2014 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** L47 / *Improved Environmental Control Units Ed*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Support continuing EMD effort for 9/18/36K BTUH IECU. Complete final engineering requirements for 9/18/36K IECUs. Develop prototypes for multiple trailer-mounted variants and integrated heating/cooling units to meet emerging user needs.			
Title: Government System Test and Evaluation	0.199	0.678	-
Articles:	-	-	-
Description: Testing for prototype performance for the trailer mounted variants of the Improved Environmental Control Units (IECUs). ***FY 2013 Accomplishments:*** Testing for prototype performance for the trailer mounted variants of the IECUs. ***FY 2014 Plans:*** Conduct reliability testing, Limited User Test, and logistics verification for trailer mounted variants to support type classification. Conduct performance tests on integrated heating/cooling units.			
Title: Other Contract and Government Agency	0.344	1.090	-
Articles:	-	-	-
Description: Support engineering, logistics, and testing efforts for multiple trailer-mounted variants, as well as integrated heating/ cooling units. Support Engineering and Manufacturing Development (EMD) effort on 9/18/36K Improved Environmental Control Unit (IECU) family. ***FY 2013 Accomplishments:*** Support engineering, logistics, and testing efforts for multiple trailer-mounted variants and integrated heating/cooling units. Support EMD effort on 9/18/36K IECU family. ***FY 2014 Plans:*** Support engineering, logistics, and testing efforts for multiple trailer-mounted variants and integrated heating/cooling units. Support EMD effort on 9/18/36K IECU family.			
Title: Government Program Management	0.433	0.198	-
Articles:	-	-	-
Description: Oversight and management of engineering, logistics, contracts, and testing efforts for 9/18/36 Improved Environmental Control Unit (IECU) family and multiple trailer-mounted variants. Transition to production. Provide oversight and management of integrated heating/cooling units. ***FY 2013 Accomplishments:***			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** L47 / *Improved Environmental Control Units Ed*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Oversight and management of engineering, logistics, contracts, and testing efforts for 9/18/36K IECU family and multiple trailer-mounted variants. Transition to production. Provide oversight and management of integrated heating/cooling units. ***FY 2014 Plans:*** Oversight and management of engineering, logistics, contracts, and testing efforts for 9/18/36 IECU family and multiple trailer-mounted variants. Transition to production. Provide oversight and management of integrated heating/cooling units.			
Accomplishments/Planned Programs Subtotals	2.661	2.966	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• MF9303: *OPA 3, Improved Environmental Control Units , MF9303*	12.194	6.269	9.235	-	9.235	19.031	26.665	12.008	18.878	Continuing	Continuing

Remarks

D. Acquisition Strategy

Complete Engineering and Manufacturing Development (EMD) for the 9/18/36K Improved Environmental Control Unit (IECU) variants and transition to production. Begin EMD for level efforts in support of multiple trailer-mounted IECU variants. The initial prototypes of the trailer-mounted variants will be assembled in house, with eventual production via depot-level integration of GFE from existing production contracts. Initial prototypes of the integrated fuel-fired heating and cooling systems will be procured off-the-shelf through third party vendors for assessment. This assessment will support development of a PD for eventual competitive procurement.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	Project (Number/Name) L47 / *Improved Environmental Control Units Ed*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
9,18 and 36K Improved Environmental Control Unit (IECU)	Various	PM-MEP : various	1.124	-		0.050	Feb 2014	-		-		-	-	1.174	Continuing
Trailer Variants	Various	PM-MEP : various	0.000	0.433	Nov 2012	0.073	Feb 2014	-		-		-	-	0.506	Continuing
18K Vertical	Various	PM-MEP : various	0.000	-		0.050	Feb 2014	-		-		-	-	0.050	-
Integrated heating/cooling units	Various	PM-MEP : various	0.000	-		0.025	Feb 2014	-		-		-	-	0.025	-
SBIR/STTR	Various	various : various	0.137	-		-		-		-		-	-	0.137	-
		Subtotal	1.261	0.433		0.198		-		-		-	-	1.892	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 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	-		-		-	-	0.400	-
18K Vertical	C/CPFF	TBD : TBD	0.000	1.685	Jun 2013	0.400	Apr 2014	-		-		-	-	2.085	-
Integrated heating/cooling units	MIPR	CERDEC Night Vision Lab : Ft. Belvoir, VA	0.000	-		0.200	Apr 2014	-		-		-	-	0.200	-
		Subtotal	2.064	1.685		1.000		-		-		-	-	4.749	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	Project (Number/Name) L47 / *Improved Environmental Control Units Ed*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 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	-		0.500	Dec 2013	-		-		-	-	2.142	-
18K Vertical	Various	CERDEC : Fort Belvoir, VA	3.507	-		0.200	Dec 2013	-		-		-	-	3.707	-
Trailer variants	MIPR	CERDEC : Fort Belvoir, VA	0.000	0.344	Oct 2012	0.300	Dec 2013	-		-		-	-	0.644	-
Integrated heating/cooling units	MIPR	CERDEC : Fort Belvoir, VA	0.000	-		0.090	Dec 2013	-		-		-	-	0.090	-
		Subtotal	5.149	0.344		1.090		-		-		-	-	6.583	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 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	0.000	0.199	Nov 2012	0.150	Apr 2014	-		-		-	-	0.349	Continuing
18K Vertical	MIPR	ATEC : APG, MD	0.000	-		0.200	Apr 2014	-		-		-	-	0.200	-
Integrated heating/cooling units	MIPR	ATEC : APG, MD	0.000	-		0.150	Apr 2014	-		-		-	-	0.150	-
		Subtotal	0.300	0.199		0.678		-		-		-	-	1.177	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	8.774	2.661		2.966		-		-		-	-	14.401	-

Remarks

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

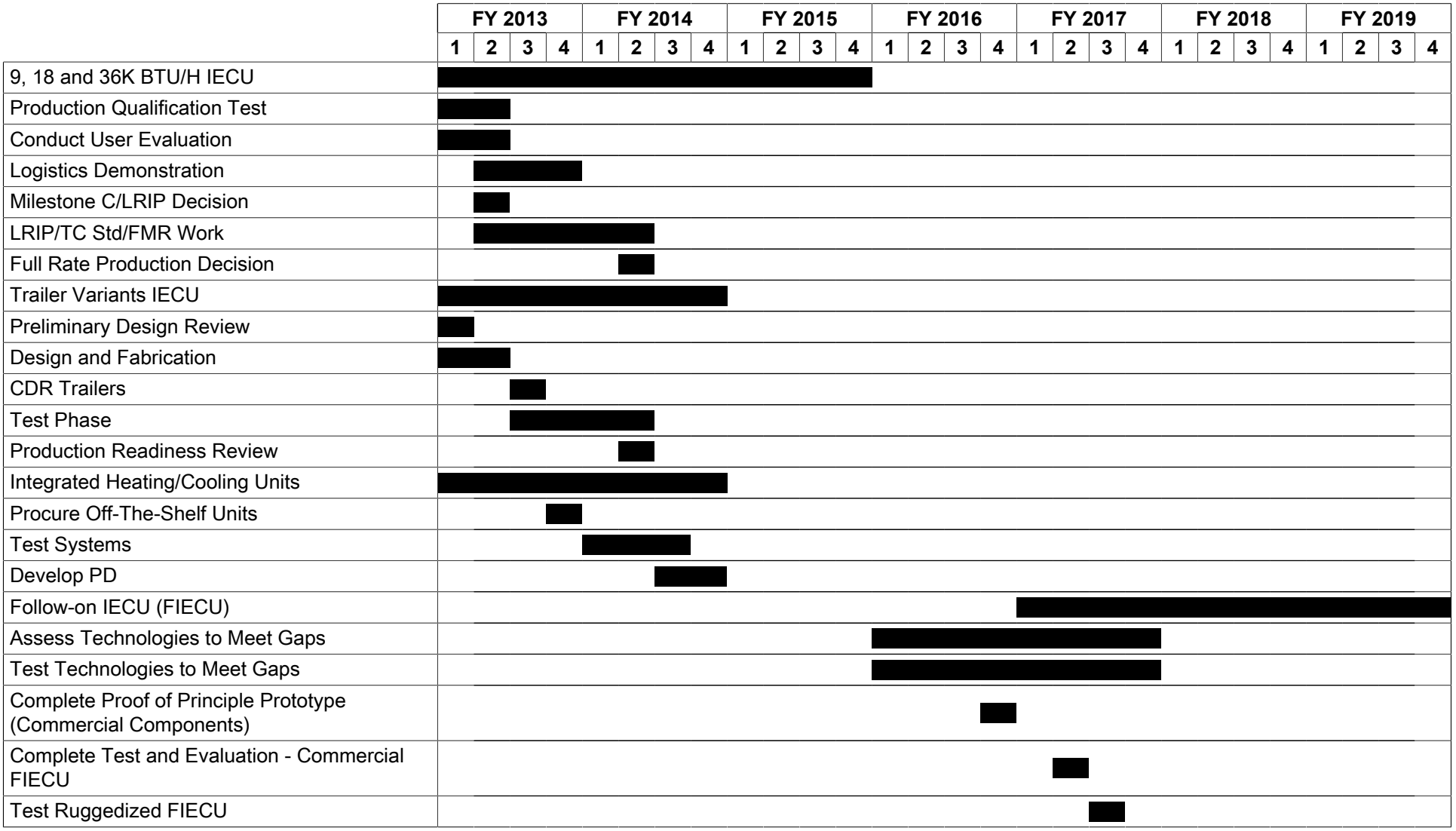

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** L47 / *Improved Environmental Control Units Ed*

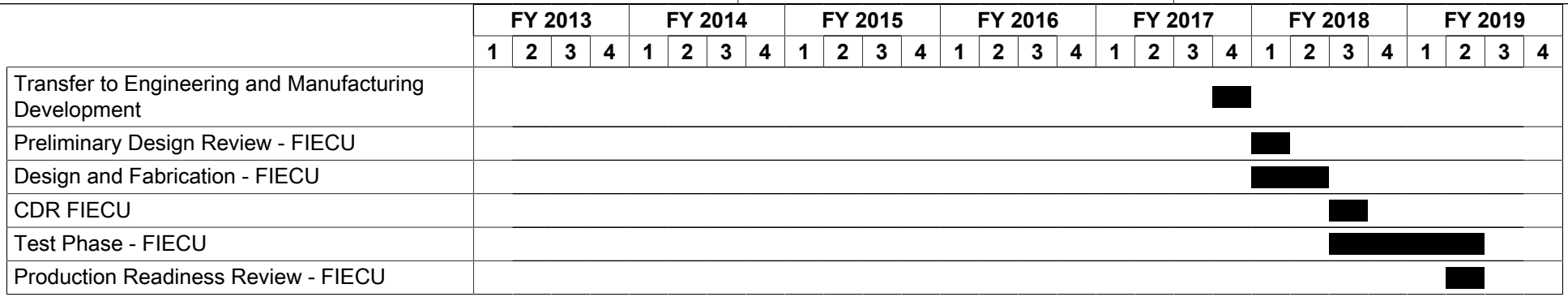

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** L47 / *Improved Environmental Control Units Ed*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
9, 18 and 36K BTU/H IECU	1	2009	4	2015
Production Qualification Test	2	2012	2	2013
Conduct User Evaluation	1	2013	2	2013
Logistics Demonstration	2	2013	4	2013
Milestone C/LRIP Decision	2	2013	2	2013
LRIP/TC Std/FMR Work	2	2013	2	2014
Full Rate Production Decision	2	2014	2	2014
Trailer Variants IECU	1	2013	4	2014
Preliminary Design Review	1	2013	1	2013
Design and Fabrication	1	2013	2	2013
CDR Trailers	3	2013	3	2013
Test Phase	3	2013	2	2014
Production Readiness Review	2	2014	2	2014
Integrated Heating/Cooling Units	1	2013	4	2014
Procure Off-The-Shelf Units	4	2013	4	2013
Test Systems	1	2014	3	2014
Develop PD	3	2014	4	2014
Follow-on IECU (FIECU)	1	2017	4	2019
Assess Technologies to Meet Gaps	1	2016	4	2017
Test Technologies to Meet Gaps	1	2016	4	2017
Complete Proof of Principle Prototype (Commercial Components)	4	2016	4	2016
Complete Test and Evaluation - Commercial FIECU	2	2017	2	2017

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

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Test Ruggedized FIECU	3	2017	3	2017
Transfer to Engineering and Manufacturing Development	4	2017	4	2017
Preliminary Design Review - FIECU	1	2018	1	2018
Design and Fabrication - FIECU	1	2018	2	2018
CDR FIECU	3	2018	3	2018
Test Phase - FIECU	3	2018	2	2019
Production Readiness Review - FIECU	2	2019	2	2019

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	Project (Number/Name) VR7 / *Combat Service Support Systems*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
VR7: *Combat Service Support Systems*	-	5.029	1.193	2.947	-	2.947	4.024	3.892	3.895	2.585	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This project supports the Engineering and Manufacturing Development (EMD) of critical distribution and sustainment capabilities to include base camp subsystems, field shelters, showers, latrines, heaters, mortuary affairs systems, camouflage systems, organizational equipment, and other combat service support equipment to fill identified theater distribution and services capability gaps, improve unit sustainability, improve resource and energy efficiency and increase combat effectiveness. Project supports development of expeditionary tactical field systems and support equipment to improve safety, effectiveness, and efficiency of deployed soldiers. This project develops critical enablers that support the Quartermaster (QM) Force Transformation Strategy and the Army's Modular Force Capabilities by maintaining readiness through fielding and integrating new equipment. This project also ensures Army Expeditionary Forces are capable of rapid deployment and reduces sustainment requirements, related Combat Support/Combat Service Support (CS/CSS), lift demands, the combat zone footprint, and costs for logistical support.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Human Remains Temperature Controlled Transfer Case (HRTC2)	0.215	-	-
Articles:	-	-	-
Description: The HRTC2 is a replacement for the current aluminum case for transporting remains from a theater of operation to CONUS that incorporates insulation and refrigeration to provide optimal temperature control and eliminate use of ice and the need for re-icing in route.			
FY 2013 Accomplishments: Completed Developmental Testing and initiated procurement of interim transfer case.			
Title: Modular Ballistic Protection System (MBPS)	-	0.368	0.550
Articles:	-	-	-
Description: MBPS is a lightweight, rapidly deployable and reusable ballistic protection system that can be installed in commonly used military shelters in expeditionary and remote base camps and outposts where more robust forms of ballistic protection (i.e. sandbags, concrete barriers) are not readily available or logistically feasible.			
FY 2014 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** VR7 / *Combat Service Support Systems*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Procure mature test items and obtain acquisition decision to conduct SDD of MBPS Stand-alone (Threshold) to support FPE and transition to production. ***FY 2015 Plans:*** Complete SDD testing and logistics of MBPS Stand-alone (Threshold), and prepare documentation to support Milestone C decision and transition to production.			
Title: Family of Space Heaters ***Articles:*** ***Description:*** The family of Army Space Heaters support soldiers operating in basic, cold and extreme cold environments with a safe, portable, lightweight, multi-fueled, self-powered, space heaters for use in multiple tents and/or expeditionary shelters that do not require an external power source. These heaters provide the much needed capability of providing heated air effectively and efficiently while eliminating the shortcomings of the antiquated, dangerous and inefficient heaters they are replacing in the inventory. ***FY 2013 Accomplishments:*** Completed DT for P3I improvements to Army Space Heater (ASH) and updated performance specification to support next procurement. ***FY 2015 Plans:*** Conduct FAT and logistics of IASH Type II to support transition to production and Type Classification decision.	0.089 -	- -	0.150 -
Title: Net-Zero Energy Efficiency Solutions ***Articles:*** ***Description:*** Net-Zero Energy Efficiency Solutions reduce the operational energy and logistics footprint of the expeditionary base camp system, with the goal being a significant reduction in fuel, water, material and power requirements to sustain operations in the field. Effort includes reducing site preparation, maintenance and spare parts requirements. Operating a base camp such as Force Provider requires a significant amount of logistics support and also produces an enormous amount of by products, both of which cost money, human effort (that means a risk in the form of soldiers on the road), and represents a potential vulnerability. ***FY 2013 Accomplishments:*** Conduct Operational Testing (OT) on Energy Efficiency (E2) shelter kit solutions for Force Provider modules. Obtain full material release of E2 kits and transition into production. ***FY 2014 Plans:***	1.207 -	0.825 -	1.980 -

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** VR7 / *Combat Service Support Systems*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Conduct OT on Force Provider 150-Soldier module with integrated Advanced Medium-sized Mobile Power Source (AMMPS) Micro-grid. Obtain material release and transition into production. Provide technical support to Contingency Basing Infrastructure initiative to transition applicable technology to Force Provider. ***FY 2015 Plans:*** Conduct evaluation on Net-Zero energy efficiency solutions for Force Provider. Complete DT/OT on Force Provider 150-Soldier module with integrated Advanced Medium-sized Mobile Power Source (AMMPS), solar hot water heating, and mature expeditionary shelter energy efficiency upgrades. Transition proven and validated capabilities into full-rate production.			
Title: Advanced Laundry System (LADS) ***Description:*** Provides an enhanced capability for field laundry with improved hot and cold weather performance, better compatibility with current and future combat clothing, and increased reliability, maintainability and ease of operation. ***FY 2015 Plans:*** Conduct Developmental Testing (DT) and initiate Operational Testing (OT) of prototype system.	-	-	0.267
Title: Contingency Basing Infrastructure (CBI) ***Articles:*** ***Description:*** Develop an integrated toolset that serves as the backbone for the analysis and interface to the field allowing commanders, acquisition activities and procurement organizations information necessary to make informed decisions leading to improved power, fuel, water, and waste management efficiency on contingency bases. ***FY 2013 Accomplishments:*** Provide M&S support to demonstrate effectiveness and value of applying systems engineering fundamentals to life cycle management of base camps and provide system of systems (SoS) modeling capability to assess Base Camp performance to include: base camp system functional performance; energy (power), water and fuel usage; and energy, water, and waste production. Evaluate proposed technology solutions for impacts on Base Camp sustainment metrics.	3.518 -	- -	- -
Accomplishments/Planned Programs Subtotals	5.029	1.193	2.947

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• 643804 VR8: *Combat Service Support Systems AD,*	1.791	1.612	2.691	-	2.691	4.582	4.386	4.390	2.585	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** VR7 / *Combat Service Support Systems*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost

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 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** VR7 / *Combat Service Support Systems*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management Support	Various	PM Force Sustainment Systems : Natick, MA	0.160	0.162	Mar 2013	0.125	Mar 2014	0.264	Dec 2014	-		0.264	Continuing	Continuing	-
SBIR+STTR	TBD	Various : Various	0.077	-		-		-		-		-	-	0.077	-
CBI Support	Various	PD CBI : Warren, MI	0.000	3.284	Jun 2013	-		-		-		-	-	3.284	-
		Subtotal	0.237	3.446		0.125		0.264		-		0.264	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Soldier Support Equipment	TBD	Various : Various	1.246	0.897	Apr 2013	0.453	May 2014	1.138	Mar 2015	-		1.138	Continuing	Continuing	-
		Subtotal	1.246	0.897		0.453		1.138		-		1.138	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Soldier Support Equipment	Various	Various : Various	0.982	0.686	Mar 2013	0.615	Mar 2014	1.545	May 2015	-		1.545	Continuing	Continuing	-
		Subtotal	0.982	0.686		0.615		1.545		-		1.545	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	2.465	5.029		1.193		2.947		-		2.947	-	-	-

Remarks

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

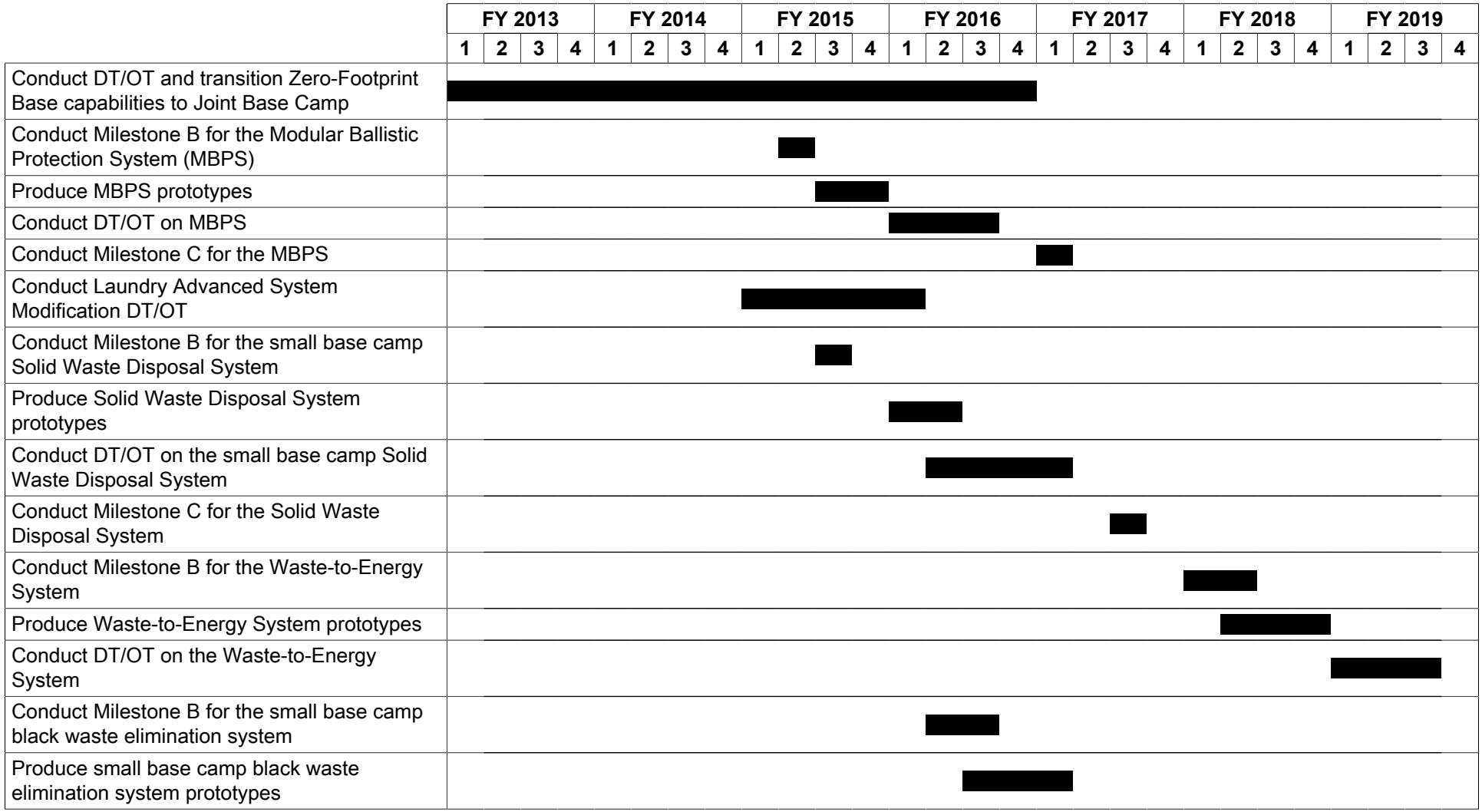

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** VR7 / *Combat Service Support Systems*

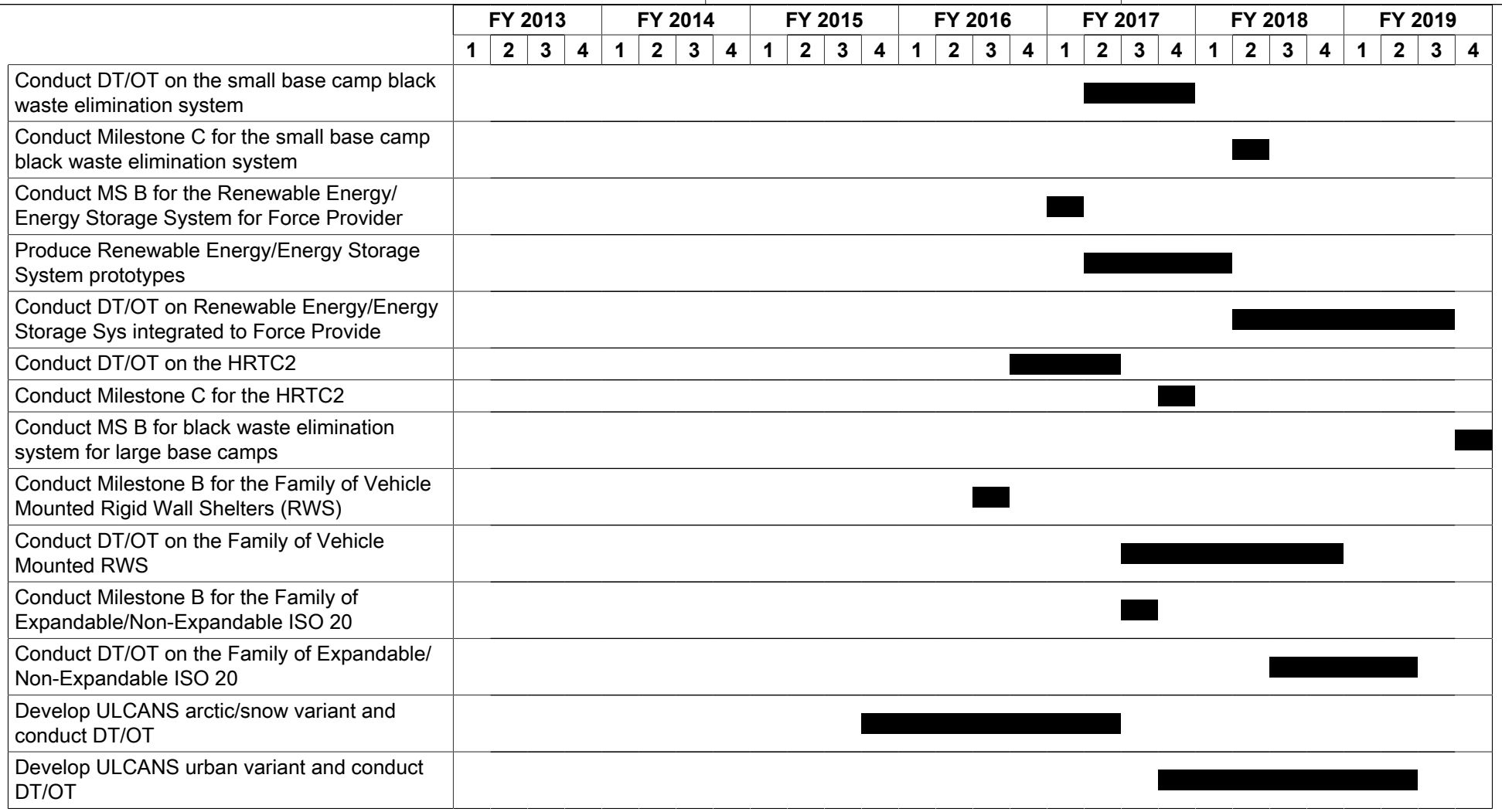

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604804A / *Logistics and Engineer Equipment - Eng Dev*	**Project (Number/Name)** VR7 / *Combat Service Support Systems*

Schedule Details

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

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

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Conduct MS B for black waste elimination system for large base camps	4	2019	4	2019
Conduct Milestone B for the Family of Vehicle Mounted Rigid Wall Shelters (RWS)	3	2016	3	2016
Conduct DT/OT on the Family of Vehicle Mounted RWS	3	2017	4	2018
Conduct Milestone B for the Family of Expandable/Non-Expandable ISO 20	3	2017	3	2017
Conduct DT/OT on the Family of Expandable/Non-Expandable ISO 20	3	2018	2	2019
Develop ULCANS arctic/snow variant and conduct DT/OT	4	2015	2	2017
Develop ULCANS urban variant and conduct DT/OT	4	2017	2	2019

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0604805A / *Command, Control, Communications Systems - Eng Dev*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	18.543	7.376	4.433	-	4.433	9.161	17.215	2.462	-	-	59.190
593: *Joint Battle Command - Platform (JBC-P)*	-	18.543	7.376	4.433	-	4.433	9.161	17.215	2.462	-	-	59.190

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This Program Element (PE) supports efforts to develop interoperability of Army programs and products, horizontally and vertically for the digitized battlefield. Project D485 supports Information Standards Interoperability Engineering and Joint Interoperability Certification. It provides the critical elements of the Army/Joint Technical Architecture, the mandated standards and communication protocols for Army/Joint ground and air operations, and crucial certification test tools to evaluate systems' interoperability for the Warfighter in support of the Vice Chief of Staff of the Army (VCSA) and Army Acquisition Executive (AAE). It also provides Joint certification testing and certification recommendations to the Joint Chiefs of Staff (JCS) for Army systems. This Army-wide effort directly supports the management, oversight, development, maintenance, and interoperability at the Army enterprise level C4I/IT (Command, Control, Communications, Computers, and Intelligence/Information Technology) architecture efforts required to implement Unit Set Fielding (USF), Software Blocking (SWB) Policy and Army Knowledge Management.

Project D593, Joint Battle Command - Platform (JBC-P) funds the Systems Engineering, Software Development and Testing of JBC-P. Joint Battle Command - Platforms (JBC-P), which includes Blue Force Tracking (BFT) and Army Aviation, and provides true Joint force Command and Control (C2) Situational Awareness (SA) and communications (e.g., terrestrial, celestial) capability at the platform level through command center locations (e.g., Network Operations Centers (NOC), Tactical Operation Centers (TOCs), Brigade Command Posts) and enables mission accomplishment across the entire spectrum of military operations.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	20.776	7.379	14.210	-	14.210
Current President's Budget	18.543	7.376	4.433	-	4.433
Total Adjustments	-2.233	-0.003	-9.777	-	-9.777
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-2.233	-0.003	-9.777	-	-9.777

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604805A / *Command, Control, Communications Systems - Eng Dev*	Project (Number/Name) 593 / *Joint Battle Command - Platform (JBC-P)*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
593: *Joint Battle Command - Platform (JBC-P)*	-	18.543	7.376	4.433	-	4.433	9.161	17.215	2.462	-	-	59.190
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Joint Battle Command - Platform (JBC-P) program is the cornerstone of joint forces Command and Control (C2) Situational Awareness (SA) and communications. JBC-P provides secure Blue Force Tracking capability in Platforms and Command Posts, providing soldiers and commanders a map-based Common Operating Picture of the battlefield, and as a result, reducing fratricide.

As part of the Army's Common Operating Environment (COE) Architecture initiative, developed to standardize end-user environments and enable streamlined deployment of new warfighting applications, JBC-P serves a primary role as the basis of the Mounted Computing Environment (MCE), one of six (6) environments within the COE framework. Future development of the Mounted CE will leverage JBC-P hardware and software to consolidate and integrate multiple warfighting systems in the Platform (Mounted) environment. This integrated Mounted CE, with its open standards, enhanced interoperability, and simplified end-user interface will speed delivery of new Mission Command applications to the warfighter while improving the effectiveness and value of current systems.

Fiscal Year 2015 funding provides Software Design and Development, System Engineering, associated Test and Integration, and Program Management that supports the development of the Mounted Computing Environment.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Software Development	8.643	2.568	1.272
Articles:	-	-	-
Description: Develop capabilities, product applications, platform interoperability, and system services across the JBC-P family of systems, to include the development of capabilities to meet Key Performance Parameters (KPPs), other system attributes. Also develop unique software and integration capabilities in support of the Mounted Computing Environment (MCE), part of the Common Operating Environment (COE). Develop Multi-Level Security Domains for Network, Users, and Information.			
FY 2013 Accomplishments: Complete engineering, design and coding for Core/Product Development Kit (PDK) software. Complete engineering, design, and coding for product builds 5 & 6 to fully maintain the KPPs and other system attributes outlined in the Capability Development Document in lieu of Capabilities Production Document for all of the products. Conduct user juries to gain user feedback on the software. Include Marine Corps participation in working groups and integrated product/process teams and provide software builds			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604805A / *Command, Control, Communications Systems - Eng Dev*	**Project (Number/Name)** 593 / *Joint Battle Command - Platform (JBC-P)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
to the Marine Corps as required for testing to ensure joint requirements are included and adequately addressed throughout the software development effort. ***FY 2014 Plans:*** Software efforts include migrating to COTS (Android) and integrating additional Mission Command capabilities including precision fires and collaboration/planning functions for platform systems. Migrate to common open interfaces across other platform components (sensors, radios) in order to reduce complexity and make integration common across all platform vehicle types (VICTORY). Co-host systems/application on the Mounted Family of Computer Systems (MFoCS) i.e. router switch, forward observer system in order to reduce Size Weight and Power (SWaP) on platforms. Build automated tools to support compliance with MCE and COE standards. ***FY 2015 Plans:*** Funding is required for on-going software development efforts focused on the migration of JBC-P and other platform systems to the Mounted CE and COE standards. This effort includes migrating to specific network communications standards, and providing routing services on a Commercial Off the Shelf (COTS) operating system (Android). Software capabilities also under migration to MCE standards include the use of Common Geospatial (map) services and additional Vehicle Integration for C4ISR/EW Interoperability (VICTORY) component types. Funds are also required for continued conduct of user juries to assess software maturity.			
Title: Software/Systems Engineering	1.878	3.008	2.044
Articles:	-	-	-
Description: Perform Software/Systems Engineering in support of the development of JBC-P Capabilities, Applications, and Services, to include, but not limited to, Conducting Engineering Studies, Architecture Development (both Software and Network), System Analyses, Technical Readiness Assessments, Technical Interchange Meetings/Events, and development of Related Reports and other deliverables. ***FY 2013 Accomplishments:*** Complete Capability Set 13-14 security engineering including security certification and accreditation plan, safety engineering and FoS definition study and prototyping. Complete development of requirements analysis, System/Subsystem specification and high level system engineering for Capability Set 15-16 software. Commence system engineering for the migration of JBC-P baseline to MCE standards. ***FY 2014 Plans:*** Continue system engineering efforts for JBC-P in support of COE baselines, focusing on hardware/software integration, engineering and development of common services across platforms. Includes planning and engineering of future MCE capabilities			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
using COTS (Android), i.e.: Common Authentication. Performance characterization on different HW/SW configurations using MFoCS. ***FY 2015 Plans:*** Funding is required for continued system engineering efforts in support of COE baselines and expanding common services across platforms. Includes planning and engineering of future MCE capabilities using COTS (Android), including Shared Software Databus, Common Geospatial (map) Services, Common Overlay, and Single Security Services.			
Title: Test, Evaluation and Integration ***Articles:*** ***Description:*** Plan and conduct Integration Events (i.e., Tests and Assessments) in support of the JBC-P Family of Systems, to include participation in Network Integration Exercises (NIEs), User Juries, Risk Reduction Events, Vulnerability testing, and Army Interoperability Certification (AIC) testing. ***FY 2013 Accomplishments:*** Conduct a customer test at NIE 13.1, a formal Developmental Test at Risk Reduction Event (RRE) 13, the Initial Operational Test & Evaluation (IOT&E) at NIE 13.2 ***FY 2014 Plans:*** Test software capability in support of the Network Operations Center (NOC). Establish tools and a process for 3rd party application testing and accreditation. ***FY 2015 Plans:*** Ongoing Verification & Validation efforts of MCE, HW/SW integration testing, 3rd party application testing and accreditation. Support for Army Warfighting Experiments (AWE), user juries and other demonstrations for MCE.	7.028 -	0.325 -	0.250 -
Title: Program Management ***Articles:*** ***Description:*** JBC-P Program Management, including Technical, Logistics, and Business staff oversight. ***FY 2013 Accomplishments:*** Provide technical, logistics and business oversight for software and hardware development activities. Monitor progress of performing organizations and prepare reports to higher headquarters. Develop and implement plans for process and product improvements. ***FY 2014 Plans:***	0.994 -	1.475 -	0.867 -

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
During this timeframe, will provide technical, logistics and business oversight for JBC-P FoS software development and system engineering activities. Program Management includes funds execution, contract management, and logistical support to program's RDT&E activities. Includes establishment of the MCE Governance process, which includes participation in Common Operating Environment (COE) working group infrastructure, operations, participation in Technical Advisory boards, system of systems engineering & the Platform Integrated Process Team (IPT) efforts. ***FY 2015 Plans:*** Provide program management, logistics, and business oversight for JBC-P/MCE Software/System Engineering activities. Program Management includes overall management of program milestones, major events, funds execution, contract management, and logistical support. Includes management of the MCE Governance process, which includes participation in COE working group infrastructure, operations, participation in Technical Advisory boards, system of systems engineering & the Platform IPT efforts.			
Accomplishments/Planned Programs Subtotals	18.543	7.376	4.433

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• Joint Battle Command - Platform: *OPA W61990*	62.199	70.214	97.892	-	97.892	97.569	106.873	102.213	120.351	-	657.311

Remarks

Procurement funding in Fiscal Year 2014 through 2019 (Base funding) is designated for the procurement, fielding, and program management of JBC-P Family of Systems including JBC-P, JBC-P Log, and the implementation of the Mounted Computing Environment (MCE).

D. Acquisition Strategy

The program entered Milestone B (Engineering and Manufacturing Development phase) in September 2009. RDTE funding for JBC-P began in Fiscal Year 2010. The Acquisition Strategy Report (ASR) was approved in July 2012. The Milestone Decision Authority (MDA) approved a Milestone C, conditional on positive Limited User Test (LUT) results, in July 2012.

The JBC-P Capabilities Development Document in lieu of Capabilities Production Document (CDD ILO CPD) was Joint Requirements Oversight Council (JROC) approved March 2013. Completed Initial Operational Test & Evaluation (IOT&E) as part of Network Integration Evaluation (NIE) 13.2 in 3QFY13. The IOT&E tested the JBC-P system software on existing FBCB2 hardware (non-dismountable vehicle systems) and future production-representative hardware. The MDA authorized entry into Full Rate Production (FRP) and deployment for JBC-P V1.4, December 2013, conditional on achieving Army Interoperability Certification (AIC) and Joint Interoperability Test Certification (JITC) prior to fielding.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
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As encouraged by DoD policy, development efforts are being performed by the Software Engineering Directorate (SED) of the Aviation and Missile Research, Development and Engineering Center (AMRDEC). Any additional development efforts in the approved CDD in lieu of CPD that cannot be accomplished by either SED or SEC will be obtained via other existing contract vehicles. Hardware along with fielding, training and field support efforts will be obtained through existing competitively awarded contracts.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JBC-P Software Development	MIPR	SED, Redstone Arsenal : Huntsville, AL	53.500	8.643		2.568		1.272		-		1.272	21.213	87.196	-
JBC-P Software/System Engineering	MIPR	Multiple : Multiple	28.840	1.878		3.008		2.044		-		2.044	9.607	45.377	-
Design, Develop, First Article Test, and Procure Hardware Prototypes	Various	Multiple : Multiple	7.225	-		-		-		-		-	-	7.225	-
		Subtotal	89.565	10.521		5.576		3.316		-		3.316	30.820	139.798	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PM Support (Gov't-Core)	Sub Allot	PM JBC-P : Aberdeen Proving Ground (APG), MD	1.900	0.994		1.475		0.867		-		0.867	2.405	7.641	-
PM Support (Gov't-Matrix)	IA	PM JBC-P : Aberdeen Proving Ground (APG), MD	1.365	-		-		-		-		-	1.874	3.239	-
PM Support (SETA Contractor)	C/CPFF	PM JBC-P : Aberdeen Proving Gound (APG), MD	2.393	-		-		-		-		-	1.249	3.642	-
		Subtotal	5.658	0.994		1.475		0.867		-		0.867	5.528	14.522	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Develop and Conduct Tests and Assessments	MIPR	Multiple : Multiple	18.480	7.028		0.325		0.250		-		0.250	9.744	35.827	-
		Subtotal	18.480	7.028		0.325		0.250		-		0.250	9.744	35.827	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604805A / *Command, Control, Communications Systems - Eng Dev*	Project (Number/Name) 593 / *Joint Battle Command - Platform (JBC-P)*	

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	113.703	18.543		7.376		4.433		-		4.433	46.092	190.147	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604805A / *Command, Control, Communications Systems - Eng Dev*	**Project (Number/Name)** 593 / *Joint Battle Command - Platform (JBC-P)*

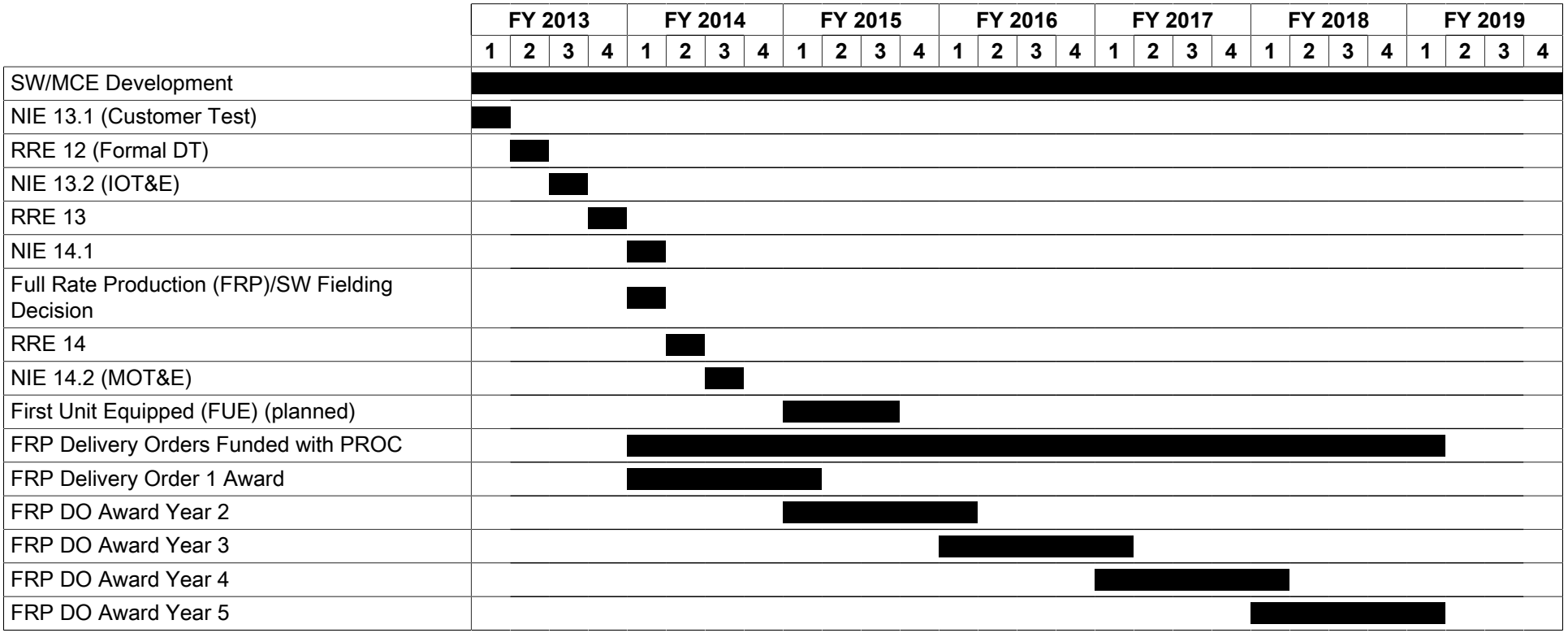

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604805A / *Command, Control, Communications Systems - Eng Dev*	**Project (Number/Name)** 593 / *Joint Battle Command - Platform (JBC-P)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
SW/MCE Development	1	2010	4	2019
NIE 13.1 (Customer Test)	1	2013	1	2013
RRE 12 (Formal DT)	2	2013	2	2013
NIE 13.2 (IOT&E)	3	2013	3	2013
RRE 13	4	2013	4	2013
NIE 14.1	1	2014	1	2014
Full Rate Production (FRP)/SW Fielding Decision	1	2014	1	2014
RRE 14	2	2014	2	2014
NIE 14.2 (MOT&E)	3	2014	3	2014
First Unit Equipped (FUE) (planned)	1	2015	3	2015
FRP Delivery Orders Funded with PROC	1	2014	1	2019
FRP Delivery Order 1 Award	1	2014	1	2015
FRP DO Award Year 2	1	2015	1	2016
FRP DO Award Year 3	1	2016	1	2017
FRP DO Award Year 4	1	2017	1	2018
FRP DO Award Year 5	1	2018	1	2019

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0604807A *I Medical Materiel/Medical Biological Defense Equipment - Eng Dev*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	38.712	39.447	30.397	-	30.397	48.304	44.937	43.593	52.884	Continuing	Continuing
812: *Mil HIV Vac&Drug Dev*	-	3.134	3.900	1.500	-	1.500	5.068	4.848	5.516	5.629	Continuing	Continuing
832: *Field Medical Systems Engineering Development*	-	19.878	23.037	18.204	-	18.204	27.980	26.604	24.525	32.171	Continuing	Continuing
849: *Infec Dis Drug/Vacc Ed*	-	13.358	12.510	10.693	-	10.693	14.857	13.371	13.438	15.084	Continuing	Continuing
VS8: *MEDEVAC Mission Equipment Package (MEP) - End Dev*	-	2.342	-	-	-	-	0.399	0.114	0.114	-	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

FY13 adjustments attributed to Congressional General Reductions (-59 thousand); SBIR/STTR transfers (-1.166 million); and Sequestration reductions (-3.458 million). FY15 reduction attributed to realignment to other higher priority Army programs.

A. Mission Description and Budget Item Justification

This program element (PE) funds advanced development of medical materiel within the System Demonstration and Low Rate Initial Production portions of the acquisition life cycle using 6.5 funding. It supports products successfully developed in the Systems Integration portion of the Systems Development and Demonstration phases through completion of the Milestone C Decision Review. Commercially-off-the-shelf (COTS) medical products are also tested and evaluated for military use, when available. This PE primarily includes pivotal (conclusive) human clinical trials necessary for licensure by the Food and Drug Administration.

(PROJ 812) project funds military relevant human immunodeficiency virus (HIV) medical countermeasures. These funds provide for engineering and manufacturing development of candidate vaccines and drugs to permit large-scale field testing. Development focused on military unique needs effecting manning, mobilization, and deployment. Products from this project will normally transition to DoD Health Programs or OPA Funds.

(PROJ 832) this project funds the engineering and manufacturing development of medical products for enhanced combat casualty care and follow-on care, including rehabilitation. Mature commercial-off-the-shelf (COTS) medical products are also evaluated for military use. Consideration will also be given to reduce the medical sustainment footprint through smaller weight and cube volume, or equipment independence from supporting materiel. Products from this project will normally transition to OPA Funds.

(PROJ 849) funds development of candidate medical countermeasures for military relevant infectious diseases. These products fall between four major areas: vaccines, drugs, diagnostic kits/devices, and insect control measures to limit exposure and disease transmission. FDA approval is a mandatory obligation for all military products

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604807A *I Medical Materiel/Medical Biological Defense Equipment - Eng Dev*

placed into the hands of medical providers or service members for human use. Products from this project will normally transition to DoD Health Programs or OPA funds.

(PROJ VS8) program receives products that transition from VS7 and funds effort to complete research and development for the MEDEVAC Mission Essential Packages (MEPs) to support 256 Medical Evacuation legacy helicopters. The force design will increase the number of air frames in the force from 12 to 15 aircraft for 37 MEDEVAC companies to better meet operation needs.

This program is managed by U.S. Army Medical Materiel Development Activity (USAMMDA) and U.S. Army Medical Materiel Agency (USAMMA) of the US Army Medical Research and Materiel Command.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	43.395	39.468	46.553	-	46.553
Current President's Budget	38.712	39.447	30.397	-	30.397
Total Adjustments	-4.683	-0.021	-16.156	-	-16.156
• Congressional General Reductions	-0.059	-0.021			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.166	-			
• Adjustments to Budget Years	-	-	-16.156	-	-16.156
• Other Adjustments	-3.458	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	Project (Number/Name) 812 / *Mil HIV Vac&Drug Dev*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
812: *Mil HIV Vac&Drug Dev*	-	3.134	3.900	1.500	-	1.500	5.068	4.848	5.516	5.629	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This project funds militarily relevant human immunodeficiency virus (HIV) medical countermeasures. These funds provide for engineering and manufacturing development of candidate vaccines and drugs to permit large-scale field testing. Development is focused on militarily unique needs effecting manning, mobilization, and deployment.

The major contractor is The Henry M. Jackson Foundation for the Advancement of Military Medicine, Rockville, MD. Research efforts are coordinated with the National Institutes of Health.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Military HIV Vaccine and Drug Development	3.134	3.900	1.500
Articles:	-	-	-
Description: This project provides funds for engineering and manufacturing development of candidate vaccines and drugs to permit large-scale field testing of vaccines for medical countermeasures to HIV			
FY 2013 Accomplishments: Refined vaccine administration schedule as well as clinical trial design based on data from previous clinical trials. Adjusted plan for increment 1 future efficacy trial planned to begin in late 2014.			
FY 2014 Plans: Continue to refine vaccine administration schedule as well as clinical trial design based on data from previous clinical trials. Adjust plan for Regional well-controlled clinical trial large enough to demonstrate vaccine efficacy which initiated mid-2013 future Prime/ Boost Regional Phase 3 Study to Confirm Safety and Effectiveness in a Diverse Populaton, planned to begin in early 2018.			
FY 2015 Plans: Will continue to refine vaccine administration schedule as well as clinical trial design based on data from previous clinical trials. Will continue to adjust plan for Regional well-controlled clinical trial large enough to demonstrate vaccine efficacy which initiated mid-2013.			
Accomplishments/Planned Programs Subtotals	3.134	3.900	1.500

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	**Project (Number/Name)** 812 / *Mil HIV Vac&Drug Dev*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Test and evaluate commercially developed vaccine candidates in government-managed trials.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	Project (Number/Name) 812 / *Mil HIV Vac&Drug Dev*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Medical Product Development Management Services Cost	Various	Various : Various	1.339	0.299		0.823		0.173		-		0.173	Continuing	Continuing	-
		Subtotal	1.339	0.299		0.823		0.173		-		0.173	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Medical Product Development Cost	Various	Henry M. Jackson Foundation, : Various	30.279	2.047		0.951		0.325		-		0.325	Continuing	Continuing	Continuing
		Subtotal	30.279	2.047		0.951		0.325		-		0.325	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Medical Product Development Support Cost	Various	Various : Various	0.626	0.031		0.878		0.302		-		0.302	Continuing	Continuing	-
		Subtotal	0.626	0.031		0.878		0.302		-		0.302	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Medical Product Development T&E Cost	Various	Henry M. Jackson Foundation, : Various	24.390	0.757		1.248		0.700		-		0.700	Continuing	Continuing	Continuing
		Subtotal	24.390	0.757		1.248		0.700		-		0.700	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	Project (Number/Name) 812 / *Mil HIV Vac&Drug Dev*	

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	56.634	3.134		3.900		1.500		-		1.500	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	**Project (Number/Name)** 812 / *Mil HIV Vac&Drug Dev*

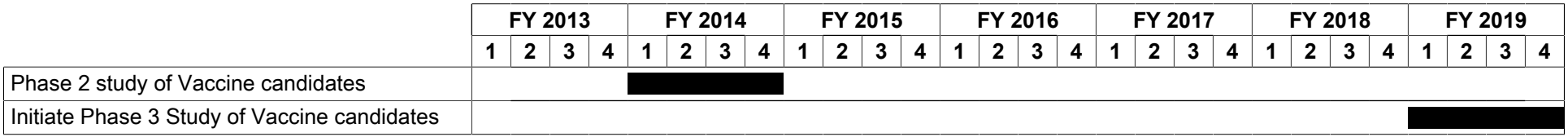

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	**Project (Number/Name)** 812 / *Mil HIV Vac&Drug Dev*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Phase 2 study of Vaccine candidates	1	2014	4	2014
Initiate Phase 3 Study of Vaccine candidates	1	2019	4	2019

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	Project (Number/Name) 832 / *Field Medical Systems Engineering Development*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
832: *Field Medical Systems Engineering Development*	-	19.878	23.037	18.204	-	18.204	27.980	26.604	24.525	32.171	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This project funds the engineering and manufacturing development of medical products for enhanced combat casualty care and follow-on care, including rehabilitation. This project funds pivotal (conclusive) human clinical trials or mechanical engineering evaluations for effectiveness of devices or biologics (products derived from living organisms) to fulfill unique military requirements. Mature commercial-off-the-shelf (COTS) medical products are also evaluated for military use. Consideration is also given to reducing the medical sustainment footprint through smaller weight and cube volume, or equipment independence from supporting materiel. This work is frequently completed through a laboratory/contractor team with the contractor obtaining the U.S. Food and Drug Administration (FDA) licensure for sale of the product.

Major contractors/intra-governmental agencies include: IGR Enterprises,Inc.;Army Medical Department Board Test Center;Se Qual Technologies,Inc.; Enginivity, Inc.;Ultrasound Diagnostics,Inc.;HemCon Medical Technologies,; Cerdak Ltd;Hemerus Medical,LLC; Fast Track Drugs & Biologics,LLC; Integrated Medical Systems,Inc;the National Institutes of Health National Heart, Lung and Blood Institute (NHLBI), and the U.S. Army Aeromedical Research Laboratory, Walter Reed Army Institute of Research (WRAIR) and Institute of Surgical Research (ISR) for user evaluation. Other military agencies include Program Executive Office (PEO) Soldier, PEO Combat Service Support (CSS), and Naval Undersea Warfare Center.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Field Medical Systems Engineering Development PM Medical Devices	0.200	0.943	2.984
Articles:	-	-	-
Description: This project funds the engineering and manufacturing development of medical products for enhanced combat casualty care managed by PM Medical Devices.			
FY 2013 Accomplishments: The Burn Resuscitation Decision Device: Prepared documentation for CPD and MS B/C. This product transitioned to procurement in FY 2013. MS B/C occurred in FY 2013. Oxygen Generator (15 LPM) System: 15LPM draft CDD completed and a request for proposals (RFP) award was received in March 2012. Continued development with a target to field in FY 2015. Replacement for the M-138 Steam Sterilizer: Conducted testing of the device. Began design and development of system in FY 2012 and continued development through FY 2013.			
FY 2014 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	**Project (Number/Name)** 832 / *Field Medical Systems Engineering Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Oxygen Generator (15 LPM) System: Instead of ARMY only Request for Proposals (RFP cooperated with the Air Force 15 LPM on developmental effort. Army efforts are airworthiness certification for MEDEVAC aircraft and other Army-unique requirements; Air Force has funding to complete the project for their needs. Replacement for the M-138 Steam Sterilizer: Continue planned testing of devices designed and developed in previous years. Medical Equipment Sets COTS Modernization of Life Cycle Equipment: Continue development and testing to ensure the most current and cost effective devices are being utilized. Equipment is selected for modernization based on its own life cycle plan as part of a Sets, Kits and Outfits (SKO). Modernization also occurred when products are discontinued, new models are available and new technology introduced to meet current standard of patient care. TBI Diagnostic Assay System Increment II Point of Care Device: Candidate product entered pivotal clinical trial and prepare to obtain FDA approval once transition from project 836 is completed. ***FY 2015 Plans:*** Oxygen Generator (15 LPM) System: An MOA was developed in FY13 between USAMMA and the USAF to address this joint requirement. At this time no Army funds are projected for this project. Anticipate DHP RDT&E funds to be used in support of the joint requirement. Replacement for the M-138 Steam Sterilizer: In FY13 the sterilizer project has undergone a major shift in contract strategy. Funds will be used to allow a manufacturer to fully develop and achieve FDA approval by the end of FY15. At the end of the contract period, it is fully anticipated that the Army will have a new sterilizer available for fielding. Will move this project through the DOD Acquisition process to accommodate the modernization effort. Medical Equipment Sets COTS Modernization of Life Cycle Equipment: will continue development and testing to ensure the most current and cost effective devices are being utilized. Equipment is selected for modernization based on its own life cycle plan as part of a Sets, Kits and Outfits (SKO). Modernization also occurs if a product will be discontinued, new models will be available and new technology will be developed to meet the users need. TBI Diagnostic Assay System Increment II Point of Care Device: This effort has seen a dramatic realignment of effort and scope away from Banyan Technologies to Abbott Labs. The focus of this effort is to use the current Biomarker technology developed by Banyan and cross-level all known technologies to Abbott Diagnostics. Contracting efforts will be developed to facilitate this path forward. Army currently uses the i-STAT in assemblages. The intent of this effort is to modernize the i-STAT platform to accommodate the new cartridges associated with the TBI Biomarkers. Noninvasive Neurodiagnostics TBI: Noninvasive Neurodiagnostic technologies for TBI is multi-focused program that transitions product from S&T and Commercial Off the Shelf (COTS) products. Efforts to collate all non-invasive technologies into one integrated IPT are currently in place. The 3 technologies currently involved are the Eye- Tracking System, the QEEG and Balance Platforms. Future components of the multi-focused approach will fall under the scope of this line item. Anticipate full-up IPTs with funding allocations designated in FY15. Impedance Threshold Device for the Treatment of TBI: Current device has a 510(k) (Premarket Notification) clearance for multiple indications. The submission of a new 510(k) is planned to cover the expanded indications for the currently fielded device. Advanced Wound Dressing: Will conduct comparative studies for the Advanced Wound Care COTS products (in-vivo animal or human studies).			
Title: Field Medical Systems Engineering Development PM Pharmaceuticals	13.506	16.876	10.470

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	**Project (Number/Name)** 832 / *Field Medical Systems Engineering Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Articles:	-	-	-
Description: Funding is provided for engineering and manufacturing development of medical products managed by PM Pharmaceuticals for enhanced combat casualty care and follow-on care, including rehabilitation. ***FY 2013 Accomplishments:*** Blood Pathogen Reduction/Inactivation: Transitioned to advanced development in FY 2012 then it transitioned from Army to be funded with Defense Health Program RDT&E funding in FY13. Remaining Army funding transitioned to Freeze-dried Plasma program to maintain schedule and avoid delays. Freeze-Dried Plasma: Finalized Phase 3 test plan and protocols, recruited test sites for Phase 3 Pivotal clinical trial, and continued development of commercially sustainable current Good Manufacturing Practices compliant manufacturing capability. Accelerated fielding of a FDA-approved Freeze-Dried Plasma was validated in the June 2011 Army Surgeon General's Report by the Blast Injury Task Force. Cryopreserved Platelets: continued validation of current Good Manufacturing Practices manufacturing processes in support of U.S. Food and Drug Administration licensure. Developed Phase 3 clinical testing network and protocols in the event this is required by the U.S. Food and Drug Administration. ***FY 2014 Plans:*** Cryopreserved Platelets: Complete Phase 2 safety and effectiveness clinical trial in cancer patients with platelet deficiency and continue development of Phase 3 clinical testing network and protocols, if Phase 3 Pivotal clinical trial is required by the U.S. Food and Drug Administration. Freeze-Dried Plasma Program: continue development and validation of a sustainable current Good Manufacturing Practices manufacturing process in support of U.S. Food and Drug Administration licensure; and initiate Phase 2b expanded safety and effectiveness clinical studies. ***FY 2015 Plans:*** Current Freeze Dried Plasma development effort terminated in FY13 with prime systems contractor due to bankruptcy. Schedule revised for new development effort begin in FY14. Will continue Phase 2b safety clinical study. Cryopreserved Platelets schedule will be extended one year due to the FDA requiring an additional safety clinical study. Will begin Phase 2 efficacy clinical trial in cancer patients with platelet deficiency and continue development of Phase 3 clinical testing and protocols for pivotal study.			
Title: Field Medical Systems Engineering Development PM Integrated Clinical Systems (ICS) ***Description:*** This project funded the engineering and manufacturing development of medical products managed by PM ICS for enhanced combat casualty care and follow-on care, including rehabilitation. ***FY 2015 Plans:*** Pre-Hospital Medical Informatics Transport: Will continue with the Integrated System Design work effort in the Engineering and Manufacturing Development Phase of the Defense Acquisition Management System for the Pre-Hospital Medical Informatics	-	-	1.357

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	**Project (Number/Name)** 832 / *Field Medical Systems Engineering Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Transport System in order to provide medics with state of the art capability to monitor and communicate patient data to deployed medical treatment facilities and medical C2 nodes.			
Title: Field Medical Systems Engineering Development PM Medical Support Systems	6.172	5.218	3.393
Articles:	-	-	-

Description: This project funds the engineering and manufacturing development of medical products managed by PM Medical Support Systems for enhanced combat casualty care and follow-on care, including rehabilitation.

FY 2013 Accomplishments:
Transitioned from Project 836 and collaborate with PM HBCT on final integration/operational testing of the treatment table and blood refrigerator in the future treatment vehicle variant. As part of the medical equipment sets, transitioned cold chain technology, trauma tiered medical bag, water/waste water management system, and quad fold litter from 836 and complete operational evaluation. Continued modernization of medical equipment sets for preventive medicine, air and ground medical evacuation, and fresh water/waste water combat support hospital support. Transitioned ISO panel from 836 and complete operational testing. Transitioned from 836 and completed final operational evaluation of Force Provider CSH. Complete operational/technical testing of Future Medical Shelter System (hard-wall 1-sided and 2-sided shelters) for a materiel procurement decision. Continued collaboration with PEO Combat Service/Combat Service Support on finalization of MRAP medical vehicle evacuation platforms including a redesign of the Casualty Evacuation (CASEVAC) medical equipment set.

FY 2014 Plans:
As part of the medical equipment sets, continue to perform form, fit and function of field medical sink, and continue to evaluate commercial litters and cold chain storage devices. Continue to evaluate modernization efforts and conduct airworthiness testing for medical equipment sets Medical Evacuation and Treatment Vehicles Medical Equipment Set and Mission Essential Package with products covering preventive medicine, air and ground medical evacuation, and fresh water/waste water systems. Complete operational testing of the ISO operating room shelter and finalize Force Provider soft-walled shelter for procurement. Continue collaboration with Program Executive Office Combat Support/Combat Support Service (PEO CS/CSS) and Program Executive Office Ground Combat Systems (PEO GCS) on development efforts for emerging medical vehicle evacuation/ casualty evacuation (CASEVAC) variants. Medical variants that will be collaborated on with PEO CS/CSS consist of medical shelters, Mine Resistant Ambush Protected (MRAP), Armored Multipurpose Vehicle (AMPV), and Joint Light Tactical Vehicle (JLTV). Collaborate with PEO GCS on medical variants for the Heavy Brigade Combat Team (HBCT). Complete operational testing of the Environmental Sentinel Biomonitor (ESB) when it transitions from project 836 and conduct a milestone C (Engineering, Manufacturing and Development phase review). The ESB will assist preventative medicine personnel certify water capabilities by providing a presumptive screening capability that can rapidly identify toxicity in water.

FY 2015 Plans:

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	**Project (Number/Name)** 832 / *Field Medical Systems Engineering Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Modernization of medical equipment sets: As part of the medical equipment sets, will complete form, fit and function of field medical sink, and will continue to evaluate commercial litters, cold chain storage devices and commercial items. Airworthiness Testing: Will continue to evaluate modernization efforts and conduct airworthiness testing for medical equipment sets Medical Evacuation and Treatment Vehicles Medical Equipment Set and Mission Essential Package with products covering air and ground medical evacuation. PEO Combat Support /Combat Support Service Support: Will continue collaboration with Program Executive Office Combat Support/Combat Service Support (PEO CS/&CSS) and Program Executive Office Ground Combat Systems (PEO GCS) on development efforts for emerging medical vehicle evacuation/casualty evacuation (CASEVAC) package. Environmental Sentinel Biomonitor (ESB): Will complete operational testing of the Environmental Sentinel Biomonitor (ESB) and conduct a milestone C (Engineering, Manufacturing and Development phase review). Milestone C start was delayed in FY14 the ESB will assist preventative medicine personnel certify water capabilities by providing a presumptive screening capability that can rapidly identify toxicity in water. Waste Treatment System for the CSH: Will develop Waste Treatment System (WTS) for the CSH. The WTS will render liquid and other fluid medical (biohazard) waste products sterile and otherwise inert to the environment in austere, deployed locations. Current methods do mitigate the risk of contamination, but only reduce the levels of agents left behind; they cannot assure total inactivation of all pathogens or the neutralization of chemical agents. Altitude Readiness Management System (ARMS): Will complete validation/verification of the Altitude Readiness Management System (ARMS). The ARMS product is a handheld sensor and software decision device to plan, monitor, and manage unit altitude illness risk and task performance prediction. Will transition from 836. Improved Vector Trap: Will develop prototypes of the Improved Vector Trap for testing. The Improved Vector Trap is a device which allows for the attraction and subsequent collection of disease-carrying insects for disease risk assessment. Will transition from 836. Portable Vector Identification Workstation: Will begin development of field deployable Vector Identification Workstation to provide situational awareness necessary to prevent/mitigate vector borne threats and associated environmental hazards.			
Accomplishments/Planned Programs Subtotals	19.878	23.037	18.204

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Develop in-house or industrial prototypes in government-managed programs to meet military and regulatory requirements for production and fielding.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	Project (Number/Name) 832 / *Field Medical Systems Engineering Development*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Medical Product Development Management Services Cost	Various	Various : Various	22.478	2.577		3.903		2.610		-		2.610	Continuing	Continuing	Continuing
		Subtotal	22.478	2.577		3.903		2.610		-		2.610	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Freeze-dried Human Plasma	Various	HemCon Medical Technologies, Inc, : Tigard OR	23.321	3.953		6.715		-		-		-	Continuing	Continuing	Continuing
Hypertonic Saline Dextran	Various	National Institutes of Health, National Heart, Lung and Blood Institute (NHLBI) : Various	15.100	-		-		-		-		-	Continuing	Continuing	Continuing
Medical Product Development Cost	Various	Various : Various	3.260	0.250		0.608		1.124		-		1.124	Continuing	Continuing	Continuing
Extended Life Red Blood Cell Product	Various	Hemerus Medical, LLC, : Various	3.140	-		-		-		-		-	Continuing	Continuing	Continuing
Cryopreserved Platelets	Various	Clinical Research Management, Inc : Hinckley, OH	0.000	-		1.200		1.911		-		1.911	-	3.111	-
Cryopreserved Platelets	Various	Multiple DoD activities and Dartmouth Hitchcock Med Ctr : North Potomac, MD	7.300	7.062		-		-		-		-	Continuing	Continuing	Continuing
Cryopreserved Platelets	Various	TBD : TBD	0.000	-		1.450		-		-		-	-	1.450	-
TBI Diagnostic Assay System - Increment II (benchtop/POC/ Bandits)	Various	Banyan BioMarkers, Inc : Alachua, FL	0.000	-		0.373		-		-		-	-	0.373	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	Project (Number/Name) 832 / *Field Medical Systems Engineering Development*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Noninvasive Neurodiagnostics	TBD	TBD : TBD	0.000	-		-		2.647		-		2.647	-	2.647	-
Impedance Threshold Device for the Treatment of Traumatic Brain Injury	TBD	Advance Circulatory Systems Inc. : Roseville, MN	0.000	-		-		0.335		-		0.335	-	0.335	-
Pre-Hospital Medical Informatics Transport (Ground Transport Telemedicine)	TBD	TBD : TBD	0.000	-		-		0.950		-		0.950	-	0.950	-
		Subtotal	52.121	11.265		10.346		6.967		-		6.967	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Regulatory Support	Various	Clinical Research Management,Inc,. : Various	5.557	-		-		0.659		-		0.659	Continuing	Continuing	Continuing
Medical Product Development Support Cost	Various	Various : Various	4.746	1.108		4.665		-		-		-	Continuing	Continuing	Continuing
Medical Equipment Sets Development	Various	Various : Various	0.000	-		0.456		2.349		-		2.349	-	2.805	-
		Subtotal	10.303	1.108		5.121		3.008		-		3.008	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Medical Product Development T&E Cost	Various	Various : Various	7.696	4.928		2.403		-		-		-	Continuing	Continuing	Continuing
Cryopreserved Platelets	TBD	TBD : TBD	0.000	-		1.150		1.743		-		1.743	-	2.893	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	Project (Number/Name) 832 / *Field Medical Systems Engineering Development*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Medical Equipment Sets Development	Various	Various : Various	0.000	-		0.114		1.092		-		1.092	-	1.206	-
Freeze Dried Plasma	C/CPFF	TBD : TBD	0.000	-		-		2.784		-		2.784	-	2.784	-
		Subtotal	7.696	4.928		3.667		5.619		-		5.619	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	92.598	19.878		23.037		18.204		-		18.204	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	**Project (Number/Name)** 832 / *Field Medical Systems Engineering Development*

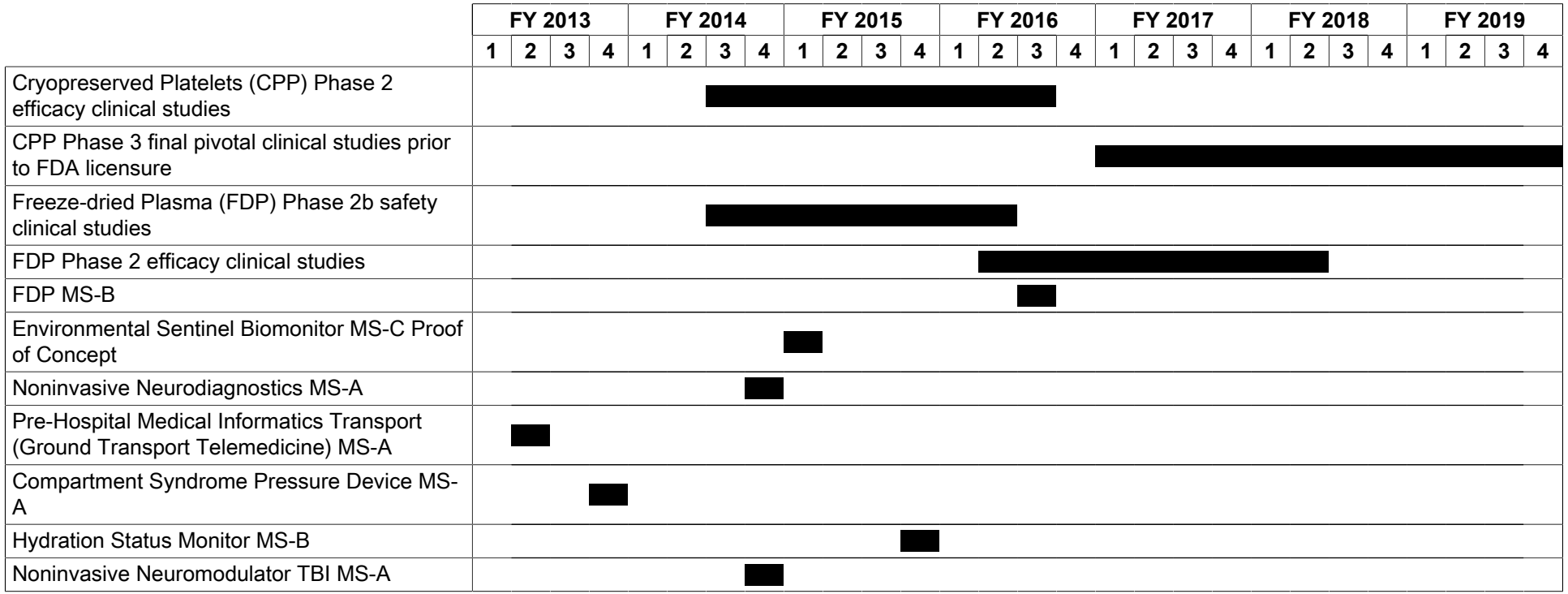

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	**Project (Number/Name)** 832 / *Field Medical Systems Engineering Development*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Cryopreserved Platelets (CPP) Phase 2 efficacy clinical studies	3	2014	3	2016
CPP Phase 3 final pivotal clinical studies prior to FDA licensure	1	2017	4	2019
Freeze-dried Plasma (FDP) Phase 2b safety clinical studies	3	2014	2	2016
FDP Phase 2 efficacy clinical studies	2	2016	2	2018
FDP MS-B	3	2016	3	2016
Environmental Sentinel Biomonitor MS-C Proof of Concept	1	2015	1	2015
Noninvasive Neurodiagnostics MS-A	4	2014	4	2014
Pre-Hospital Medical Informatics Transport (Ground Transport Telemedicine) MS-A	2	2013	2	2013
Compartment Syndrome Pressure Device MS-A	4	2013	4	2013
Hydration Status Monitor MS-B	4	2015	4	2015
Noninvasive Neuromodulator TBI MS-A	4	2014	4	2014

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	Project (Number/Name) 849 / *Infec Dis Drug/Vacc Ed*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
849: *Infec Dis Drug/Vacc Ed*	-	13.358	12.510	10.693	-	10.693	14.857	13.371	13.438	15.084	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This project funds development of candidate medical countermeasures for militarily relevant infectious diseases. These products fall within four major areas: vaccines, drugs, diagnostic kits/devices, and determining if insects are infected with pathogenic organisms capable of infecting service members' insect control/preventive medicine measures to limit exposure and disease transmission. It funds research that supports conclusive human clinical trials for large-scale human effectiveness (capacity to produce a desired size of an effect under ideal or optimal conditions) testing, expanded human safety clinical trials, long-term animal studies, and related manufacturing tests. This work, which is jointly performed by military laboratories, civilian contracted pharmaceutical firms and foreign research partners, is directed toward the prevention of disease, early diagnosis, and speeding recovery once diagnosed. Medical products approved for human use must successfully complete a series of clinical trials that are required and regulated by the U.S. Food and Drug Administration (FDA). FDA approval is a mandatory obligation for all military products placed into the hands of medical providers or service members for human use. Development priority is based upon four major factors: (1) the extent of the disease within the Combatant Commands' theater of operations, (2) the clinical severity of the disease, (3) the technical maturity of the proposed solution, and (4) the affordability of the solution (development, production, and sustainment). Malaria, dysentery, hepatitis , and Dengue diseases (a severe debilitating disease transmitted by mosquitoes), which are found in Africa Command, Central Command, European Command, Southern Command, and Pacific Command areas are at the top of the infectious diseases requirements list.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Infectious Disease Drug and Vaccine Engineering Development	13.358	12.510	10.693
Articles:	-	-	-
Description: Funding for research and development efforts for Drugs and Vaccines.			
FY 2013 Accomplishments: Reviewed and analyzed data from the on-going Adult Indication study begun in FY 2012 with industry partner Sanofi Pasteur and determine a Go/No Go Decision on continued product development for the Dengue Tetravalent Vaccine. Phase 3 clinical effectiveness studies are on-going with industry partner Sanofi Pasteur for the Dengue Tetravalent Vaccine, as well as Phase 3 studies for traveler/military indication. Completed preparation prior to initiating Phase 3 Pivotal clinical trial for Malaria Prophylaxis Drug. For Topical Antileishmanial Cream, complete Phase 2 safety and effectiveness New World clinical trial analysis and complete Phase 3 New World Pivotal clinical trial, and begin New World Treatment Protocol for Phase 3 site(s). The enteric JBAIDS assay transitions to advanced development and clinical trial planning begins. The Dengue Rapid Diagnostic Device (DRDD) (Hand Held Infectious Disease Diagnostics) transitions to advanced development and will be evaluated in a multi-site			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	**Project (Number/Name)** 849 / *Infec Dis Drug/Vacc Ed*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
clinical performance study. Leishmania Rapid Diagnostic Device (LRDD) continued the new world clinical trial started in FY 2012. The Leishmania Skin Test project completed FDA approval and transition to procurement. The Antimalarial Drug, Artesunate Intravenous transitioned from 808 and conducted a MS C review ***FY 2014 Plans:*** :Dengue Tetravalent Vaccine (DTV): Continue patient follow up and serology (study of blood serum) and immunology (study of body's immune system) testing to determine persistence of protection for phase 3 (safety and effectiveness Clinical trials on >300 subjects) endemic region studies, continue performance of military-specific needs US adult clinical studies, and continue studies to determine if the vaccine will protect against the disease. Malaria Prophylaxis Drug (drug to prevent from contracting Malaria): continue Pivotal clinical trials and begin efforts to determine if licensing in Austratlia is feasible. Topical Antileishmanial Cream (TLC, Paromomycin/Gentamicin): Will complete New World Phase 3 (safety and effectiveness clinical trials > 300 subjects) clinical trial and Treatment Protocol for Phase 3 site(s), and complete Pivotal clinical trials in Tunisia and the U.S. Dengue Joint Biological Agent identification and Diagnostic System (JBAIDS): An updated Analysis of Alternatives (AoA and requirements analysis helped to determine that the Dengue JBAIDS capability does not meet user needs; therefore, the project has been terminated. Leishmania Rapid Diagnostic Device (LRDD): conduct milestone C (Engineering, Manufacturing and Development phase review) review, obtain FDA approval, and begin fielding. The Leishmania Skin Test (LST) project: The response from the FDA indicating they would only support limited clinical utility and require additional product characterization and additional clinical trial requirements helped to determine that the LST capability does not meet user needs; therefore, the project has been terminated. Antimalarial Drug, Artesunate Intravenous: Plan to obtain FDA approval and begin fielding to prevent deaths from severe or complicated Malaria. Phase 3 (Safety and Effectiveness Clinical trials on 250 to 3000 subjects). Preventive Medicine advanced detection devices: for the control/mitigation of arthropod (insect) borne diseases, begin field testing and evaluation. Preventive Medicine advanced pesticides : will begin field testing and evaluation. Preventive Medicine spatial repellents: will begin field testing and evaluation. Preventive Medicine arthropod collection devices: begin field testing and evaluation. Infectious Disease Diagnostic products: begin field testing and evaluation of several product candidates to include: Scrub Typhus, Rickettsiae, and Sand Fly Fever. ***FY 2015 Plans:*** Dengue Tetravalent Vaccine: Dengue Tetravalent Vaccine (DTV): will continue patient follow up and will complete Phase 3 pivotal clinical trials and adult/military-specific indication studies. Will continue and complete follow up of Phase 2 military-specific / immunological evaluation study in Syracuse, NY. Development of Biologic License Application (BLA) for US Licensure, development of Final reports, will continue trial-related activities and data analysis. Commercial Partner will validate production of batches at their dedicated manufacturing facility. Next Generation Malaria Prophylaxis: Malaria Prophylaxis Drug (drug to prevent contracting Malaria): will complete New Drug Application (NDA) preparatory work for a supplemental NDA filing with commercial partner Glaxo-Smith Kline after halting activities associated with a phase 3 study that is no longer needed. Topical Antileishmanial Cream: Topical Antileishmanial Cream: Transitioned from project 808 in FY14. Phase 3 New World clinical trial will be completed			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	**Project (Number/Name)** 849 / *Infec Dis Drug/Vacc Ed*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
in FY15 based on additional guidance and requirements from the FDA. Will conduct MS-C decision review and submit New Drug Application to the FDA. Leishmania Rapid Diagnostic Device: Will complete fielding/delivery of Leishmania Rapid Diagnostic Device. Antimalarial Drug, Artesunate Intravenous: Antimalarial Drug, Artesunate Intravenous: conducted MS-C decision review and submitted New Drug Application to the FDA sent in FY14. Planning to obtain FDA approval in FY15 and begin fielding/delivery of Antimalarial Drug, Artesunate Intravenous. Preventive Medicine advanced detection devices: Preventive Medicine advanced detection devices: for the control/mitigation of arthropod (insect) borne diseases, will begin field testing and evaluation. Preventive Medicine advanced pesticides: Preventive Medicine advanced pesticides: will begin field testing and evaluation. Preventive Medicine spatial repellents: Preventive Medicine spatial repellents: will begin field testing and evaluation. Preventive Medicine arthropod collection devices: Preventive Medicine arthropod collection devices: will begin field testing and evaluation. Infectious Disease Diagnostic: Infectious Disease Diagnostic products: will begin field testing and evaluation of several product candidates to include: Scrub Typhus, Rickettsiae, and Sand Fly Fever.			
Accomplishments/Planned Programs Subtotals	13.358	12.510	10.693

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Test and evaluate in-house and commercially developed products in government-managed trials to meet FDA requirements and Environmental Protection Agency registration.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	Project (Number/Name) 849 / *Infec Dis Drug/Vacc Ed*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Medical Product Development Management Services Cost	Various	Various : Various	14.489	2.172		2.220		0.265		-		0.265	Continuing	Continuing	Continuing
Medical Product Development Management Services Cost	C/CPFF	General Dynamics Information Technology : Frederick MD	0.000	-		-		1.012		-		1.012	-	1.012	-
		Subtotal	14.489	2.172		2.220		1.277		-		1.277	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Medical Product Development Cost	Various	Various : Various	24.594	3.621		5.100		1.331		-		1.331	Continuing	Continuing	Continuing
Topical Antileishmanial Drug	TBD	TBD : TBD	0.000	2.400		-		-		-		-	-	2.400	-
Topical Antileishmanial Drug	C/CPFF	Advantar Laboratories, INC : TBD	0.000	-		-		1.355		-		1.355	-	1.355	-
Dengue Tetravalent Vaccine	TBD	TBD : TBD	0.000	-		-		1.525		-		1.525	-	1.525	-
		Subtotal	24.594	6.021		5.100		4.211		-		4.211	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Medical Product Development Support Cost	Various	Various : Various	11.943	2.620		2.624		0.690		-		0.690	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	Project (Number/Name) 849 / *Infec Dis Drug/Vacc Ed*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Medical Product Development Support Cos	PO	Clinical Research Management, In : Hinckley, OH	0.000	-		-		3.168		-		3.168	-	3.168	-
		Subtotal	11.943	2.620		2.624		3.858		-		3.858	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Medical Product Development T&E Cost	Various	Various : Various	33.922	2.545		1.182		1.347		-		1.347	Continuing	Continuing	Continuing
Product Development of Dengue Tetravalent Vaccine	Various	TBD : TBD	0.000	-		1.384		-		-		-	-	1.384	-
		Subtotal	33.922	2.545		2.566		1.347		-		1.347	-	-	-

	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	84.948	13.358		12.510		10.693		-		10.693	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	**Project (Number/Name)** 849 / *Infec Dis Drug/Vacc Ed*

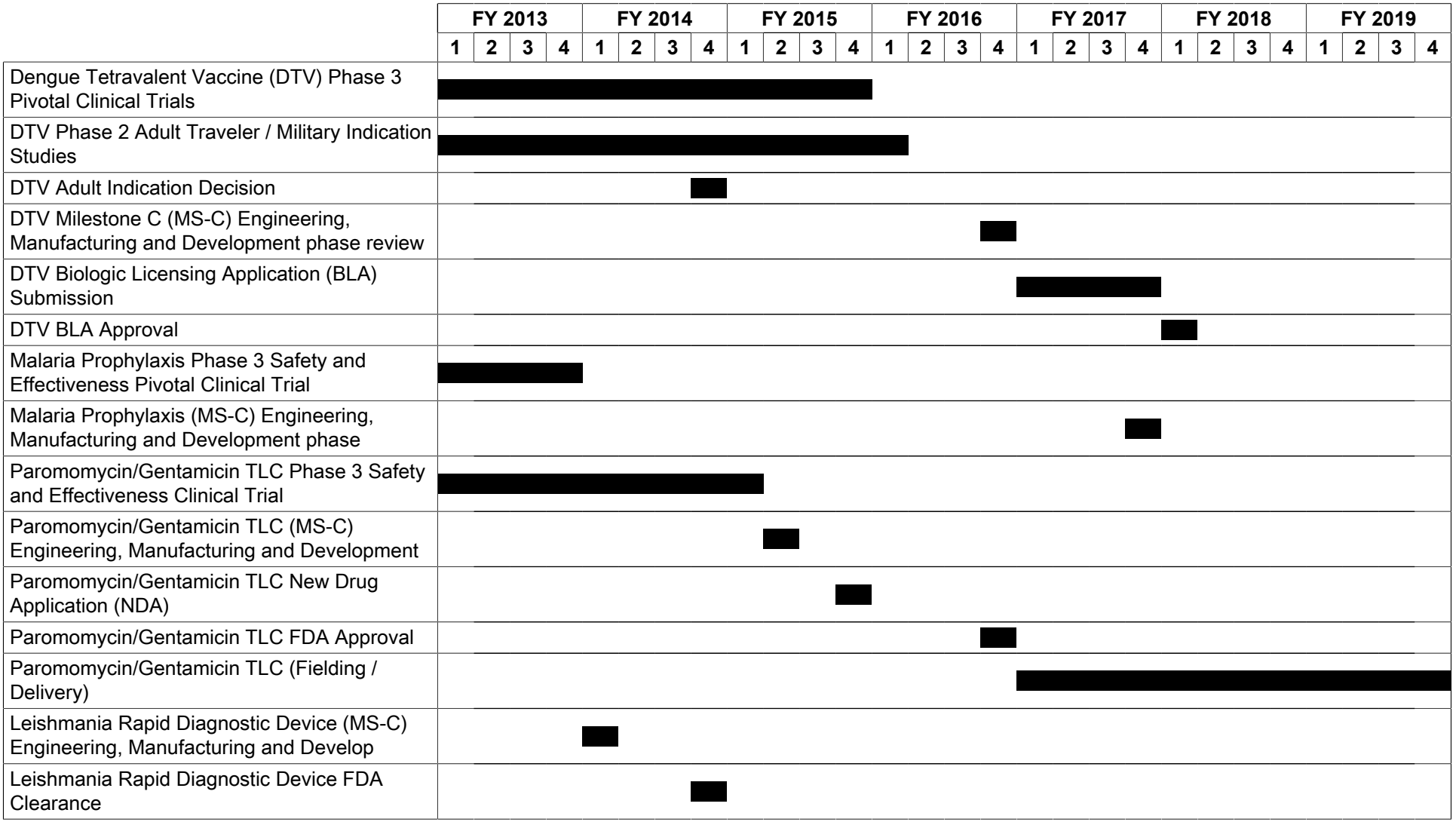

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	**Project (Number/Name)** 849 / *Infec Dis Drug/Vacc Ed*

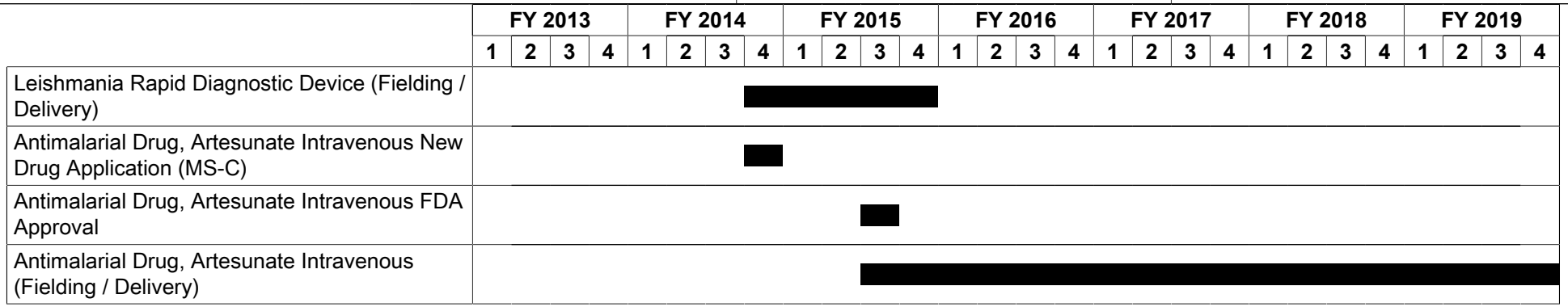

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	**Project (Number/Name)** 849 / *Infec Dis Drug/Vacc Ed*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Dengue Tetravalent Vaccine (DTV) Phase 3 Pivotal Clinical Trials	1	2011	4	2015
DTV Phase 2 Adult Traveler / Military Indication Studies	2	2012	1	2016
DTV Adult Indication Decision	4	2014	4	2014
DTV Milestone C (MS-C) Engineering, Manufacturing and Development phase review	4	2016	4	2016
DTV Biologic Licensing Application (BLA) Submission	1	2017	4	2017
DTV BLA Approval	1	2018	1	2018
Malaria Prophylaxis Phase 3 Safety and Effectiveness Pivotal Clinical Trial	1	2013	4	2013
Malaria Prophylaxis (MS-C) Engineering, Manufacturing and Development phase	4	2017	4	2017
Paromomycin/Gentamicin TLC Phase 3 Safety and Effectiveness Clinical Trial	3	2011	1	2015
Paromomycin/Gentamicin TLC (MS-C) Engineering, Manufacturing and Development	2	2015	2	2015
Paromomycin/Gentamicin TLC New Drug Application (NDA)	4	2015	4	2015
Paromomycin/Gentamicin TLC FDA Approval	4	2016	4	2016
Paromomycin/Gentamicin TLC (Fielding / Delivery)	1	2017	4	2019
Leishmania Rapid Diagnostic Device (MS-C) Engineering, Manufacturing and Develop	1	2014	1	2014
Leishmania Rapid Diagnostic Device FDA Clearance	4	2014	4	2014
Leishmania Rapid Diagnostic Device (Fielding / Delivery)	4	2014	4	2015
Antimalarial Drug, Artesunate Intravenous New Drug Application (MS-C)	4	2014	4	2014
Antimalarial Drug, Artesunate Intravenous FDA Approval	3	2015	3	2015
Antimalarial Drug, Artesunate Intravenous (Fielding / Delivery)	3	2015	4	2019

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	Project (Number/Name) VS8 / *MEDEVAC Mission Equipment Package (MEP) - End Dev*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
VS8: *MEDEVAC Mission Equipment Package (MEP) - End Dev*	-	2.342	-	-	-	-	0.399	0.114	0.114	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Funding for this project starts in FY 2013. Original models of Army Black Hawk MEDEVAC helicopters continue to play a major role in maintaining high US troop survival rates in Iraq and Afghanistan by evacuating wounded troops in less than one-hour. In 2009, a VCSA-approved force design update increased the number of air frames in the force from 12 to 15 aircraft for 37 MEDEVAC companies to better meet operational needs. In 2010, the Army Medical Department (AMEDD) accepted life-cycle management of the MEDEVAC MEP from PEO Aviation. In order to achieve required operational capability and enhance commonality across the MEDEVAC fleet, the MEDEVAC MEP program upgrades and retrofits the 256 MEDEVAC legacy helicopters to achieve the medical capability provided by the HH-60M, which is factory built for the MEDEVAC mission.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: MEDEVAC Mission Sensor Forward Looking Infrared Radar (FLIR)	2.342	-	-
Articles:	-	-	-
Description: MEDEVAC Mission Sensor (MMS) FLIR for UH-60 aircraft. One of the requirements for the UH-60A/L MEDEVAC is a sensor system that will assist the pilots in locating patient pick-up points and assist them in maintaining situational awareness in night and adverse weather conditions. The MMS is currently being qualified for use on the HH-60M aircraft. This system will be installed on UH-60 aircraft using the proven Sponson-Mount FLIR system, which is currently being used in Operation Enduring Freedom (OEF) for the MEDEVAC mission.			
FY 2013 Accomplishments: Transitioned from VS7 and completed testing and integration of the Talon FLIR into the aircraft suspenson to ensure maximum capability of the sensor, while minimizing impact to aircraft performance.			
Accomplishments/Planned Programs Subtotals	2.342	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	**Project (Number/Name)** VS8 / *MEDEVAC Mission Equipment Package (MEP) - End Dev*

D. Acquisition Strategy

Develop in-house or industrial prototypes in government-managed programs to meet military MEDEVAC and regulatory requirements for production and fielding.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	Project (Number/Name) VS8 / *MEDEVAC Mission Equipment Package (MEP) - End Dev*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MEDEVAC Mission Sensor Forward Looking Infrared	TBD	Redstone Arsenal, : AL	0.000	1.721		-		-		-		-	-	1.721	-
		Subtotal	0.000	1.721		-		-		-		-	-	1.721	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Medical Product Development Support Cost	SS/UCA	Redstone Arsenal : AL	0.000	0.621		-		-		-		-	-	0.621	-
		Subtotal	0.000	0.621		-		-		-		-	-	0.621	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	2.342		-		-		-		-	-	2.342	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	**Project (Number/Name)** VS8 / *MEDEVAC Mission Equipment Package (MEP) - End Dev*

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
MEDEVAC Mission Sensor (MMS) FLIR																												

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604807A / *Medical Materiel/Medical Biological Defense Equipment - Eng Dev*	**Project (Number/Name)** VS8 / *MEDEVAC Mission Equipment Package (MEP) - End Dev*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
MEDEVAC Mission Sensor (MMS) FLIR	2	2013	4	2013

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0604808A *I Landmine Warfare/Barrier - Eng Dev*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	37.769	92.236	57.705	-	57.705	52.477	24.305	5.377	1.014	Continuing	Continuing
415: *Mine Neutral/Detection*	-	24.099	70.051	47.028	-	47.028	48.143	24.305	5.377	1.014	Continuing	Continuing
434: *Anti-Personnel Landmine Alternatives (NSD)*	-	13.670	22.185	10.677	-	10.677	4.334	-	-	-	-	50.866

The FY 2015 OCO Request will be submitted at a later date.

Note

FY 2013: Budget decreases of $60.500 million and $0.904 million for Congressional and SBIR/STTR reductions.

FY 2015: Budget supports Project 415, Mine Neutral/Detection and Project 434, Anti-Personnel Landmine Alternatives (NSD).

A. Mission Description and Budget Item Justification

This program element (PE) provides for the technology development and demonstration of networked munitions, countermine systems, and counter improvised explosive device capabilities. This PE also implements the National Landmine Policy to develop alternatives to the non-self-destructing counter mobility anti-personnel landmine systems. The PE contributes to Area Access and Area denial (A2/AD) to support unified land operations and improve soldier survivability.

Project 415, Mine Neutralization/Detection provides for development of next generation standoff, detection, and neutralization capability programs such as Husky Mounted Detection System (HMDS), Route Clearance & Interrogation System (RCIS), Vehicle Optics Sensor System (VOSS), Route Clearance Vehicles (RCV), Multi-Function Display (MFD), development of interface kits and the Autonomous Mine Detection System (AMDS). It also supports development of Explosive Hazard Pre-Detonation (EHP) capability to neutralize/detonate a broad spectrum of improvised explosive hazards while on the move, to support A2 route clearance missions.

Project 434, Spider Networked Munitions (NM) is an integrated system of effects (lethal and non-lethal Anti Personnel (AP), counter mobility and AD munition, software, and communications. The Spider system is a hand emplaced, networked remotely controlled (Man-In-The Loop) system that provides highly responsive terrain-shaping and force protection capabilities. Spider Inc 1 replaces persistent anti-personnel landmines, is compliant with US National Landmine policy, and is fielded and operational in Afghanistan. Spider Inc 1A will build upon the existing Spider system, develop additional capabilities to enhance the Spider Remote Control Station and demonstrate the ability to employ legacy Government-Off-The-Shelf (GOTS) lethal and non-lethal AP, counter mobility, and the new Spider Non-Lethal Launcher (NLL).a

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army					Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*			R-1 Program Element (Number/Name) PE 0604808A / *Landmine Warfare/Barrier - Eng Dev*		
B. Program Change Summary ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO**	**FY 2015 Total**
Previous President's Budget	104.971	92.285	50.603	-	50.603
Current President's Budget	37.769	92.236	57.705	-	57.705
Total Adjustments	-67.202	-0.049	7.102	-	7.102
• Congressional General Reductions	-60.500	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.904	-			
• Adjustments to Budget Years	-5.798	-0.049	7.102	-	7.102

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604808A / *Landmine Warfare/Barrier - Eng Dev*				Project (Number/Name) 415 / *Mine Neutral/Detection*			
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
415: *Mine Neutral/Detection*	-	24.099	70.051	47.028	-	47.028	48.143	24.305	5.377	1.014	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This Project provides for Engineering Manufacturing and Development (EMD) for the next generation of capabilities to detect, identify and neutralize hybrid threats and explosive hazards such as Improvised Explosive Devices (IEDs) and landmines. These capabilities are a Family of Systems (FOS) encompassing handheld, vehicle mounted, small robotic mounted, aerial platform mounted and Area Access (A2), and neutralization systems operating in manned, remotely controlled, semi-autonomous or fully autonomous modes. Continued development of this FOS is necessary to support Route Clearance Platoons located within both Engineer Companies, and Brigade Engineering Battalion Brigade Combat Teams.

HMDS is a Counter Explosive Device System that provides standoff detection and marking of metallic and low-metallic surface-laid and shallow-buried antitank landmines, unexploded ordinance, trigger mechanisms, and deep buried IEDs and metallic encased caches in support of route clearance operations. It provides Area Access and freedom of movement for the Commander. HMDS is a mission equipment package mounted on the Husky route clearance vehicle that consists of a ground penetrating radar (GPR), deep buried detection (DBD) capability and semi-autonomous operation. The Husky Mounted GPR detection capability will detect and accurately mark a broader spectrum of suspected explosive hazards and trigger mechanisms in a wider range of road surfaces and varying soil conditions. The DBD capability will detect and accurately mark suspected deep buried metallic improvised explosive devices (IEDs) and metallic encased caches. The Semi-Autonomous Control (SAC) capability will enable an operator to semi-autonomously control all functions of a Husky in an unmanned mode from inside the Mine Protected Clearance Vehicle at standoff and will remove the operator from the proximity of the effects of explosive hazards.

The Route Clearance & Interrogation System (RCIS) consists of two semi-autonomous vehicles and a designated control vehicle which provides a standoff capability to detect and neutralize the full spectrum of explosive hazards by integrating a semi-autonomous kit onto a High Mobility Engineering Excavator (HMEE) and the RG-31 and a teleoperate control device onto a designated RG31 or Buffalo. RCIS Type 1 semi-autonomous kit will be integrated onto the HMEE and be capable of interrogating and classifying explosive hazards. RCIS Type 2 semi-autonomous kit will be integrated onto an RG-31/Medium Mine Protected Vehicle (MMPV) and be able to detect, neutralize and proof explosive hazards. The teleoperational control device will be integrated into both a RG31/MMPV and Buffalo. RCIS capabilities will be fielded to Route Clearance Squads and Engineer Platoons. RCIS Type 1 and Type 2 are being procured as separate increments from the same acquisition in order to maintain commonality across the formation.

The Man-Transportable Robotic System (MTRS) Inc II is a modular System providing a multitude of standoff capabilities through different payloads for the Army. These capabilities include detect and confirm presence, identify disposition and counter hazards by providing a platform for payloads in support of current and future mission requirements. Additionally, MTRS Inc II will support current and future payload missions for the engineer's route clearance platoons, Special Operational Forces (SOF)

detachments, and CBRN units. An Analysis of Alternatives (AoA) will be completed in FY15 and may result in a common medium weight class robot across the Army, to include Explosive Ordnance Disposal (EOD) teams.

The Interoperability effort includes development of RCIS and HMDS interface requirements in UGV Interoperability Profile (IOP) Version 2, development of RCIS and HMDS IOP Instantiation Document, and government lab interoperability risk reduction for RCIS and HMDS in support of Milestone B and EMD phase.

The Vehicle Optics Sensor System (VOSS) provides a telescoping, gyro-stabilized, high-resolution, triple sensor (daylight, night-vision, and thermal-imaging) surveillance system to optically detect from standoff distances, explosive hazards (IEDs and landmines) and their trigger sources. VOSS is mounted on Medium Mine Protected Vehicles (MMPV) and the Joint EOD Rapid Response Vehicle (JERRV) located within Route Clearance Platoons and Explosive Ordinance Disposal (EOD) Companies.

The Multifunction Video Display (MVD) provides view/control capability of the enablers (Interrogation Arms, VOSS, Man Transportable Robotic System, Drivers Vision Enhancement, Vehicle Situational Awareness Cameras) in the Medium Mine Protected Vehicle (MMPV) to all Operators. New capabilities will be added into that display to view and control future Unmanned Ground Vehicle Systems (UGVs) programs Route Clearance & Integration System (RCIS) and Husky Mounted Detection System (HMDS) and view Unmanned Aerial Vehicles video feeds. Additional software will need to be developed to add these capabilities. In addition, a new capability to push the video feeds of all of the enablers (Interrogation Arms, VOSS, Man Transportable Robotic System, Drivers Vision Enhancement, Vehicle Situational Awareness Cameras) from various vehicles within a Route Clearance Patrol will be developed.

The following Route Clearance Vehicles (RCV) enablers will require a full system integration design cycle to ensure suitability and compatibility with various RCVs:
- Wire Neutralization System (WNS) on the Husky (VMMD)
- Debris Blower on the Buffalo Mine Protected Clearance Vehicle (MPCV)
- RCIS on the Husky (VMMD)
- HMDS on the Husky and semi-autonomous control capability on the Husky (VMMD)and Buffalo
- Mine ROLLER/WNS kits for MMPV Type II

Force Protection Improvements/Add On Armor (AoA) to execute system level design cycle for RPG and EFP AoA kits for VMMD/Husky and MPCV/Buffalo. Explosive Hazard Pre-Detonation (EHP) capability to include a debris blower, Wire Neutralization System (WNS)and integrated Roller-WNS system to neutralize/ detonate a broad spectrum of improvised explosive hazards while on the move, to support route clearance mission.

Autonomous Mine Detection System (AMDS) provides increased survivability through mine and explosive hazards stand-off detection, marking and neutralization capability for the dismounted soldier. It provides Area Access and freedom of movement for the Commander. AMDS consists of payload modules to be mounted on man-portable unmanned ground vehicles. The payloads are for surface laid and buried threats to include mines and explosive hazards. AMDS will transition from Technical Development to Engineering and Manufacturing Development (EMD) in FY 2014. This capability allows a soldier to remain in a protective posture while detecting and neutralizing a wide variety of hybrid and conventional explosive threats.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604808A / *Landmine Warfare/Barrier - Eng Dev*	**Project (Number/Name)** 415 / *Mine Neutral/Detection*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: AMDS	9.629	21.324	7.549
Articles:	-	-	-
Description: AMDS ***FY 2013 Accomplishments:*** Program documentation preparation, and pre-Engineering and Manufacturing Development (EMD) In-Process Review (IPR) ***FY 2014 Plans:*** Engineering and Manufacturing (EMD) Contract Award and Milestone (MS) B ***FY 2015 Plans:*** Preliminary Design Review (PDR), Critical Design Review (CDR), Engineering and Manufacturing Development (EMD), and Risk Reduction Testing (RRT)			
Title: HMDS Program of Record (POR)	0.505	8.250	-
Articles:	-	-	-
Description: HMDS Program of Record (POR) ***FY 2013 Accomplishments:*** HMDS Pre-Engineering and Manufacturing Development (EMD) In-Process Review (IPR) for Increments A1, A2,and B Acquisition Strategy and Milestone (MS) B Review ***FY 2014 Plans:*** EMD Contract Award, Preliminary Design Review (PDR)			
Title: HMDS Increment A, Configuration 1 (GPR) Ground Penetrating Radar (GPR)	-	9.350	4.025
Articles:	-	-	-
Description: HMDS Increment A, Configuration 1 (GPR) Ground Penetrating Radar (GPR) ***FY 2014 Plans:*** HMDS Increment A1 baseline testing and reset planning ***FY 2015 Plans:*** HMDS Increment A1 Limited User Test (LUT), type classification and material release (TC/MR) and MS C			
Title: HMDS Increment A, Configuration 2	-	17.300	21.602
Articles:	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604808A / *Landmine Warfare/Barrier - Eng Dev*	**Project (Number/Name)** 415 / *Mine Neutral/Detection*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Description: HMDS Increment A, Configuration 2 ***FY 2014 Plans:*** Increment A2 EMD IPR and contract award ***FY 2015 Plans:*** Increment A2 Limited Critical Design Review (CDR) and Developmental Testing (DT)			
Title: HMDS Increment A, Configuration 1 Trainer Development	-	1.000	-
Articles:	-	-	-
Description: PEO STRI to develop trainer. ***FY 2014 Plans:*** HMDS Increment A, Configuration 1 - Trainer			
Title: HMDS Increment B Integration of Semi-autonomous Control (SAC) Capability	-	1.982	2.640
Articles:	-	-	-
Description: HMDS Increment B Integration of Semi-autonomous Control (SAC) Capability ***FY 2014 Plans:*** Pre-contract award activities ***FY 2015 Plans:*** Pre-Engineering and Manufacturing Development (EMD) In-Process Review (IPR)			
Title: EHP	5.800	-	-
Articles:	-	-	-
Description: EHP ***FY 2013 Accomplishments:*** EHP Debris Blower, EHP Wire Neutralization System (WNS), and EHP Roller -WNS Technical Insertion Contract Awards			
Title: RCIS	2.480	7.098	9.246
Articles:	-	-	-
Description: RCIS			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604808A / *Landmine Warfare/Barrier - Eng Dev*	**Project (Number/Name)** 415 / *Mine Neutral/Detection*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
FY 2013 Accomplishments: RCIS MDD, Program Documentation Prep. MTRS Inc II MDD, MTRS Inc II AoA Study Guidance preparation ***FY 2014 Plans:*** RCIS MS B Preparation and Contract Award and Interoperability, MTRS Inc II AoA, and MTRS Inc II Program Documentation Preparation ***FY 2015 Plans:*** RCIS Engineering and Manufacturing Dev. contract award, Interoperability, MTRS Inc II PM Support, and complete MTRS Inc II AoA			
Title: Multifunction Video Display (MVD). ***Articles:*** ***Description:*** Multifunction Video Display (MVD). Digital display used to control and view RCV enablers ***FY 2014 Plans:*** Development of MVD, procurement of Product Verification Test (PVT) assets and Test. Begin development of MVD System Integration Laboratory (SIL) at Night Vision & Electronic Sensor Directorate (NVESD) ***FY 2015 Plans:*** Continued MVD Prototype Development and follow-on Test. Continuing support for MVD SIL at NVESD; development of additional enablers (EHP, HMDS Inc B, & control of robot) into MVD	- -	3.297 -	1.100 -
Title: Interface Kits. ***Articles:*** ***Description:*** Interface Kits. Develop the hardware used to connect and control enablers (rollers,WNS, & Blowers) onto Program of Record RCV ***FY 2014 Plans:*** Prototype Development ***FY 2015 Plans:*** Test/Modify Prototype	- -	0.450 -	0.383 -
Title: Add on Armor (AoA)	-	-	0.483

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604808A / *Landmine Warfare/Barrier - Eng Dev*	**Project (Number/Name)** 415 / *Mine Neutral/Detection*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Description: Development efforts for Route Clearance Vehicles (RCV) to include Rocket Propelled Grenade (RPG) and Explosive Fromed Projectiles (EFP) for Husky/VMMD and Buffalo/MPCV ***FY 2015 Plans:*** Development efforts for Route Clearance Vehicles (RCV) to include Rocket Propelled Grenade (RPG) and Explosive Formed Projectiles (EFP) for Husky/VMMD and Buffalo/MPCV			
Title: VOSS MDD & Milestone C Prep.	5.685	-	-
Articles:	-	-	-
Description: VOSS MDD & Milestone C Prep. ***FY 2013 Accomplishments:*** Spec Development, plot build & test. and sustainment planning in preparation for Milestone C			
Accomplishments/Planned Programs Subtotals	24.099	70.051	47.028

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• 606: *Countermine/ Barrier Advanced Dev*	4.089	-	-	-	-	-	-	-	-	-	4.089
• R64002: *HMDS GPR*	-	-	18.545	-	18.545	11.597	16.427	57.121	98.291	Continuing	Continuing
• R68102: *GSTAMIDS*	-	-	37.649	-	37.649	33.783	21.181	31.158	34.910	Continuing	Continuing
• R68260: *AMDS*	-	-	-	-	-	6.957	5.619	15.577	25.366	Continuing	Continuing
• DA0924: *OPA1 Mods in Services*	2.217	45.297	83.867	-	83.867	134.004	65.589	101.418	84.776	Continuing	Continuing

Remarks

D. Acquisition Strategy

AMDS, HMDS, RCIS, A-Kits, Debris Blower, Wire Neutralization System (WNS), and Roller-WNS will all be competitively solicited to the maximum extent possible for contract awards projected in FY 2013-2015. EHP Debris Blower will be procured as a COTS item from a commercial vendor. WNS and Roller-WNS are going thru a make or buy decision and will be procured thru Depot/Arsenal or commercial vendor. AMDS has transitioned to Engineering Manufacturing Development in FY 2014.

The HMDS acquisition strategy is evolutionary with three capability increments – Increment A, Configuration1 (A1), Increment A, Configuration 2 (A2) and Increment B. Increment A provides detection and marking of explosive hazards (EH), unexploded ordnance (UXO), and weapons caches, while Increment B provides (semi-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604808A / *Landmine Warfare/Barrier - Eng Dev*	**Project (Number/Name)** 415 / *Mine Neutral/Detection*

autonomous) remote control (SAC) of the HMDS platform vehicle (Husky) from another vehicle and Increment A capabilities. This further improves Solder survivability. In order to accelerate delivery of the Ground Penetrating Radar (GPR) capability and its corresponding full-scale training device, Increment A will be executed as two distinct capability increments. Increment A1 leverages the Quick Reaction Capability (QRC) GPR technology currently deployed in support of Operation Enduring Freedom (OEF) and the stand alone full-scale GPR trainer currently used for pre-deployment home station training. Increment A2 provides Deep Buried Detection (DBD) and marking capabilities, a full-scale DBD training device and integrates these capabilities with the GPR. Increment B integrates the Semi-autonomy (SAC) with GPR, DBD, and marking capabilities, training devices, and the host vehicles. The HMDS program entered EMD in 4th Quarter FY 2013 and awarded a contract for Configuration A1 in 4th Quarter FY 2013. An EMD contract for Configuration A2 is planned for award in 3rd Quarter FY 2014 and a solicitation for an EMD contract for Increment B is planned for 3rd Quarter FY 2016.

PM Ground Sensors is pursuing a two phase acquisition approach for Vehicle Optics Sensor System (VOSS) which harvests Quick Reaction Capability (QRC) procured systems for refresh and insertion into the Program of Record (POR), followed by a full and open procurement for the remaining systems.

MTRS Inc II will conduct an AoA in FY 2014 through FY 2015 to determine the best robotic platform solution. Acquisition strategy will be developed based on the outcome of the AoA.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604808A / *Landmine Warfare/Barrier - Eng Dev*	Project (Number/Name) 415 / *Mine Neutral/Detection*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management - HMDS & AMDS	Allot	PM-CCS : Picatinny Arsenal, NJ	24.375	-		3.731		-		-		-	Continuing	Continuing	-
Program Management - AMDS	Allot	PM-CCS : Picatinny Arsenal, NJ	0.000	1.969		-		0.270		-		0.270	-	2.239	-
Program Management - HMDS	MIPR	PM CCS : Picatinny Arsenal, NJ	0.000	0.505		-		2.826	Dec 2014	-		2.826	-	3.331	-
Program Management - VOSS	MIPR	PM Ground Sensors : Ft. Belvoir, VA	0.000	0.200		-		-		-		-	-	0.200	-
		Subtotal	24.375	2.674		3.731		3.096		-		3.096	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AMDS	C/CPIF	TBD : TBD	0.000	5.329	Jul 2014	15.401	Jul 2014	6.700	Jun 2015	-		6.700	Continuing	Continuing	Continuing
HMDS Inc A2 - Integration with DBD and Training Devices	SS/IDIQ	NIITEK Dulles : VA	0.000	-		18.900	Apr 2014	13.300	Mar 2015	-		13.300	-	32.200	-
A1 Test Support	SS/FFP	Unversal Solutions International : Newport News, VA	0.000	-		0.392	Jul 2014	-		-		-	-	0.392	-
Power Steering Upgrade Kits	SS/FFP	Parker-Hannifin : Lakeville, MN	0.000	-		0.032	Feb 2014	-		-		-	-	0.032	-
EHP Debris Blower/WNS/ Roller	C/CPFF	Yuma Proving Ground : Yuma	0.000	1.711	Aug 2013	-		-		-		-	Continuing	Continuing	-
RCIS	C/CPFF	TBD : TBD	4.878	-		-		3.667	Jun 2015	-		3.667	Continuing	Continuing	Continuing
MTRS Inc II - EMD Systems	C/CPFF	RSJPO : Warren, MI	0.000	-		-		-		-		-	1.761	1.761	1.791
Interface Kits	C/CPFF	TARDEC : Warren, MI	0.000	-		0.450		0.283		-		0.283	1.830	2.563	1.830

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Multi-Function Video Display	C/CPFF	Night Vision Electronic Sensor Directorate : APG, Md	0.000	-		2.297		1.000		-		1.000	3.045	6.342	3.045
Add on Armor (AoA)	SS/BA	TARDEC : Warren, MI	0.000	-		-		0.283		-		0.283	-	0.283	-
VOSS	C/CPFF	Various : Ft. Belvoir, VA	0.670	0.723		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	5.548	7.763		37.472		25.233		-		25.233	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AMDS	MIPR	Various : Various	0.000	2.331		2.950		0.579		-		0.579	Continuing	Continuing	Continuing
HMDS	MIPR	NVESD/CERDEC : Fort Belvoir, VA	5.452	-		2.766	Feb 2014	2.500	Dec 2014	-		2.500	Continuing	Continuing	-
HMDS	MIPR	Joint Products Office (JPO) Robotics Systems : Warren, MI	1.994	-		1.275	Mar 2014	0.960	Dec 2014	-		0.960	-	4.229	-
HMDS	MIPR	Product Realization Directorate (PRD)/ CERDEC : APG, MD	0.000	-		0.462	Feb 2014	-		-		-	-	0.462	-
HMDS	MIPR	TARDEC : Warren, MI	0.545	-		0.400	Jun 2014	0.400		-		0.400	-	1.345	-
HMDS	MIPR	ECBC : Edgewater, MD	0.000	-		0.750	Apr 2014	-		-		-	-	0.750	-
HMDS	MIPR	AMRDEC : Redstone Arsenal, AL	0.000	-		0.338	Mar 2014	-		-		-	-	0.338	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
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Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
HMDS	MIPR	Tobyhanna Army Depot : Tobyhanna, PA	0.000	-		0.241	Mar 2014	-		-		-	-	0.241	-
HMDS	MIPR	Various : Various locations	2.290	-		0.844	Feb 2014	0.611	Dec 2014	-		0.611	-	3.745	-
HMDS	MIPR	ARDEC : Picatinny Arsenal, NJ	0.861	-		0.492	Mar 2014	0.780	Dec 2014	-		0.780	-	2.133	-
HMDS	MIPR	CECOM : Aberdeen Proving Grounds	0.000	-		0.780	Mar 2014	1.260	Dec 2014	-		1.260	-	2.040	-
HMDS	MIPR	MSCoE : Ft. Leonard Wood, MO	0.000	-		-		0.143	Dec 2014	-		0.143	-	0.143	-
HMDS	MIPR	PEO STRI : Orlando, FL	0.000	-		1.575	Mar 2014	0.597	Dec 2014	-		0.597	-	2.172	-
EHP	MIPR	PM AMS : Warren, MI	1.145	2.100	Oct 2013	-		-		-		-	Continuing	Continuing	-
RCIS	MIPR	RSJPO : Warren, MI	0.350	1.480		1.300		2.246	Jan 2015	-		2.246	Continuing	Continuing	-
RCIS Interoperability	MIPR	RSJPO : Warren, MI	0.000	1.000		1.000		1.000	Jan 2015	-		1.000	-	3.000	-
VOSS	MIPR	Various : Various	0.768	1.608		-		-		-		-	Continuing	Continuing	Continuing
MTRS Inc II Support	MIPR	RSJPO : Warren, MI	0.000	-		3.600	Jun 2014	2.333	Jun 2015	-		2.333	-	5.933	-
		Subtotal	13.405	8.519		18.773		13.409		-		13.409	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AMDS	MIPR	ATEC : Aberdeen Proving Ground, MD	0.000	-		1.239		-		-		-	-	1.239	-
HMDS	MIPR	ATEC : Alexandria, VA	0.362	-		6.638	Mar 2014	4.890	Jan 2015	-		4.890	Continuing	Continuing	Continuing
EHP	MIPR	ATEC : APG, MD	0.750	1.989	Oct 2013	-		-		-		-	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
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Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
RCIS	MIPR	ATEC : Alexandria, VA	0.136	-		1.198		-		-		-	-	1.334	-
MTRS Inc II	MIPR	ATEC : APG, MD	0.000	-		-		-		-		-	1.000	1.000	1.000
VOSS	MIPR	ATEC : Alexandria, VA	0.000	3.154		-		-		-		-	Continuing	Continuing	Continuing
Multi-Function Video Display	WR	KRC : Houghton, MI	0.000	-		1.000		0.100		-		0.100	-	1.100	-
Interface Kits	MIPR	TARDEC : Warren, MI	0.000	-		-		0.100		-		0.100	-	0.100	-
Add on Armor (AoA)	MIPR	TARDEC : Warren, MI	0.000	-		-		0.200		-		0.200	-	0.200	-
		Subtotal	1.248	5.143		10.075		5.290		-		5.290	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	44.576	24.099		70.051		47.028		-		47.028	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604808A / *Landmine Warfare/Barrier - Eng Dev*	**Project (Number/Name)** 415 / *Mine Neutral/Detection*

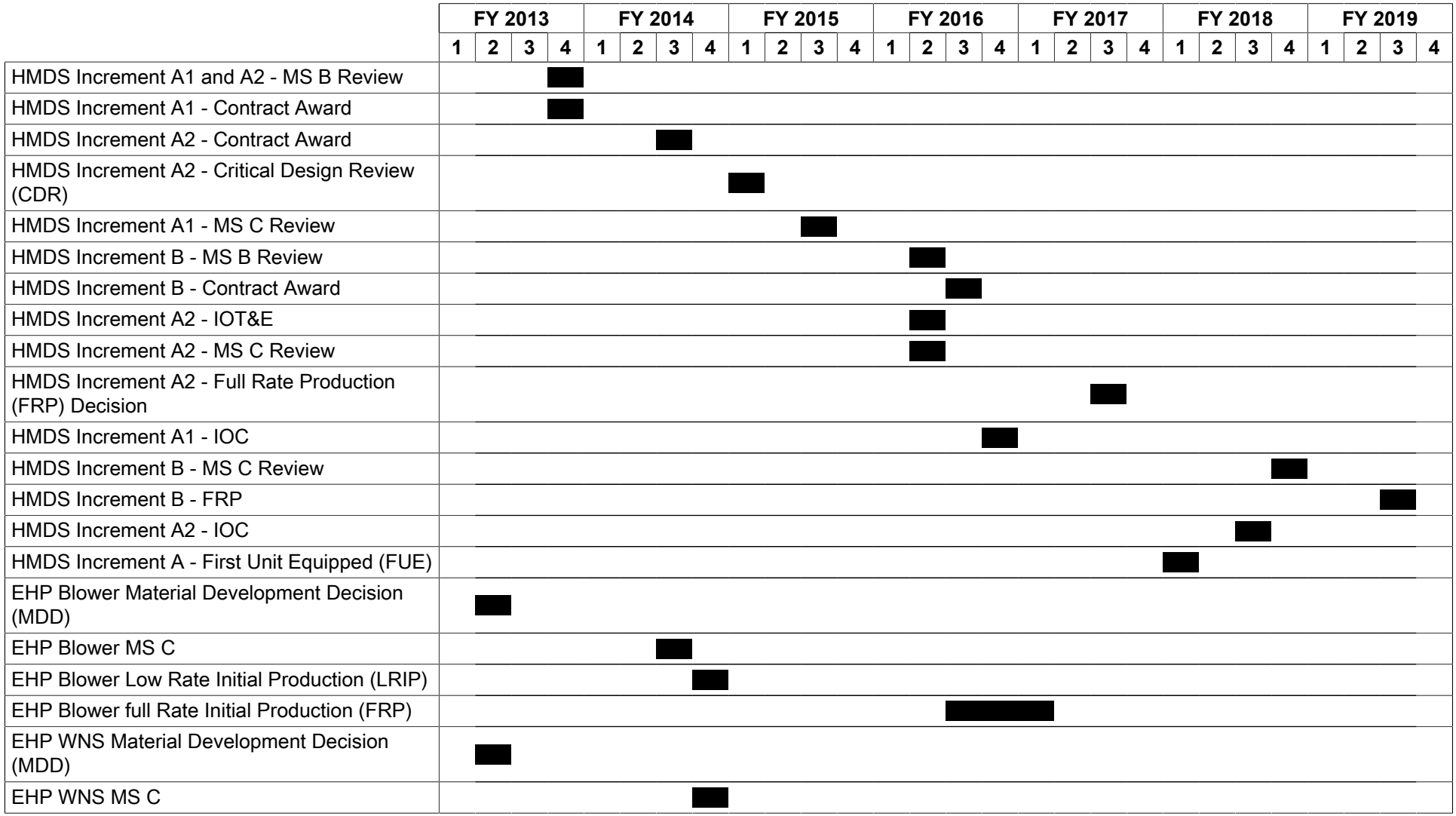

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604808A / *Landmine Warfare/Barrier - Eng Dev*	**Project (Number/Name)** 415 / *Mine Neutral/Detection*

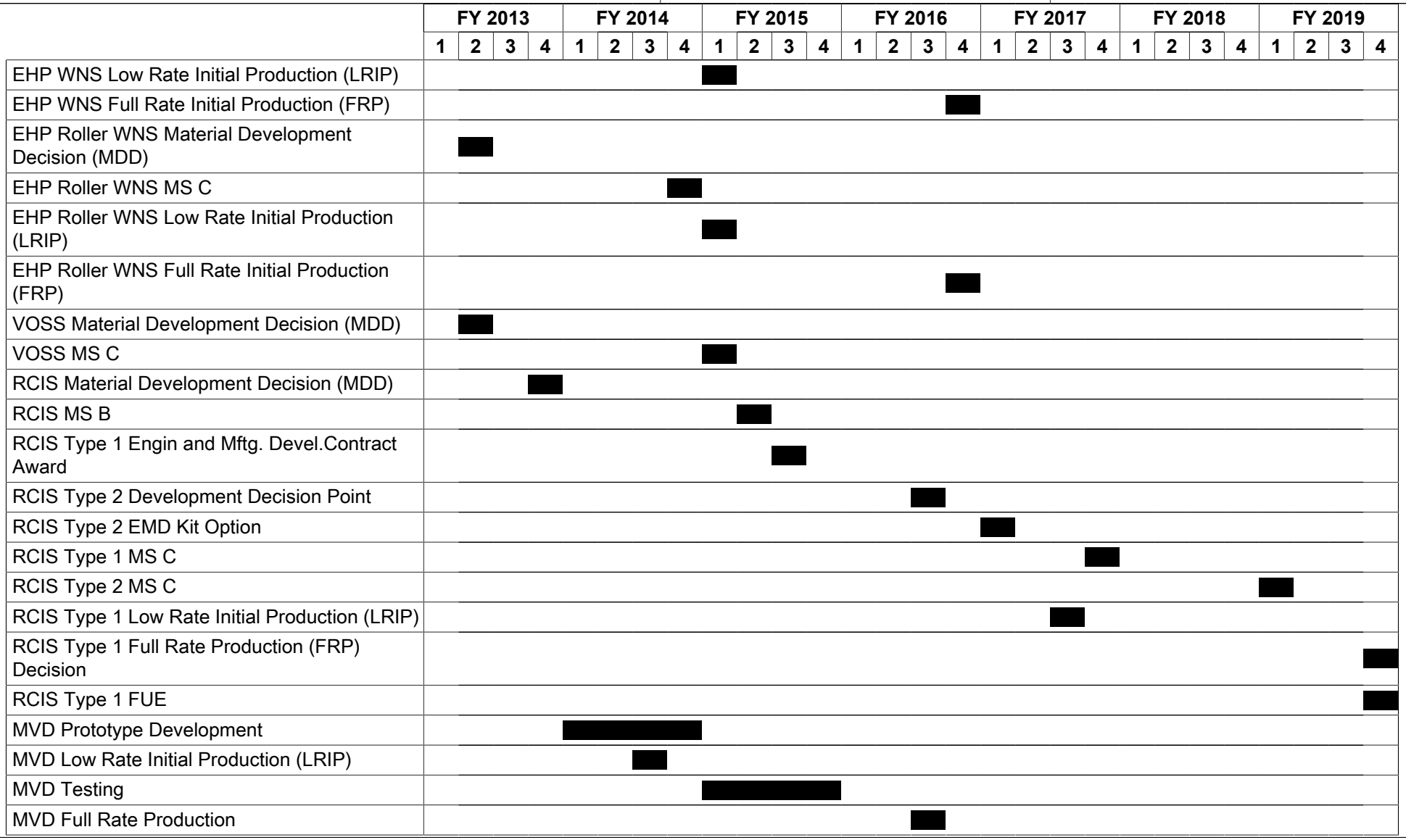

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
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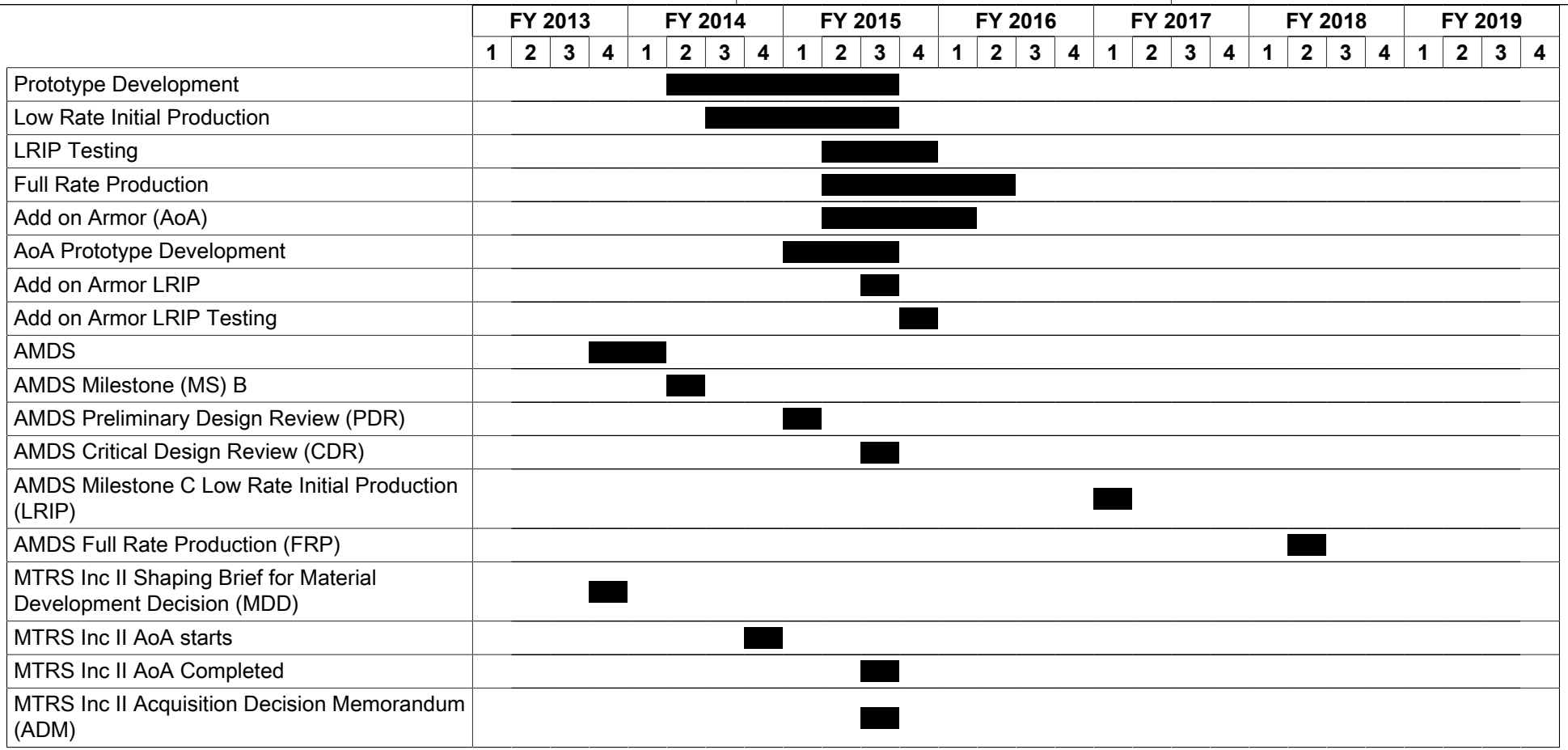

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604808A / *Landmine Warfare/Barrier - Eng Dev*	**Project (Number/Name)** 415 / *Mine Neutral/Detection*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
HMDS Increment A1 and A2 - MS B Review	4	2013	4	2013
HMDS Increment A1 - Contract Award	4	2013	4	2013
HMDS Increment A2 - Contract Award	3	2014	3	2014
HMDS Increment A2 - Critical Design Review (CDR)	1	2015	1	2015
HMDS Increment A1 - MS C Review	3	2015	3	2015
HMDS Increment B - MS B Review	2	2016	2	2016
HMDS Increment B - Contract Award	3	2016	3	2016
HMDS Increment A2 - IOT&E	2	2016	2	2016
HMDS Increment A2 - MS C Review	2	2016	2	2016
HMDS Increment A2 - Full Rate Production (FRP) Decision	3	2017	3	2017
HMDS Increment A1 - IOC	4	2016	4	2016
HMDS Increment B - MS C Review	4	2018	4	2018
HMDS Increment B - FRP	3	2019	3	2019
HMDS Increment A2 - IOC	3	2018	3	2018
HMDS Increment A - First Unit Equipped (FUE)	1	2018	1	2018
EHP Blower Material Development Decision (MDD)	2	2013	2	2013
EHP Blower MS C	3	2014	3	2014
EHP Blower Low Rate Initial Production (LRIP)	4	2014	4	2014
EHP Blower full Rate Initial Production (FRP)	3	2016	1	2017
EHP WNS Material Development Decision (MDD)	2	2013	2	2013
EHP WNS MS C	4	2014	4	2014
EHP WNS Low Rate Initial Production (LRIP)	1	2015	1	2015

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604808A / *Landmine Warfare/Barrier - Eng Dev*	**Project (Number/Name)** 415 / *Mine Neutral/Detection*

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
EHP WNS Full Rate Initial Production (FRP)	4	2016	4	2016
EHP Roller WNS Material Development Decision (MDD)	2	2013	2	2013
EHP Roller WNS MS C	4	2014	4	2014
EHP Roller WNS Low Rate Initial Production (LRIP)	1	2015	1	2015
EHP Roller WNS Full Rate Initial Production (FRP)	4	2016	4	2016
VOSS Material Development Decision (MDD)	2	2013	2	2013
VOSS MS C	1	2015	1	2015
RCIS Material Development Decision (MDD)	4	2013	4	2013
RCIS MS B	2	2015	2	2015
RCIS Type 1 Engin and Mftg. Devel.Contract Award	3	2015	3	2015
RCIS Type 2 Development Decision Point	3	2016	3	2016
RCIS Type 2 EMD Kit Option	1	2017	1	2017
RCIS Type 1 MS C	4	2017	4	2017
RCIS Type 2 MS C	1	2019	1	2019
RCIS Type 1 Low Rate Initial Production (LRIP)	3	2017	3	2017
RCIS Type 1 Full Rate Production (FRP) Decision	4	2019	4	2019
RCIS Type 1 FUE	4	2019	1	2020
MVD Prototype Development	1	2014	4	2014
MVD Low Rate Initial Production (LRIP)	3	2014	3	2014
MVD Testing	1	2015	4	2015
MVD Full Rate Production	3	2016	3	2016
Prototype Development	2	2014	3	2015
Low Rate Initial Production	3	2014	3	2015
LRIP Testing	2	2015	4	2015
Full Rate Production	2	2015	2	2016

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
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	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Add on Armor (AoA)	2	2015	1	2016
AoA Prototype Development	1	2015	3	2015
Add on Armor LRIP	3	2015	3	2015
Add on Armor LRIP Testing	4	2015	4	2015
AMDS	4	2013	1	2014
AMDS Milestone (MS) B	2	2014	2	2014
AMDS Preliminary Design Review (PDR)	1	2015	1	2015
AMDS Critical Design Review (CDR)	3	2015	3	2015
AMDS Milestone C Low Rate Initial Production (LRIP)	1	2017	1	2017
AMDS Full Rate Production (FRP)	2	2018	2	2018
MTRS Inc II Shaping Brief for Material Development Decision (MDD)	4	2013	4	2013
MTRS Inc II AoA starts	4	2014	4	2014
MTRS Inc II AoA Completed	3	2015	3	2015
MTRS Inc II Acquisition Decision Memorandum (ADM)	3	2015	3	2015

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604808A / *Landmine Warfare/Barrier - Eng Dev*				Project (Number/Name) 434 / *Anti-Personnel Landmine Alternatives (NSD)*			
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
434: *Anti-Personnel Landmine Alternatives (NSD)*	-	13.670	22.185	10.677	-	10.677	4.334	-	-	-	-	50.866
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Spider Increment 1A will build upon the existing M7 Spider system. The M7 Spider system is a hand-emplaced, remotely controlled (Man-In-The-Loop) system that provides highly responsive terrain-shaping and protection capabilities. M7 Spider replaces persistent anti-personnel landmines, is compliant with US National Landmine policy, and has been fielded to US forces in support of Operation Enduring Freedom. Additional capabilities will be developed to enhance the Spider Remote Control Station and demonstrate the ability to employ legacy Government-Off-The-Shelf (GOTS) lethal and non-lethal anti-personnel (AP) munitions and counter mobility obstacles. Spider Increment 1A will utilize an open system architecture to facilitate future munition integration. Further, Spider Increment 1A will complete the development of the Non-Lethal Launcher (NLL) XM809 and XM810.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Spider Increment 1A Contract and completion NLL	12.059	10.822	-
Articles:	-	-	-
Description: Develop Spider Increment 1A Controller with the ability to employ/control and initiate AP & counter mobility obstacle munitions. Continue with the development of the Spider NLL for use with the Spider Inc 1A system.			
FY 2013 Accomplishments: FY13 Spider Increment 1A Engineering Manufacturing and Development (EMD) contract award and initiation of EMD development. Continue with the development of the Spider NLL for use with the Spider Inc 1A system.			
FY 2014 Plans: Continue with Spider Increment 1A EMD development efforts and complete development of the Spider NLL.			
Title: Engineering Support	1.429	8.426	5.814
Articles:	-	-	-
Description: Perform engineering support.			
FY 2013 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Support development of Capability Development Document, Pre-EMD and Milestone B documentation, development of procurement package (Statement of Work Performance Requirements Document, etc), and engineering support to award EMD/ Low rate Initial Production (LRIP) Option contract. Continue to support NLL development. ***FY 2014 Plans:*** Continue EMD efforts of the Spider Inc 1A system. Provide engineering support, software development support, Shock Tube safety improvements, conduct Preliminary Design Review (PDR) and Post-PDR Assessment, provide MANPRINT and Human Factors Engineering (HFE) support to contractor Developmental Testing. Support the completion of the development effort for the NLL. ***FY 2015 Plans:*** Continue development of the Spider Inc 1A system. Provide engineering support, software development support, conduct Critical Design Review (CDR) and Post-CDR Assessment, provide MANPRINT and HFE support to contractor Developmental Testing, and initiate efforts to support Milestone C.			
Title: Test and Evaluation ***Articles:*** ***Description:*** Provide support to Contractor/Government test activities (Contractor Developmental Testing (DT), Pre-Logistics Demonstration, Functional Development Test and Evaluation (FDTE), and Pre-Limited UserTest (LUT) activities). ***FY 2013 Accomplishments:*** Planning conducted to support Contractor/Government test activities. ***FY 2014 Plans:*** Support contractor development testing, software development, Hardware Environmental and Lab Integration and Technical Interchange Meetings. ***FY 2015 Plans:*** Provide support to Contractor/Government test activities. Contractor will perform Software Functional Qualification Test (FQT) and end to end Contractor System Verification Test (C-SVT). The Government will perform User Jury, IETM Val/Log Demo, Information Assurance (IA), Force Development Test (FDT), and Army Interoperability Certification (AIC).	0.006 -	0.523 -	2.820 -
Title: Program Management and Oversight ***Articles:*** ***Description:*** Program Management and support Spider Increment 1A. ***FY 2013 Accomplishments:***	0.176 -	1.945 -	1.500 -

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Perform program management to support acquisition activities, program execution, Milestone B documentation, and program management support to award EMD/LRIP Option contract. Support and continue NLL development. ***FY 2014 Plans:*** Perform overall program management support for the execution of the Spider Inc 1A development effort. Oversee all contractor activities. Conduct all major Program Reviews (System Requirements Review (SRR), System Functional Review (SFR), Preliminary Design Review (PDR) and Initial Baseline Review (IBR). Complete NLL development efforts. ***FY 2015 Plans:*** Perform overall program management support for the execution of the Spider Inc 1A development effort. Prepare for Milestone C to include initiation of the development of the Capability Production Document (CPD).			
Title: FY 2013-2015 Reductions	-	0.469	0.543
Articles:	-	-	-
Description: Small Business Innovative Research/Small Business Technology Transfer Program (SBIR/STTR) and Federally Funded Research & Development Centers (FFRDC) Reductions. ***FY 2014 Plans:*** FY 2014 reductions are $469K in SBIR / STTR, Sec 3001 ATB and Sec 3004 ATB adjustments. ***FY 2015 Plans:*** Approximately $543K projected adjustments in FY 2015.			
Accomplishments/Planned Programs Subtotals	13.670	22.185	10.677

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• Spider Network Munitions: *PAA Spider Increment 1 Program*	17.385	-	-	-	-	-	-	-	-	-	17.385
• Spider - APLA Remote Control Unit: *OPA2 Spider Increment 1 Program B55501*	24.292	-	0.969	-	0.969	-	-	-	-	-	25.261
• Spider Family Of Networked Munition: *OPA2 Spider Increment 1A Program B54020*	-	-	-	-	-	9.276	10.325	10.388	9.179	-	39.168

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost

Remarks

D. Acquisition Strategy

The Engineering Manufacturing Development (EMD) contract was a competitively awarded 26 month, Cost Plus Incentive Fee EMD contract with a one year Firm-Fixed Price (FFP) Low Rate Initial Production (LRIP) option. A Government Level 3 Technical Data Package (TDP) will be delivered as part of the EMD contract. The modified TDP at the end of LRIP will facilitate full and open competition of a FFP Full Rate Production contract.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
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Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Spider - Program Mgmt	Various	PM-CCS, : Picatinny Arsenal, NJ	0.593	0.176		1.945		1.500		-		1.500	Continuing	Continuing	-
SBIR/STTR, FFRDC and Section 3001/3004 ATB Adjustments	Various	PM CCS, : Picatinny Arsenal, NJ	2.352	-		0.469		0.543		-		0.543	-	3.364	-
		Subtotal	2.945	0.176		2.414		2.043		-		2.043	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Spider Non-Lethal Launcher (FY12)	C/CPIF	Alliant Techsystems Operations, LLC : Plymouth, MN	0.667	-		-		-		-		-	-	0.667	-
Spider Inc 1A (FY13-15)	C/CPIF	Northrop Grumman Systems Corporation : Carson, CA	0.000	12.002	Aug 2013	10.822	Mar 2014	-		-		-	Continuing	Continuing	-
Rifleman Radio Systems	Reqn	General Dynamics, C4 Systems : Scottsdale, AZ	0.000	0.057	Sep 2013	-		-		-		-	-	0.057	-
		Subtotal	0.667	12.059		10.822		-		-		-	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Spider - Eng support	MIPR	ARDEC, : Picatinny Arsenal, NJ	3.063	0.500		3.931		4.089		-		4.089	Continuing	Continuing	-
Spider - Non-Lethal Launcher Eng Spt	MIPR	ARDEC, : Picatinny Arsenal, NJ	0.650	-		1.400	Mar 2014	-		-		-	-	2.050	-
Spider - Eng support	MIPR	Various, : Various	0.000	-		0.098		0.120		-		0.120	Continuing	Continuing	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604808A / *Landmine Warfare/Barrier - Eng Dev*	Project (Number/Name) 434 / *Anti-Personnel Landmine Alternatives (NSD)*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Mitre provide C4 Support	MIPR	Mitre, : McLean, VA	0.830	0.670		0.816		0.780		-		0.780	Continuing	Continuing	-
Spider - Contractor Engineering Support	C/FFP	Millennium : Arlington, VA	0.463	0.159		0.734	Feb 2014	0.450		-		0.450	Continuing	Continuing	-
Spider - Contractor Engineering Support	C/CPFF	URS Federal Support Service : Lakehurst, NJ	0.000	-		0.172	Feb 2014	-		-		-	-	0.172	-
Spider - Contract Engineering Support	C/CPFF	CACI Technologies, INC : Chantilly, VA	0.000	-		0.100	Dec 2013	0.100		-		0.100	-	0.200	-
Spider Increment 1A Training Support	MIPR	PEO STRI : Orlando, FL	0.050	-		0.100		0.100		-		0.100	-	0.250	-
MANPRINT/HFE Support	MIPR	ARL HRED : Adelphi, MD	0.009	0.100		0.100		0.175		-		0.175	-	0.384	-
Spider Shock Tube Safety Improvement	MIPR	ARDEC, : Picatinny Arsenal, NJ	0.000	-		0.975		-		-		-	-	0.975	-
		Subtotal	5.065	1.429		8.426		5.814		-		5.814	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Support Contractor/ Government Test Activities	MIPR	OTC, AMSAA, AEC, ATEC : Various	0.050	0.006		0.523		2.820		-		2.820	Continuing	Continuing	-
		Subtotal	0.050	0.006		0.523		2.820		-		2.820	-	-	-

Remarks

Not Applicable

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	8.727	13.670		22.185		10.677		-		10.677	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604808A / *Landmine Warfare/Barrier - Eng Dev*	**Project (Number/Name)** 434 / *Anti-Personnel Landmine Alternatives (NSD)*

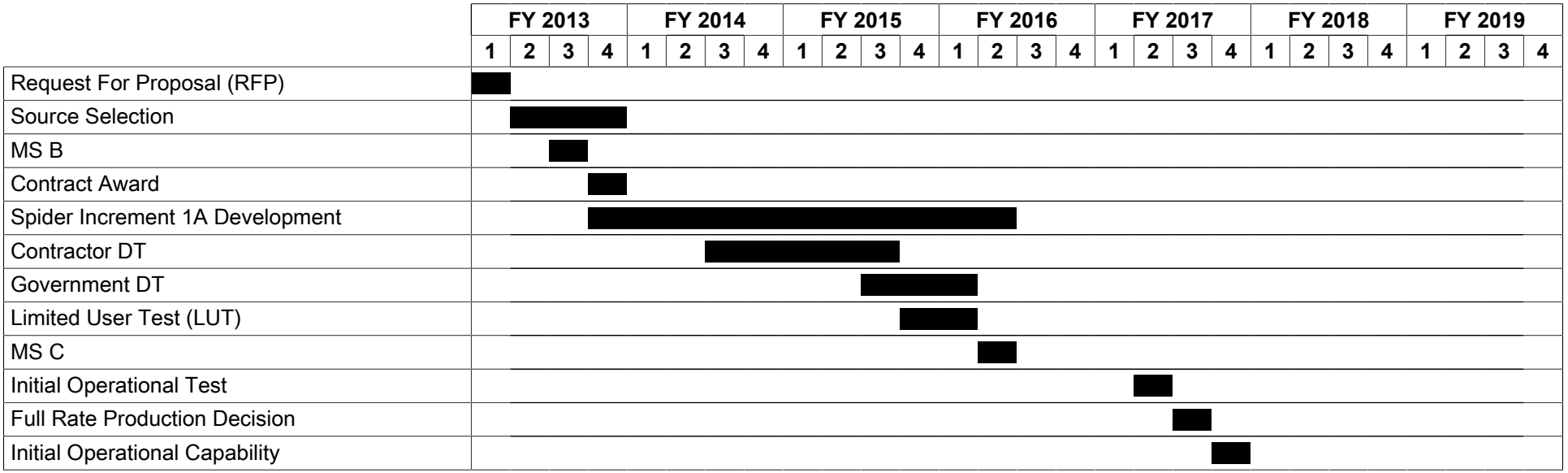

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604808A / *Landmine Warfare/Barrier - Eng Dev*	**Project (Number/Name)** 434 / *Anti-Personnel Landmine Alternatives (NSD)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Request For Proposal (RFP)	1	2013	1	2013
Source Selection	2	2013	4	2013
MS B	3	2013	3	2013
Contract Award	4	2013	4	2013
Spider Increment 1A Development	4	2013	2	2016
Contractor DT	3	2014	3	2015
Government DT	3	2015	1	2016
Limited User Test (LUT)	4	2015	1	2016
MS C	2	2016	2	2016
Initial Operational Test	2	2017	2	2017
Full Rate Production Decision	3	2017	3	2017
Initial Operational Capability	4	2017	4	2017

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0604814A / *Artillery Munitions - EMD*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	3.576	8.205	-	-	-	-	-	-	-	-	11.781
708: *XM982 Projectile*	-	3.576	8.205	-	-	-	-	-	-	-	-	11.781

The FY 2015 OCO Request will be submitted at a later date.

Note

FY 2013: $.657 million budget adjustment.

A. Mission Description and Budget Item Justification

Excalibur is a Precision Guided Extended Range 155mm Artillery projectile providing Brigade Combat Teams an organic precision fires capability. Additionally it provides improved fire support capability due to its increased range of 40.5 kilometers and demonstrated accuracy of < 4 meters radial miss distances, which enables a first round effect on target reducing the number of rounds required while reducing collateral damage. Excalibur is compatible with the M777A2 Lightweight 155mm Howitzer (LW155) and the M109A6 Paladin Howitzer and Sweden's Archer Howitzer. Excalibur provides a 35% range increase over current Rocket Assisted Projectiles, with a < 10 meter accuracy circular error probable at all ranges. Excalibur is also highly resistant to Global Positioning System (GPS) jamming. Excalibur is an international program, teamed with the Kingdom of Sweden (KoS), who contributed resources towards the development and have procured rounds in accordance with an established Project Agreement for use in their Archer Howitzer.

Increment Ib completed a successful Milestone C Decision Review on December 12, 2012. The first Low Rate Initial Production contract was awarded on December 21, 2012.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	4.346	8.209	-	-	-
Current President's Budget	3.576	8.205	-	-	-
Total Adjustments	-0.770	-0.004	-	-	-
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.113	-			
• Adjustments to Budget Years	-0.657	-0.004	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604814A / *Artillery Munitions - EMD*	Project (Number/Name) 708 / *XM982 Projectile*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
708: *XM982 Projectile*	-	3.576	8.205	-	-	-	-	-	-	-	-	11.781
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Excalibur is a Precision Guided Extended Range 155mm Artillery projectile providing Brigade Combat Teams an organic precision fires capability. Additionally it provides improved fire support capability due to its increased range of 40.5 kilometers and demonstrated accuracy of < 4 meters radial miss distances, which enables a first round effect on target reducing the number of rounds required while reducing collateral damage. Excalibur is compatible with the M777A2 Lightweight 155mm Howitzer (LW155) and the M109A6 Paladin Howitzer and Sweden's Archer Howitzer. Excalibur provides a 35% range increase over current Rocket Assisted Projectiles, with a < 10 meter accuracy circular error probable at all ranges. Excalibur is also highly resistant to Global Positioning System (GPS) jamming. Excalibur is an international program, teamed with the Kingdom of Sweden (KoS), who contributed resources towards the development and have procured rounds in accordance with an established Project Agreement for use in their Archer Howitzer.

Increment Ib completed a successful Milestone C Decision Review on December 12, 2012. The first Low Rate Initial Production contract was awarded on December 21, 2012.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Increment Ib development support.	1.479	2.920	-
Articles:	-	-	-
Description: Increment Ib development support. ***FY 2013 Accomplishments:*** Continuation of Increment Ib follow-on Artillery development support, completion of qualification testing, and prepare for IOT&E testing. ***FY 2014 Plans:*** Implementation of reliability growth effort and completion of the IOT&E.			
Title: Integrated Developmental Testing/Operational Testing (DT/OT), Safety/Reliability testing, and operational assessment for Increment Ib.	2.097	5.285	-
Articles:	-	-	-
Description: Conduct Integrated Developmental Testing/Operational Testing (DT/OT) , Safety/Reliability testing, and operational assessment.			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604814A / *Artillery Munitions - EMD*	**Project (Number/Name)** 708 / *XM982 Projectile*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
FY 2013 Accomplishments: To conduct operational testing, safety and reliability testing, initial operational test and evaluation. ***FY 2014 Plans:*** To complete initial operational test and evaluation to support full rate production for Increment Ib.			
Accomplishments/Planned Programs Subtotals	3.576	8.205	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• Procurement Ammo: *Procurement Ammunition Army: Proj 155mm Extended Range: XM982-U Excalibur: E80103*	68.528	77.326	35.672	-	35.672	45.518	-	-	-	-	227.044

Remarks

D. Acquisition Strategy

Excalibur is a family of Precision Guided Extended Range Munitions. In 1997, a competitive Engineering and Manufacturing Development (EMD) contract was awarded for the initial increment, with options for Low Rate Initial Production (LRIP) quantities. In coordination with the Army Acquisition Executive, the Army implemented an incremental development approach that provided for an early fielding capability in FY 2007 in response to an Urgent Needs Statement in support of Operation Iraqi Freedom (as of September 2010 re-named to Operation New Dawn) and Operation Enduring Freedom. Increment Ib was solicited as a full and open competition and awarded to two contractors in September 2008. Following the Increment Ib strategy, the Army conducted a demonstration phase followed by a shoot off between the two competing contractors and down selected to a single contractor for qualification and production. The shoot off was completed in July 2010 followed by the downselect decision on 25 August 2010 to support Phase II development and qualification. Increment Ib completed successful Milestone C Decision Review on December 12, 2012. The first Low Rate Initial Production contract was awarded on December 21, 2012. The contractor is currently testing/implementing reliability growth initiatives to further improve the overall reliability of the Increment Ib rounds. The Army will conduct an Initial Operational Test and Evaluation in fiscal year 2014 followed by a Full Materiel Release and Full Rate Production Decision.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604814A / *Artillery Munitions - EMD*	Project (Number/Name) 708 / *XM982 Projectile*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Misc Support Contracts	Various	Various : Various	3.645	-		-		-		-		-	-	3.645	3.645
Platform Integration/Fire Control - AFATDS	SS/CPIF	Raytheon AFATDS : Fort Wayne, IN	5.907	-		-		-		-		-	-	5.907	5.907
Govt Support for Paladin, LW155 Integration SW Development	MIPR	ARDEC, Software Engineering : Picatinny, NJ	7.588	-		-		-		-		-	-	7.588	7.588
Increment Ib Development Phase 2	C/CPIF	Raytheon Missile System : Tucson, AZ	77.428	-		-		-		-		-	-	77.428	77.428
Increment 1b Development Phase 1	C/FFP	Alliant Techsystems : Pymouth, MN	30.773	-		-		-		-		-	-	30.773	30.773
Increment 1b Development Phase 1	C/FFP	Raytheon Missile System : Tucson, AZ	30.413	-		-		-		-		-	-	30.413	30.413
Platform Integration & EPIAFS Software Development	MIPR	Navy, Surface Warfare Center : MD	0.230	-		-		-		-		-	-	0.230	0.230
Follow on Precision Artillery risk reduction	C/CPFF	ARDEC : Picatinny, NJ	5.049	-		-		-		-		-	-	5.049	5.049
Platform Integration-Systems Contractor	MIPR	ARES : Annapolis, MD	0.840	-		-		-		-		-	-	0.840	0.840
TCM Merger Assessment	SS/FP	Bofors Defence, Karlskoga : Sweden	14.430	-		-		-		-		-	-	14.430	14.430
Fee on Excalibur Development Contract	C/CPIF	Raytheon Missile System : Tucson, AZ	35.377	-		-		-		-		-	-	35.377	35.377
Platform Integration LW155 M777A2	C/CPIF	BAE : Burlington, VT	11.989	-		-		-		-		-	-	11.989	11.989
ARDEC fuze technology maturation (DOTC)	SS/FP	ARDEC : Picatinny, NJ	3.872	-		-		-		-		-	-	3.872	3.872
SS-SFM Test Projectiles	C/FFP	Various : Varoius	10.815	-		-		-		-		-	-	10.815	10.815
Advanced Cargo Projectile Technology	MIPR	DMEA, McClellan : CA	2.390	-		-		-		-		-	-	2.390	2.390
Platform Integration Firing Tables Development	MIPR	ARDEC, Firing Tables Branch Picatinny, NJ and : Aberdeen, MD	2.399	-		-		-		-		-	-	2.399	2.399

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604814A / *Artillery Munitions - EMD*	Project (Number/Name) 708 / *XM982 Projectile*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Excalibur Increment Ia Development	C/CPIF	Raytheon Missile System : Tucson, AZ	428.187	-		-		-		-		-	-	428.187	428.187
		Subtotal	671.332	-		-		-		-		-	-	671.332	671.332

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	PO	PM Excalibur : Picatinny, NJ	27.771	0.300	Nov 2012	0.400	Oct 2013	-		-		-	-	28.471	28.471
Government Support-Excalibur XM982	MIPR	ARDEC : Picatinny, NJ	67.482	1.179	Nov 2012	2.500	Jan 2014	-		-		-	-	71.161	71.161
Goverment Support- Ft Sill	MIPR	Ft. Sill : OK	3.534	-		0.020	Nov 2013	-		-		-	-	3.554	3.554
Milestone Support	C/FP	Camber : Alexandria, VA	1.792	-		-		-		-		-	-	1.792	1.792
Miscellaneous Support	Various	Various : Various	4.175	-		-		-		-		-	-	4.175	4.175
Engineering Services Contract for Increment 1a-2	SS/CPFF	Raytheon Missile Systems : Tucson, AZ	0.085	-		-		-		-		-	-	0.085	0.085
Paladin Platform Integration	MIPR	PM Paladin : Picatinny, NJ	0.930	-		-		-		-		-	-	0.930	0.930
Government Support - SS-SFM	MIPR	ARDEC : Picatinny, NJ	1.625	-		-		-		-		-	-	1.625	1.625
Technical Spt Contract for Platform Integration	C/FP	Camber : Dallas, TX	0.821	-		-		-		-		-	-	0.821	0.821
Fire Control development support	MIPR	Fort Monmouth, NJ and : Fort Sill, OK	1.008	-		-		-		-		-	-	1.008	1.008
Platform Integration Software Support	MIPR	Navy Surface Warfare Center : MD	0.390	-		-		-		-		-	-	0.390	0.390
Government TCM Support	MIPR	ARDEC : Picatinny, NJ	0.910	-		-		-		-		-	-	0.910	0.910

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604814A / *Artillery Munitions - EMD*	Project (Number/Name) 708 / *XM982 Projectile*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Support-Advanced Cargo Projectile Technology	MIPR	ARDEC : Picatinny, NJ	0.353	-		-		-		-		-	-	0.353	0.353
Government Support Platform Integration	MIPR	ARDEC : Picatinny, NJ	6.241	-		-		-		-		-	-	6.241	6.241
PM CAS SS-SFM	PO	PM CAS : Picatinny, NJ	0.700	-		-		-		-		-	-	0.700	0.700
Increment Ia Engineering Services	MIPR	DMEA : McClellan, CA	5.078	-		-		-		-		-	-	5.078	5.078
Increment Ia Engineering Services	C/CPFF	DRS : Eatontown, NJ	12.850	-		-		-		-		-	-	12.850	12.850
Modeling and Structural Development	MIPR	Army Research Labs : Adelphi, MD	9.034	-		-		-		-		-	-	9.034	9.034
Government Engineering Support for Precision Artillery Risk Reduction	MIPR	ARDEC : Picatinny, NJ	2.750	-		-		-		-		-	-	2.750	2.750
		Subtotal	147.529	1.479		2.920		-		-		-	-	151.928	151.928

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TECOM Test Range	MIPR	Yuma Proving Grounds : Yuma, AZ	23.768	2.000	Jan 2013	3.240	Nov 2013	-		-		-	-	29.008	29.008
Test Instrumentation and Analysis	MIPR	Army Research Labs : Adelphi, MD	3.935	-		0.196	Dec 2013	-		-		-	-	4.131	4.131
Telemetry Support	SS/FFP	Physical Science Laboratories (PSL) : Las Cruces, NM	3.146	-		-		-		-		-	-	3.146	3.146
Telemetry Support	MIPR	ARDEC : Picatinny, NJ	17.711	-		0.150	Nov 2013	-		-		-	-	17.861	17.861

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604814A / *Artillery Munitions - EMD*	Project (Number/Name) 708 / *XM982 Projectile*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Telemetry Cryptographic Support & Anti-Jam Support	MIPR	Ft. Huachuca : AZ	0.822	0.097	Jun 2013	-		-		-		-	-	0.919	0.919
Target Replacement, Definition, Maintenance and Repair and Threat Assessment	MIPR	Target Management Office : Huntsville, AL	1.558	-		0.078	Nov 2013	-		-		-	-	1.636	1.636
Operational Test Support & AEC	MIPR	ATEC : Alexandria, VA	9.457	-		0.200	Dec 2013	-		-		-	-	9.657	9.657
ARDEC Testing	MIPR	ARDEC : Picatinny, NJ	2.814	-		0.221	Jan 2014	-		-		-	-	3.035	3.035
TECOM Test Range	MIPR	White Sands Missile Range : NM	13.595	-		-		-		-		-	-	13.595	13.595
Operational Test Support	MIPR	Ft. Sill : OK	3.244	-		1.200	Nov 2013	-		-		-	-	4.444	4.444
Test Gun Equipment	MIPR	Watervliet Arsenal : NY	3.972	-		-		-		-		-	-	3.972	3.972
Test Hardware	SS/CPFF	SAVIT : Parsippany, NJ	0.450	-		-		-		-		-	-	0.450	0.450
Live Fire Test and Evaluation	MIPR	ARL : Aberdeen, MD	0.697	-		-		-		-		-	-	0.697	0.697
Tri-Service Software Assessment	MIPR	OSD : Washington, DC	0.061	-		-		-		-		-	-	0.061	0.061
SS-SFM Testing	MIPR	Yuma Proving Grounds : Yuma, AZ	2.300	-		-		-		-		-	-	2.300	2.300
		Subtotal	87.530	2.097		5.285		-		-		-	-	94.912	94.912

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	906.391	3.576		8.205		-		-		-	-	918.172	918.172

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604814A / *Artillery Munitions - EMD*	**Project (Number/Name)** 708 / *XM982 Projectile*

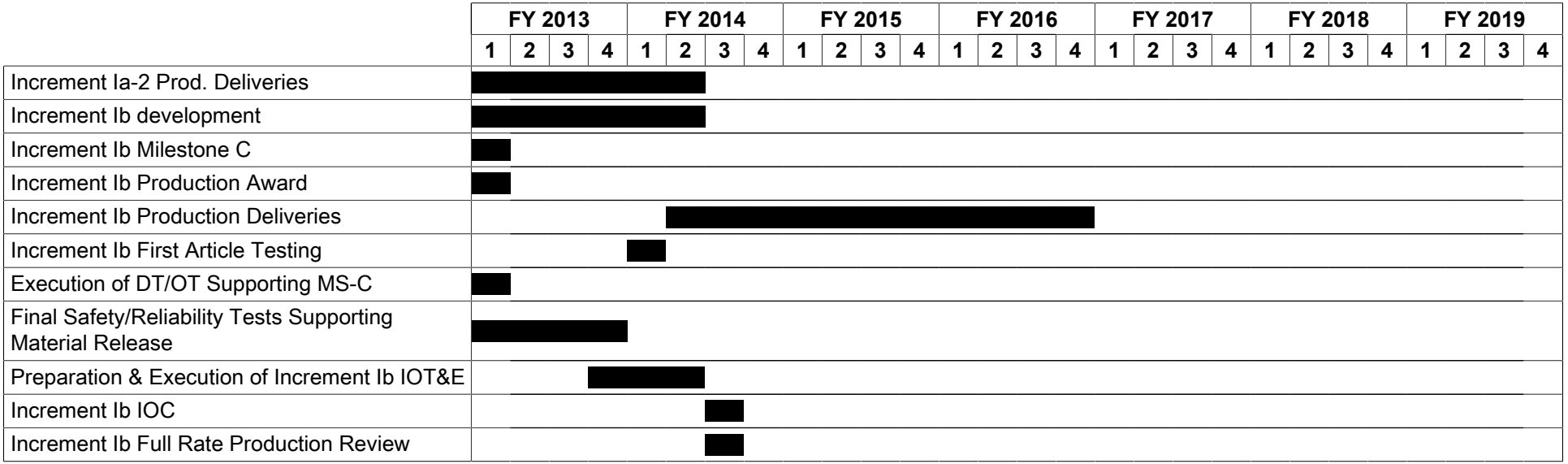

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604814A / *Artillery Munitions - EMD*	**Project (Number/Name)** 708 / *XM982 Projectile*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Increment Ia-2 Prod. Deliveries	4	2011	2	2014
Increment Ib development	4	2008	2	2014
Increment Ib Milestone C	1	2013	1	2013
Increment Ib Production Award	1	2013	1	2013
Increment Ib Production Deliveries	2	2014	4	2016
Increment Ib First Article Testing	1	2014	1	2014
Execution of DT/OT Supporting MS-C	2	2012	1	2013
Final Safety/Reliability Tests Supporting Material Release	4	2012	4	2013
Preparation & Execution of Increment Ib IOT&E	4	2013	2	2014
Increment Ib IOC	3	2014	3	2014
Increment Ib Full Rate Production Review	3	2014	3	2014

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0604818A *I Army Tactical Command & Control Hardware & Software*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	50.279	22.945	29.683	-	29.683	41.596	51.991	52.844	64.953	Continuing	Continuing
323: *Common Hardware Systems*	-	7.121	5.810	4.506	-	4.506	5.910	5.719	5.821	5.936	Continuing	Continuing
334: *Common Software*	-	3.127	1.452	8.323	-	8.323	21.409	32.563	34.295	46.213	Continuing	Continuing
C29: *Centralized Technical Support Facility (CTSF)*	-	19.930	4.653	7.876	-	7.876	-	-	-	-	Continuing	Continuing
C34: *Army Tac C2 Sys Eng*	-	20.101	11.030	8.978	-	8.978	14.277	13.709	12.728	12.804	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The umbrella program to exploit automation technology for the conduct of combat operations is the Army Tactical Command and Control System (ATCCS) program which is a component of the Army Battle Command System (ABCS). The ATCCS program provides automation in the five battlefield functional areas (BFAs) with the following specific systems: (1) Maneuver Control System (MCS); (2) Effects and Fires Command and Control Systems (EFCCS); (3) All Source Analysis System (ASAS) for Intelligence/Electronic Warfare; (4) Forward Area Air Defense Command, Control and Intelligence System (FAADC2I); and (5) Battle Command Sustainment Support System (BCS3). To provide an overall technically sound, cost effective, and operationally responsive approach, the design and development of ATCCS must be accomplished on a total systems basis.

The Common Hardware Systems (CHS) program provides tactical, state-of-the-art, fully qualified, interoperable, compatible, deployable, and survivable hardware and computer networking equipment for command, control, and communications for the United States Army and other Department of Defense (DoD) services. CHS provides technical support, common standardized testing and system design / configuration management across Army tactical programs to ensure interoperability and integration of hardware throughout the development of capabilities, to facilitate and simplify the selection of common hardware solutions across the operational battlefield and to create efficiencies through streamlined common hardware configurations across the Common Operating Environments (COE)s. CHS also provides worldwide repair, maintenance, logistics, and technical support services through strategically located contractor-operated Regional Support Centers (RSC) for tactical military units and management of a comprehensive 5-year warranty and 72-hour turnaround for repairs.

Common Software(CS) is the program through which the Army develops, integrates and tests common software products and/or components used for communication between ABCS, Joint and coalition Command and Control (C2) applications. The CS project provides state-of-the-art software technologies and functionality that is used by numerous Army Battle Command Systems (ABCS) and joint systems to eliminate the need for service independent development and duplication of effort. The CS project also manages and performs technology demonstrations of emerging technologies for future use by Army C2 systems. The CS program is a cornerstone in the Army's COE modernization efforts. Funding supports on-going development of common software solutions and the technical evaluation of previously developed software capabilities for integration into the computing environments of the Army COE architecture to include appropriate Mounted and Mobile Computing environments. Efforts will include assessment of software maturity and readiness, development/modification of software necessary to integrate, integration with common computing environments, and validation.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604818A *I Army Tactical Command & Control Hardware & Software*

This program element also includes the Central Technical Support Facility (CTSF) which is the Army's single strategic facility responsible for executing SoS Interoperability checkout, testing, physical system integration and configuration management of the Army's LandWarNet Baseline.
The Technical Management Division (TMD) effectively manages the engineering, Enterprise and Integration efforts within the Program Executive Office Command, Control, Communication and Tactical (PEO C3T) portfolio of technology and across the capability enhancement packages to deliver efficient and effective cross-domain technical solutions. TMD efforts will focus on System-of-Systems (SOS) engineering and integration for evolution of the network (Warfighter Information Network-Tactical, Joint Tactical Radio System) and associated services (Mission Command, Joint Battle Command-Platform, Net-Enabled Command Capability, Network Service Center) with increased emphasis on immediate Warfighter needs as well as leveraging emerging technologies. TMD efforts support working Army Network Modernization strategy and implementation to include: network integration; emerging technologies; coordination of network services; current and force integrated Command, Control, Communications, Computers, Combat Systems, Intelligence, Surveillance, and Reconnaissance (C5ISR) network/transport architectures; integrated developmental, technical, and operational test schedules/documentation; and the tactical assessment and execution of the enterprise implementation and framework. TMD synchronizes the integration of many Headquarters, Department Of The Army (HQDA) initiatives and also oversees the technical analysis supporting the Army Common Operating Environment (COE) Assessment and implementation.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	77.223	22.958	42.754	-	42.754
Current President's Budget	50.279	22.945	29.683	-	29.683
Total Adjustments	-26.944	-0.013	-13.071	-	-13.071
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-28.200	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	1.256	-0.013	-13.071	-	-13.071

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604818A / *Army Tactical Command & Control Hardware & Software*	Project (Number/Name) 323 / *Common Hardware Systems*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
323: *Common Hardware Systems*	-	7.121	5.810	4.506	-	4.506	5.910	5.719	5.821	5.936	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Common Hardware Systems (CHS) program provides tactical, state-of-the-art, fully qualified, interoperable, compatible, deployable, and survivable hardware and computer networking equipment for command, control, and communications for the United States Army and other Department of Defense (DoD) services. CHS provides technical support, common standardized testing and system design / configuration management across Army tactical programs to ensure interoperability and integration of hardware throughout the development of capabilities, to facilitate and simplify the selection of common hardware solutions across the operational battlefield and to create efficiencies through streamlined common hardware configurations across the Common Operating Environments (COE)s. CHS also provides worldwide repair, maintenance, logistics, and technical support services through strategically located contractor-operated Regional Support Centers (RSC) for tactical military units and management of a comprehensive 5-year warranty and 72-hour turnaround for repairs.

FY 2015 funds support CHS to continue to manage the acquisition and delivery of CHS equipment and technology insertion in support of customer requirements. CHS will continue CHS-5 contract pre-award activities.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Acquisition Management, System/ Configuration Management, and technical evaluation and testing of CHS equipment and services in support of program requirements	6.321	5.310	4.006
Articles:	-	-	-
Description: Funding is provided for the following effort			
FY 2013 Accomplishments: Continued the management of the acquisition/delivery, System/ Configuration Management, and technical evaluation and testing of CHS equipment in support of customer requirements			
FY 2014 Plans: Will continue the management of the acquisition/delivery, System/ Configuration Management, and technical evaluation and testing of CHS equipment in support of customer requirements			
FY 2015 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604818A / *Army Tactical Command & Control Hardware & Software*	**Project (Number/Name)** 323 / *Common Hardware Systems*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Will continue the management of the acquisition/delivery, System/ Configuration Management, and technical evaluation and testing of CHS equipment in support of customer requirements			
Title: CHS equipment testing efforts	0.300	-	-
Articles:	-	-	-
Description: Funding is provided for the following effort ***FY 2013 Accomplishments:*** Continued to support CHS customer testing efforts			
Title: CHS Technology Insertion in support of program capability requirements	0.500	0.500	0.500
Articles:	-	-	-
Description: Funding is provided for the following effort ***FY 2013 Accomplishments:*** Continued CHS Technology Insertion in support of program capability requirements ***FY 2014 Plans:*** Continue CHS Technology Insertion in support of program capability requirements ***FY 2015 Plans:*** Continue CHS Technology Insertion in support of program capability requirements			
Accomplishments/Planned Programs Subtotals	7.121	5.810	4.506

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Not applicable for this item.

D. Acquisition Strategy

The overall goal is to improve interoperability and compatibility and lower life cycle costs by standardizing battlefield command and control automation and other warfighting systems (net centric, etc) through centralized buys of modified/ruggedized non-developmental items. This project provides a coherent migration strategy for acquisition of warfighting systems through the use of technology insertion.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604818A / *Army Tactical Command & Control Hardware & Software*	**Project (Number/Name)** 323 / *Common Hardware Systems*

CHS also conducts common environmental and developmental testing of hardware items thereby reducing the testing requirements for individual Project Managers. An Indefinite Delivery/Indefinite Quantity firm fixed priced, full and open competition contract was awarded to General Dynamics in May 2003, for ruggedization and production.

In August 2011, CHS awarded, on a best value basis, the follow-on CHS-4 contract via full and open competition. CHS-5 is to be awarded in FY16 to provide flexibility for Tactical Programs of Record (PoR)s to meet hardware and associated services requirements through full and open competition and to provide an agile solution to support COE, network integration activities, capability set development, and transport needs.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604818A / *Army Tactical Command & Control Hardware & Software*	Project (Number/Name) 323 / *Common Hardware Systems*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Support Costs	C/FP	Various : Various	71.883	3.285		2.575		2.232		-		2.232	Continuing	Continuing	Continuing
Product Development	C/FP	Various : Various	81.115	3.036		2.735		1.774		-		1.774	Continuing	Continuing	Continuing
CHS-3 Non Recurring Engineering	C/FFP	General Dynamics : Taunton, MA	17.500	-		-		-		-		-	-	17.500	-
CHS-4 Non-Recurring Engineering	C/FP	Various : Various	14.150	-		-		-		-		-	Continuing	Continuing	Continuing
Technology Insertion	C/FP	Various : Various	14.777	0.500		0.500		0.500		-		0.500	Continuing	Continuing	Continuing
		Subtotal	199.425	6.821		5.810		4.506		-		4.506	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CHS Test Activities	Various	Other Government Activities : various	2.654	0.300		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	2.654	0.300		-		-		-		-	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	202.079	7.121		5.810		4.506		-		4.506	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604818A / *Army Tactical Command & Control Hardware & Software*	**Project (Number/Name)** 323 / *Common Hardware Systems*

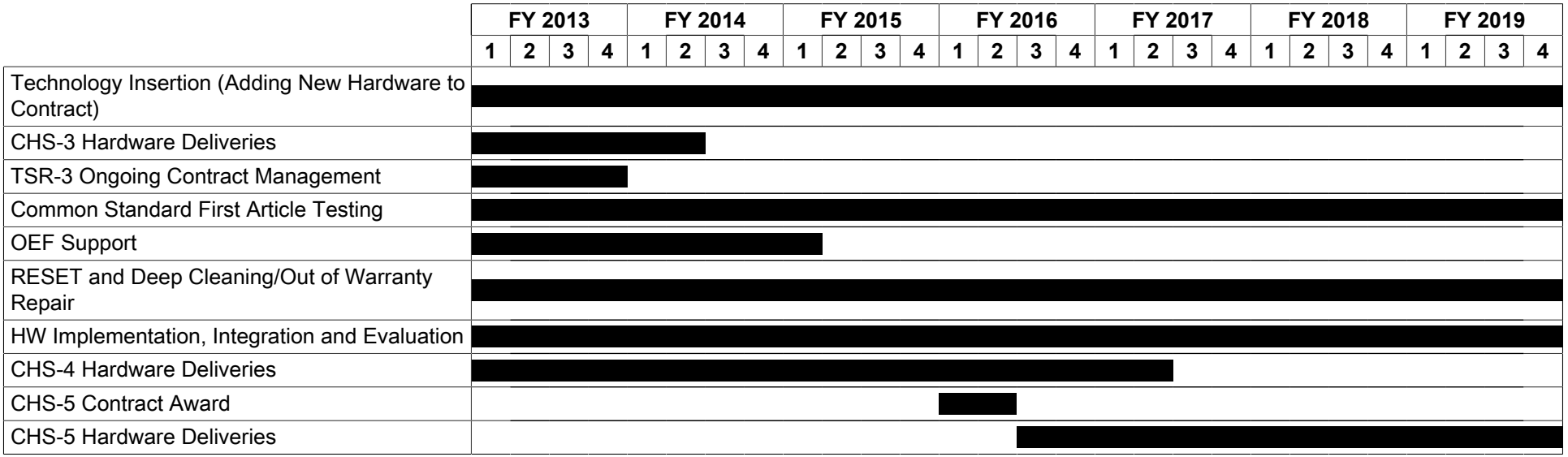

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604818A / *Army Tactical Command & Control Hardware & Software*	**Project (Number/Name)** 323 / *Common Hardware Systems*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Technology Insertion (Adding New Hardware to Contract)	1	2007	4	2020
CHS-3 Hardware Deliveries	2	2004	2	2014
TSR-3 Ongoing Contract Management	1	2006	4	2013
Common Standard First Article Testing	1	2006	4	2020
OEF Support	1	2006	1	2015
RESET and Deep Cleaning/Out of Warranty Repair	1	2006	4	2020
HW Implementation, Integration and Evaluation	1	2006	4	2020
CHS-4 Hardware Deliveries	1	2012	2	2017
CHS-5 Contract Award	1	2016	2	2016
CHS-5 Hardware Deliveries	3	2016	4	2020

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604818A / *Army Tactical Command & Control Hardware & Software*	Project (Number/Name) 334 / *Common Software*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
334: *Common Software*	-	3.127	1.452	8.323	-	8.323	21.409	32.563	34.295	46.213	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Not applicable for this item.

A. Mission Description and Budget Item Justification

Project 334 Common Software (CS): CS is the program through which the Army develops, integrates and tests common software products and/or components used for communication between Army Mission Command Systems and Joint and coalition Command and Control (C2) applications. The CS project provides state-of-the-art software technologies and functionality that is used by numerous Mission Command (MC) and joint systems to eliminate the need for service independent development and duplication of effort. The CS project also manages and performs technology demonstrations of emerging technologies for future use by Army C2 systems. The CS program is a cornerstone in the Army's COE modernization efforts.

FY15 funding supports on-going development of common software solutions and the technical evaluation of previously developed software capabilities for integration into the computing environments of the Army Common Operating Environment (COE) architecture to include appropriate Mounted and Mobile Computing environments. Efforts will include assessment of software maturity and readiness, development/modification of software as necessary to integrate, integration with common computing environments, and validation.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Mission Command (MC) systems provide single common software enterprise infrastructure development in support of Army and Joint Services requirements. ***Description:*** Funding is provided for the following effort. ***FY 2015 Plans:*** MC systems provid single common software enterprise infrastructure development in support of Army and Joint Services requirements. Funding is provided for the following effort:	-	-	2.718
Title: Joint and Coalition interoperability efforts. ***Articles:*** ***Description:*** Will continue to provide software for interoperability of Joint and Coalistion efforts. ***FY 2013 Accomplishments:***	0.127 -	- -	1.446 -

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604818A / *Army Tactical Command & Control Hardware & Software*	**Project (Number/Name)** 334 / *Common Software*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Will continue to provide software for interoperability of Joint and Coalition efforts. ***FY 2015 Plans:*** Will continue to provide software for interoperability of Joint and Coalition efforts.			
Title: Integration of previously developed and currently required mission command software services and common software solutions into the Army COE and Command Post Computing Environment. ***Articles:*** ***Description:*** Funding is provided for the following effort. ***FY 2014 Plans:*** Integration of previously developed and currently required mission command software services and common software solutions into the Army COE and Command Post Computing Environment. ***FY 2015 Plans:*** Technical evaluation of previously developed software capabilities for integration with the computing environments of the Army Common Operating Environment (COE) architecture to include appropriate Mounted and Mobile Computing environments. Efforts will include assessment of software applicability to the core infrastructure, development/modification of software necessary to integrate, integration with common computing environments, and validation.	- -	1.452 -	4.159 -
Title: Software Development ***Articles:*** ***Description:*** Develop capabilites, product applications, platform interoperability and system services for Project Manager Joint Battle Command-Platform (PM JBC-P). Support efforts for Mounted Computing Environment (MCE) in compliance with Common Operating Environment (COE). ***FY 2013 Accomplishments:*** Continue engineering, design and coding for MCE Build 1.0 and initiate engineering, design and coding efforts for MCE Build 2.0. Develop software and integration capabilities within MCE in support of the COE Directive.	3.000 -	- -	- -
Accomplishments/Planned Programs Subtotals	3.127	1.452	8.323

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Not applicable.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604818A / *Army Tactical Command & Control Hardware & Software*	**Project (Number/Name)** 334 / *Common Software*

D. Acquisition Strategy

In accordance with the approved Net-enabled Mission Command Initial Capabilities Document (NeMC ICD), software capability will be developed in 2-year increments as capability sets designed to facilitate messaging, mediation and addressing for Army, Joint and Coalition Partners in synchronization with the maturity of the Common Operating Environment (COE) and Command Post Computing Environment (CP CE) architecture baselines. The product development funded under this R-Form is an integral part of the Mission Command systems, and a core communication component of the virtualized infrastructure and will be accomplished primarily under a Project Manager, Mission Command (PM MC) system of systems contract approach which consists of multiple prime contracts awarded from a single solicitation that will require each specific development task be competed among primes whenever possible. This strategy is designed to optimize opportunities for improved interoperability among the systems, to capture the benefits of competition, and to ensure the rapid integration of new capabilities into warfighter systems. This strategy is also designed to reduce the physical footprint, the logistics support requirements, and to increase operational efficiency by integration of additional system interoperability services which reduce duplication of effort and cost; and allows for development of communication standards across the DoD community.

The overall acquisition goal of the CS program is the improvement of life cycle cost efficiencies by providing common products that are used horizontally across programs, thereby avoiding duplications of effort by Army and Joint programs.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604818A / *Army Tactical Command & Control Hardware & Software*	Project (Number/Name) 334 / *Common Software*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Office Management	Allot	PM Mission Command : Aberdeen, MD	9.161	0.127		0.320		0.645		-		0.645	Continuing	Continuing	-
		Subtotal	9.161	0.127		0.320		0.645		-		0.645	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Common Software Product Engineering/Software Development	C/CPFF	Future Skies : Wall Township, NJ	122.856	-		-		-		-		-	Continuing	Continuing	-
Common Software Product Engineering/Software Development	C/CPFF	Various Contractors : Various Locations	0.000	-		-		2.073	Jan 2015	-		2.073	Continuing	Continuing	-
Mission Command/Army System Engineering & Integration	C/CPFF	Future Skies : Wall Township, NJ	5.547	-		1.132	Jan 2014	-		-		-	Continuing	Continuing	-
Mission Command/Army System Engineering & Integration	C/CPFF	Various Contractors : Various Locations	0.000	-		-		1.446	Jan 2015	-		1.446	Continuing	Continuing	-
Mission Command System of Systems Architecture Development	C/CPFF	Future Skies : Wall Township, NJ	14.386	-		-		-		-		-	Continuing	Continuing	-
Evaluation, modification, validation and integration of developed SW	C/CPFF	Future Skies : Wall Township, NJ	30.913	-		-		-		-		-	Continuing	Continuing	-
Evaluation, modification, validation & integration of developed SW	C/CPFF	Various Contractors : Various Locations	0.000	-		-		4.159	Jan 2015	-		4.159	Continuing	Continuing	-
JBC-P Software Development	C/CPFF	SED : Redston Arsenal Huntsville, AL	0.000	3.000	Sep 2013	-		-		-		-	-	3.000	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604818A / *Army Tactical Command & Control Hardware & Software*	Project (Number/Name) 334 / *Common Software*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	173.702	3.000		1.132		7.678		-		7.678	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Support	Various	Various Contractors : Various Locations	7.506	-		-		-		-		-	Continuing	Continuing	-
Technical Support	Various	Various Contractors : Various Locations	2.139	-		-		-		-		-	Continuing	Continuing	-
		Subtotal	9.645	-		-		-		-		-	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test	Various	Various Contractors : Various Locations	7.145	-		-		-		-		-	Continuing	Continuing	-
		Subtotal	7.145	-		-		-		-		-	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	199.653	3.127		1.452		8.323		-		8.323	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604818A / *Army Tactical Command & Control Hardware & Software*	**Project (Number/Name)** 334 / *Common Software*

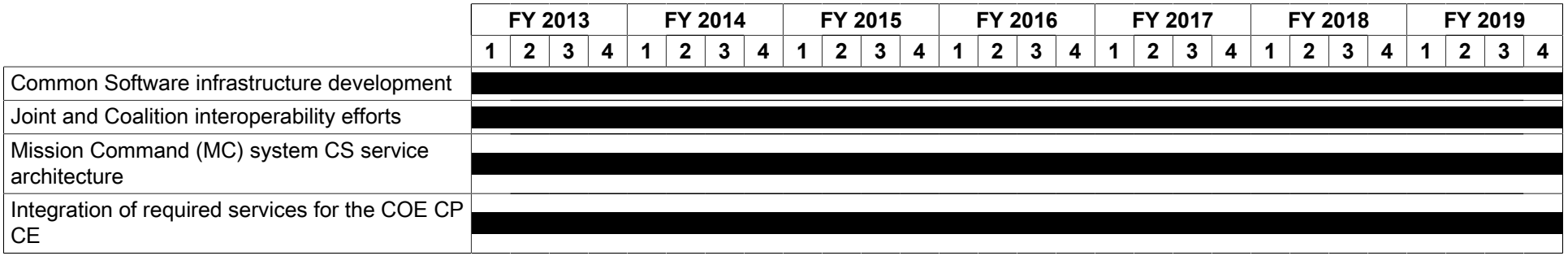

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604818A / *Army Tactical Command & Control Hardware & Software*	**Project (Number/Name)** 334 / *Common Software*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Common Software infrastructure development	1	2011	4	2019
Joint and Coalition interoperability efforts	1	2011	4	2019
Mission Command (MC) system CS service architecture	1	2011	4	2019
Integration of required services for the COE CP CE	1	2011	4	2019

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604818A / *Army Tactical Command & Control Hardware & Software*	Project (Number/Name) C29 / *Centralized Technical Support Facility (CTSF)*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
C29: *Centralized Technical Support Facility (CTSF)*	-	19.930	4.653	7.876	-	7.876	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Project C29 - Centralized Technical Support Facility: The Central Technical Support Facility (CTSF) is the Army's premier test and certification facility for System of Systems interoperability. It is the Army's strategic facility responsible for conducting engineering support associated with test integration of Army Mission Command architectures into the Army Interoperability Certification (AIC) system of systems environment, performing AIC testing and conducting configuration management for all operational and tactical level applications (individual systems, System of Systems, and Families of Systems) prior to fielding. The CTSF provides validated test data to the Department of the Army and Joint agencies to accredit interoperability certifications. The current expansion of the distributed test environment of the CTSF will be accomplished through the Federation of Net-centric Sites (FaNS) construct. This FaNS construct addresses distributed integration development and testing using the core infrastructure of the CTSF to harness AMC, Army, and Joint expertise/resources. Through these federated resources, the CTSF will execute interoperability development and certification testing of the Warfighter and Business mission areas, to include Brigade Combat Team Modernization spin-outs, as they digitize and become part of the Army's LandWarNet.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Army Interoperability Certification (AIC) Testing	10.290	2.638	6.196
Articles:	-	-	-
Description: Description: Conduct Army Interoperability Certification testing/planning/data collection/ data analysis/reporting, interoperability baseline testing, simulation/stimulation verification/validation and distributed testing. Manage the set-up, configuration, integration, and operations and maintenance of the LandWarNet systems within the test floor environment, as the CIO/G-6's Test Agent for Program Managers of LandWarNet systems that need to deliver software updates for fielding to the Warfighter. Report the results of Army Interoperability Certification Tests to the CIO/G-6, PM, and TRADOC communities to support updates to the G-3/5/7 managed baseline.			
FY 2013 Accomplishments: Began COE 1.0 (formerly SWB 13-14) test planning, test case development, test floor architecture design and set-up to include supporting ASA(ALT) with integration and interoperability event (I2E) with operators, test officers, ORSAs, data management, instrumentation; upgraded/refreshed test floor hardware (routers, switches, servers, computers and power supplies) to build out network infrastructure required for Army's next baseline (COE 1.0), new servers and associated equipment to support virtualization; establish operationally relevant infrastructure to prove-out required AIC testing. ASA(ALT) will leverage unique			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604818A / *Army Tactical Command & Control Hardware & Software*	**Project (Number/Name)** C29 / *Centralized Technical Support Facility (CTSF)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
infrastructure prior to AIC testing to complete System of System integration. Prepared to execute COE 1.0 AIC; conducted information assurance software/compliance scans, test tool verification, and validated COE 1.0 test threads needed for AIC. Continued to coordinate with PEO C3T Crypto Network Initialization and to incorporate the go-to-war Data Products into AIC tests. ***FY 2014 Plans:*** Execute COE 1.0 testing/evaluation and certification. Continue COE 1.0 bi-annual test planning, test case development, to include information assurance software/compliance scans, and test tool verification. Upon establishment of the COE 1.0 baseline, plan for AIC testing and data collection on a Bi-Annual basis, that will allow for the completion of SW AIC certification that may be leveraged for use during the NIE events at Ft Bliss, TX/WSMR. Begin COE 2.0 test planning, test case development; coordinate with PMs for systems undergoing COE 2.0 testing to determine test floor architecture; determine COE 2.0 test floor architecture; update infrastructure to achieve required commonality with COE 2.0 architecture. Continue to coordinate with PEO C3T Crypto Network Initialization for baseline Data Products and to incorporate the go-to-war Data Products into AIC tests. ***FY 2015 Plans:*** Continue planning for AIC testing and data collection on a Bi-Annual basis, that will allow for the completion of SW AIC certification that may be leveraged for use during NIE events at Ft Bliss, TX/WSMR. Continue COE 2.0 test planning, test case development, test floor architecture set-up to include information assurance software/compliance scans, test tool validation/ verification, and conduct COE 2.0 testing/evaluation and certification; begin COE 3.0 test planning, test case development. Continue to coordinate with PEO C3T Crypto Network Initialization for baseline Data Products and to incorporate the go-to-war Data Products into AIC tests. Plan and conduct AIC testing and data collection in the Network Integration Evaluation (NIE)/ Capability Integration Evaluation (CIE) to leverage the operational environment and NIE/CIE resources.			
Title: Engineering Services	6.160	0.742	0.481
Articles:	-	-	-
Description: Provide network engineering support to establish and maintain tactical architectures on the CTSF test floors and to deploying units at training centers around the world (NIE, JRTC, NTC, JMRC). System engineering support provides hardware virtualization, advanced host based security system (HBSS) support, system validation and integration support to numerous PMs on the integration and risk reduction labs, and assists Army programs with interoperability assessments and AIC rehearsal. ***FY 2013 Accomplishments:*** Supported AIC Integration and Testing. Conducted Network Integration checkout before each AIC to ensure systems and Network are ready for test. Supported PMs for COE V1.0 integration. Supported backward compatibility testing between SWB2 and CS11-12. Identified the challenges of having three fielded baselines and the interoperability limitations. Identified and incorporated software tools to monitor performance and assist in issue resolution. Integrated and implemented HBSS policies and assist PMs in HBSS implementation. Assisted integration and test architectures to include Program of Record (POR) and			

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
non-POR radio communications devices to provide PMs and Material Developers testing in realistic environments. Provided CTSF network and systems engineering support to ASA(ALT) System of Systems Integration (SoSI) and Systems for sensor and platform level for validation of end-to-end communications and interoperability, platform through Army Corps to Joint/Coalition; supported NIE. Provided software patch validation; network support for integration and test floors; network support to fielded units upon request; and systems engineering and analysis support to system of systems integration activities. Provided PMs with a Virtualization Suite, assist in virtualizing SW and assist PMs that are new to virtualization. ***FY 2014 Plans:*** Contine AIC Integration and Testing support. Conduct Network Integration checkout before each AIC to ensure systems and Network are ready for test. Support to PMs for COE V1.0 integration. Support to backward compatibility testing between SWBL2, CS11-12 and COE V1.0. Identify and incorporate software tools to monitor performance and assist in issue resolution. Decrease scope and size of engineering staff to implement the HQDA directed guidance to provide systems engineering support services only directed at test/certification research, tools and instrumentation to speed the testing of LWNMC systems. Provide PMs with a Virtualization Suite and assist in virtualizing SW. ***FY 2015 Plans:*** Continue to support AIC Integration and Testing. Conduct Network Integration checkout before each AIC to ensure systems and Network are ready for test. Support to PMs for COE V2.0 integration. Support to backward compatibility testing between CS11-12, COE V1.0 and COE V2.0. Identify and incorporate software tools to monitor performance and assist in issue resolution. Provide PMs with a Virtualization Suite, assist in virtualizing SW.			
Title: Configuration Management	0.877	0.173	0.176
Articles:	-	-	-
Description: Establish and maintain the configuration baseline of the Army LandWarNet Mission Command Baseline (ALWNMCB) for Lifecycle Software Management (LCSM). CM facilitates orderly management of product configuration information and product baseline changes to enable capability revisions, improve reliability and maintainability, extend life, reduce cost, and provide support to MATDEV, PM and SO for a visual and informational retrievable authoritative database to assist with determining how to reduce risk and liability, and/or correct defects. Conduct Physical Configuration Audits (PCAs) at the start-of-exercise (StartEx) and end-of-exercise (EndEx) of testing; probe a representative hard drive of each type for each WFA and a representative sample of the windows systems before and after testing. Provide memorandum of record that authenticates the integrity of the software based on a comparison of before and after probes. ***FY 2013 Accomplishments:*** Verified configuration of PM software drops for SWB2, SWB11-12 and COE v1.0 prior to tri-annual or baseline AIC test; controlled software configuration during test; performed Change Management (ChM) for the Fielded Baselines for HQ/DA CIO/			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
G6 and G3/5/7; and disseminated software to deployed/deploying units. Continued development/refinement of Configuration Management Tracking Tool Version 3 (CMTSv3) modules. ***FY 2014 Plans:*** Verify SWB11-12 for Tri-Annuals and COE v1.0 software configuration prior to bi-annual test events, control and manage configuration and architecture during test to ensure validity with certification event, and maintain baselines as Title 40 manager for HQ/DA CIO/G6 and G3/5/7; disseminate software to deployed/deploying units. Sustain Configuration Management Tracking Tool Version 3 (CMTSv3) to incorporate CMTSv3 Director Report and Incident Reporting of CTSF Certification of Systems Under test. Establish support to AGILE Process with access to CMTSv3 performing audits in support of activities performed at the NIE events. ***FY 2015 Plans:*** Verify software configuration prior to test, control configuration during test, and maintain baselines for HQ/DA CIO/G6 and G3/5/7; disseminate software to deployed/deploying units. Sustain Configuration Management Tracking Tool Version 3 (CMTSv3) to incorporate CTSF Baseline Tracking for Army Interoperability Certification of Systems Under Test. Sustain support to AGILE Process with access to CMTSv3 performing audits in support of activities performed at the NIE and events.			
Title: Management Operations/Program Office ***Articles:*** ***Description:*** Provide management operations consisting of programming and executing funds, personnel, contracts, and identifying reimbursable tests and collecting/allocating appropriate funds. ***FY 2013 Accomplishments:*** Program and execute funds/manpower/contracting requirements; track testing schedule, prepare/coordinate/track reimbursements for tests (e.g. Tri-Annual CS 11-12, Tri-Annual SWB2, AIC testing, Joint, Coalition, and future systems test events. Coordinate, plan and program field support for unit training and exercises. Maintain facility and test infrastructure. ***FY 2014 Plans:*** Program and execute funds/manpower/contracting requirements; track testing schedule, prepare/coordinate/track reimbursements for tests (COE V1.0 and v2.0 baseline and bi-annual testing, CS 11-12 Tri-Annual testing; Joint, and future systems test events. Provide field support coordination for unit training and exercises. Maintain facility and test infrastructure. ***FY 2015 Plans:*** Program and execute funds/manpower/contracting requirements; track testing schedule, prepare/coordinate/track reimbursements for tests (e.g. COE V1.0 and v2.0 baseline and bi-annual tests, CS 11-12 Tri-Annual testing, Joint, and future systems test events. Provide field support coordination for unit training and exercises. Maintain facility and test infrastructure.	2.603 -	1.100 -	1.023 -
Accomplishments/Planned Programs Subtotals	19.930	4.653	7.876

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
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C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Execute system of systems interoperability testing and certification through the use of Government and Systems Engineering and Technical Analysis (SETA) contract personnel experienced in product development and interoperability testing. Testing and certification occurs in a cyclical fashion, with an expectation of an annual Software Block/Capability Set test followed with cyclical test events (Bi-Annual Tests) to ensure integrity of software baselines to the Warfighter. Engineering Services provides strategic integration of software into a system of systems/family of systems environment to support interoperability testing. Establish and maintain Configuration Management and version control of the Army's Interoperable Battle Command LandWarNet Baseline. Further expand distributed testing capability using local assets and leveraging other federated test facilities to create synergy and realize efficiencies, to include system of system test efforts, where possible at 2/1 AD/ WSMR (NIE).

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MITRE Corp	FFRDC	Engineering Services : Fort Hood, TX	15.028	1.276	Oct 2012	0.569	Oct 2013	0.305	Oct 2014	-		0.305	Continuing	Continuing	Continuing
CECOM R2 3G	C/CPFF	Enterprise Integration & Validation Infrastructure : Fort Hood, TX	0.736	3.877	Sep 2012	-		-		-		-	-	4.613	-
In-House	Allot	Engineering Services : Fort Hood, TX	1.192	1.007	Oct 2012	0.173	Oct 2013	0.176	Oct 2014	-		0.176	Continuing	Continuing	Continuing
		Subtotal	16.956	6.160		0.742		0.481		-		0.481	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CECOM Matrix	MIPR	Program and Budget Analysis Support : Fort Hood, TX/ Aberdeen Proving Grounds, MD	3.173	0.311	Oct 2012	0.070	Oct 2013	0.180	Oct 2014	-		0.180	Continuing	Continuing	Continuing
In-House Support	Allot	Management Operations, Logistics Support : Fort Hood, TX	6.269	1.397	Oct 2012	0.905	Oct 2013	0.814	Oct 2014	-		0.814	Continuing	Continuing	Continuing
Supplies	C/UCA	Management Operations, Logistics Support : Fort Hood, TX	0.237	0.895	Oct 2012	0.125	Oct 2013	0.029	Oct 2014	-		0.029	Continuing	Continuing	Continuing
		Subtotal	9.679	2.603		1.100		1.023		-		1.023	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army		Date: March 2014
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Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CECOM R2 3G	C/CPFF	Test, Configuration Management : Fort Hood, TX	1.471	4.358	Sep 2012	0.715	Sep 2013	2.703	Sep 2014	-		2.703	Continuing	Continuing	Continuing
CECOM S3	C/CPFF	Facilities, Maintenance, Security : Fort Hood, TX	1.965	3.474	Sep 2012	0.234	Sep 2013	1.200	Sep 2014	-		1.200	-	6.873	-
Instrumentation	C/UCA	Test Equipment Infrastructure : Fort Hood, TX	0.801	0.782	Oct 2012	0.004	Oct 2013	0.301	Oct 2014	-		0.301	Continuing	Continuing	Continuing
EPG Matrix	MIPR	Test : Fort Hood, TX	2.417	1.258	Oct 2012	1.178	Oct 2013	1.175	Oct 2014	-		1.175	Continuing	Continuing	Continuing
ISSA	MIPR	Test : Fort Hood, TX	3.728	0.716	Oct 2012	0.010	Oct 2013	0.311	Oct 2014	-		0.311	-	4.765	-
In-House Support	Allot	Test : Fort Hood,TX	0.818	0.579	Oct 2012	0.670	Oct 2013	0.682	Oct 2014	-		0.682	Continuing	Continuing	Continuing
		Subtotal	11.200	11.167		2.811		6.372		-		6.372	-	-	-

Remarks

CECOM R2 contract will provide Test and Configuration Management functions. CECOM S3 contract will provide Site Support/Facilities, Maintenance, and Security functions.
Data based on revised FY13 cost analysis.

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	37.835	19.930		4.653		7.876		-		7.876	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
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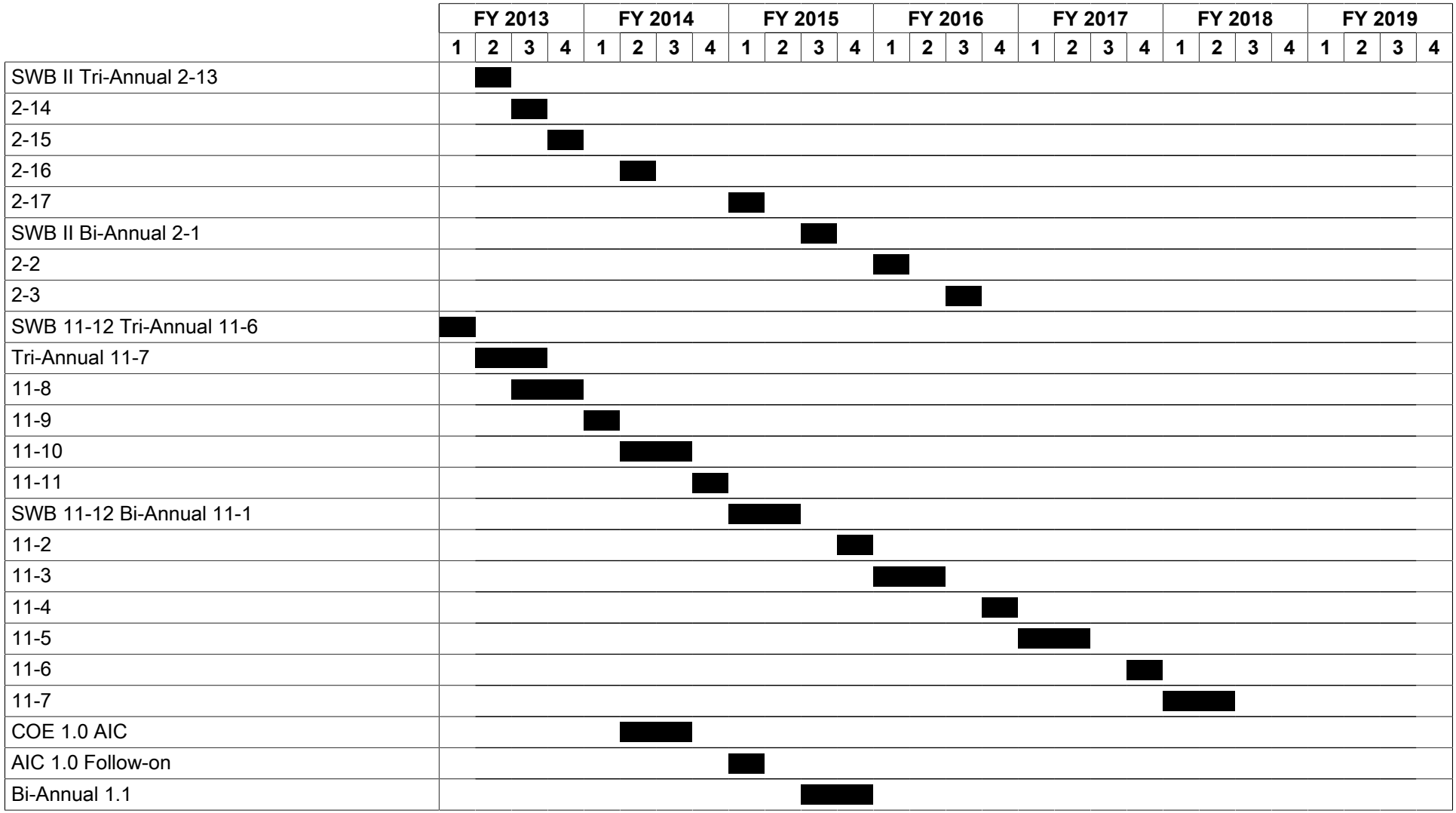

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
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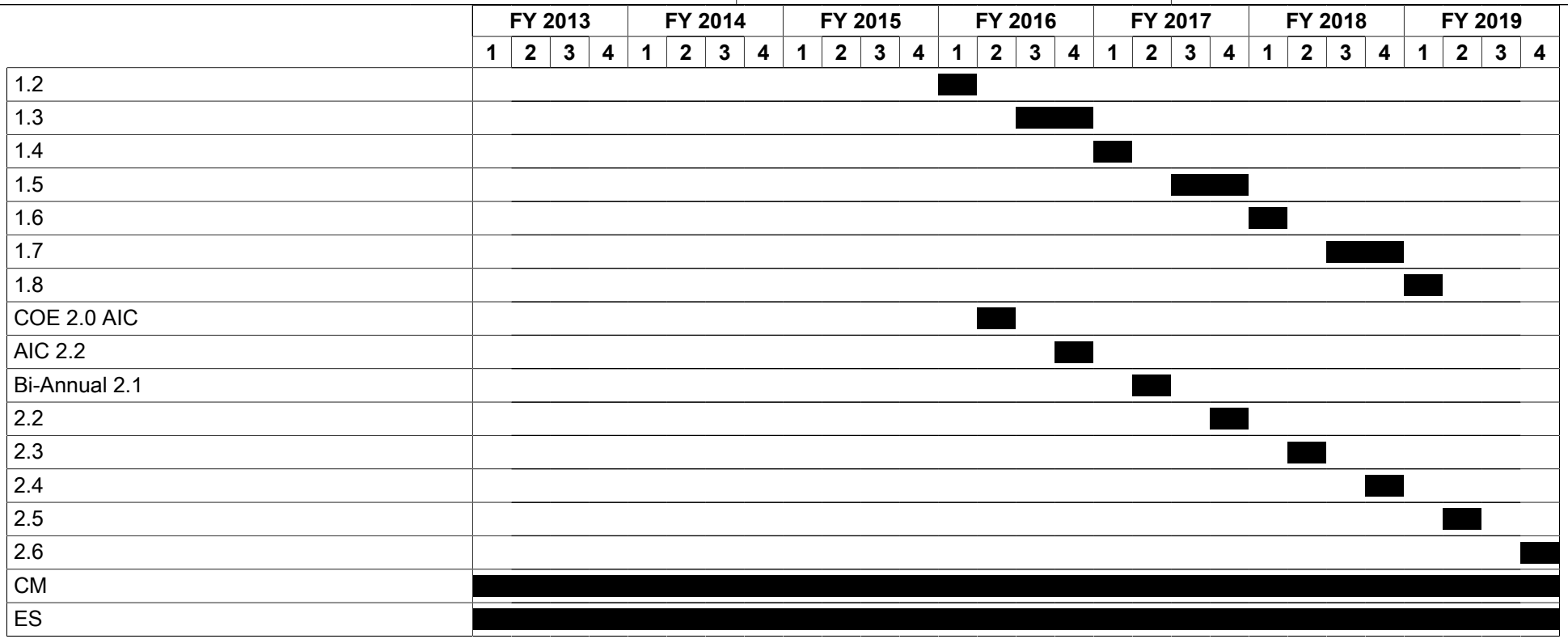

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
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Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
SWB II Tri-Annual 2-13	2	2013	2	2013
2-14	3	2013	3	2013
2-15	4	2013	4	2013
2-16	2	2014	2	2014
2-17	1	2015	1	2015
SWB II Bi-Annual 2-1	3	2015	3	2015
2-2	1	2016	1	2016
2-3	3	2016	3	2016
SWB 11-12 Tri-Annual 11-6	1	2013	1	2013
Tri-Annual 11-7	2	2013	3	2013
11-8	3	2013	4	2013
11-9	1	2014	1	2014
11-10	2	2014	3	2014
11-11	4	2014	4	2014
SWB 11-12 Bi-Annual 11-1	1	2015	2	2015
11-2	4	2015	4	2015
11-3	1	2016	2	2016
11-4	4	2016	4	2016
11-5	1	2017	2	2017
11-6	4	2017	4	2017
11-7	1	2018	2	2018
COE 1.0 AIC	2	2014	3	2014

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
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	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
AIC 1.0 Follow-on	1	2015	1	2015
Bi-Annual 1.1	3	2015	4	2015
1.2	1	2016	1	2016
1.3	3	2016	4	2016
1.4	1	2017	1	2017
1.5	3	2017	4	2017
1.6	1	2018	1	2018
1.7	3	2018	4	2018
1.8	1	2019	1	2019
COE 2.0 AIC	2	2016	2	2016
AIC 2.2	4	2016	4	2016
Bi-Annual 2.1	2	2017	2	2017
2.2	4	2017	4	2017
2.3	2	2018	2	2018
2.4	4	2018	4	2018
2.5	2	2019	2	2019
2.6	4	2019	4	2019
CM	2	2007	4	2019
ES	2	2007	4	2019

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COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
C34: *Army Tac C2 Sys Eng*	-	20.101	11.030	8.978	-	8.978	14.277	13.709	12.728	12.804	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Not applicable for this item.

A. Mission Description and Budget Item Justification

Project C34, Army Tactical Command and Control Systems Engineering: This project funds the PEO Command, Control, Communications-Tactical (PEO C3T) Technical Management Division (TMD) systems engineering and integration, experimentation, acquisition management, testing, fielding and sustainment support to ensure interoperability and affordability among the PEO C3T suite for Army Capability Sets (CS). The TMD focuses on System-of-Systems (SoS) Engineering and Integration for the C3T network with increased emphasis on immediate Warfighter needs as well as leveraging emerging technologies, through the G3 LandWarNet Capability Set Development and Integration. Fiscal Year 2015 will focus on the continued development, implementation and integration of the Command, Control, Communications, Computers, Combat Systems, Intelligence, Surveillance, and Reconnaissance (C5ISR) network architectures. This will include development of a technology enhancement roadmap for SoS capability evolution across the PEO C3T portfolio; network integration support and design products for CS validation at Network Integration Evaluations (NIE); integration of tactical Networked capabilities for all CS, initiative fieldings, and integration events; integration of tactical information assurance solutions and security measures for consistent cyber protection; leading integration of Army strategic and tactical NetOps capability; and execution of SoS developmental testing across the PEO portfolio in support of capability set fieldings.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Continue Army Tactical Battle Command and Network Synchronization and Integration Support	1.874	0.169	0.138
Articles:	-	-	-
Description: .			
FY 2013 Accomplishments: Continue the support of current force and the development of future force C5ISR across the tactical network to ensure all C3T programs are synchronized and redundancies and overlapping capabilities are reduced across the network and in synchronization with Common Operating Environment.			
FY 2014 Plans:			

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Continue the support of current force and the development of future force C5ISR across the tactical network to ensure all Assistant Secretary of the Army (Acquisition, Logistics & Technology) (ASA(ALT)) programs are synchronized and redundancies and overlapping capabilities are reduced across the network and in synchronization with Common Operating Environment. ***FY 2015 Plans:*** Continue the support of current force and the development of future force C5ISR across the tactical network to ensure all Assistant Secretary of the Army (Acquisition, Logistics & Technology) (ASA(ALT)) programs are synchronized and redundancies and overlapping capabilities are reduced across the network and in synchronization with Common Operating Environment.			
Title: Continue Developmental Testing & Integration Testing between Programs of Record (PORs) and platforms / Command Posts (CPs) to execute System-of-Systems (SoS) and Interoperability ***Articles:*** ***Description:*** . ***FY 2013 Accomplishments:*** Continue to conduct integration testing and systems engineering for C3T non-program of record and program of record systems, products, technical insertions, and systems under evaluation to ensure integration of capabilities across the network. Provide collaborative developmental approach and training venue for new hire engineers. ***FY 2014 Plans:*** Continue to conduct integration testing and systems engineering for C3T non-program of record and program of record systems, products, technical insertions, and systems under evaluation to ensure integration of capabilities across the network. Provide training and continued development of current engineers. ***FY 2015 Plans:*** Continue to conduct integration testing and systems engineering for C3T non-program of record and program of record systems, products, technical insertions, and systems under evaluation to ensure integration of capabilities across the network. Provide training and continued development of current engineers.	2.193 -	1.651 -	1.344 -
Title: Continue Tactical Network Engineering ***Articles:*** ***Description:*** . ***FY 2013 Accomplishments:***	1.482 -	0.946 -	0.770 -

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Develop effective engineering strategies to integrate tactical applications for use across the C3T enterprise network. Continue to perform network planning and integration activities across all cross-domain system-of-systems future capabilities and technologies. ***FY 2014 Plans:*** Develop effective engineering strategies to integrate tactical applications for use across the C3T enterprise network. Continue to perform network planning and integration activities across all cross-domain system-of-systems future capabilities and technologies ***FY 2015 Plans:*** Develop effective engineering strategies to integrate tactical applications for use across the C3T enterprise network. Continue to perform network planning and integration activities across all cross-domain system-of-systems future capabilities and technologies.			
Title: Conduct and Support System Interoperability Engineering and Development of System-of-Systems (SoS) Architectural Products ***Articles:*** ***Description:*** . ***FY 2013 Accomplishments:*** Within the PEO C3T portfolio, continue to assess Emerging Technologies, identify critical integrated test points, conduct developmental testing at integration points, develop architectural data process/tool kits, and facilitate the transition of Network capabilities to the warfighter. ***FY 2014 Plans:*** Within the PEO C3T portfolio, continue to assess Emerging Technologies, identify critical integrated test points, conduct developmental testing at integration points, develop architectural data process/tool kits, and facilitate the transition of Network capabilities to the warfighter ***FY 2015 Plans:*** Within the PEO C3T portfolio, continue to assess Emerging Technologies, identify critical integrated test points, conduct developmental testing at integration points, develop architectural data process/tool kits, and facilitate the transition of Network capabilities to the warfighter.	3.013 -	2.126 -	1.730 -
Title: Continue Development and Implementation of Tactical Information Assurance (IA) ***Articles:*** ***Description:*** .	0.666 -	0.321 -	0.261 -

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
FY 2013 Accomplishments: Continue to support CIO/G6 and CYBERCOM guidance for execution of Information Assurance (IA) policies and procedures at the tactical level. Continue to plan and design security measures and IA requirements across the tactical network for future capabilities. ***FY 2014 Plans:*** Continue to support CIO/G6 and CYBERCOM guidance for execution of Information Assurance policies and procedures at the tactical level. Continue to plan and design security measures and IA requirements across the tactical network for future capabilities. ***FY 2015 Plans:*** Implement CIO/G6 and CYBERCOM guidance for execution of Information Assurance policies and procedures at the tactical level. Continue to document the current tactical IA network architecture with the goal of developing recommendations to eliminate inconsistencies/duplications, increasing the security posture, decreasing complexity of operations, and decreasing costs. Continue to plan and design security measures and IA requirements across the tactical network for future capabilities.			
Title: Continue System of Systems Development ***Articles:*** ***Description:*** . ***FY 2013 Accomplishments:*** Continue to effectively manage overall System-of-Systems Engineering, Enterprise, and Integration efforts for the PEO C3T portfolio of technology and capability enhancement programs. ***FY 2014 Plans:*** Continue to effectively manage overall System-of-Systems Engineering, Enterprise, and Integration efforts for the PEO C3T portfolio of technology and capability enhancement programs. ***FY 2015 Plans:*** Continue to effectively manage overall System-of-Systems Engineering, Enterprise, and Integration efforts for the PEO C3T portfolio of technology and capability enhancement programs.	5.556 -	3.784 -	3.080 -
Title: System of Systems (SoS) Engineering and Integration Evolution of the Network ***Articles:*** ***Description:*** .	2.882 -	2.033 -	1.655 -

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
FY 2013 Accomplishments: Continue to develop streamlined processes to support ASA(ALT) System-of-Systems Engineering & Integration (SoSE&I) and implement VE and Lean Six Sigma initiatives across all PEO C3T capabilities to include the Joint Coalition partners. Also continue to implement cross PEO System of Systems Engineering and Integration processes to ensure successful development Engineering and Testing. ***FY 2014 Plans:*** Continue to develop streamlined processes to support ASA(ALT) SoSE&I and implement VE and Lean Six Sigma initiatives across all PEO C3T capabilities to include the Joint Coalition partners. Also continue to implement cross PEO System of Systems Engineering and Integration processes to ensure successful development Engineering and Testing. ***FY 2015 Plans:*** Continue to develop streamlined processes to support ASA(ALT) SoSE&I and implement Value Engineering (VE) and Lean Six Sigma initiatives across all PEO C3T capabilities to include the Joint Coalition partners. Also continue to implement cross PEO System of Systems Engineering and Integration processes to ensure successful development Engineering and Testing.			
Title: Supports Network Intialization and enabling digital communication engineering support. ***Articles:*** ***Description:*** . ***FY 2013 Accomplishments:*** In support of the dynamic initialization development, providing warfighters with a transparent means of network initialization and enabling digital communication. The value added of this capability will provide the combatant commander with the long-awaited, operational flexibility of modifying his/her organization, while maintaining constant command and control, in order to adapt to the dynamic changes dictated by Mission, Enemy, Terrain, Troops & Time Available (METT_T). Additionally, this capability will benefit the taxpayer by significantly reducing the number of Field Service Representatives needed to support a static initialization capability, as well as, reducing the data product production staff needed to produce a static initialization product for every specific unit. This capability will shift the Project Directorate's focus from initialization data and data propagation to initialization standardization.	2.435 -	- -	- -
Accomplishments/Planned Programs Subtotals	20.101	11.030	8.978

C. Other Program Funding Summary ($ in Millions)

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604818A / *Army Tactical Command & Control Hardware & Software*	**Project (Number/Name)** C34 / *Army Tac C2 Sys Eng*

C. Other Program Funding Summary ($ in Millions)

Remarks

Not applicable for this item.

D. Acquisition Strategy

This project provides the technical and programmatic disciplines required for systems engineering and integration, experimentation, acquisition management, testing, interoperability, support to fielding and sustainment. It will focus on System-of-Systems (SoS) Systems Engineering and Integration for the tactical network with increased emphasis on immediate Warfighter needs as well as leveraging emerging technologies, through the G3 LandWarNet Capability Set Development and Integration. The Technical Management Division (TMD) will ensure that the Program Executive Office Command, Control, Communications-Tactical (PEO C3T) capability portfolio is effectively SoS engineered and integrated to meet the tactical Warfighter's evolving mission needs.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604818A / *Army Tactical Command & Control Hardware & Software*	Project (Number/Name) C34 / *Army Tac C2 Sys Eng*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Emerging Technologies	SS/FP	CACI : Aberdeen Proving Ground, MD	20.642	0.450		-		-		-		-	Continuing	Continuing	Continuing
Emerging Technologies	SS/FP	Southwest Research Installation : Aberdeen Proving Ground, MD	0.000	0.175		-		-		-		-	-	0.175	-
System Of System Engineering and Integration, Current and Strategic Initiatives	C/T&M	CSC Aberdeen Proving Ground /Fort Hood, TX : APG	50.619	7.071		-		-		-		-	Continuing	Continuing	Continuing
System of System Engineering & Integration, Current & Strategic Initiative, Architecture Integration	C/T&M	TBD : tbd	0.000	-		3.341		2.662		-		2.662	Continuing	Continuing	Continuing
Architecture Integration	C/T&M	CSC : various	7.756	1.249		-		-		-		-	Continuing	Continuing	Continuing
Systems Engineering Support	SS/FP	LOCKHEED MARTIN : Eatontown, NJ	7.799	-		-		-		-		-	Continuing	Continuing	Continuing
Systems Engineering Support	C/CPFF	Northrop Grumman : Arlington, VA	3.000	2.282		-		-		-		-	-	5.282	-
Systems Engineering Support	C/CPFF	TBD : tbd	0.000	-		1.749		1.393		-		1.393	Continuing	Continuing	Continuing
System of System Architectures, Engineering, and Integration	SS/FP	MITRE : Aberdeen Proving Ground, MD/ Eatontown, NJ	74.658	6.069		3.325		2.650		-		2.650	Continuing	Continuing	Continuing
Tactical Network Initialization	SS/FP	Future Skys Inc. : Neptune, NJ	0.000	0.600		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	164.474	17.896		8.415		6.705		-		6.705	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604818A / *Army Tactical Command & Control Hardware & Software*	Project (Number/Name) C34 / *Army Tac C2 Sys Eng*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
IN-HOUSE SUPPORT	Various	PEO C3T : APG, MD	25.997	1.403		1.260		1.801		-		1.801	Continuing	Continuing	Continuing
MATRIX	Various	Various : Aberdeen Proving Ground, MD	10.061	0.802		1.006		0.472		-		0.472	Continuing	Continuing	Continuing
OTHER GOVERNMENT SUPPORT	Various	Various : Various	7.021	-		0.349		-		-		-	Continuing	Continuing	Continuing
		Subtotal	43.079	2.205		2.615		2.273		-		2.273	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	207.553	20.101		11.030		8.978		-		8.978	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604818A / *Army Tactical Command & Control Hardware & Software*	**Project (Number/Name)** C34 / *Army Tac C2 Sys Eng*

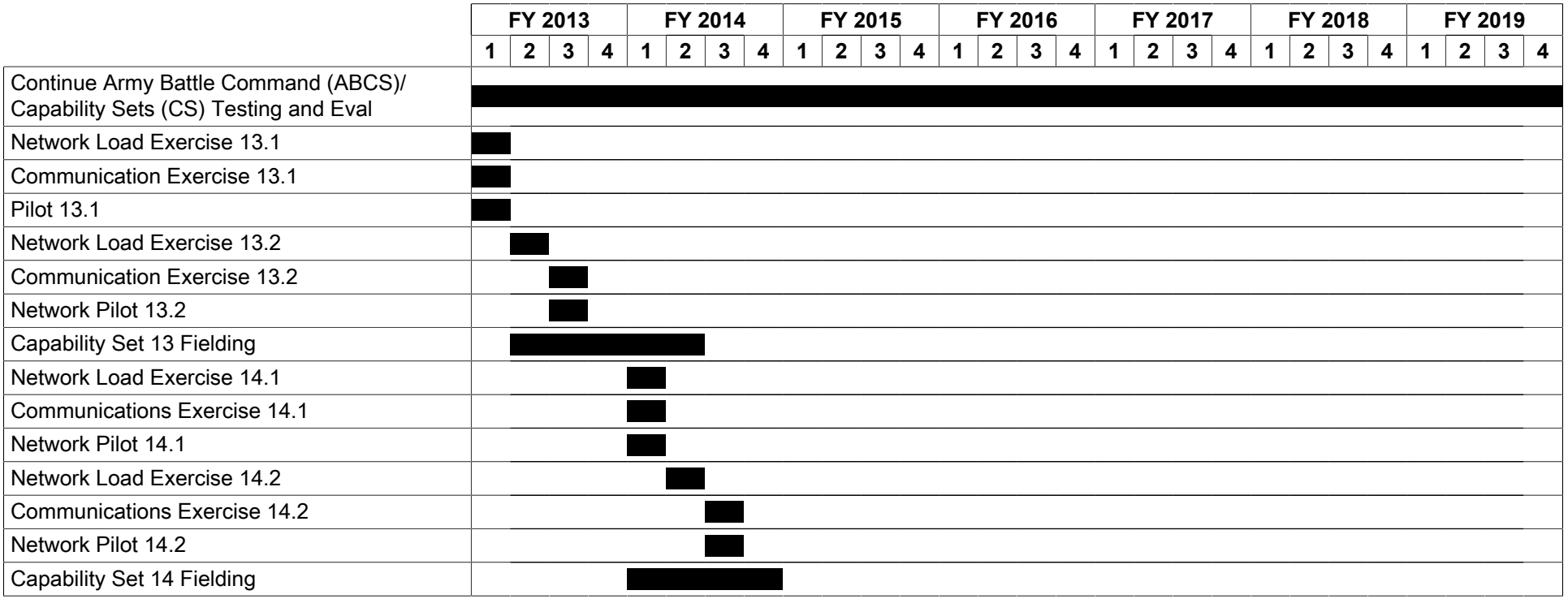

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604818A / *Army Tactical Command & Control Hardware & Software*	**Project (Number/Name)** C34 / *Army Tac C2 Sys Eng*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Continue Army Battle Command (ABCS)/Capability Sets (CS) Testing and Eval	1	2008	4	2019
Network Load Exercise 13.1	1	2013	1	2013
Communication Exercise 13.1	1	2013	1	2013
Pilot 13.1	1	2013	1	2013
Network Load Exercise 13.2	2	2013	2	2013
Communication Exercise 13.2	3	2013	3	2013
Network Pilot 13.2	3	2013	3	2013
Capability Set 13 Fielding	2	2013	2	2014
Network Load Exercise 14.1	1	2014	1	2014
Communications Exercise 14.1	1	2014	1	2014
Network Pilot 14.1	1	2014	1	2014
Network Load Exercise 14.2	2	2014	2	2014
Communications Exercise 14.2	3	2014	3	2014
Network Pilot 14.2	3	2014	3	2014
Capability Set 14 Fielding	1	2014	4	2014

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0604820A / *RADAR DEVELOPMENT*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	3.734	1.548	5.224	-	5.224	12.213	11.389	10.906	12.132	Continuing	Continuing
E10: *Sentinel*	-	3.734	1.548	5.224	-	5.224	12.213	11.389	10.906	12.132	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This system is a supporting program of the overall Air and Missile Defense (AMD) architecture and will provide for an incrementally fielded Integrated Air and Missile Defense Fire Control System/capability for the composite Army Air and Missile Defense Brigades. The Sentinel system is used with the Forward Area Air Defense Command and Control (FAAD C2) element and is a key component to the Integrated Air and Missile Defense (IAMD)architecture via the Integrated Air and Missile Defense Battle Command System (IBCS) to provide critical air surveillance of the forward areas.

Sentinel (AN/MPQ-64A1) consists of a radar-based sensor with its prime mover/power, Identification Friend or Foe (IFF), and Forward Area Air Defense (FAAD) Command, Control and Intelligence (C2I) interfaces. The radar is deployed in both an air defense role and a force protection role for Counter-Rocket, Artillery, and Mortar (C-RAM) missions. The sensor is an advanced three-dimensional battlefield X-Band air defense phased-array radar with an instrumented range of 75 km. Sentinel is capable of operating day or night, in adverse weather conditions, in the battlefield environments of dust, smoke, aerosols and enemy countermeasures. It provides 360-degree azimuth coverage for acquisition tracking. Sentinel contributes to the digital battlefield by automatically detecting, classifying, identifying and reporting targets (cruise missiles, unmanned aerial systems, rotary wing and fixed wing aircraft). Sentinel acquires targets sufficiently forward of the battle area to allow weapons reaction time and engagement at optimum ranges. Sentinel's integrated IFF reduces the potential for fratricide of US and Coalition aircraft.

The Research and Development funding supports Sentinel modernization/upgrades, hardware/software issue resolution, resolution of obsolescence issues, engineering studies, and cost reduction initiatives. The funding for Fiscal Year (FY) 2013 through FY2019 development activities addresses the following Sentinel system capability gaps and obsolescence issues identified by the User: 1) Target Detection gap; 2) Target Tracking gap; 3) Net Readiness gap; 4) Electronic Counter Measures (ECM) gap; and 5) Unmanned Aerial Systems (UAS) Defense gap.

Battle Space Improvement addresses the Target Detection gap that currently exists with the Sentinel system. This development effort modifies the radar signal processor algorithms to reduce system processing losses. The modified algorithms will increase target acquisition and tracking range capability by a minimum of 12 percent against the threat set within the instrumented range band. This effort also develops modifications to the radar hardware by utilizing an upgraded common signal processing card to the radar signal processor to provide a common hardware and software processing configuration across the Sentinel radar fleet.

Stop, Stare and Track addresses the Target Tracking Gap. This development effort provides direct Fire Control Radar (FCR) support in an integrated air and missile defense architecture. In addition this provides significantly improved Non-Cooperative Target Recognition (NCTR) timeline and performance against all targets to include Unmanned Aerial Systems (UAS), Cruise Missiles, Rotary Wing and Fixed Wing aircraft. This upgrade also enables rapid classification of cued Rockets, Artillery and

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604820A *I RADAR DEVELOPMENT*

Mortars (RAM), UAS, Rotary wing and fixed wing aircraft, as well as very accurate Point of Origin (POO) and Point of Impact (POI) of RAM targets and enables a robust kill assessment capability of engaged targets.

Cross Domain Solution (CDS) Network Interface addresses net readiness and system security concerns. This effort develops a CDS interface to isolate the Sentinel radar from connected networks of lower classification levels.

Electronic Attack/Electronic Protect (EA/EP) addresses the electronic countermeasures (ECM) gap. This effort conducts additional design and testing to verify initial EA/EP results and updates the database and associated software and hardware with more extensive EA/EP signatures to address evolving threats.

Signal Data Processor (SDP)/North Finding Module (NFM) addresses the Target Detection, Target Tracking, and Electronic Countermeasures (ECM) capability gaps and funds the mitigation of the Signal Data Processor (SDP) and North Finding Module (NFM) obsolescence issues. Signal Data Processor (SDP) cards are estimated to go obsolete every four to six years.

Medium Bandwidth Waveform upgrade will address latent tracking issues that currently exist with Sentinel in certain applications. This development effort modifies firmware as well as software in the Sentinel radar. This effort will provide better target resolution and more accurate tracking in the slant range coordinate. This improved target resolution and tracking accuracy will provide improved retention of target identification and more robust tracking that addresses the latent tracking issues.

Mode S upgrade to existing Sentinel Identification Friend or Foe (IFF) will address Sentinel's objective requirement to interrogate IFF mode S which is currently not being met. Mode S transmissions are a key component of the Automatic Dependent Surveillance-Broadcast (ADS-B) surveillance technology being used by the Federal Aviation Administration for tracking aircraft as part of the Next Generation Air Transportation System (NextGen). In the United States, all aircraft required to have transponders (most aircraft) must transition to mode S capable units by 2020. Without the Mode S upgrade, Sentinel will have to rely on these aircraft transponders responding to the legacy mode 3/A interrogations. The data available in the mode S response will be valuable in identifying the aircraft and correlating Sentinel tracks with civil aviation tracks/data and other track data sources.

The Active Electronic Steered Array (AESA) is the next generation of radar technology to replace the current phase and frequency scanned array used by Sentinel today. The AESA effort is to develop and test a new single face, rotating AESA Antenna for the Sentinel radar and will be executed as a modification to the existing platform. The single face AESA Antenna will provide increased capability including extended range for ground-based surveillance and situational awareness, faster and more accurate Non-Cooperative Target Recognition (NCTR) for clearing fires and preventing fratricide, improved Fire Control (FC) quality track accuracy, and management of larger track loads. The AESA will also provide improved operation in severe/urban clutter. The system will detect and track small targets, such as Unmanned Aerial Systems (UAS) and Cruise Missiles, in clutter and will detect and track slow targets, such as UAS and Rotary Wing (RW) aircraft, at low altitudes in clutter. The system will detect, track, and classify Rocket, Artillery, and Mortar (RAM) threats and will support Integrated Air and Missile Defense (IAMD) requirements. The AESA will support advanced Electronic Protect (EP) techniques to address the evolving Electronic Attack (EA) threat.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army					Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*		R-1 Program Element (Number/Name) PE 0604820A / *RADAR DEVELOPMENT*			
B. Program Change Summary ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO**	**FY 2015 Total**
Previous President's Budget	3.486	1.549	5.264	-	5.264
Current President's Budget	3.734	1.548	5.224	-	5.224
Total Adjustments	0.248	-0.001	-0.040	-	-0.040
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.622	-			
• SBIR/STTR Transfer	-0.094	-			
• Adjustments to Budget Years	-0.004	-0.001	-0.040	-	-0.040
• Other Adjustments 1	-0.276	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604820A / *RADAR DEVELOPMENT*				Project (Number/Name) E10 / *Sentinel*			
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
E10: *Sentinel*	-	3.734	1.548	5.224	-	5.224	12.213	11.389	10.906	12.132	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604820A / *RADAR DEVELOPMENT*	**Project (Number/Name)** E10 / *Sentinel*

Cross Domain Solution (CDS) Network Interface addresses net readiness and system security concerns. This effort develops a CDS interface to isolate the Sentinel radar from connected networks of lower classification levels.

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Product Development	2.541	-	3.561
Articles:	-	-	-
Description: Funding is provided for the following efforts:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604820A / *RADAR DEVELOPMENT*	**Project (Number/Name)** E10 / *Sentinel*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
FY 2013 Accomplishments: Integrated firmware, software and hardware. Built prototype subsystems/components for testing. Completed software code coding and modification of the system search and track logic, clutter mapping, and waveforms. Characterized performance, design & replace firmware, software and hardware. Performed technical assessments, concept studies, cost reduction, risk reduction, threat analysis, and required documentation. ***FY 2015 Plans:*** Integrate firmware, software and hardware. Build prototype subsystems/components for testing. Complete software code coding and modification of the system search and track logic, clutter mapping, and waveforms. Characterize performance, design & replace firmware, software and hardware. Perform technical assessments, concept studies, cost reduction, risk reduction, threat analysis, and required documentation.			
Title: Test & Evaluation	0.888	1.408	1.101
Articles:	-	-	-
Description: Funding is provided for the following efforts: ***FY 2013 Accomplishments:*** Conducted software qualification test and hardware verification testing, field testing against representative targets. Prepared logistics products and required documentation for material release of software and hardware upgrades. ***FY 2014 Plans:*** Conduct system verification test and system qualification test on software upgrades. ***FY 2015 Plans:*** Conduct software qualification test and hardware verification testing, field testing against representative targets. Prepare logistics products and required documentation for material release of software and hardware upgrades.			
Title: Management Support	0.305	0.140	0.562
Articles:	-	-	-
Description: This funds Government and technical support. ***FY 2013 Accomplishments:*** Provided government management, technical and administrative support in FY 2013. ***FY 2014 Plans:*** Provides government management, technical and administrative support in FY 2014. ***FY 2015 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604820A / *RADAR DEVELOPMENT*	**Project (Number/Name)** E10 / *Sentinel*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Provides government management, technical and administrative support in FY 2015.			
Accomplishments/Planned Programs Subtotals	3.734	1.548	5.224

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• PE 0604869A: *Proj M06, Patriot/MEADS Combined Aggregate Program (CAP)*	348.234	-	-	-	-	-	-	-	-	-	348.234
• PE 0605456A: *Proj PA3, PAC-3/MSE MISSILE*	63.123	68.807	35.009	-	35.009	2.271	-	-	-	Continuing	Continuing
• SSN C53101: *MSE Missile*	8.249	690.401	384.605	-	384.605	419.791	422.527	458.724	497.553	Continuing	Continuing
• PE 0205456: *Proj EF9, System Integration and Test*	-	-	78.758	-	78.758	64.628	67.461	65.734	117.666	Continuing	Continuing
• SSN C50016: *Lower Tier Air and Missile Defense (AMD)*	-	-	110.300	-	110.300	116.416	131.549	114.678	113.281	Continuing	Continuing
• PE 0102419A: *Proj E55, JLENS*	142.508	83.406	54.076	-	54.076	50.167	39.590	2.566	0.003	Continuing	Continuing
• PE 0604319A: *Proj DU3, IFPC2 (FY12 PE0603305A IFPC II - Intercept)*	25.710	79.190	96.177	-	96.177	156.523	90.980	58.214	27.663	Continuing	Continuing
• PE 0605457A: *Proj S40, Army Integrated Air and Missile Defense (AIAMD)*	233.892	369.452	142.584	-	142.584	215.659	228.791	170.828	154.565	Continuing	Continuing
• SSN BZ5075: *IAMD Battle Command System*	-	-	-	-	-	21.091	206.300	298.990	379.981	Continuing	Continuing
• PE 0604741A: *Proj 126, 146, 149; Air Defense C2I Eng Dev*	42.876	18.284	15.906	-	15.906	20.248	19.632	19.878	20.165	Continuing	Continuing

Remarks

This program is an integral part of the Army Integrated Air and Missile Defense (IAMD) architecture.

D. Acquisition Strategy

Battle Space Improvement: The Sentinel Product Office will contract with Thales Raytheon Systems (TRS) to update and modify the radar signal processor algorithms. The updated software will be tested, documented and released for installation.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604820A / *RADAR DEVELOPMENT*	**Project (Number/Name)** E10 / *Sentinel*

Stop, Stare and Track: The Sentinel Product Office will contract with Thales Raytheon Systems (TRS) to develop new and/or modify existing Sentinel software. The updated software will be tested, documented and released for installation.

Cross Domain Solution Interface: The Sentinel Product Office will contract with Thales Raytheon Systems (TRS) to develop an interface solution to isolate Sentinel transmission from connected networks of lower classifications. The updated software will be tested, documented and released for installation in the field.

Electronic Attack/Electronic Protect (EA/EP): The Sentinel Product Office will contract with Thales Raytheon Systems (TRS) to verify the initial EA/EP Database and update the database, software and hardware with more extensive EA/EP signatures to address evolving threats. The updated database will be tested, documented and released for installation.

Signal Data Processor (SDP)/North Finding Module (NFM) Obsolescence: The Sentinel Product Office will contract with Thales Raytheon Systems (TRS) to upgrade and mitigate the Signal Data Processor and North Finding Module issues. The updated SDP and NFM hardware will be tested, documented and released for installation in the field.

Medium Bandwidth Waveform: The Sentinel Product Office will contract with Thales Raytheon Systems (TRS) to address latent tracking issues that currently exist with Sentinel in certain applications. The effort modifies firmware as well as software in the Sentinel radar. The updated medium bandwidth waveform software and firmware will be tested, documented and released for installation in the field.

Mode S: The Sentinel Product Office will contract with Thales Raytheon Systems (TRS) to address Sentinel's objective requirement to interrogate Identification Friend or Foe (IFF) mode S on board commercial aircraft. The updated software will be tested, documented and released for installation in the field.

Active Electronic Steered Array (AESA): The Sentinel Product Office will issue an RFI for solutions to an AESA single face rotating radar for the Sentinel. The updated software and hardware will be tested, documented and released for installation in the field.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604820A / *RADAR DEVELOPMENT*	Project (Number/Name) E10 / *Sentinel*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Improved Sentinel Development	Various	Cruise Missile Defense Systems Project Office : Huntsville, AL	11.398	-		-		-		-		-	-	11.398	-
System of Systems Mod Development & Integration	Various	Cruise Missile Defense Systems Project Office : Huntsville, AL	1.169	-		-		-		-		-	-	1.169	-
Battle Space Improvement	Various	Cruise Missile Defense Systems Project Office : Huntsville, AL	0.139	0.031		0.049		0.050		-		0.050	-	0.269	-
Stop, Stare and Track	Various	Cruise Missile Defense Systems Project Office : Huntsville, AL	0.118	0.255		0.091		0.050		-		0.050	-	0.514	-
Electronic Attack/ Electronic Protect	Various	Cruise Missile Defense Systems Project Office : Huntsville, AL	0.000	-		-		0.313		-		0.313	Continuing	Continuing	-
Cross Domain Solution Network Interface	Various	Cruise Missile Defense Systems Project Office : Huntsville, AL	0.000	-		-		0.031		-		0.031	Continuing	Continuing	-
Signal Data Processor North Finding Module	Various	Cruise Missile Defense Systems Project Office : Huntsville, AL	0.000	-		-		0.118		-		0.118	Continuing	Continuing	-
		Subtotal	12.824	0.286		0.140		0.562		-		0.562	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604820A / *RADAR DEVELOPMENT*	Project (Number/Name) E10 / *Sentinel*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Improved Sentinel Development	SS/CPFF	Thales Raytheon Systems : Fullerton, CA	102.729	-		-		-		-		-	-	102.729	-
System of Systems Mod Development & Integration	SS/CPFF	Thales Raytheon Systems : Fullerton, CA	20.820	-		-		-		-		-	-	20.820	-
Battle Space Improvement	Various	Thales Raytheon Systems & Various : Fullerton,CA / Various	1.463	0.138		-		-		-		-	-	1.601	-
Stop, Stare, and Track	Various	Thales Raytheon Systems & Various : Fullerton, CA / Various	1.201	2.403		-		-		-		-	-	3.604	-
Electronic Attack/ Electronic Protect	Various	Thales Raytheon Systems & Various : Fullerton, CA / Various	0.000	-		-		2.046		-		2.046	Continuing	Continuing	-
Cross Domain Solution Network Interface	Various	Thales Raytheon Systems & Various : Fullerton, CA / Various	0.000	-		-		0.219		-		0.219	Continuing	Continuing	-
Signal Data Processor/ North Finding Module	Various	Thales Raytheon Systems & Various : Fullerton, CA / Various	0.000	-		-		1.296		-		1.296	Continuing	Continuing	-
		Subtotal	126.213	2.541		-		3.561		-		3.561	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Improved Sentinel Development	SS/CPFF	Thales Raytheon Systems : Fullerton, CA	16.930	-		-		-		-		-	-	16.930	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604820A / *RADAR DEVELOPMENT*	Project (Number/Name) E10 / *Sentinel*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System of Systems Mod Development & Integration	SS/CPFF	Thales Raytheon Systems : Fullerton, CA	0.352	-		-		-		-		-	-	0.352	-
		Subtotal	17.282	-		-		-		-		-	-	17.282	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Improved Sentinel Mod Development	SS/CPFF	Thales Raytheon Systems : Fullerton, CA	34.599	-		-		-		-		-	-	34.599	-
System of Systems Mod Development & Integration	SS/CPFF	Thales Raytheon Systems : Fullerton, CA	2.331	-		-		-		-		-	-	2.331	-
Battle Space Improvement	Various	Thales Raytheon Systems & Various : Fullerton, CA / Various	0.086	0.335		0.447		0.450		-		0.450	-	1.318	-
Stop, Stare and Track	Various	Thales Raytheon Systems & Various : Fullerton, CA / Various	0.086	0.572		0.961		0.450		-		0.450	-	2.069	-
Electronic Attack/ Electronic Protect	Various	Thales Raytheon Systems & Various : Fullerton, CA / Various	0.000	-		-		0.201		-		0.201	Continuing	Continuing	-
Cross Domain Solution Network Interface	Various	Thales Raytheon Systems & Various : Fullerton, CA / Various	0.000	-		-		-		-		-	Continuing	Continuing	-
Signal Data Processor North Finding Module	Various	Thales Raytheon Systems & Various : Fullerton, CA / Various	0.000	-		-		-		-		-	Continuing	Continuing	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604820A / *RADAR DEVELOPMENT*	Project (Number/Name) E10 / *Sentinel*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	37.102	0.907		1.408		1.101		-		1.101	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	193.421	3.734		1.548		5.224		-		5.224	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604820A / *RADAR DEVELOPMENT*	**Project (Number/Name)** E10 / *Sentinel*

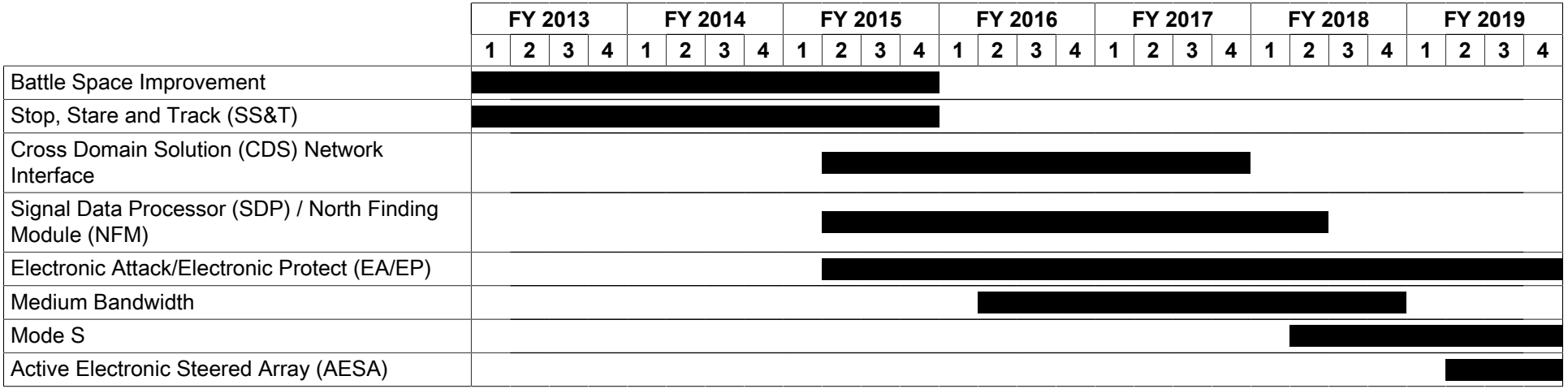

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604820A / *RADAR DEVELOPMENT*	**Project (Number/Name)** E10 / *Sentinel*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Battle Space Improvement	4	2012	4	2015
Stop, Stare and Track (SS&T)	4	2012	4	2015
Cross Domain Solution (CDS) Network Interface	2	2015	4	2017
Signal Data Processor (SDP) / North Finding Module (NFM)	2	2015	2	2018
Electronic Attack/Electronic Protect (EA/EP)	2	2015	4	2019
Medium Bandwidth	2	2016	4	2018
Mode S	2	2018	1	2021
Active Electronic Steered Array (AESA)	2	2019	1	2024

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0604822A / *General Fund Enterprise Business System (GFEBS)*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	24.742	0.226	-	-	-	-	-	-	-	-	24.968
DV6: *General Fund Enterprise Business System*	-	24.742	0.226	-	-	-	-	-	-	-	-	24.968

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The General Fund Business Enterprise System (GFEBS) is a Major Automated Information System program and is currently in the sustainment phase. It followed the DoD Business Enterprise Architecture which is aligned to the mandated Federal Enterprise Architecture. GFEBS was implemented to fulfill the needs and comply with the Federal Financial Management Improvement Act, The Chief Financial Officers Act of 1990, the Government Performance and Results Act of 1993, the Government Management Reform Act of 1994, and the Clinger-Cohen Act of 1996 and to fulfill the stated mission of the Assistant Secretary of the Army for Financial Management and Comptroller. GFEBS replaced, in full or in part, financial systems operating in excess of 40 years including the Standard Finance Systems and other costly feeder systems which do not allow the Department of Defense or the U.S. government to achieve an unqualified audit opinion on its financial statements. GFEBS is used to administering the Army's General Fund. GFEBS was developed using a commercial off-the-shelf Enterprise Resource Planning system that is certified by the Chief, Financial Officer Council and provides six core financial functions. GFEBS allows tactical commanders to make informed decisions on a virtually real time system.

On 1 October 2008, GFEBS deployed to Wave 1 end users at Fort Jackson Garrison, Defense Finance Accounting Service (DFAS) Indianapolis, Indiana and several other organizations. On 1 April 2009, GFEBS deployed to Wave 2 users at Fort Benning, Fort Stewart, DFAS Rome and several other organizations. Wave 3 deployed in October FY10, Wave 4 in January of FY11, Wave 5 in April 2011, Wave 6 in July 2011, Wave 7 in October 2011, Wave 8A in April 2012 and the final Wave 8B in July 2012. GFEBS is fielded to 53,000 trained end users. Each fielded release subsumes the previous release keeping all deployed sites executing under the same GFEBS release. The Full Deployment Decision was received by the Milestone Decision Authority on 24 June 2011 and Full Deployment was Full Deployment was achieved on 1 July 2012.

GFEBS-Sensitive Activities (SA) instance of the General Fund Enterprise Business System (GFEBS). GFEBS is a commercial off-the-shelf Enterprise Resource Planning System certified by the Chief Financial Officers Council. GFEBS has trained and supports over 53,000 end users at 227 installations worldwide and is the Army's solution to the current capability gap in accounting and financial management. Army still has classified and sensitive financial activity remaining in legacy systems that cannot be processed in our new, fully-fielded GFEBS. To protect sensitive information and enable auditability, Army needs a separate instance of GFEBS operated on a secure network for processing sensitive and classified financial transactions. GFEBS-SA will be implemented in two functional releases to 3,000 users across 100 locations worldwide. GFEBS-SA will integrate seamlessly with GFEBS to provide secure, web-based financial execution and reporting capabilities to the Army's classified and sensitive activities. SA is envisioned as a fully functional GFEBS application operated on a secure network, including additional performance requirements designed to enhance security. SA is essential to comply with the Chief Financial Officers Act and the Federal Financial Management Improvement Act; includes the additional security controls; shall be delivered NLT 3QFY16 with all capability and required cross domain interfaces. SA will be accessible on SIPRnet domain, contain Secret Collateral level information, and below. SA will utilize a cross-domain solution to exchange summary level financial transaction data to GFEBS and other required

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604822A *I General Fund Enterprise Business System (GFEBS)*

systems, enabling total general ledger accountability in one system. In accordance with 2010 NDAA, GFEBS-SA willl support the legal requirements to achieve full audit readiness of all DOD finanical statement by 2017. Without the SA increment, GFEBS will be unable to achieve an unqualified audit opinion or achieve audit readiness. GFEBS and GFEBS-SA will provide Army's decision makers with relevant, reliable, and timely information for decision making. RDTE funds are required to execute the System Integrator contract to develop and test the SA solution.Sensitive Activities provides a classified version of the GFEBS program.

Sensitive Activities allows processing of data in a secure environment to protect and manage classified data without causing risk to our national security.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	9.963	17.342	0.072	-	0.072
Current President's Budget	24.742	0.226	-	-	-
Total Adjustments	14.779	-17.116	-0.072	-	-0.072
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	14.779	-17.116	-0.072	-	-0.072

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604822A / *General Fund Enterprise Business System (GFEBS)*	Project (Number/Name) DV6 / *General Fund Enterprise Business System*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
DV6: *General Fund Enterprise Business System*	-	24.742	0.226	-	-	-	-	-	-	-	-	24.968
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Project DV6 is General Fund Enterprise Business System - Sensitive Activities.

A. Mission Description and Budget Item Justification

Plan, develop, and manage GFEBS-SA as a separate instance from GFEBS base program to support evolutionary delivery of capabilities. SA is envisioned as a fully functional GFEBS application operated on a secure network (SIPRNET), including additional performance requirements designed to enhance security. SA is essential to comply with the Chief Financial Officers (CFO) Act and the Federal Financial Management Improvement Act (FFMIA). Fully integrated (across domains) secure GFEBS-SA capability with all required cross domain interfaces shall be delivered no later than 1QFY16.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Product Development	24.742	0.226	-
Articles:	-	-	-
Description: Funding is for the following activities:			
FY 2013 Accomplishments: Award of a System Integrator contractor to develop and test functional, technical and configuration designs for a secure solution of GFEBS.			
FY 2014 Plans: Execution of systems Integrator contractor to develop and test functional, technical and configuration designs for secure solution of GFEBS.			
Accomplishments/Planned Programs Subtotals	24.742	0.226	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604822A / *General Fund Enterprise Business System (GFEBS)*	**Project (Number/Name)** DV6 / *General Fund Enterprise Business System*	

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• OPA: *GFEBS Sensative Activites (OPA SSN B55511)*	-	-	13.728	-	13.728	-	-	-	-	Continuing	Continuing

Remarks

D. Acquisition Strategy

Plan, develop, and manage GFEBS-SA as a separate instance from GFEBS base program to support evolutionary delivery of capabilities. SA is envisioned as a fully functional GFEBS application operated on a secure network (SIPRNET), including additional performance requirements designed to enhance security. SA is essential to comply with the Chief Financial Officers (CFO) Act and the Federal Financial Management Improvement Act (FFMIA). Fully integrated (across domains) secure GFEBS-SA capability with all required cross domain interfaces.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604822A / *General Fund Enterprise Business System (GFEBS)*	Project (Number/Name) DV6 / *General Fund Enterprise Business System*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Integrator Contract	PO	EDC : Alexandria, VA	0.000	17.056	Apr 2013	0.226		-		-		-	-	17.282	-
		Subtotal	0.000	17.056		0.226		-		-		-	-	17.282	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Support Costs	Various	PdM GFEBS SA : Alexandria, VA	0.000	2.726		-		-		-		-	-	2.726	-
		Subtotal	0.000	2.726		-		-		-		-	-	2.726	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Testing	IA	JITC/ATEC : Alexandria, VA	0.000	4.960		-		-		-		-	-	4.960	-
		Subtotal	0.000	4.960		-		-		-		-	-	4.960	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	24.742		0.226		-		-		-	-	24.968	-

Remarks

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0604823A / *FIREFINDER*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	18.303	20.210	37.492	-	37.492	-	-	-	3.726	-	79.731
L86: *LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)*	-	2.841	-	-	-	-	-	-	-	3.726	-	6.567
L88: *Enhanced AN/TPQ 36*	-	15.462	20.210	37.492	-	37.492	-	-	-	-	-	73.164

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This Program funds design, development and test of primary target acquisition and counterfire radars to automatically detect, locate and classify hostile indirect fire weapons (mortars, artillery, and rockets). This PE directly supports the prioritization, tracking, and locating of targets, and dissemination of that information for simultaneous attack of multiple threats. It provides the Warfighter with continuous and responsive counterfire target acquisition systems for all types and phases of military operations. Project L86, Lightweight Counter Mortar Radar, Version AN/TPQ-50 provides 360 degree coverage and is used to detect, locate and report hostile locations of enemy indirect firing systems. Project L88, AN/TPQ-53 (formerly known as Enhanced AN/TPQ-36), is a highly mobile radar system that will leverage the latest in technology design to accelerate technology infusion and increase range while improving False Alarm Rate, reducing obsolescence and increasing reliability. The AN/TPQ-53 will provide 90 degree coverage and extended range, with an incremental development to increase detection capability to 360 degrees.

The Fiscal Year (FY) 2015 funds of $37.492 million will support follow-on testing and continue development and testing of Pre-Planned Product Improvement (P3I) for Low Quadrant Elevation efforts. These funds will also initiate development and testing for Increased Range and Accuracy, Electronic Protection and Worldwide Interoperability for Microwave Access (WIMAX), and Networking and Radar Interoperability to include performing technical assessments, concept studies, cost reduction, risk reduction and required documentation.

B. Program Change Summary ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO**	**FY 2015 Total**
Previous President's Budget	20.517	47.221	42.204	-	42.204
Current President's Budget	18.303	20.210	37.492	-	37.492
Total Adjustments	-2.214	-27.011	-4.712	-	-4.712
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-0.027	-27.011			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.583	-			
• Adjustments to Budget Years	-	-	-4.712	-	-4.712

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army					Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*		R-1 Program Element (Number/Name) PE 0604823A / *FIREFINDER*			
• Other Adjustments	-1.604	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604823A / *FIREFINDER*	Project (Number/Name) L86 / *LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
L86: *LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)*	-	2.841	-	-	-	-	-	-	-	3.726	-	6.567
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The AN/TPQ-50 (formerly known as AN/TPQ-48(V)3) Lightweight Counter Mortar Radar (LCMR) is a digitally connected, day/night mortar, cannon, and rocket locating system. It is used to detect, locate, track, and report enemy indirect firing systems and provides the ability to observe friendly fire units. The AN/TPQ-50 is capable of being deployed in two configurations, standalone or vehicle mounted. It can be set up and operational in 20 minutes and disassembled in 10 minutes. The AN/TPQ-50 will be deployed as part of a System of Systems for the Counter-Rocket, Artillery, and Mortar (C-RAM) construct or Rocket Artillery Mortar (RAM) Warn. It provides data to the Forward Area Air Defense Command and Control (FAADC2) node for the sense and warn force protection capability at fixed and semi-fixed sites. It provides 360 degrees of azimuth coverage from ranges of 500 meters to 10 kilometers. The AN/TPQ-50 is a program of record with systems currently fielded and deployed to Operation Enduring Freedom as well as multiple CONUS and OCONUS locations.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Government Test Support	2.841	-	-
Articles:	-	-	-
Description: Funding is provided for the following effort			
FY 2013 Accomplishments: Government Verification/Validation test support and associated Program Management Office support costs.			
Accomplishments/Planned Programs Subtotals	2.841	-	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• B05201: *SSN: B05201 Lightweight Counter Mortar Radar*	77.107	98.535	24.828	-	24.828	24.795	24.551	25.292	21.074	Continuing	Continuing

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604823A / *FIREFINDER*	**Project (Number/Name)** L86 / *LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)*

D. Acquisition Strategy

The AN/TPQ-50 Lightweight Counter Mortar Radar is post Milestone C and was developed to meet Training and Doctrine Command (TRADOC) Capabilities Production Document (CPD) requirements. Seventy eight (78) Quick Reaction Capability (QRC) and forty five (45) Low Rate Initial Production (LRIP) systems have been procured towards an Army Acquisition Objective (AAO) of 400. Initial Operational Test and Evaluation (IOT&E) was conducted in third quarter of fiscal year 2012 (3QFY12). A favorable Full Rate Production (FRP) decision was achieved on 30 May 2013. A three year sole source contract was awarded on 17 July 2013. One hundred thirty two (132) AN/TPQ-50 radars and vehicle mounts have been procured to date. The approved acquisition strategy does include upgrading the 78 QRC and 45 LRIP systems to the full rate production specification beginning in FY15. A second three year production contract is scheduled for 2QFY16. Follow on production contracts will be awarded as needed to fulfill the AAO.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604823A / *FIREFINDER*	Project (Number/Name) L86 / *LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management (Contractor)	Various	Various : Activities	3.348	0.632		-		-		-		-	-	3.980	-
Program Management	Various	PM Radars : Fort Monmouth NJ/ APG MD	0.911	-		-		-		-		-	-	0.911	-
Program Management (Government Matrix)	Various	Various : Activities	1.155	-		-		-		-		-	-	1.155	-
		Subtotal	5.414	0.632		-		-		-		-	-	6.046	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Common Front End (CFE) Software	Various	SRCTec, North : Syracuse, NY	0.000	-		-		-		-		-	-	-	-
Primary Hardware Development	SS/CPFF	SRCTec, North : Syracuse, NY	45.088	-		-		-		-		-	-	45.088	-
Systems Engineering	Various	CERDEC : Fort Monmouth, NJ	2.964	-		-		-		-		-	-	2.964	-
Systems Engineering Contractor	Various	Various : Activities	4.613	-		-		-		-		-	-	4.613	-
Radar Environmental Simulators (RES)	Various	Oakridge National Labs : Oakridge, TN	0.250	-		-		-		-		-	-	0.250	-
		Subtotal	52.915	-		-		-		-		-	-	52.915	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support (Government)	Various	Various : Activities	0.774	-		-		-		-		-	-	0.774	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604823A / *FIREFINDER*	Project (Number/Name) L86 / *LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.774	-		-		-		-		-	-	0.774	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Support (Contractor)	SS/CPFF	SRCTec : Syracuse, NY	0.309	-		-		-		-		-	-	0.309	-
Limited User Test	Various	YUMA/WSMR : Arizona/ New Mexico	1.246	-		-		-		-		-	-	1.246	-
Follow-On Test Event (FOTE)	Various	YUMA/WSMR : Arizona/New Mexico	0.690	-		-		-		-		-	-	0.690	-
Developmental Test Operational Test (DT/OT)	Various	YUMA/ATEC : Arizona/APG	4.228	-		-		-		-		-	-	4.228	-
Initial Operational Test & Evaluation	Various	YUMA/FT SILL : Arizona/Oklahoma	2.077	-		-		-		-		-	-	2.077	-
Test Support (Government)	Various	Various : Activities	2.542	2.209		-		-		-		-	-	4.751	-
		Subtotal	11.092	2.209		-		-		-		-	-	13.301	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	70.195	2.841		-		-		-		-	-	73.036	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604823A / *FIREFINDER*	**Project (Number/Name)** L86 / *LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)*

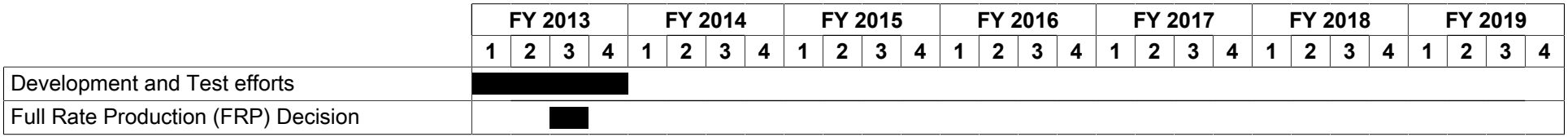

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604823A / *FIREFINDER*	**Project (Number/Name)** L86 / *LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Development and Test efforts	4	2006	4	2013
Full Rate Production (FRP) Decision	3	2013	3	2013

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604823A / *FIREFINDER*	Project (Number/Name) L88 / *Enhanced AN/TPQ 36*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
L88: *Enhanced AN/TPQ 36*	-	15.462	20.210	37.492	-	37.492	-	-	-	-	-	73.164
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The AN/TPQ-53 (formerly known as the Enhanced AN/TPQ-36) Counterfire Target Acquisition Radar System Capability Production Document (CPD) was approved on 29 September 2010. The AN/TPQ-53 System is a highly mobile radar set that automatically detects, classifies, tracks, and locates the point of origin of projectiles fired from mortar, artillery, and rocket systems with sufficient accuracy for first round fire for effect. It mitigates close combat radar coverage gaps and will ultimately replace the current AN/TPQ-36 and AN/TPQ-37 Firefinder Radars; fully supporting Brigade Combat Teams (BCTs) and Fires Brigades operations. The AN/TPQ-53 System interoperates with Battle Command Systems (BCSs) to provide the maneuver commander increased counterfire radar flexibility. The AN/TPQ-53 System is capable of being deployed as part of the Indirect Fire Protection Capability (IFPC) System of Systems (SoS) to provide a sense and warn capability for fixed and semi-fixed sites. The AN/TPQ-53 provides a system with increased range and accuracy throughout a 90 degree search sector (stare mode) as well as 360 degree coverage (rotating) for locating mortar, artillery and rocket firing positions.

The Fiscal Year (FY) 2015 funds of $37.492 million will support follow-on testing and continue development and testing of Pre-Planned Product Improvement (P3I) for Low Quadrant Elevation efforts. These funds will also initiate development and testing for Increased Range and Accuracy, Electronic Protection and Worldwide Interoperability for Microwave Access (WIMAX), and Networking and Radar Interoperability to include performing technical assessments, concept studies, cost reduction, risk reduction and required documentation.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Test Support	8.654	8.378	7.300
Articles:	-	-	-
Description: Funding is provided for the following effort			
FY 2013 Accomplishments: Initiated Logistics/Maintenance Demonstration, Cold Regions Test Center (CRTC) testing, Developmental Testing (DT), Initial Operational Test and Evaluation (IOT&E), operational Capabilities and Limitations (C&Ls) tests, software and hardware Independent Verification and Validation (IV&V), ammunition, Program Management Office (PMO) and test support costs.			
FY 2014 Plans: Test activities to include DT, IOT&E, operational C&Ls, software and hardware IV&V, ammunition, PMO and test support costs.			
FY 2015 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604823A / *FIREFINDER*	**Project (Number/Name)** L88 / *Enhanced AN/TPQ 36*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Test activities to include Follow-on testing, operational Capabilities and Limitations (C&Ls) testing, ammunition, Program Management Office (PMO) and test support costs.			
Title: Electronic Protection / Worldwide Interoperability for Microwave Access (WiMAX) ***Description:*** Funding is provided for the following effort ***FY 2015 Plans:*** Mitigate electromagnetic interference (EMI) from military bands, hostile EMI, and the WiMAX commercial spectrum; this includes associated PMO support costs.	-	-	17.307
Title: Increased Range and Accuracy ***Description:*** Funding provided for the following effort ***FY 2015 Plans:*** Initiate development efforts to improve radar performance versus long range threats and improve accuracy; this includes associated PMO support costs.	-	-	7.105
Title: High Clutter Environment	5.408	6.923	-
Articles:	-	-	-
Description: Funding is provided for the following effort ***FY 2013 Accomplishments:*** Initiated development efforts to track projectiles through a high clutter environment; this includes associated PMO support costs. ***FY 2014 Plans:*** Continue development efforts to track projectiles through a high clutter environment; this includes associated PMO support costs.			
Title: Low Quadrant Elevation (QE) Shots	1.400	4.909	1.690
Articles:	-	-	-
Description: Funding is provided for the following effort ***FY 2013 Accomplishments:*** Initiated efforts to develop algorithms to detect Low QE shots; this includes associated PMO support costs. ***FY 2014 Plans:*** Continue efforts to develop algorithms to detect Low QE shots; this includes associated PMO support costs. ***FY 2015 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604823A / *FIREFINDER*	**Project (Number/Name)** L88 / *Enhanced AN/TPQ 36*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Continue efforts to develop algorithms to detect Low Quadrant Elevation (QE) shots; this includes associated Program Management Office (PMO) support costs.			
Title: Networking / Radar Interoperability ***Description:*** Funding is provided for the following effort ***FY 2015 Plans:*** Initiate development of increased capabilities through the use of Advanced Field Artillery Tactical Data System (AFATDS), Integrated Air and Missile Defense (IAMD) Battle Command System (IBCS), and other Army Battle Command Systems to enable the Warfighter to employ counterfire with increased accuracy. Develop a new user interface that supports commonality among Counterfire Target Acquisition (CTA) radars. Perform technical assessments, concept studies, cost reduction, risk reduction, threat analysis, and required documentation; this includes associated PMO support costs.	-	-	4.090
Accomplishments/Planned Programs Subtotals	15.462	20.210	37.492

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• SSN B05310 AN/TPQ-53: *SSN B05310 AN/TPQ-53*	297.082	348.557	209.050	-	209.050	274.117	243.943	202.934	159.087	-	1,734.770

Remarks

D. Acquisition Strategy

The AN/TPQ-53 leverages technology developed in the Multi-Mission Radar Advanced Technology Objective (ATO) program incorporating the latest antenna technology into the AN/TPQ-53. In 2006, the Government awarded a contract following full and open competition for the design of the AN/TPQ-53 radar and the purchase of four Non-Recurring Engineering (NRE) radars. Twelve additional radars were purchased under the same contract in response to an urgent directed procurement in July 2008. The Army Acquisition Executive approved the acquisition of up to 20 radars. Twenty systems were procured through two separate contract actions in 2010 and 2011. A competitive production contract for Low Rate Initial Production (LRIP) systems was awarded in 2012 with an option for additional systems in 2013. Production and delivery of all IP systems are complete, and production of LRIP systems is ongoing. A Full Rate Production (FRP) contract to fill the remainder of the Army Acquisition Objective (AAO) is expected to be awarded following completion of the Initial Operating Test and Evaluation (IOT&E). Additionally, all initial production systems will be retrofitted to FRP configuration between FY2014 and FY 2016. The FRP system deliveries will continue through FY 2021. The system will eventually replace all of the AN/TPQ-36 and AN/TPQ-37 systems in the fleet.

The Fiscal Year (FY) 2015 funds will support follow-on testing and continue development and testing of Pre-Planned Product Improvement (P3I) for Low Quadrant Elevation efforts. These funds will also initiate development and testing for Increased Range and Accuracy, Electronic Protection and Worldwide Interoperability for

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604823A / *FIREFINDER*	**Project (Number/Name)** L88 / *Enhanced AN/TPQ 36*

Microwave Access (WIMAX), and Networking and Radar Interoperability to include performing technical assessments, concept studies, cost reduction, risk reduction and required documentation.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604823A / *FIREFINDER*	Project (Number/Name) L88 / *Enhanced AN/TPQ 36*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management (Contractor)	Various	Various : Activities	3.482	0.136	Jan 2013	0.138	Dec 2013	0.629	Mar 2015	-		0.629	-	4.385	-
Program Management (Government)	Various	Various : Activities	0.974	0.033	Oct 2013	0.050	Jan 2014	0.515	Mar 2015	-		0.515	-	1.572	-
		Subtotal	4.456	0.169		0.188		1.144		-		1.144	-	5.957	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Electronic Protection/ Worldwide Interoperability for Microwave Access (WiMAX)	SS/CPFF	Lockheed Martin : Syracuse, NY	0.000	-		-		17.096	Mar 2015	-		17.096	-	17.096	-
Increased Range and Accuracy	SS/CPFF	Lockheed Martin : Syracuse, NY	0.000	-		-		6.886	Mar 2015	-		6.886	-	6.886	-
High Clutter Environment	SS/CPFF	Lockheed Martin : Syracuse, NY	0.000	5.340	Aug 2013	6.854	Apr 2014	-		-		-	-	12.194	-
Low Quadrant Elevation (QE) Shots	SS/CPFF	Lockheed Martin : Syracuse, NY	0.000	1.332	Aug 2013	4.840	Apr 2014	1.501	Mar 2015	-		1.501	-	7.673	-
Networking/Radar Interoperability	SS/CPFF	Lockheed Martin : Syracuse, NY	0.000	-		-		3.755	Mar 2015	-		3.755	-	3.755	-
		Subtotal	0.000	6.672		11.694		29.238		-		29.238	-	47.604	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Support	Various	Various : Activities	22.236	8.621	Mar 2013	8.328	Sep 2014	7.110	Mar 2015	-		7.110	-	46.295	-
		Subtotal	22.236	8.621		8.328		7.110		-		7.110	-	46.295	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604823A / *FIREFINDER*	Project (Number/Name) L88 / *Enhanced AN/TPQ 36*	

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	26.692	15.462		20.210		37.492		-		37.492	-	99.856	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604823A / *FIREFINDER*	**Project (Number/Name)** L88 / *Enhanced AN/TPQ 36*

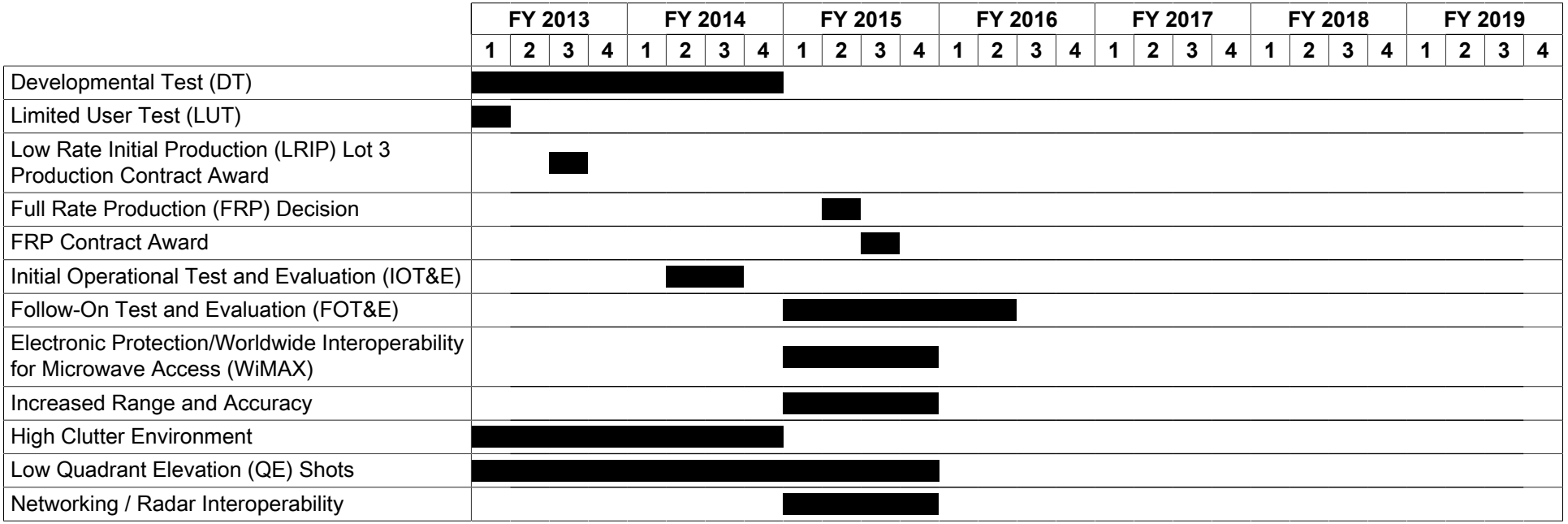

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604823A / *FIREFINDER*	**Project (Number/Name)** L88 / *Enhanced AN/TPQ 36*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Developmental Test (DT)	2	2012	4	2014
Limited User Test (LUT)	4	2012	1	2013
Low Rate Initial Production (LRIP) Lot 3 Production Contract Award	3	2013	3	2013
Full Rate Production (FRP) Decision	2	2015	2	2015
FRP Contract Award	3	2015	3	2015
Initial Operational Test and Evaluation (IOT&E)	2	2014	3	2014
Follow-On Test and Evaluation (FOT&E)	1	2015	2	2016
Electronic Protection/Worldwide Interoperability for Microwave Access (WiMAX)	1	2015	4	2015
Increased Range and Accuracy	1	2015	4	2015
High Clutter Environment	1	2013	4	2014
Low Quadrant Elevation (QE) Shots	1	2013	4	2015
Networking / Radar Interoperability	1	2015	4	2015

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0604827A / *Soldier Systems - Warrior Dem/Val*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	28.358	18.467	6.157	-	6.157	11.976	16.416	9.459	5.092	Continuing	Continuing
DX7: *TACTICAL COMMUNICATIONS AND PROTECTIVE SYSTEM*	-	-	-	0.922	-	0.922	0.940	0.958	0.977	0.996	Continuing	Continuing
S65: *Soldier Power*	-	4.499	7.410	-	-	-	-	-	-	-	-	11.909
S75: *Ground Soldier Ensemble*	-	23.859	11.057	5.235	-	5.235	11.036	15.458	8.482	4.096	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

Fiscal Year 2014: Program Decreases of $5.718 million to Ground Soldier Ensemble and $2.000 million to Soldier Power.

A. Mission Description and Budget Item Justification

This program element contains four projects: Project S56 for Mounted Soldier System (MSS), Project S65 for Soldier Power, Project S75 for Nett Warrior (NW), [named in honor of Medal of Honor recipient COL Robert Nett], previously known as Ground Soldier System (GSS), and Project DX7 Tactical Communications and Protective System (TCAPS). MSS provides an integrated suite of enhancements to the combat vehicle crew member and commander to address identifiable capability gaps in their ability to fight, communicate, and maneuver across the full spectrum of operations. MSS consists of lightweight, modular, and misison tailorable equipment and Command, Control, Communications and Computer (C4) devices worn, carried, or used by mounted crew members in performance of their missions. Congressionally added funding in FY10 for Soldier Power efforts has been applied to the Soldier Power project line. NW provides unparalleled situational awareness and understanding to the dismounted leader allowing for faster and more accurate decisions in the tactical fight. This translates into Soldiers being at the right place, at the right time, with the right equipment making them more effective, more lethal, and more survivable in the execution of their combat mission. TCAPS enables Soldiers to communicate over radios in combat environments while simultaneously providing hearing protection from both steady state and impulse noise.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army					Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*			R-1 Program Element (Number/Name) PE 0604827A / *Soldier Systems - Warrior Dem/Val*		
B. Program Change Summary ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO**	**FY 2015 Total**
Previous President's Budget	51.851	48.477	18.923	-	18.923
Current President's Budget	28.358	18.467	6.157	-	6.157
Total Adjustments	-23.493	-30.010	-12.766	-	-12.766
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-23.493	-30.010	-9.062	-	-9.062
• Other Adjustments 2	-	-	-3.704	-	-3.704

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604827A / *Soldier Systems - Warrior Dem/Val*	Project (Number/Name) DX7 / *TACTICAL COMMUNICATIONS AND PROTECTIVE SYSTEM*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
DX7: *TACTICAL COMMUNICATIONS AND PROTECTIVE SYSTEM*	-	-	-	0.922	-	0.922	0.940	0.958	0.977	0.996	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Tactical Communications and Protective System (TCAPS) provides Soldiers with advanced, active hearing protection that simultaneously protects Soldiers' hearing while enabling situational awareness and mission command. TCAPS protects Soldiers against harmful impulse and steady-state noises characteristic of combat environments while enabling Soldiers to communicate with each other using voice communications or over a tactical radio. TCAPS also enhances survivability and situational awareness by allowing Soldiers to selectively amplify faint sounds that would not be otherwise audible.

By reducing noise-induced hearing damage, TCAPS contributes to the reduction of post-service disability compensation and limits lost in-service time related to hearing injury. TCAPS will employ commercial-off-the-shelf (COTS) solution(s) that annually are evaluated. The best commercial solutions will cut into production. TCAPS will also evaluate lower cost active hearing protection solutions for soldiers without radios.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Testing Tactical Communications and Protective Ssystem (TCAPS)	-	-	0.922
Description: TCAPS procurement of test articles and testing			
FY 2015 Plans: TCAPS will buy test articles and conduct an annual relook of commercial technology to seek improved capabilities, conduct testing and transition to procurement.			
Accomplishments/Planned Programs Subtotals	-	-	0.922

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• SSN B55510: *Tactical Communications and Protective System*	12.967	31.868	24.354	-	24.354	21.809	20.176	20.462	20.867	-	152.503

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604827A / *Soldier Systems - Warrior Dem/Val*	**Project (Number/Name)** DX7 / *TACTICAL COMMUNICATIONS AND PROTECTIVE SYSTEM*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost

Remarks

D. Acquisition Strategy

TCAPS is an ACAT III program leveraging commercial-off-the-shelf (COTS) technology. TCAPS will conduct an annual relook of commercial technology to seek improved capabilities, reduce cost, conduct testing and transition to procurement.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604827A / *Soldier Systems - Warrior Dem/Val*	Project (Number/Name) DX7 / *TACTICAL COMMUNICATIONS AND PROTECTIVE SYSTEM*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SEPM	MIPR	Fort Belvoir : Ft Belvoir, VA	0.018	-		-		0.300		-		0.300	-	0.318	-
		Subtotal	0.018	-		-		0.300		-		0.300	-	0.318	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Articles (Engineering Assessment)	MIPR	DLA DSCP : Philadelphia, PA	0.026	-		-		0.028	May 2015	-		0.028	-	0.054	-
Test Articles (Development Test)	MIPR	DLA DSCP : Philadelphia, PA	0.020	-		-		0.019	May 2015	-		0.019	-	0.039	-
Test Articles (OT)	MIPR	DLA DSCP : Philadelphia, PA	0.120	-		-		0.141	May 2015	-		0.141	-	0.261	-
		Subtotal	0.166	-		-		0.188		-		0.188	-	0.354	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Annual Relook of Technology/Evaluation	MIPR	ATEC, AEC, OTC, ARL-SLAD : Various Locations	0.177	-		-		0.190	Jan 2015	-		0.190	-	0.367	-
Developmental and Operational Test	Various	ATEC, AEC, OTC, ARL-SLAD : Various Locations	0.411	-		-		0.244	Feb 2015	-		0.244	-	0.655	-
Customer Test	Various	Army Hearing Program Office : Various Locations	0.028	-		-		-		-		-	-	0.028	-
		Subtotal	0.616	-		-		0.434		-		0.434	-	1.050	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
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	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.800	-		-		0.922		-		0.922	-	1.722	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604827A / *Soldier Systems - Warrior Dem/Val*	**Project (Number/Name)** DX7 / *TACTICAL COMMUNICATIONS AND PROTECTIVE SYSTEM*

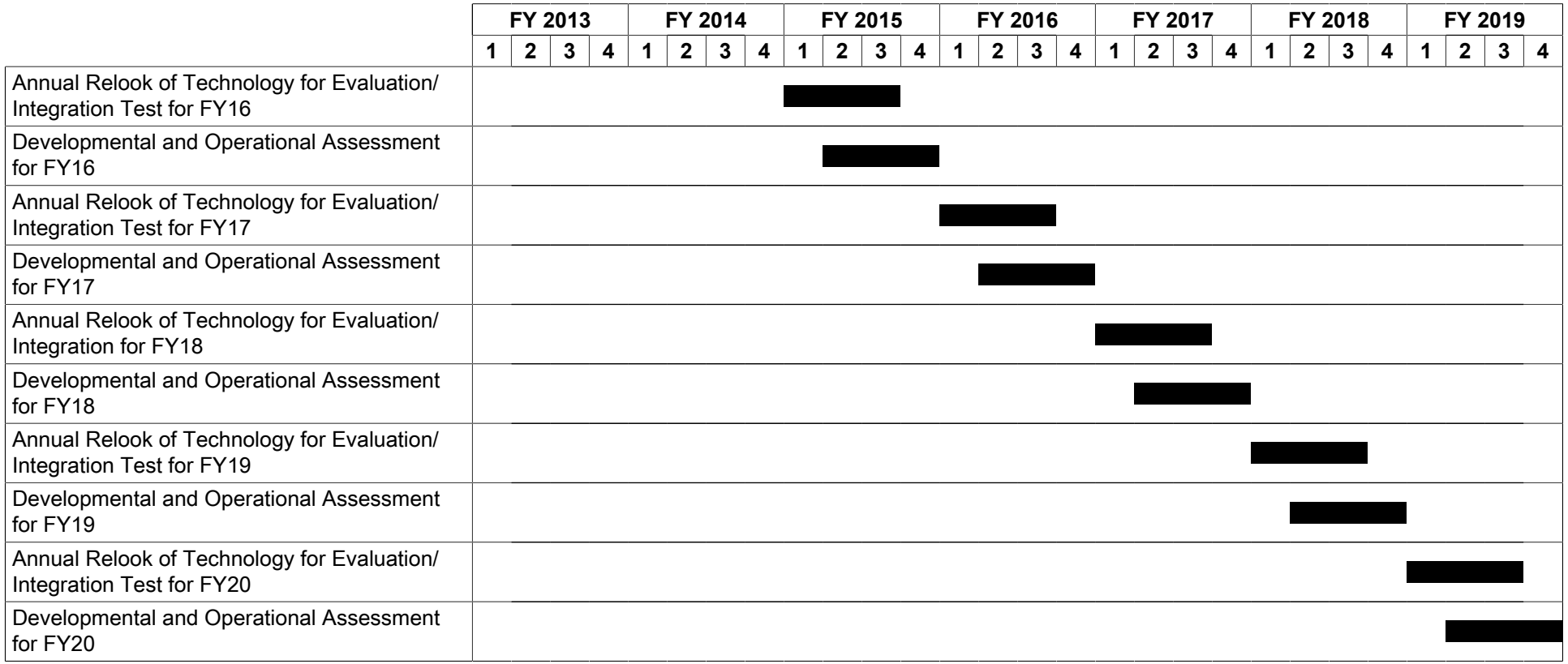

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
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Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Annual Relook of Technology for Evaluation/Integration Test for FY16	1	2015	3	2015
Developmental and Operational Assessment for FY16	2	2015	4	2015
Annual Relook of Technology for Evaluation/Integration Test for FY17	1	2016	3	2016
Developmental and Operational Assessment for FY17	2	2016	4	2016
Annual Relook of Technology for Evaluation/Integration for FY18	1	2017	3	2017
Developmental and Operational Assessment for FY18	2	2017	4	2017
Annual Relook of Technology for Evaluation/Integration Test for FY19	1	2018	3	2018
Developmental and Operational Assessment for FY19	2	2018	4	2018
Annual Relook of Technology for Evaluation/Integration Test for FY20	1	2019	3	2019
Developmental and Operational Assessment for FY20	2	2019	4	2019

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604827A / *Soldier Systems - Warrior Dem/Val*	Project (Number/Name) S65 / *Soldier Power*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
S65: *Soldier Power*	-	4.499	7.410	-	-	-	-	-	-	-	-	11.909
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Not applicable for this item.

A. Mission Description and Budget Item Justification

Soldier and Small Unit Power Systems enable dismounted Soldiers and squads to execute their missions with significantly less battery weight and enable longer missions without a daily unit re-supply of batteries. These improved systems enable the warfighter to sustain themselves for extended mission duration in the most austere operating environments. An advanced, Integrated Soldier Power/Data System (ISPDS) provides the Soldier with a worn power/data capability that is significantly more efficient and lighter than carrying separate batteries for each device. Soldier and Small Unit Power systems address the power and energy capability gap created by the increase in mission essential, Soldier-portable power consumers, such as Situational Awareness (SA) displays, Global Positioning System (GPS) navigation, weapon sensors, and portable Soldier radios. This effort began as a Congressional add for development and system improvement for early fuel cell and battery technology and has developed into a line of power sources and solutions suited for not only the individual Soldier, but for the small unit as well. These power solutions include, but are not limited to, Soldier-worn power systems, integrated power vests, power management devices and small unit chargers/scavengers; all intended for use in the most austere operating environments. Soldier-portable power systems reduce the weight and logistical burden associated with moving fuel and primary (disposable) batteries across the conventional battlefield. By using renewable energy and power scavenging technology, Soldiers and small units are able to operate independently for longer durations without being tethered to a large generator, vehicle, or supply train. This effort supports the August 2013 Small Unit Power MDD, September 2013 Small Unit Power Capability Development Document (CDD), March 2011 Soldier Protection CDD, the December 2011 Operational Energy Initial Capabilities Document (ICD), the Army Chief of Staff's Squad: Foundation of the Decisive Force initiative, and the December 2011 Operation Enduring Freedom (OEF) Operational Energy directives.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Individual Soldier Power	3.404	1.940	-
Articles:	-	-	-
Description: Integrated Soldier Power/Data System (ISPDS) and individual power			
FY 2013 Accomplishments: Mature an integrated Soldier system capable of managing power and system C4I data from Soldier worn/carried peripherals. This system is comprised of a safe, high energy, lightweight, Soldier-wearable battery that conforms to the Soldiers body armor and improved outer tactical vest. This conformal battery is the central source of power for all Soldier worn devices and serves			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
as the central power storage point for integrated. This integrated Soldier system passes its power and peripheral system C4I data through a wiring system that is integrated into the fabric of the improved outer tactical vest and/or its soft armor. Efforts also include Soldier carried power/data management devices that are capable of harvesting energy from a variety of available power source. ***FY 2014 Plans:*** Will continue to mature an integrated Soldier system capable of managing power and system C4I data from Soldier worn/carried peripherals. This system will be comprised of a safe, high energy, lightweight, Soldier-wearable battery that will conform to the Soldier's body armor and improved outer tactical vest. This improved conformal battery will be the central source of power for all Soldier worn devices and serve as the central power storage point for the integrated Soldier. This integrated Soldier system will pass its power and peripheral C4I data through a wiring system that will be integrated into the fabric of the improved outer tactical vest and/or its soft armor. Will continue to mature Soldier carried power/data management devices that are capable of harvesting energy from a variety of available power source and will mature a highly efficient solar technology conducive to a variety of operating environments and capable of providing over twice the current level of power in an equal or lesser form factor.			
Title: Squad and Soldier Power Generation	1.095	4.584	-
Articles:	-	-	-
Description: Soldier portable, renewable energy solutions for Squad formation ***FY 2013 Accomplishments:*** Development of Soldier-portable, renewable energy solutions that have the power capacity to sustain expeditionary austere operations for 72 hours while decreasing dependence on packaged fuel and combat logistics through the use of improved renewable energy solutions and hybridized technology. Technologies include Soldier worn energy harvesting technologies such as kinetic and/or solar energy harvesters. These technologies are capable of harvesting energy from the Soldiers movement and/or from the sun. Continue development of lightweight, Soldier-portable chargers and power scavenging technology capable of supporting the variety of batteries used in the conventional IBCT formation. ***FY 2014 Plans:*** Will continue development of Soldier-portable, renewable energy solutions that have the power capacity to sustain expeditionary austere operations for 72 hours, while decreasing dependence on combat logistics through the use of fuels cells and hybridized technology. Will continue development and optimization of lightweight, Soldier-portable chargers capable of supporting the variety of batteries used in the conventional IBCT formation.			
Title: Soldier Power Test and Evaluation	-	0.886	-
Articles:	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604827A / *Soldier Systems - Warrior Dem/Val*	**Project (Number/Name)** S65 / *Soldier Power*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Description: Integration testing and annual testing and evaluation events ***FY 2014 Plans:*** Conduct annual developmental test and evaluation on Soldier Power components at Electronic Proving Ground, Arizona and Aberdeen Proving Ground, Maryland with focus on environmental testing, reliability, electro-magnetic interference and electro-magnetic compatibility. Conduct operational test and evaluation on Soldier Power components at Fort Bliss, Texas and Fort Bragg, North Carolina to evaluate operational reliability and performance at the Soldier and Squad levels.			
Accomplishments/Planned Programs Subtotals	4.499	7.410	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Pursue a variety of Soldier power initiatives under full and open competition. These initiatives range from Commercial-Off-The-Shelf (COTS) solutions to developmental efforts. The type of solicitation depends on the maturity of the technology. The power initiatives will be evaluated through scheduled test and evaluation events, and if successful, selected for procurement and subsequent fielding and sustainment.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
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Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PM integration and oversight	MIPR	Various : Various	0.000	1.263		2.088		-		-		-	Continuing	Continuing	Continuing
		Subtotal	0.000	1.263		2.088		-		-		-	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Soldier Power Development and Integration	TBD	TBD : TBD	5.648	2.456		3.774		-		-		-	Continuing	Continuing	Continuing
		Subtotal	5.648	2.456		3.774		-		-		-	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Martix Support	MIPR	ARL, CERDEC, Various : Various	0.732	0.780		0.828		-		-		-	Continuing	Continuing	Continuing
		Subtotal	0.732	0.780		0.828		-		-		-	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Various Testing Organizations	MIPR	Various : Various	0.000	-		0.720		-		-		-	Continuing	Continuing	Continuing
		Subtotal	0.000	-		0.720		-		-		-	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
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	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	6.380	4.499		7.410		-		-		-	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604827A / *Soldier Systems - Warrior Dem/Val*	**Project (Number/Name)** S65 / *Soldier Power*

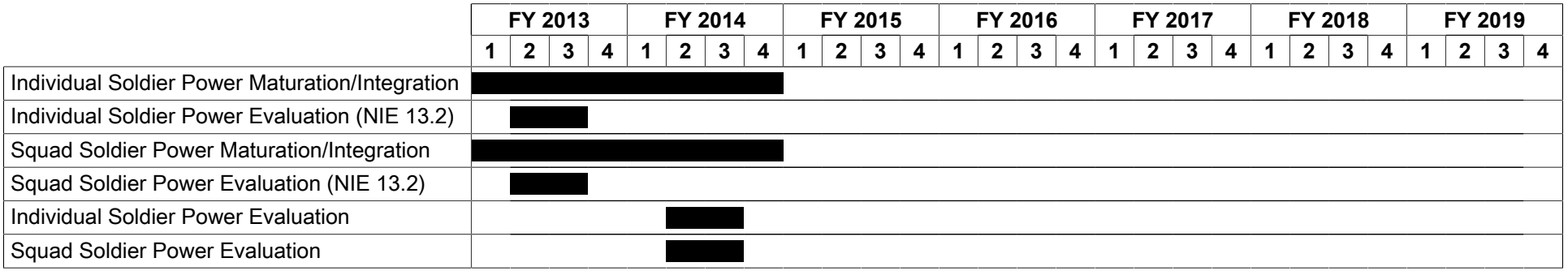

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604827A / *Soldier Systems - Warrior Dem/Val*	**Project (Number/Name)** S65 / *Soldier Power*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Individual Soldier Power Maturation/Integration	1	2013	4	2014
Individual Soldier Power Evaluation (NIE 13.2)	2	2013	3	2013
Squad Soldier Power Maturation/Integration	1	2013	4	2014
Squad Soldier Power Evaluation (NIE 13.2)	2	2013	3	2013
Individual Soldier Power Evaluation	2	2014	3	2014
Squad Soldier Power Evaluation	2	2014	3	2014

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604827A / *Soldier Systems - Warrior Dem/Val*	Project (Number/Name) S75 / *Ground Soldier Ensemble*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
S75: *Ground Soldier Ensemble*	-	23.859	11.057	5.235	-	5.235	11.036	15.458	8.482	4.096	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Previously funded in 0603827A - Soldier Systems Advanced Development - S49 Ground Soldier System.

A. Mission Description and Budget Item Justification

The Nett Warrior (NW) Program (named in honor of Medal of Honor recipient Colonel Robert C. Nett), also known as the Ground Soldier System (GSS) Program, leverages commercial smart devices and secure Army tactical radios to provide the dismounted leader an integrated mission command and situational awareness system for use during combat operations. The NW system provides leaders electronic real-time information on friendly positions; information about enemy activity and movement; navigational data and map imagery; a collaborative planning tool; and other mission related graphics which effectively puts the power of the entire Army tactical network in the hands of the dismounted leader. The NW system also provides the same integrated mission command capability to the tactical vehicle-mounted leaders so that when dismounted the leader still maintains the common operating picture (COP) and has continuous situational awareness. This capability provides unparalleled situational awareness and enhanced communications to the dismounted leader allowing for faster, more accurate decisions and reduced fratricide in the tactical fight.

The continued development and integration of the NW program harnesses soldiers' experience in combat operations and employs combat veterans for Soldier feedback enhancing human factor design and fightability of the system. The NW program also integrates applications from other programs aimed at considerably reducing the weight and bulk of the dismounted soldier's load by using End User Devices. This project funds the following: 1) Yearly developmental and operational test of the NW with continually advancing commercial smart device technology inserted, 2) Software development for planned updates, 3) Integration with AN/PRC-154A, including vehicle power integration, 4) Government led integration and system engineering and program management, 5) Incorporation of other applications and capabilities into Nett Warrior, 6) and Conduct NW IOT&E with Mechanized and Infantry units in FY14 and FY15.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Test and Evaluation including twice a year Network Integration Evaluation (NIE) to gain Soldier feedback	7.242	6.357	2.873
Articles:	-	-	-
Description: Funding is provided for the following effort			
FY 2013 Accomplishments: Continued NW developmental and operational evaluation of the latest commercial smart devices and emerging technologies. Conducted testing at NIE (with multiple commercial smart devices to support yearly production decisions) and program			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604827A / *Soldier Systems - Warrior Dem/Val*	**Project (Number/Name)** S75 / *Ground Soldier Ensemble*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
management support for NW. Test events included: Brigade level support, equipping, training, test costs, and spares for NW Developmental and Operational Test at NIE to support a Low Rate Initial Production extension decision; Logistics Demonstration; safety testing; airborne; air-worthiness; Army Interoperability Certification; environmental testing; electronic warfare testing; and Information Assurance penetration prevention testing. ***FY 2014 Plans:*** Conduct NW test and evaluation for technical verification at developmental events and user verification. Fund continual Developmental Test efforts. Fund Initial Operational Test and Evaluation (IOT&E) Phase I (Mechanized unit) at Network Integration Evaluation (NIE) 14.2 events to support continued production decisions. Support NW as a baseline NIE system including: Brigade level support, equipping, training, and spares for NW; yearly Army Interoperability Certification; environmental testing; electronic warfare testing; and Information Assurance penetration prevention testing for new commercial smart devices. ***FY 2015 Plans:*** Will continue NW test and evaluation for technical verification at developmental events and user verification through operational testing including Initial Operational Test & Evaluation (IOT&E) Phase II (Infantry unit) for a Full Rate Production (FRP) Decision. Support NW as a baseline NIE system including: Brigade level support, equipping, training, test costs, and spares for NW; yearly Army Interoperability Certification; environmental testing; electronic warfare testing; Stryker Interoperability testing; and Information Assurance penetration prevention testing for new commercial smart devices.			
Title: Hardware and Software Integration and Evaluation for Capability Improvements	4.241	1.680	0.565
Articles:	-	-	-
Description: Funding is provided for the following effort ***FY 2013 Accomplishments:*** Continued software integration of the Army's Joint Battle Command Platform software development kit for commercial smart device hardware to support Governmental T&E activities by conducting Developmental Tests (DT), and Operational Testing (OT) preparing for production decisions and fielding for FY14. Integrated applications to expand Nett Warrior capabilities to meet other requirements with a common smart device. Provided Software updates to support Army Interoperability Certification testing and other testing supporting DT and OT. ***FY 2014 Plans:*** Acquire, integrate and evaluate Brigade sized quantities of commercial smart devices, cables, and other hardware for potential integration into the NW system of proven and mature capabilities during the semi-annual NIE events. Integrate 3rd party software			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
combat applications and keep pace with emerging technology and inform the acquisition decision process as to yearly Army Capability Set insertion. ***FY 2015 Plans:*** Integrate and evaluate small quantities of the latest commercial smart devices, cables, and other hardware for potential adoption into the NW system. Will continue to integrate 3rd party software combat applications for increased functionality. This will continually allow NW to keep pace with emerging technology and informs the future acquisition decision process as to yearly Army Capability Set insertion.			
Title: Software Development and Integration	2.099	2.032	0.964
Articles:	-	-	-
Description: Funding is provided for the following effort ***FY 2013 Accomplishments:*** Continued software integration of the Army's Joint Battle Command Platform software development kit for commercial smart device hardware to support Governmental T&E activities by conducting Developmental Tests (DT), and Operational Testing (OT) that led to production decisions and fielding for FY14. Integrated applications that expanded Nett Warrior capabilities to meet other requirements utilizing a common smart device. Provided Software updates that supported Army Interoperability Certification testing and other testing supporting DT and OT. ***FY 2014 Plans:*** Develop software based on the Army's Joint Battle Command Platform software development kit for commercial smart device hardware for potential integration into the NW system to provide the most current capability into production on a semi-annual basis. Integrate software for open architecture to facilitate incorporation of other applications with minimal integration while maintaining Secret Level Accreditation. Maintain software updates and changes for NW program to keep pace with Army software blocking updates, maintain information assurance accreditation, and retain interoperability certification for Army Capability Sets. ***FY 2015 Plans:*** Will continually integrate applications that expand Nett Warrior capabilities to meet other requirements utilizing a common smart device. Will continually modify the NW software architecture to align with Mobile Handheld CE V2.0 emerging architecture and allow for easier integration of third party applications onto the common Army platoon level computational platform. Will maintain software updates that allow the NW program to keep pace with Army software blocking updates, retain interoperability certification for Army Capability Sets and information assurance accreditation.			
Title: Integration with AN/PRC-154A and Cross Domain Capability	-	0.480	-
Articles:	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604827A / *Soldier Systems - Warrior Dem/Val*	**Project (Number/Name)** S75 / *Ground Soldier Ensemble*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Description: Funding is provided for the following effort ***FY 2014 Plans:*** Integrate new commercial smart devices with AN/PRC-154A Radio and cross domain guards as technology changes over time.			
Title: Conduct Systems Engineering and Program Management Support to Nett Warrior	10.277	0.508	0.833
Articles:	-	-	-
Description: Funding is provided for the following effort ***FY 2013 Accomplishments:*** Conducted government systems engineering and program management support for NW program including documentation preparation for upcoming acquisition lifecycle decision. Integrated the latest commercial smart devices and technology for test and evaluation. Collected input from Soldiers at semi-annual NIE events that improved NW size, weight, power, fightability, safety and effectiveness via surveys and electronic data monitoring from Developmental and Operational Testing (DT/OT) events. ***FY 2014 Plans:*** Continue to conduct government systems engineering and program management support for NW program including documentation preparation for Full Rate Production decision. Develop advanced electronic training materials for improved leader training. Collect input from Soldiers at semi-annual NIE events to improve NW size, weight, power, fightability, safety and effectiveness via surveys and electronic data monitoring from Developmental and Operational Testing (DT/OT) events. ***FY 2015 Plans:*** Will continue to conduct government systems engineering and program management support for NW program. Will develop advanced electronic training materials for improved leader training. Will collect input from Soldiers to improve NW size, weight, power, fightability, safety and effectiveness via surveys.			
Accomplishments/Planned Programs Subtotals	23.859	11.057	5.235

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• OPA 3, R80501: *OPA 3, R80501, Ground Soldier System*	93.914	61.859	84.761	-	84.761	87.706	48.857	46.960	53.008	Continuing	Continuing
• RDT&E, PE 0603827A S49: *RDT&E, PE 0603827A S49 - Ground Soldier System (GSS)*	-	-	-	-	-	-	-	17.565	17.825	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost

Remarks

D. Acquisition Strategy

The Nett Warrior (NW) program provides unparalleled situational awareness and mission command to dismounted combat leaders through an integrated End User Device, power source and radio. The NW program executed a MS A in FY09 and began three competing TD phase contracts leading to developmental and operational testing FY10-11. A Configuration Steering Board (CSB) was held August 2011 which restructured the program to implement COTS-based technology. Twice a year technology maturation and integration is assessed at NIE events. The NW MS C was approved 3 April 2012 followed by a low rate Capability Set (CS) 14 production award. Conducted Developmental Test and Evaluation during 4QFY12-1QFY13, followed by 1QFY13 Operational Test (OT) as well as hardware, software, integration and program management. The Developmental and Operational tests validated the system utility, supportability, and austere-environment power production and regeneration strategy that resulted in a production decision in the 2QFY13 to procure the CS14 quantity of NW systems and support. Conduct a 1QFY14 Operational Test, Developmental and Operational Tests during 2QFY14-3QFY14, as well as hardware, software, integration and program management. The Developmental and Operational tests will continue to validate the system utility, supportability, and austere-environment power production and regeneration strategy-leading to a production decision in the 2QFY14 to procure the CS15 quantity of NW systems and support. While in production NW also continues to reduce size, weight and power through a semi-annual integration and evaluation and test of the latest commercial smart device technologies which evolve continuously.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604827A / *Soldier Systems - Warrior Dem/Val*	Project (Number/Name) S75 / *Ground Soldier Ensemble*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Hardware and software integration and evaluation	Various	Various : Various	12.422	4.241		1.680		0.565		-		0.565	Continuing	Continuing	Continuing
Systems Engineering and program management support	Various	Various : Various	10.566	10.277		0.508		0.833		-		0.833	Continuing	Continuing	Continuing
SSI BTR	Various	Various : Various	0.258	-		-		-		-		-	-	0.258	-
		Subtotal	23.246	14.518		2.188		1.398		-		1.398	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Integration with Project Manager Tactical Radios and Vehicle Platforms	Various	Various : Various	1.882	-		0.480		-		-		-	Continuing	Continuing	Continuing
		Subtotal	1.882	-		0.480		-		-		-	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development and Integration	Various	Various : Various	3.696	2.099		2.032		0.964		-		0.964	Continuing	Continuing	Continuing
		Subtotal	3.696	2.099		2.032		0.964		-		0.964	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Various Testing Organizations	Various	Various : Various	8.780	7.242		6.357		2.873		-		2.873	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604827A / *Soldier Systems - Warrior Dem/Val*	Project (Number/Name) S75 / *Ground Soldier Ensemble*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	8.780	7.242		6.357		2.873		-		2.873	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	37.604	23.859		11.057		5.235		-		5.235	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604827A / *Soldier Systems - Warrior Dem/Val*	**Project (Number/Name)** S75 / *Ground Soldier Ensemble*

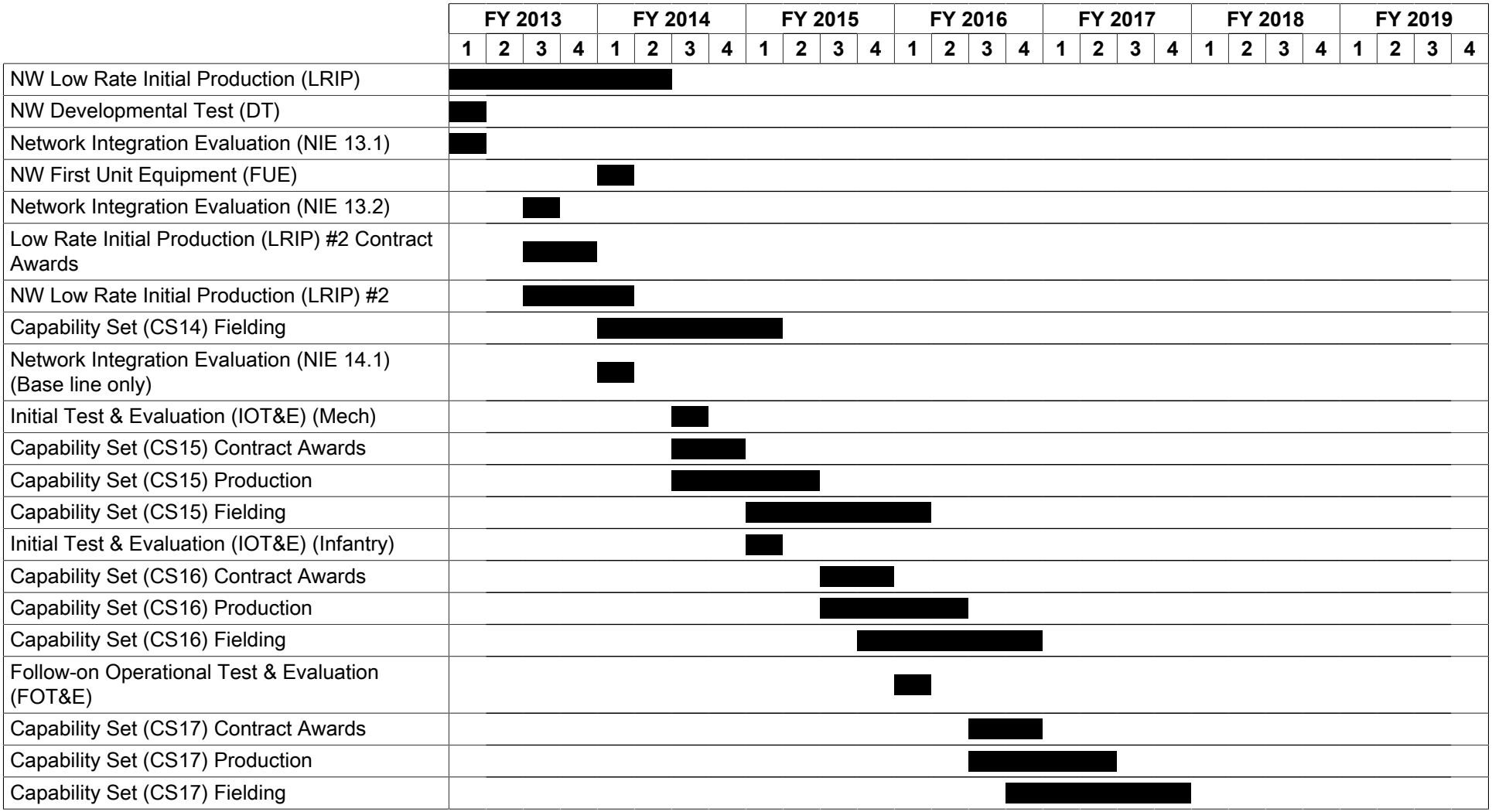

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604827A / *Soldier Systems - Warrior Dem/Val*	**Project (Number/Name)** S75 / *Ground Soldier Ensemble*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
NW Low Rate Initial Production (LRIP)	3	2012	2	2014
NW Developmental Test (DT)	4	2012	1	2013
Network Integration Evaluation (NIE 13.1)	1	2013	1	2013
NW First Unit Equipment (FUE)	1	2014	1	2014
Network Integration Evaluation (NIE 13.2)	3	2013	3	2013
Low Rate Initial Production (LRIP) #2 Contract Awards	3	2013	4	2013
NW Low Rate Initial Production (LRIP) #2	3	2013	1	2014
Capability Set (CS14) Fielding	1	2014	1	2015
Network Integration Evaluation (NIE 14.1) (Base line only)	1	2014	1	2014
Initial Test & Evaluation (IOT&E) (Mech)	3	2014	3	2014
Capability Set (CS15) Contract Awards	3	2014	4	2014
Capability Set (CS15) Production	3	2014	2	2015
Capability Set (CS15) Fielding	1	2015	1	2016
Initial Test & Evaluation (IOT&E) (Infantry)	1	2015	1	2015
Capability Set (CS16) Contract Awards	3	2015	4	2015
Capability Set (CS16) Production	3	2015	2	2016
Capability Set (CS16) Fielding	4	2015	4	2016
Follow-on Operational Test & Evaluation (FOT&E)	1	2016	1	2016
Capability Set (CS17) Contract Awards	3	2016	4	2016
Capability Set (CS17) Production	3	2016	2	2017
Capability Set (CS17) Fielding	4	2016	4	2017

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0604854A / *Artillery Systems - EMD*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	149.667	121.270	1.912	-	1.912	1.938	1.959	1.978	10.587	Continuing	Continuing
509: *LIGHTWEIGHT 155M HOWITZER*	-	-	-	1.912	-	1.912	1.938	1.959	1.978	10.587	Continuing	Continuing
516: *Paladin/FAASV*	-	149.667	121.270	-	-	-	-	-	-	-	-	270.937

The FY 2015 OCO Request will be submitted at a later date.

Note

Beginning FY15, 0604854A, project 516 has been moved to new APE 0210609A, project ED8.

A. Mission Description and Budget Item Justification

Paladin Integrated Management (PIM) is an ACAT 1D Acquisition Program. The program will replace the current fleet of M109 Family of Vehicles (FoV) consisting of the M109A6 Paladin Self Propelled Howitzer and M992A2 Field Artillery Ammunition Supply Vehicle (FAASV). PIM is an Army Modernization Program that addresses a critical capability gap created by the Non-Line of Sight Cannon termination in June of 2009 as well as obsolescence and size/weight and power (SWaP) issues in the M109 FoV current Fleet. The PIM system integrates current Bradley Fighting Vehicle suspension and drive train items, Future Combat Systems (FCS) developed Electric Gun Drive systems and current fleet (M109A6) fire control systems into a new chassis that provides better force protection, survivability and increased electrical power over the current fleet. PIM is a two vehicle system: Self Propelled Howitzer (SPH) and Carrier Ammunition Tracked (CAT). The SPH has all characteristics listed above. The CAT utilizes all these same components and traits less those that relate directly to the cannon system. The PIM system replaces the current M109 FoV on a one for one basis, in the cannon fires battalions in the Armored Brigade Combat Team Formations and the Echelons above Brigade (EAB). The overall intent is to increase Soldier force protection, vehicle survivability, provide an appropriate amount of SWaP capacity to add future capabilities, reduce life cycle costs and extend the life of the M109 FoV through FY2050.

The Lightweight 155mm Howitzer (LW155), also known as the M777A2, provides direct, reinforcing, general support fires to maneuver forces and direct support artillery. It replaces all howitzers in all missions in the USMC and replaces the M198 howitzer as the general support artillery for light forces in the Army. The LW155 fires unassisted projectiles to a range of 15 miles and assisted projectiles to 19 miles. The addition of the digital fire control system enables the weapon to program and fire the improved Excalibur precision-guided munitions to ranges in excess of 25 miles with better than 10-meter Circular Error Probable (CEP) accuracy. The LW155 is the first ground combat system whose major structures are made of high strength titanium alloy and the system makes extensive use of hydraulics to operate the breech, load tray, recoil and wheel arms. The combination of titanium structures and the use of hydraulic systems resulted in a significant weight savings of 7000 lbs over the M198 system. Compared to the M198, the LW155 emplaces three-times faster and displaces four-times faster. It traverses 32 percent more terrain worldwide and is 70 percent more survivable than the M198. It is a successful joint service program between the Marine Corps and Army working together to develop, produce, field, and sustain the howitzer.
The LW155 was first introduced into the Marine Corps in April 2005 and the Marines have now fielded the howitzer to all active units. The Army has fielded the howitzer to its Stryker Brigade Combat teams (SBCT), Fires Brigades and National Guard. Fielding of the Infantry Brigade Combat Teams

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604854A / *Artillery Systems - EMD*

(IBCT) will commence in FY14 and continue through 2018. The LW155 saw extensive action in Afghanistan, receiving high marks for its performance. Having now been in the field for almost 10 years, the howitzer will be going through obsolescent replacement of electronic components in its digital fire control system. New start in FY-15.

Funding supports engineering studies for capabilities identified in the Joint Operation Requirements Document (JORD) but deferred during Engineering Manufacturing and Development due to technology maturity, cost and schedule. This includes a digital direct fire site for the Digital Fire Control System and low temperature, high density power solutions to achieve full operational requirements.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	167.797	80.613	92.844	-	92.844
Current President's Budget	149.667	121.270	1.912	-	1.912
Total Adjustments	-18.130	40.657	-90.932	-	-90.932
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-18.130	40.657	-90.932	-	-90.932

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604854A / *Artillery Systems - EMD*	Project (Number/Name) 509 / *LIGHTWEIGHT 155M HOWITZER*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
509: *LIGHTWEIGHT 155M HOWITZER*	-	-	-	1.912	-	1.912	1.938	1.959	1.978	10.587	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

The Lightweight 155mm (LW155) Towed Howitzer is a jointly managed program with the Marine Corps.

A. Mission Description and Budget Item Justification

The Lightweight 155mm Howitzer (LW155), also known as the M777A2, provides direct, reinforcing, general support fires to maneuver forces and direct support artillery. It replaces all howitzers in all missions in the USMC and replaces the M198 howitzer as the general support artillery for light forces in the Army. The LW155 fires unassisted projectiles to a range of 15 miles and assisted projectiles to 19 miles. The addition of the digital fire control system enables the weapon to program and fire the improved Excalibur precision-guided munitions to ranges in excess of 25 miles with better than 10-meter Circular Error Probable (CEP) accuracy. The LW155 is the first ground combat system whose major structures are made of high strength titanium alloy and the system makes extensive use of hydraulics to operate the breech, load tray, recoil and wheel arms. The combination of titanium structures and the use of hydraulic systems resulted in a significant weight savings of 7000 lbs over the M198 system. Compared to the M198, the LW155 emplaces three-times faster and displaces four-times faster. It traverses 32 percent more terrain worldwide and is 70 percent more survivable than the M198. It is a successful joint service program between the Marine Corps and Army working together to develop, produce, field, and sustain the howitzer. The LW155 was first introduced into the Marine Corps in April 2005 and the Marines have now fielded the howitzer to all active units. The Army has fielded the howitzer to its Stryker Brigade Combat teams (SBCT), Fires Brigades and National Guard. Fielding of the Infantry Brigade Combat Teams (IBCT) will commence in FY14 and continue through 2018. The LW155 saw extensive action in Afghanistan, receiving high marks for its performance. Having now been in the field for almost 10 years, the howitzer will be going through obsolescent replacement of electronic components in its digital fire control system. New start in FY-15.

Funding supports engineering studies for capabilities identified in the Joint Operation Requirements Document (JORD) but deferred during Engineering Manufacturing and Development due to technology maturity, cost and schedule. This includes a digital direct fire sight for the Digital Fire Control System and low temperature, high density power solutions to achieve full operational requirements.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Management Services	-	-	0.194
Description: Funding supports management services within the Program Management Office, Towed Artillery Systems			
FY 2015 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604854A / *Artillery Systems - EMD*	**Project (Number/Name)** 509 / *LIGHTWEIGHT 155M HOWITZER*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Funding supports management and coordination with the Armaments Research Development and Engineering Center to conduct trade studies to determine the best material solution for the digital direct fire sight and low temperature, high density power solutions.			
Title: Product Development ***Description:*** Funds engineering support from the Armaments Research Development and Engineering Center ***FY 2015 Plans:*** Funding will support conducting trade studies to determine the best material solution for digital direct fire sight for the Digital Fire Control System and low temperature, high density power solutions to achieve full operational requirements.	-	-	1.718
Accomplishments/Planned Programs Subtotals	-	-	1.912

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• M777 Mods: *M777 Mods - Modification of Weapons and Other Combat Vehicles SSN GZ1700*	20.860	39.300	18.166	-	18.166	11.617	11.239	-	-	-	101.182
• Procurement, WTCV, Army, LW155 with: *Procurement, WTCV, Army, LW155 with TAD G01700*	12.581	-	-	-	-	-	-	-	-	-	12.581

Remarks

Procurement Funding supports active retrofits for previously contracted Digital Fire Control System components, addressing obsolescence.

D. Acquisition Strategy

This will be a collaborative effort between the Program Management Office, Towed Artillery Systems, and the Armaments Research Development and Engineering Center at Picatinny Arsenal.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604854A / *Artillery Systems - EMD*	Project (Number/Name) 509 / *LIGHTWEIGHT 155M HOWITZER*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	Sub Allot	Program Management Towed Artillery Systems : Picatinny Arsenal, NJ	0.000	-		-		0.194	Oct 2014	-		0.194	Continuing	Continuing	Continuing
		Subtotal	0.000	-		-		0.194		-		0.194	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering	MIPR	Armaments Research & Developmet Center : Picatinny Arsenal, NJ	0.000	-		-		1.718	Oct 2014	-		1.718	Continuing	Continuing	Continuing
		Subtotal	0.000	-		-		1.718		-		1.718	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		-		1.912		-		1.912	-	-	-

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604854A / *Artillery Systems - EMD*	Project (Number/Name) 516 / *Paladin/FAASV*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
516: *Paladin/FAASV*	-	149.667	121.270	-	-	-	-	-	-	-	-	270.937
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Starting FY15, 0604854A, project 516 has been moved to new APE 0600609A, project ED8.

A. Mission Description and Budget Item Justification

Paladin Integrated Management (PIM) is an ACAT 1D Acquisition Program. The program will replace the current fleet of M109 Family of Vehicles (FoV) consisting of the M109A6 Paladin Self Propelled Howitzer and M992A2 Field Artillery Ammunition Supply Vehicle (FAASV). PIM is an Army Modernization Program that addresses a critical capability gap created by the Non-Line of Sight Cannon termination in June of 2009 as well as obsolescence and size/weight and power (SWaP) issues in the M109 FoV current Fleet. The PIM system integrates current Bradley Fighting Vehicle suspension and drive train items, Future Combat Systems (FCS) developed Electric Gun Drive systems and current fleet (M109A6) fire control systems into a new chassis that provides better force protection, survivability and increases electrical power over the current fleet. PIM is a two vehicle system: Self Propelled Howitzer (SPH) and Carrier Ammunition Tracked (CAT). The SPH has all characteristics listed above. The CAT utilizes all these same components and traits less those that relate directly to the cannon system. The PIM system replaces the current M109 FoV on a one for one basis, in the cannon fires battalions in the Armored Brigade Combat Team Formations and the Echelons above Brigade (EAB). The overall intent is to increase Soldier force protection, vehicle survivability, provide an appropriate amount of SWaP capacity to add future capabilities, reduce life cycle costs and extend the life of the M109 FoV through FY2050.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Paladin/FAASV Integrated Management (PIM) Development	100.689	84.969	-
Articles:	-	-	-

Description: Funding is provided for the following developmental efforts:

FY 2013 Accomplishments:

Completion of all program documentation, required reviews (Functional Configuration Audit, Product Readiness Review and System Verification Review). Execution of key testing support: LUT and other DT Phase II. Continuing Software Phase II maintenance efforts for Corrective Actions, Producibility, and Obsolescence (CPO) functionality. Engineering development for CPO changes required for LRIP and continuance of Software Phase III development. Development of logistical support products required for fielding (manuals, training). The production of 1.5 Sets of PIM for the execution of Full Up Systems Live-Fire (FUSL).

FY 2014 Plans:

Finalization of developmental fixes, sub-system qualification, and testing for production. Continuance of engineering development for CPOs and Software Phase III efforts required for LRIP production-continue Software Phase II maintenance efforts for CPO

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604854A / *Artillery Systems - EMD*	**Project (Number/Name)** 516 / *Paladin/FAASV*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
functionality. Executing Software Developmental Qualification Testing (DQT) for Software Phase III. Development of an Objective Underbelly Kit per guidance of the Defense Acquisition Executive (DAE.) Continued development of logistical support products (manuals and training) required for fielding. Execution of First Article Testing (FAT) of production vehicles.			
Title: Test and Evaluation	7.442	4.900	-
Articles:	-	-	-
Description: Funding is provided for the following government test efforts: ***FY 2013 Accomplishments:*** Plan and execute operational testing and continued DT including qualification of subsystems, system safety, performance testing, live fire exploitation testing, logistics demonstration, and additional Green DT. Key tests include a Limited User Test (LUT) to evaluate suitability and effectiveness in an operational environment, and DT to include completion of the second segment of the RAM Growth Curve (RGC); extreme temperature testing; transportability testing; durability testing of the Carrier, Ammunition, Tracked (CAT) vehicle; automotive and firing performance; and initial testing to verify Corrective Action, Producibility, and Obsolescence (CPO) changes resulting from earlier testing and continued development. Live fire test events include BH&T exploitation testing, fuel cell and Improvised Explosive Device (IED) testing, and behind armor debris testing. Logistics demonstration continues on prototype vehicles to develop maintenance procedures and publications. ***FY 2014 Plans:*** Plan and execute continued DT including qualification of subsystems, system safety, performance testing, live fire exploitation testing, and logistics demonstration. Key developmental tests events include continued verification of CPO changes to validate the LRIP production configuration. This testing consists of full load cooling test, software DQT, and automotive and firing performance testing on a production representative vehicle. Key live fire test events include final exploitation testing on a BH&T and production representative vehicle, component ballistic testing, and testing of the Automatic Fire Extinguisher System (AFES). Logistics demonstration is integrated with the test plan as CPO changes are verified.			
Title: Program Management	28.320	22.484	-
Articles:	-	-	-
Description: Funding is provided for the following program management support: ***FY 2013 Accomplishments:*** Government System Engineering and Program Management for the total program including: Original Equipment Manufacturer (OEM) management consisting of weekly, monthly, and quarterly program management reviews; continue contract execution management, and execution of key program reviews (FCA, SVR and PRR). Manages Government Developmental Test and Evaluation program. Management of LRIP contract award process. Complete all program documentation and reviews for the MS			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604854A / *Artillery Systems - EMD*	**Project (Number/Name)** 516 / *Paladin/FAASV*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
C (production) decision in JUN 2013. Management of the program cost, schedule, and performance metrics including making programmatic trade-off decisions. Management of Other Governmental Agencies (OGAs) that support the PIM program. ***FY 2014 Plans:*** Government System Engineering and Program Management for the total program including: OEM management consisting of weekly, monthly, and quarterly program management reviews; continue contract execution management for the EMD phase contract until completion of all efforts in FY 16. Manages Government Developmental Test and Evaluation program. Management of the program cost, schedule, and performance metrics including making programmatic trade-off decisions. Management of Other Governmental Agencies (OGAs) that support the PIM program.			
Title: Training	6.428	5.864	-
Articles:	-	-	-
Description: Funding is provided for the following training government and contractor efforts: ***FY 2013 Accomplishments:*** PIM Training Development supports the development of Training Aids, Devices, Simulators and Simulations (TADSS) for crew and maintainers, New Equipment Training (NET) and fielding plans. ***FY 2014 Plans:*** Continue PIM training developmental efforts that support TADSS for crew and maintainers, NET, and fielding plans.			
Title: Data	6.788	3.053	-
Articles:	-	-	-
Description: Funding is provided for the following data contractor efforts: ***FY 2013 Accomplishments:*** Contractor Technical Data Package Updates and Technical Publications ***FY 2014 Plans:*** Contractor Technical Data Package Updates and Technical Publications			
Accomplishments/Planned Programs Subtotals	149.667	121.270	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• Paladin/FAASV: *Paladin/FAASV Mod*	8.630	4.769	45.411	-	45.411	48.426	65.139	67.544	77.099	97.586	414.604

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604854A / *Artillery Systems - EMD*	**Project (Number/Name)** 516 / *Paladin/FAASV*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• Paladin Integrated Management (PIM): *PIM Mod In Service*	188.633	199.477	-	-	-	-	-	-	-	-	388.110

Remarks

Starting FY15, 0604854A, project 516 has been moved to new APE 0600609A, project ED8.

D. Acquisition Strategy

The PIM Program was initiated on 16 August 07 under the BAE Systems, Inc., System Technical Support (STS) Contract W56HZV-07-C-0096. Subsequent work directives were awarded under BAE STS contract W56HZV-07-C-0256 to further define the configuration of the PIM vehicles. On 14 August 2009, a Research, Development, Test and Evaluation (RDT&E) Contract W56HZV-09-C-0550 was awarded to BAE Systems Inc. for the Prototype Development and Fabrication of 7 prototype vehicles (5 PIM Self Propelled Howitzer Systems (SPHS) and 2 PIM Carrier Ammunition Tracked (CAT) vehicles). A Comprehensive Contract Modification (CCM) award to the RDT&E contract was accomplished on 6 Jan 2012. This modification allows for the completion of the Engineering and Manufacturing Development (EMD) Phase and transfers the system responsibility for the program from the Government to BAE Systems Inc. The planned Low-Rate Initial Production (LRIP) contract is of a Fixed Price Incentive Firm Target (FPIF) contract type for procurement of vehicles with a period of performance running from Nov 2013 through approximately Jun 2019. The LRIP contract will provide for three LRIP years with the initial base year including 19 SPHs and 18 CATs and the remaining two option years with 18 sets and 30 sets, respectively (each set consisting of one each SPH and CAT) of PIM vehicles. The Full Rate Production (FRP) contract is planned as a FPIF contract that converts to a Firm Fixed Price (FFP) contract after the second year of FRP. The FRP contract provides for the remaining PIM vehicles to fulfill the requirement up to the Army Acquisition Objective of 580 sets.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604854A / *Artillery Systems - EMD*	Project (Number/Name) 516 / *Paladin/FAASV*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMO Support	MIPR	PM Paladin/FAASV : Picatinny, NJ/ TACOM	77.871	28.320	Dec 2012	22.484	Dec 2013	-		-		-	Continuing	Continuing	Continuing
		Subtotal	77.871	28.320		22.484		-		-		-	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Training	SS/CPIF	BAE Systems : York, PA	0.000	6.428	Dec 2012	5.864	Nov 2013	-		-		-	Continuing	Continuing	Continuing
Data	SS/CPIF	BAE : York, PA	0.000	6.788	Dec 2012	3.053	Nov 2013	-		-		-	Continuing	Continuing	Continuing
Small Business Innovative Research/Small Business Technology Transfer Program	Various	TACOM : Warren, MI	3.668	-		-		-		-		-	Continuing	Continuing	Continuing
PIM Development - Contractor	SS/CPIF	BAE, Systems : York, PA	387.182	100.689	Nov 2012	84.969	Nov 2013	-		-		-	Continuing	Continuing	Continuing
PIM Development - Government	MIPR	Various OGAs : Various	0.000	-		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	390.850	113.905		93.886		-		-		-	-	-	-

Remarks

Funding has been moved to new PE 650609 and PROJECT ED8.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Level Testing	Various	Various OGAs : Various	38.549	7.442	Nov 2012	4.900	Feb 2014	-		-		-	Continuing	Continuing	Continuing
		Subtotal	38.549	7.442		4.900		-		-		-	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604854A / *Artillery Systems - EMD*	Project (Number/Name) 516 / *Paladin/FAASV*	

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	507.270	149.667		121.270		-		-		-	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604854A / *Artillery Systems - EMD*	**Project (Number/Name)** 516 / *Paladin/FAASV*

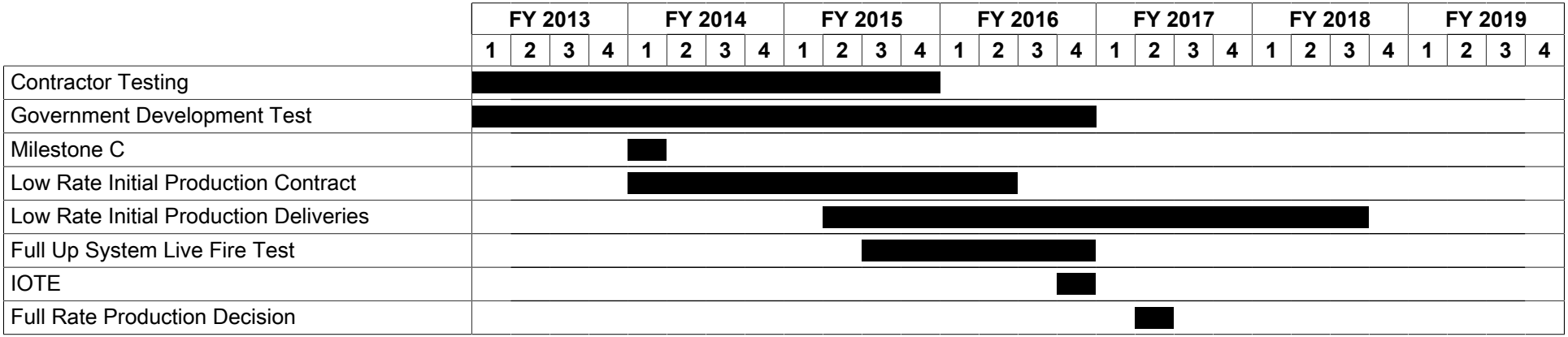

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604854A / *Artillery Systems - EMD*	**Project (Number/Name)** 516 / *Paladin/FAASV*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Contractor Testing	1	2011	4	2015
Government Development Test	3	2011	4	2016
Milestone C	1	2014	1	2014
Low Rate Initial Production Contract	1	2014	2	2016
Low Rate Initial Production Deliveries	2	2015	3	2018
Full Up System Live Fire Test	3	2015	4	2016
IOTE	4	2016	4	2016
Full Rate Production Decision	2	2017	2	2017

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0604869A / *Patriot/MEADS Combined Aggregate Program (CAP)*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	348.234	-	-	-	-	-	-	-	-	-	348.234
M06: *Patriot/Meads Combined Aggregate Program*	-	348.234	-	-	-	-	-	-	-	-	-	348.234

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Medium Extended Air Defense System (MEADS) provides joint and coalition forces critical asset and defended area protection against multiple and simultaneous attacks by short-to-medium range ballistic missiles, cruise missiles, manned and unmanned aerial systems, and tactical air-to-surface missiles. This system leverages current technology for an Integrated Air and Missile Defense Fire Control System/capability.

MEADS is a tri-national co-development program among the United States, Germany, and Italy to replace the PATRIOT and HAWK systems in Germany, and NIKE Hercules systems in Italy. The NATO MEADS Management Agency (NAMEADSMA) is the North Atlantic Treaty Organization (NATO) contracting authority providing management of the MEADS program on behalf of the participating nations and is responsible for managing the system acquisition. The U.S. and Italy signed the D&D MOU on September 24, 2004, and September 27, 2004, respectively. The NAMEADSMA awarded the MEADS D&D letter contract to MEADS International Inc. on September 28, 2004, initiating the MEADS D&D phase. The Memorandum of Understanding (MOU) was amended in March 2005 by the U.S. and Italy to allow the German Parliament additional time for their signature decision and on April 22, 2005 Germany signed the MOU. NAMEADSMA awarded a $3.4 billion D&D definitized contract to MEADS International Inc. on May 31, 2005.

MEADS is designed to provide joint and coalition forces, critical asset and defended area protection against multiple and simultaneous attacks by short to medium range ballistic missiles, cruise missiles, manned and unmanned aerial systems and tactical air-to-surface missiles. MEADS is being developed to have a netted and distributed architecture with modular components to increase survivability and flexibility of employment in a number of operational configurations. The objective MEADS Fire Unit, designed to be scalable and tailorable to operational requirements, will consist of: two Battle Management Command, Control, Communication, Computers and Intelligence (BMC4I) tactical operations center (TOC), enabling distributed system operations and Beyond-Line-of-Site (BLOS) engagements for maximum protection of supported forces by engaging at longer ranges; six near-vertical launchers capable of transporting and launching up to eight missiles; three launcher reloaders; the PAC-3 Missile Segment Enhancement (MSE)interceptor; an ultra-high frequency (UHF) Surveillance Radar (SR) that provides 360-degree coverage and near-range to long-range detection of low radar cross-section targets; and two X-band Multifunction Fire Control Radars (MFCR) that provide 360-degree coverage and are designed for high-precision handover to the in-flight missile, discrimination capabilities, and short-range target detection and horizon search.

The U.S. rendered a MEADS program decision in Feb 2011 to continue the D&D phase focusing remaining activities to implement a "demonstration of capabilities" through Mar 2014 with the remaining MOU funds to provide a meaningful capability for Germany and Italy and a possible future option for the U.S. Based on this decision, NAMEADSMA developed a new D&D detailed program schedule and the Board of Directors (BoD) approved it via a signed contract amendment on 31 October 2011.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0604869A *I Patriot/MEADS Combined Aggregate Program (CAP)*

The PAC-3 system is continuously being improved via hardware and software changes. The latest missile improvement is the MSE and has been accepted as the baseline missile for MEADS. It is being developed by the U.S. for PATRIOT to meet U.S. operational requirements. The MSE will provide a more agile and lethal interceptor that increases the engagement envelope/defended area of PATRIOT and the MEADS systems. The MSE improves upon the current PAC-3 missile capability with a higher performance solid rocket motor, modified lethality enhancer, more responsive control surfaces, upgraded guidance software, and insensitive munitions improvements. PAC-3 is reported under Program Element 0605456A.

U.S. financial support completed with FY13 funds.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	400.861	-	-	-	-
Current President's Budget	348.234	-	-	-	-
Total Adjustments	-52.627	-	-	-	-
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-52.627	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604869A / *Patriot/MEADS Combined Aggregate Program (CAP)*				Project (Number/Name) M06 / *Patriot/Meads Combined Aggregate Program*			
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
M06: *Patriot/Meads Combined Aggregate Program*	-	348.234	-	-	-	-	-	-	-	-	-	348.234
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

The U.S. rendered a MEADS program decision in Feb 2011 to continue the Design and Development (D&D) phase focusing remaining activities to implement a "demonstration of capabilities" through March 2014; no resources are budgeted to support these efforts after 2013. This program element was terminated.

A. Mission Description and Budget Item Justification

MEADS provides joint and coalition forces critical asset and defended area protection against multiple and simultaneous attacks by short-to-medium range ballistic missiles, cruise missiles, manned and unmanned aerial systems, and tactical air-to-surface missiles. This system leverages current technology for an Integrated Air and Missile Defense Fire Control System/capability.

Medium Extended Air Defense System (MEADS) is a tri-national co-development program among the United States, Germany, and Italy to replace the PATRIOT and HAWK systems in Germany, and NIKE Hercules systems in Italy. The NATO MEADS Management Agency (NAMEADSMA) is the North Atlantic Treaty Organization (NATO) contracting authority providing management of the MEADS program on behalf of the participating nations and is responsible for managing the system acquisition. The U.S. and Italy signed the D&D MOU on September 24, 2004, and September 27, 2004, respectively. The NAMEADSMA awarded the MEADS D&D letter contract to MEADS International Inc. on September 28, 2004, initiating the MEADS D&D phase. The MOU was amended in March 2005 by the U.S. and Italy to allow the German Parliament additional time for their signature decision and on April 22, 2005 Germany signed the MOU. NAMEADSMA awarded a $3.4 billion D&D definitized contract to MEADS International Inc. on May 31, 2005.

MEADS is designed to provide joint and coalition forces, critical asset and defended area protection against multiple and simultaneous attacks by short to medium range ballistic missiles, cruise missiles, manned and unmanned aerial systems and tactical air-to-surface missiles. MEADS is being developed to have a netted and distributed architecture with modular components to increase survivability and flexibility of employment in a number of operational configurations. The objective MEADS Fire Unit, designed to be scalable and tailorable to operational requirements, will consist of: two Battle Management Command, Control, Communication, Computers and Intelligence (BMC4I) tactical operations center (TOC), enabling distributed system operations and Beyond-Line-of-Site (BLOS) engagements for maximum protection of supported forces by engaging at longer ranges; six near-vertical launchers capable of transporting and launching up to eight missiles; three launcher reloaders; the PAC-3 Missile Segment Enhancement (MSE)interceptor; an ultra-high frequency (UHF) Surveillance Radar (SR) that provides 360-degree coverage and near-range to long-range detection of low radar cross-section targets; and two X-band Multifunction Fire Control Radars (MFCR) that provide 360-degree coverage and are designed for high-precision handover to the in-flight missile, discrimination capabilities, and short-range target detection and horizon search.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604869A / *Patriot/MEADS Combined Aggregate Program (CAP)*	**Project (Number/Name)** M06 / *Patriot/Meads Combined Aggregate Program*

The U.S. rendered a MEADS program decision in Feb 2011 to continue the D&D phase focusing remaining activities to implement a "demonstration of capabilities" through Mar 2014 with the remaining MOU funds to provide a meaningful capability for Germany and Italy and a possible future option for the U.S. Based on this decision, NAMEADSMA developed a new D&D detailed program schedule and the Board of Directors (BoD) approved it via a signed contract amendment on 31 October 2011.

The PAC-3 system is continuously being improved via hardware and software changes. The latest missile improvement is the MSE. The MSE has been accepted as the baseline missile for MEADS. It is being developed by the U.S. for PATRIOT to meet U.S. operational requirements. The MSE will provide a more agile and lethal interceptor that increases the engagement envelope/defended area of PATRIOT and the MEADS systems. The MSE improves upon the current PAC-3 missile capability with a higher performance solid rocket motor, modified lethality enhancer, more responsive control surfaces, upgraded guidance software, and insensitive munitions improvements. PAC-3 is reported under Program Element 0605456A.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Medium Extended Air Defense Missile System (MEADS) Design and Development (D&D)	275.573	-	-
Articles:	-	-	-
Description: U.S. contribution to the North Atlantic Treaty Organization (NATO) MEADS Management Agency (NAMEADSMA) International Program Office operational (prime contract) and administrative (support contracts/personnel/travel) budgets to manage the Design and Development (D&D) Phase Contract.			
FY 2013 Accomplishments: Funds the final U.S. contribution to the North Atlantic Treaty Organization (NATO) MEADS Management Agency (NAMEADSMA) International Program Office operational (prime contract) and administrative (support contracts/personnel/travel) for the year of a MEADS Demonstration of Capabilities and will bring the U.S. participation in the MEADS development program to a close under the MEADS contract amendment #26 . Remaining efforts include Data Archival for all major MEADS elements, the last of two intercept flight tests, and four system capability demonstrations as the culmination of MEADS contract amendment #26 in 2QFY14.			
Title: MEADS Design and Development Program Integration	46.387	-	-
Articles:	-	-	-
Description: Close out of MEADS Program.			
FY 2013 Accomplishments: Funds close out planning and execution that is conducted in parallel with the Demonstration of Capabilities activities with an anticipated date for termination of U.S. security oversight and return of U.S. Government Furnished Equipment (GFE) by the end of 4QFY14.			
Title: National and International Program Office Support	14.749	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604869A / *Patriot/MEADS Combined Aggregate Program (CAP)*	**Project (Number/Name)** M06 / *Patriot/Meads Combined Aggregate Program*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Articles:	-	-	-
Description: Management support and salaries for the MEADS National and International program offices. ***FY 2013 Accomplishments:*** Facilitates the closing out of the PATRIOT/ MEADS Combined Aggregate Program(CAP) in 2QFY14.			
Title: MEADS U.S. Only Efforts	11.525	-	-
Articles:	-	-	-
Description: U.S. only efforts to support Exciter and Exportable Missile Model ***FY 2013 Accomplishments:*** Facilitates the closing out of the PATRIOT/ MEADS Combined Aggregate Program(CAP) in 2QFY14.			
Accomplishments/Planned Programs Subtotals	348.234	-	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• PE 0605456A: *Proj PA3, PAC-3/MSE Missile*	63.123	68.807	35.009	-	35.009	2.271	-	-	-	-	169.210
• SSN C53101: *MSE Missile*	8.249	690.401	384.605	-	384.605	419.791	422.527	458.724	497.553	Continuing	Continuing
• PE 0205456: *Proj EF9, System Integration and Test*	-	-	78.758	-	78.758	64.628	67.461	65.734	117.666	Continuing	Continuing
• SSN C50016: *Lower Tier Air and Missile Defense (AMD)*	-	-	110.300	-	110.300	116.416	131.549	114.678	113.281	Continuing	Continuing
• PE 0102419A: *Proj E55, JLENS*	142.508	83.406	54.076	-	54.076	50.167	39.590	2.566	0.003	Continuing	Continuing
• PE 0604319A: *Proj DU3, IFPC2 (FY12 PE0603305A IFPCI II Intercept)*	25.710	79.190	96.177	-	96.177	156.523	90.980	58.214	27.663	Continuing	Continuing
• PE 0605457A: *Proj S40, Army Integrated Air and Missile Defense (AIAMD)*	233.892	369.452	142.584	-	142.584	215.659	228.791	170.828	154.565	Continuing	Continuing
• SSN BZ5075: *IAMD Battle Command System (IBCS)*	-	-	-	-	-	21.091	206.300	298.990	379.981	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604869A / *Patriot/MEADS Combined Aggregate Program (CAP)*	Project (Number/Name) M06 / *Patriot/Meads Combined Aggregate Program*	

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• PE 0604820A: *Proj E10, SENTINEL*	3.734	1.548	5.224	-	5.224	12.213	11.389	10.906	12.132	Continuing	Continuing
• PE 0604741A: *Project Numbers 126, 146 and 149; Air Defense C2I Eng Dev*	42.876	18.284	15.906	-	15.906	20.248	19.632	19.878	20.165	Continuing	Continuing

Remarks

D. Acquisition Strategy

On 1 July 2004, the Defense Acquisition Board approved the Acquisition Strategy (AS) for the PATRIOT/MEADS CAP Milestone B. On 6 April 2006, the Lower Tier Project Manager submitted a Program Deviation Report (PDR) to notify the Under Secretary of Defense for Acquisition, Technology, and Logistics, of changes affecting the 6 August 2004, approved PATRIOT/MEADS CAP Acquisition Program Baseline (APB). On 9 February 2006, the Army System Acquisition Review Council (ASARC) approved establishment of the Integrated Air and Missile Defense (IAMD) Project Office (PO) to lead development efforts for the Army IAMD. On 8 May 2006, the Army established the IAMD PO which will manage the U.S. Army's initiatives to implement the user's operational concept from a System-Centric focus to a Network-Centric, Component-Based (Plug and Fight) architecture. The PATRIOT/MEADS CAP Acquisition Program Baseline and Acquisition Strategy will be modified to reflect these changes. The U.S. rendered a MEADS program decision on 11 Feb 2011 to continue the D&D phase focusing remaining activities to implement a "demonstration of capabilities" through Mar 2014 with the remaining MOU funds to provide a meaningful capability for Germany and Italy and a possible future option for the U.S. Based on this decision, NAMEADSMA developed a new D&D detailed program schedule and the Board of Directors (BoD) approved it via a signed contract on 31 October 2011.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604869A / *Patriot/MEADS Combined Aggregate Program (CAP)*	Project (Number/Name) M06 / *Patriot/Meads Combined Aggregate Program*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
International Operating	Various	NAMEADSMA : Huntsville, AL	41.093	9.000		-		-		-		-	-	50.093	-
Gov't Program Services/ Mgmt	Various	Lower Tier Project Office : Huntsville, AL	4.500	1.500		-		-		-		-	-	6.000	-
		Subtotal	45.593	10.500		-		-		-		-	-	56.093	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Design and Development	Various	NAMEADSMA : Huntsville, AL	1,872.480	279.784		-		-		-		-	-	2,152.264	-
Program Integration	Various	Various : Huntsville, AL	157.251	23.487		-		-		-		-	-	180.738	-
Product Development Support	Various	Program Office : Huntsville, AL	57.488	6.400		-		-		-		-	-	63.888	-
U.S. Only Security / Exciter	SS/CPFF	Lockheed Martin : Syracuse, NY; Dallas, TX & Orlando, FL	80.535	7.276		-		-		-		-	-	87.811	-
U. S. Other Government Agencies (OGA's)	Various	Various : Huntsville, AL	47.252	5.972		-		-		-		-	-	53.224	-
International Program Office	Various	NAMEADSMA : Huntsville, AL	27.771	5.500		-		-		-		-	-	33.271	-
Systems Engineering	Various	AMRDEC : Huntsville, AL	33.867	3.600		-		-		-		-	-	37.467	-
U.S. Contracts	Various	Various : Huntsville, AL	67.147	5.715		-		-		-		-	-	72.862	-
		Subtotal	2,343.791	337.734		-		-		-		-	-	2,681.525	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604869A / *Patriot/MEADS Combined Aggregate Program (CAP)*	Project (Number/Name) M06 / *Patriot/Meads Combined Aggregate Program*	

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	2,389.384	348.234		-		-		-		-	-	2,737.618	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604869A / *Patriot/MEADS Combined Aggregate Program (CAP)*	**Project (Number/Name)** M06 / *Patriot/Meads Combined Aggregate Program*

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
MEADS Design and Development																												

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604869A / *Patriot/MEADS Combined Aggregate Program (CAP)*	**Project (Number/Name)** M06 / *Patriot/Meads Combined Aggregate Program*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
MEADS Design and Development	1	2009	2	2014

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0604870A / *Nuclear Arms Control Monitoring Sensor Network*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	7.093	-	-	-	-	-	-	-	-	Continuing	Continuing
SE1: *Nact Sensor Engineering*	-	7.093	-	-	-	-	-	-	-	-	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

Program being moved from Army to OSD DTRA in FY14.

A. Mission Description and Budget Item Justification

This project provided Research, Development, Testing & Evaluation (RDTE) to meet technology requirements in support of implementation, compliance, monitoring and inspection for existing and emerging nuclear arms control activities and dual use technology for missile defense integration activities. The project addressed requirements validated by the Office of the Under Secretary of Defense, Acquisition, Technology & Logistics (OUSD AT&L). This project conformed to the administration's research and development priorities as related to Weapons of Mass Destruction (WMD) arms control and disarmament. Technical assessments were made to provide the basis for sound project development, evaluation of existing programs and provide the data required to make compliance judgments and support US policy, decision-makers and negotiating teams. Technology developments and system improvement projects were conducted to ensure that capabilities for monitoring systems were available when required.

Primary emphasis was on improved sensor capabilities and improved detection and assessment capabilities against a wide range of threat origins.

The program included development of equipment and procedures for data exchanges, inspections and monitoring capability and analysis. The technologies and procedures developed in the arms control technology program provided an invaluable source of information on equipment and procedures that is extensively used by US and international agencies. This project also supports the warfighting capability area of combating Weapons of Mass Destruction (WMD).

Effective 1 October 2013, the NACT Program formally transferred from USASMDC/ARSTRAT to the Defense Threat Reduction Agency for management and execution of all aspects of the program.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army					Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*			R-1 Program Element (Number/Name) PE 0604870A / *Nuclear Arms Control Monitoring Sensor Network*		
B. Program Change Summary ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO**	**FY 2015 Total**
Previous President's Budget	7.922	-	-	-	-
Current President's Budget	7.093	-	-	-	-
Total Adjustments	-0.829	-	-	-	-
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.226	-			
• Other Adjustments 1	-0.603	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604870A / *Nuclear Arms Control Monitoring Sensor Network*	Project (Number/Name) SE1 / *Nact Sensor Engineering*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
SE1: *Nact Sensor Engineering*	-	7.093	-	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This project provided Research, Development, Testing & Evaluation (RDTE) to meet technology requirements in support of implementation, compliance, monitoring and inspection for existing and emerging nuclear arms control activities and dual use technology for missile defense integration activities. The project addressed requirements validated by the Office of the Under Secretary of Defense, Acquisition, Technology & Logistics (OUSD AT&L). This project conformed to the administration's research and development priorities as related to Weapons of Mass Destruction (WMD) arms control and disarmament. Technical assessments were made to provide the basis for sound project development, evaluation of existing programs and provide the data required to make compliance judgments and support US policy, decision-makers and negotiating teams. Technology developments and system improvement projects were conducted to ensure that capabilities for monitoring systems were available when required.

Primary emphasis was on improved sensor capabilities and improved detection and assessment capabilities against a wide range of threat origins.

The program included development of equipment and procedures for data exchanges, inspections and monitoring capability and analysis. The technologies and procedures developed in the arms control technology program provided an invaluable source of information on equipment and procedures that is extensively used by US and international agencies. This project also supports the warfighting capability area of combating Weapons of Mass Destruction (WMD).

Effective 1 October 2013, the NACT Program formally transferred from USASMDC/ARSTRAT to the Defense Threat Reduction Agency for management and execution of all aspects of the program.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Support OSD Treaty Manager	0.597	-	-
Articles:	-	-	-
Description: Funding is provided for the following effort			
FY 2013 Accomplishments: Supported joint U.S. / PTS technology conferences / exchanges (i.e. Workshop on Medical Isotope Production (WOSMIP) IV, PTS / U.S. Technology Working Group 5th Annual Conference; U.S. / Great Britain technology / operations interchange meetings). WOSMIP focused on d understanding the processes involved with isotope production to more capably account for backgrounds observed in International Monitoring Systems (IMS) stations. Provided technical and operational support for the			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604870A / *Nuclear Arms Control Monitoring Sensor Network*	**Project (Number/Name)** SE1 / *Nact Sensor Engineering*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
PTS/U.S. sponsored monitoring technology developments, standard reliability and operations / maintenance profile conference. Prepared / Supported DASD (TRAC) IMS technology overview briefings in preparation for interagency meetings.			
Title: Prototype Sensor Development	1.343	-	-
Articles:	-	-	-
Description: Funding is provided for the following effort ***FY 2013 Accomplishments:*** Transitioned sensor and array calibration development efforts to DTRA. Sensor stability and uniformity is required for optimal array performance. Techniques, facilities, and equipment to calibrate sensors and arrays under laboratory conditions and in the field are being developed. Higher-performance, more stable and uniform sensors are being developed. Continue station calibration & metrology planning. The array calibration work focus' on in-situ array calibration systems and array performance measurements. Planned and carried-out signal capture & identification efforts to include signal clutter source studies, noise source studies, participated in exercises to collect field source data, develop field clutter rejection methodology / algorithms, and False Alarm Rejection Methodology. Completed planning to evaluate options for performing an experiment to evaluate measurement performance of IMS stations from a planned underground or under water detonation. The explosion will be non-nuclear in nature and will be configured to include the release of radioactive noble gasses in concentrations acceptable to environmental regulations and of a nature suitable to challenge IMS measurement technology.			
Title: Radionuclide Particulate / Xenon Gas Sensor System Development	0.416	-	-
Articles:	-	-	-
Description: Funding is provided for the following effort ***FY 2013 Accomplishments:*** Transitioned Xenon gas systems research. Study and evaluate Xenon backgrounds & transport - Xenon categorization, data analysis & interpretation & Xenon transport from underground/underwater. Implemented a study of past detection schemes and compared current and future detections options with a focus on best pathways to improve sensitivity, selectivity (radon daughters vs. fission products), and reliability. Completed efforts to improve data quality and confidence in measurement data through development of high accuracy SAUNA gas calibration procedures and improvements to RASA filter splitting & handling.			
Title: Information Management Systems Enhancements	1.365	-	-
Articles:	-	-	-
Description: Funding is provided for the following effort			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604870A / *Nuclear Arms Control Monitoring Sensor Network*	**Project (Number/Name)** SE1 / *Nact Sensor Engineering*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
FY 2013 Accomplishments: Transitioned Infrasound propagation models development for purposes to improve detection, identification, and location of sources of interest. Conducted field experiments to collect data to constrain and refine models. To make contact with the data, models will include fine-scale atmospheric conditions, topography, 3D winds and effects of non-linear propagation. Completed development of plans for a portable / rapid deployable infrasound array and standard sound source for calibrating Infrasound stations / arrays. Conducted extensive testing and validation of propagation models.			
Title: Continue Research & Development support system ***Articles:*** ***Description:*** Funding is provided for the following effort ***FY 2013 Accomplishments:*** Aging of the original RASA components, along with uptime/sustainment challenges (e.g., cooler failures) indicates the necessity to upgrade subsystems in the RASA. Increasing manufacturer obsolescence of many components has created a challenge to operations. Concentrated on RASA drawing package. Conducted RASA performance and design study. Based on those results, plans are to collect and prioritize requirements from Station Operators and design-build-test highest priority upgrades. Focus areas are nuclear detector (including cooling); filtration medium and sample head; and electronic controls. Supported the sustainment of Fielded IMS Systems. Analyzed alternate cooling options for RASA particulate systems, focused on development of system component upgrades, and maintained software updates/sustainment activities.	0.851 -	- -	- -
Title: Continue U.S. IMS Sensor Event Signal Identification Technique Development ***Articles:*** ***Description:*** Funding is provided for the following effort ***FY 2013 Accomplishments:*** Operated the TXL and SAUNA systems in advance of deployment. Operations and maintenance performed in advance of the TXL/SAUNA foreign deployment established an operations baseline for the SAUNA and provided additional opportunity to diagnose and resolve any remaining operational concerns. The operational mobile noble gas labs deployed to Japan and Indonesia completed their data gathering mission and delivered that to the customer. Evaluated the memory effect that occur when highly polarizable Xenon atoms attach to surfaces used in beta-gamma detection systems, or diffuse into the plastic cell wall. Conducted infrasound event signal clutter, false alarms and noise mitigation analysis (U.S. Array studies; catalogue persistent sources; noise studies; wind noise physics; false alarm rejection). Large numbers of spurious detections and high	1.218 -	- -	- -

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604870A / *Nuclear Arms Control Monitoring Sensor Network*	**Project (Number/Name)** SE1 / *Nact Sensor Engineering*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
noise levels at IMS stations can make data unusable. Noise reduction technologies, both algorithmic and mechanical, are being developed. Algorithms for the reduction of false positives will be investigated. Metrics for data usability will be developed.			
Title: Continue "On-Location" Infrasound Event Calibration Research ***Articles:*** ***Description:*** Funding is provided for the following effort ***FY 2013 Accomplishments:*** Planned for Sayarim experiments and test at the Utah Test and Training Range (UTTR). Data collected and analyzed was utilized in propagation models improve and provide a fuller accounting of phenomenology. Conducted planning and development of the EDTC. The test beds will be utilized for research, testing and evaluations relevant to station shut downs; configuration changes; and invasive procedures. These test beds will allow for evaluation of R&D primary array developments of new technologies and their associated field testing.	0.542 -	- -	- -
Title: Continue U.S. IMS Radionuclide Detection & Measurement Development ***Articles:*** ***Description:*** Funding is provided for the following effort ***FY 2013 Accomplishments:*** Transitioned Xenon gas systems research to DTRA. Evaluated gas yield and detection limits. PTS requirements indicate that the RL-16 gas system requires additional capability to meet the requirements. Develop test methods to increase yield and to improve detection efficiency. The processing train will be updated to improve transfer efficiency and to reduce dead volumes. To assure the RL-16 gas system is making a high precision measurement, the samples will be sent to a certified laboratory for part of the calibration. Current IMS operations of SAUNA radioxenon detection systems indicate the need for more robust and repeatable calibrations, ability to replace aging radiation detectors with more reliable, more flexible units, and a real-time state of health monitoring system to assist in improving data availability. Directed research will allow for timely and effective solutions to address these lessons learned and improve operational quality. Development of a robust, high precision method to calibrate the nuclear detectors effectively will be pursued. Task will develop the calibration methods to obtain the absolute calibration of the nuclear detector.	0.761 -	- -	- -
Accomplishments/Planned Programs Subtotals	7.093	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604870A / *Nuclear Arms Control Monitoring Sensor Network*	**Project (Number/Name)** SE1 / *Nact Sensor Engineering*

C. Other Program Funding Summary ($ in Millions)

Remarks

D. Acquisition Strategy

Not applicable for this item.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604870A / *Nuclear Arms Control Monitoring Sensor Network*	Project (Number/Name) SE1 / *Nact Sensor Engineering*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SMDC Support	SS/CPFF	Various : Various	2.932	0.597		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	2.932	0.597		-		-		-		-	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Product Development Program	SS/CPFF	UM, MS, PNNL, WA : Various	23.740	4.589		-		-		-		-	-	28.329	-
		Subtotal	23.740	4.589		-		-		-		-	-	28.329	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SMDC Support	SS/CPFF	SMDC : AL, DC	7.158	1.365		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	7.158	1.365		-		-		-		-	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	SS/CPFF	Various : Various	2.599	0.542		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	2.599	0.542		-		-		-		-	-	-	-

	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	36.429	7.093		-		-		-		-	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604870A / *Nuclear Arms Control Monitoring Sensor Network*	**Project (Number/Name)** SE1 / *Nact Sensor Engineering*

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
NACT Technology Development																												

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604870A / *Nuclear Arms Control Monitoring Sensor Network*	**Project (Number/Name)** SE1 / *Nact Sensor Engineering*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
NACT Technology Development	1	2007	4	2013

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0605013A *I Information Technology Development*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	44.684	68.778	69.761	-	69.761	92.832	93.223	93.150	125.105	Continuing	Continuing
099: *Army Human Resource System*	-	0.585	0.590	1.470	-	1.470	1.127	-	1.974	0.988	Continuing	Continuing
184: *Installation Support Modules*	-	1.834	1.733	0.764	-	0.764	1.162	2.028	1.317	1.396	Continuing	Continuing
193: *Medical Communications For Combat Casualty*	-	3.760	3.634	1.466	-	1.466	5.585	0.640	-	-	Continuing	Continuing
474: *ENTERPRISE TRANSMISSION SYSTEMS*	-	2.229	-	-	-	-	-	-	-	-	Continuing	Continuing
738: *AcqBiz*	-	13.305	12.362	8.674	-	8.674	11.242	12.641	11.767	20.047	Continuing	Continuing
M05: *Enterprise Army Workload & Performance Sys*	-	0.733	0.701	-	-	-	-	-	-	-	-	1.434
T04: *USMEPCOM TRANSFORMTION - IT MODERNIZATION*	-	-	-	15.434	-	15.434	30.454	22.066	9.867	4.940	-	82.761
T05: *Army Business System Modernization Initiatives*	-	22.238	49.758	41.953	-	41.953	43.262	55.848	68.225	97.734	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

Increase supports US Military Entrance Processing Command Integrated Resource System (MIRS). MIRS provides automation and communications capability to meet peacetime, mobilization and wartime military manpower accession mission for the Armed Services. MIRS interfaces with recruiting capabilities for the services, incorporating the concept of electronic data sharing using standard DoD data elements between USMEPCOM and all Armed Services recruiting commands. This project includes Computerized Adaptive Testing-Armed Services Vocational Aptitude Battery (CAT-ASVAB), automated Armed Services Vocational Aptitude Battery is given to determine applicants' mental abilities. Data Services mission consists of automatic data processing in support of USMEPCOM, the Selective Service System (SSS) and other external agencies for both peacetime and mobilization requirements. MIRS directly supports mobilization in the event of a military draft, through electronic links with the SSS and its ability to process and ship.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0605013A / *Information Technology Development*

A. Mission Description and Budget Item Justification

Supports efforts to plan, design, develop, and test information technology solutions to fulfill the Army's Warfighter Support Mission and accommodate changing Army requirements while fulfilling future Army needs. Provides for development and acquisition of Combat Service Support (CSS) and business information technology solutions to help arm, sustain, fix, move, train and man the force. Completed development/acquisition efforts will also enhance sustaining base functions and power projection capabilities and facilitate global messaging and electronic data interchange (EDI). Ongoing development efforts support multiple functional areas including logistics, personnel, transportation, training, medical/health protection, and sustaining base.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	51.463	68.814	69.166	-	69.166
Current President's Budget	44.684	68.778	69.761	-	69.761
Total Adjustments	-6.779	-0.036	0.595	-	0.595
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-6.779	-0.036	0.595	-	0.595

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0605013A / *Information Technology Development*				Project (Number/Name) 099 / *Army Human Resource System*			
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
099: *Army Human Resource System*	-	0.585	0.590	1.470	-	1.470	1.127	-	1.974	0.988	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This project funds the Personnel Transformation - Enterprise Service Bus and GoArmy Ed.
- Personnel Transformation (PT)- Enterprise Service Bus (ESB)- The Army's Enterprise Service Bus (ESB) provides a data integration service in which data can be extracted from the legacy human resource systems and transferred to DIMHRS. The ESB will be a middleware application which will provide a single interface to and from DIMHRS from the Army Legacy Systems. The ESB will provide the infrastructure for the integration of new and existing applications by allowing systems and applications to easily exchange information across different environments and platforms. It will also form the information bridge between IPPS-A, the Army Legacy Systems, and external systems to create more streamlined systems in support of the military mission and personnel transformation goals.

- GoArmy Ed is an Army continuing Education System (ACES) program that provides the virtual gateway to request Tuition Assistance (TA) online, anytime for classroom, distance learning, and online college courses. GoArmy Ed is a dynamic online portal that automates many of the paper-based processes historically conducted in-person at Army Education Centers. GoArmyEd includes automated registration tools that enforce TA policies and procedures. GoArmyED is used by authorized users to pursue their post secondary educational goals: Army Education Counselors to provide educational guidance; and Colleges to deliver degree and course offerings and to report user progress.

Modernization initiatives address continued improvements related to the integration of new users and decreasing reliance on the help desk. GoArmyEd is the Army's enterprise education solution. GoArmyEd has integrated the Reserve Component (USAR and National Guard) and is actively integrating the Department of the Army Civilians. In addition, GoArmyEd is working to add a new data warehouse for HQ data retrieval and user self help tools. Education benefits are paramount to recruiting and retention of quality Soldiers, Civilians and Families.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	**FY 2013**	**FY 2014**	**FY 2015**
Title: AHRS	0.585	0.590	1.470
Articles:	-	-	-
Description: Funding will support continued enhancement/automation of the software functionality.			
FY 2013 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605013A / *Information Technology Development*	**Project (Number/Name)** 099 / *Army Human Resource System*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
GoArmy Ed will add functionality, continue automation of manual business processes, integration of DA Civilians and a new Data Warehouse. ***FY 2014 Plans:*** GoArmy Ed will add functionality, continue automation of manual business processes, integration of DA Civilians and a new Data Warehouse. ***FY 2015 Plans:*** GoArmy Ed will add functionality, continue automation of manual business processes, and add a virtual self help tool.			
Accomplishments/Planned Programs Subtotals	0.585	0.590	1.470

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• STAMISTactical Computers: *STACOMP (SSN W00800)*	110.158	71.236	117.524	-	117.524	126.980	119.860	25.517	33.609	Continuing	Continuing

Remarks

D. Acquisition Strategy

GoArmy Ed - The program manager makes extensive use of Integrated Product Teams (IPTs). Sub-elements of the acquisition (engineering and design, logistics planning, testing, etc.) are intensively managed by integrated teams of government and contractor personnel. Task performance is tracked against the Work Breakdown Structure (WBS) and resources allocated to each task are adjusted based on performance against the WBS. GoArmy Ed contractual efforts are acquired on a firm fixed price basis on existing contractual vehicles.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605013A / *Information Technology Development*	Project (Number/Name) 099 / *Army Human Resource System*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AHRS - ECPs/SCPs/ICPs	C/FFP	Hewlit Packard : various	89.251	-		-		-		-		-	Continuing	Continuing	Continuing
AHRS - Software Development	C/FFP	Hewlit Packard : various	51.723	-		-		-		-		-	Continuing	Continuing	Continuing
Go Army ED	C/FFP	IBM : Various	0.000	0.585	Jan 2013	0.590		1.470		-		1.470	Continuing	Continuing	-
		Subtotal	140.974	0.585		0.590		1.470		-		1.470	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	140.974	0.585		0.590		1.470		-		1.470	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605013A / *Information Technology Development*	**Project (Number/Name)** 099 / *Army Human Resource System*

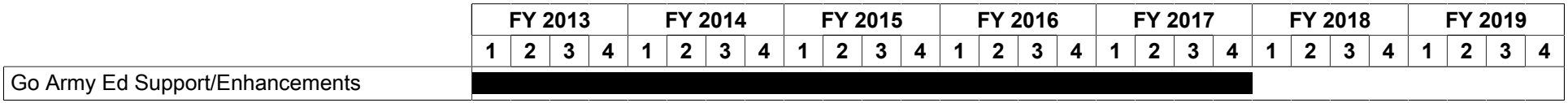

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605013A / *Information Technology Development*	**Project (Number/Name)** 099 / *Army Human Resource System*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Go Army Ed Support/Enhancements	1	2013	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0605013A / *Information Technology Development*				Project (Number/Name) 184 / *Installation Support Modules*			
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
184: *Installation Support Modules*	-	1.834	1.733	0.764	-	0.764	1.162	2.028	1.317	1.396	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

ISM budget request supports Army Data Centralization by virtualizing ISM systems.

A. Mission Description and Budget Item Justification

Installation Support Modules (ISM) consists of four standardized, web based, custom-developed enterprise wide applications that integrate essential installation business practices and processes throughout the Army, to meet Army Force Generation (ARFORGEN) Brigade Combat Team readiness and deployment requirements. Three modules support human resources business functions (In/Out-Processing, Transition Processing, and Personnel Locator); the fourth module, Central Issue Facility (CIF) supports management of over 9 million combatant Organizational Clothing and Individual Equipment inventory. The web server architecture is fully internet protocol capable and allows soldiers ready access to their records and commanders and logisticians access to information affecting readiness of combat organizations.

Coalition Warfighter Interoperability Demonstration (CWID) is a mandated Joint program that requires participation by the US Army to explore near-term technologies that support Joint and Coalition Warfare Interoperability. Funding is to facilitate Coalition Force interoperability research and development and to comply with CJCSI 6230.2 date 30 April 05.

Army Behavioral Health Integrated Data Environment (ABHIDE) will be the U.S. Army Center for Health Promotion and Preventive Medicine (CHPPM) Suicide Registry. Data relating to suicides and suicides attempts are collected and stored in a in disparate, non-related databases that cross the domains of medical, personnel and law enforcement. ABHIDE will provide the capability of integrating the non-related and dispersed data from the separate sources into a single comprehensive database to support both retrospective and predictive analysis. The information obtained will be used to conduct epidemiological surveillance, identify trends in behavior patterns and identify potential indicators for suicidal tendencies supporting the mitigation of future suicide attempts across all phases of Army service.

ISM Core funding is essential for supporting demands to research and develop improved systems to provide for soldier safety and inventory reduction without risking readiness. Supports research and development to comply with Dept of Defense Instruction 8320.4 Serialized Item Management. Applications to use commercial off the shelf wireless bar code equipment to ensure inventory accuracy throughout 154 warehouses in worldwide locations potentially reduces operating costs by $500.000 million.

Funding for CWID will continue to facilitate Coalition Force interoperability research and development. Funding for ABHIDE will continue development of the system.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605013A / *Information Technology Development*	**Project (Number/Name)** 184 / *Installation Support Modules*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Independent Verification and Validation (IV&V) Testing	0.064	0.067	0.031
Articles:	-	-	-
Description: Independent Verification and Validation (IV&V) Testing ***FY 2013 Accomplishments:*** Required Independent Verification and Validation (IV&V) Testing. ***FY 2014 Plans:*** Required Independent Verification and Validation (IV&V) Testing ***FY 2015 Plans:*** Required Independent Verification and Validation (IV&V) Testing.			
Title: Post-Deployment Software Support (PDSS) - Engineering Change Packages (ECPs)/System Change Packages (SCPs)	0.321	0.313	0.155
Articles:	-	-	-
Description: Post-Deployment Software Support (PDSS) - Engineering Change Packages (ECPs)/System Change Packages (SCPs): Develop or enhance software to meet the requirements of the soldier and installation. ***FY 2013 Accomplishments:*** Planned: apply commercial off the shelf e-Signature software to existing applications to reduce soldier wait time for processing signatures from 30 minutes per transaction to under one minute. Funds are also intended to upgrade core systems hardware to improve overall efficiency. Current equipment was installed in 2002 and is inadequate for forcasted workloads. ***FY 2014 Plans:*** Planned: apply commercial off the shelf e-Signature software to existing applications to reduce soldier wait time for processing signatures from 30 minutes per transaction to under one minute. Funds are also intended to upgrade core systems hardware to improve overall efficiency. Current equipment was installed in 2002 and is inadequate for forcasted workloads. ***FY 2015 Plans:*** Planned: testing of commercial off the shelf software for best fit to improve the use of wireless bar code equipment in Central Issue Facility warehouses. Current total inventory is over $9,000.000 million; estimated savings by reducing the possibility of excess purchases is $500.000 million.			
Title: Army Behavioral Health Integrated Data Environment	1.449	1.353	0.578
Articles:	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605013A / *Information Technology Development*	**Project (Number/Name)** 184 / *Installation Support Modules*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Description: Army Behavioral Health Integrated Data Environment (ABHIDE) will be the U.S. Army Center for Health Promotion and Preventive Medicine (CHPPM) Suicide Registry. ***FY 2013 Accomplishments:*** Army Behavioral Health Integrated Data Environment (ABHIDE) will be the U.S. Army Center for Health Promotion and Preventive Medicine (CHPPM) Suicide Registry. Data relating to suicides and suicides attempts are collected and stored in a in disparate, non-related databases that cross the domains of medical, personnel and law enforcement. ABHIDE will provide the capability of integrating the non-related and dispersed data from the separate sources into a single comprehensive database to support both retrospective and predictive analysis. The information obtained will be used to conduct epidemiological surveillance, identify trends in behavior patterns and identify potential indicators for suicidal tendencies supporting the mitigation of future suicide attempts across all phases of Army service. ***FY 2014 Plans:*** Army Behavioral Health Integrated Data Environment (ABHIDE) will be the U.S. Army Center for Health Promotion and Preventive Medicine (CHPPM) Suicide Registry. Data relating to suicides and suicides attempts are collected and stored in a in disparate, non-related databases that cross the domains of medical, personnel and law enforcement. ABHIDE will provide the capability of integrating the non-related and dispersed data from the separate sources into a single comprehensive database to support both retrospective and predictive analysis. The information obtained will be used to conduct epidemiological surveillance, identify trends in behavior patterns and identify potential indicators for suicidal tendencies supporting the mitigation of future suicide attempts across all phases of Army service. ***FY 2015 Plans:*** Army Behavioral Health Integrated Data Environment (ABHIDE) will be the U.S. Army Center for Health Promotion and Preventive Medicine (CHPPM) Suicide Registry. Data relating to suicides and suicides attempts are collected and stored in a in disparate, non-related databases that cross the domains of medical, personnel and law enforcement. ABHIDE will provide the capability of integrating the non-related and dispersed data from the separate sources into a single comprehensive database to support both retrospective and predictive analysis. The information obtained will be used to conduct epidemiological surveillance, identify trends in behavior patterns and identify potential indicators for suicidal tendencies supporting the mitigation of future suicide attempts across all phases of Army service.			
Accomplishments/Planned Programs Subtotals	1.834	1.733	0.764

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605013A / *Information Technology Development*	**Project (Number/Name)** 184 / *Installation Support Modules*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• BE4162: *MACOM AUTOMATION SYSTEMS (BE4162)*	10.126	64.264	48.895	-	48.895	40.880	41.468	31.521	41.075	Continuing	Continuing

Remarks

D. Acquisition Strategy

Installation Support Modules is in Post Deployment Software Support (PDSS). The present concept calls for the use of full and open competition to implement enhancements as defined by the Functional Proponent, Army Chief Information Officer (CIO)/G-6. Current emphasis is to bring the ISM systems to functional readiness for transfer to an Army Data Center and virtualize the ISM systems.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605013A / *Information Technology Development*	Project (Number/Name) 184 / *Installation Support Modules*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Army Behavioral Health Integrated Data Environment	Various	TBD : TBD	1.746	1.449		1.353		0.578		-		0.578	Continuing	Continuing	-
Post-Deployment Solfware Support (PDSS)	C/TBD	various : various	5.241	0.321		0.313		0.155		-		0.155	Continuing	Continuing	Continuing
Coalition Warfighter Interoperability Demonstration (CWID)	C/TBD	various : various	0.091	-		-		-		-		-	-	0.091	-
		Subtotal	7.078	1.770		1.666		0.733		-		0.733	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Independent Verification and Validation (IVV) Testing	C/T&M	GDIT Corp : various	2.047	0.064		0.067		0.031		-		0.031	Continuing	Continuing	Continuing
		Subtotal	2.047	0.064		0.067		0.031		-		0.031	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	9.125	1.834		1.733		0.764		-		0.764	-	-	-

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0605013A / *Information Technology Development*				Project (Number/Name) 193 / *Medical Communications For Combat Casualty*			
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
193: *Medical Communications For Combat Casualty*	-	3.760	3.634	1.466	-	1.466	5.585	0.640	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Medical Communications for Combat Casualty Care (MC4) System provides multipliers to the medical force structure through the acquisition of information technology solutions for the deployable medical forces. The MC4 System fulfills the requirements highlighted in United States Code: Title 10, Subtitle A, Part II, Chapter 55, Section 1074f, mandating the proper documentation of deployed service members' medical treatment to include pre- and post-deployment screening and its associated medical surveillance. The MC4 System interfaces Force Health Protection and medical surveillance information with Army Mission Command information technology systems. The MC4 System supports other soldier protection initiatives by providing data for analyses which can be used for identification and development of critical soldier support systems such as body armor, improved helmets, traumatic brain injury protection and trauma reduction. Current MC4 Program efforts are focused on system engineering, testing, integration, and fielding automation infrastructure for Army users of the Theater Medical Information Program-Joint (TMIP-J) suite of software. Effort has also been initiated to integrate MC4 with the Army CIO Network 2020 and Common Operating Environment (COE) and as a program of record in the Mobile/Handheld Computing Environment Working Group. Funding provides engineering, developmental testing, and integration of information management/information technology to support Force Health Protection in accordance with the Army Equipment Modernization Plan.

FY 2015 Base funding will be used for the engineering effort required to provide the Defense Health Information Management System (DHIMS) TMIP-J software on the Army platform, as well as the engineering effort for other Army unique capability. Activities include:
--Integration testing of DHIMS/TMIP releases, other software systems on the MC4 baseline
--All other testing to include operational, security, acceptance of TMIP and other software products
--Research of technologies to integrate software into Army future information infrastructure, such as exploration of virtualization for MC4
--Evaluation of hardware technology obsolescence and solutions
--Interfaces with other systems, e.g. Nett Warrior

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Engineering and Technical Support	1.239	1.333	0.574
Articles:	-	-	-
Description: Engineering and Technical Support for Preplanned Program Improvements and System Upgrades, Systems Integration, and Software Support.			
FY 2013 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605013A / *Information Technology Development*	**Project (Number/Name)** 193 / *Medical Communications For Combat Casualty*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Engineering and Technical Support for Planned Upgrades and System Updates, Systems Integration, and Software Support. Evaluation of virtualization and telehealth solutions to support Army current and future information infrastructure. ***FY 2014 Plans:*** Engineering and Technical Support for Planned Upgrades and System Updates, Systems Integration, and Software Support. Continued evaluation and development of virtualization, interface/integration with Common Operating Environment and Mobile Handheld NETT Warrior (PEO Soldier). ***FY 2015 Plans:*** Continued evaluation and development of virtualization, interface/integration with Common Operating Environment.			
Title: PMO Testing Support ***Articles:*** ***Description:*** Test augmentation by outside agencies to include test efforts for DHIMS/TMIP-J and other Army unique software capabilities ***FY 2013 Accomplishments:*** Test augmentation to include DHIMS/TMIP-J and other Army unique software capabilities by outside agencies. Planned upgrade will require Army Medical Department Board (testing), Army Test and Evaluation Command and Joint Interoperability Test Command to provide Operational Assessment and Multi-services Operational Test and Evaluation. ***FY 2014 Plans:*** Test augmentation to include DHIMS/TMIP-J and other Army unique software capabilities by outside agencies. Testing will include next planned upgrades and development of test plans for next major test event.	0.342 -	0.151 -	- -
Title: MC4/TMIP Integration and Testing ***Articles:*** ***Description:*** Development testing of DHIMS/TMIP-J Increment 2 (all releases)a nd Increment 3; Lab site studies with technology and scenarios; Integration testing of software systems on the MC4 baseline system; test and evaluation of new capabilities for combat theater functionality. ***FY 2013 Accomplishments:*** Integrate and test DHIMS/TMIP-J Increment 2 Release 2 on the MC4 baseline system; Lab site studies with technology and scenarios; test and evaluation of new capabilities for combat theater functionality to include virtualization and telehealth. Support initial development testing of DHIMS/TMIP-J Increment 2 Release 3. ***FY 2014 Plans:***	2.179 -	2.150 -	0.892 -

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605013A / *Information Technology Development*	**Project (Number/Name)** 193 / *Medical Communications For Combat Casualty*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Integrate and complete test DHIMS/TMIP-J Increment 2 Release 2 (TMIP-J I2R2) on the MC4 baseline system; Test and evaluation of new capabilities for combat theater functionality to include virtualization and telehealth. Support development testing of DHIMS/TMIP-J Increment 2 Release 3 (TMIP-J I2R3). ***FY 2015 Plans:*** Integrate and test DHIMS/TMIP-J Increment 2 Release 3 (TMIP-J I2R3) on the MC4 baseline system; Lab site studies with technology and scenarios.			
Accomplishments/Planned Programs Subtotals	3.760	3.634	1.466

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• OPA SSN MA8046: *OPA*	22.899	19.367	22.614	-	22.614	21.198	25.708	22.640	22.421	Continuing	Continuing
• OMA PE 432612: *OMA*	2.406	8.500	6.249	-	6.249	3.495	3.554	3.550	2.440	Continuing	Continuing

Remarks

D. Acquisition Strategy

The MC4 Program supports a number of Army Medical Information Technology/Communications initiatives. The near and mid-term focus of the MC4 program is to engineer, design, integrate, test, acquire and field the Army automation infrastructure capabilities supporting fielding of the Theater Medical Information Program-Joint (TMIP-J) integrated software application suite and other Army requirements. The MC4 hardware is procured as Commercial-off-the-Shelf (COTS) components. Since TMIP software is a major component of the MC4 System being developed in increments, the MC4 Program will deliver capabilities in increments, recognizing the need for future system updates and planned upgrades. The MC4 Program continues to work with the user community to continually define and refine additional requirements and match them with available technologies to provide the user enhanced capabilities. These enhanced capabilities will be provided to the user at the earliest possible date. This approach yields the most operationally useful and supportable capability in the shortest time possible with Cost As an Independent Variable. Moreover, this approach provides an initial capability with the explicit intent of delivering improved and updated capability in subsequent updates and planned upgrades. This evolutionary development approach will be accomplished through a rapid prototyping process that will progress the system from its current functional capabilities to fully integrated objective capabilities. Appropriate commercial technology enhancements (e.g. advances in operating systems, voice activated technology, etc) will be incorporated into MC4 products and systems as they become available. Each MC4 System component will undergo a full range of developmental testing to include software unit testing, integration testing, interoperability testing and software qualification testing. The MC4 system updates and planned upgrades will continue to undergo follow-on testing.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605013A / *Information Technology Development*	Project (Number/Name) 193 / *Medical Communications For Combat Casualty*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prog Mgmt Operations	Various	PMO : various	8.405	-		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	8.405	-		-		-		-		-	-	-	-

Remarks

Funding (Prior Years) in Program Management Operations includes direct pay of PMO government employees, TDY, training, supplies, etc. in direct support of RDTE effort. At Milestone C, Program Management Operations efforts were moved to another appropriation.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering & Tech Spt/ Information Assurance (old contract)	Various	L3 (was Titan) : various	8.151	1.239	Jun 2013	-		-		-		-	Continuing	Continuing	Continuing
Engineering & Tech Spt/ Information Assurance (new contract)	Various	L3 : Various	0.000	-		1.333	Feb 2014	0.574	Feb 2015	-		0.574	Continuing	Continuing	-
Information Assurance	Various	ISEC Support : AZ	1.783	-		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	9.934	1.239		1.333		0.574		-		0.574	-	-	-

Remarks

Information Assurance activities moved from ISEC to L3 in FY12, IA activities moved to another appropriation FY13; FY14 new competitive contract award

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMO Testing Spt	MIPR	ATEC/AMEDD Board/JTIC : various	6.043	0.342		0.151		-		-		-	Continuing	Continuing	Continuing
MC4/TMIP System Engineering	C/T&M	L3 Communications : Frederick MD	5.710	2.179	Jun 2013	-		-		-		-	Continuing	Continuing	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605013A / *Information Technology Development*	Project (Number/Name) 193 / *Medical Communications For Combat Casualty*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MC4/TMIP System Engineering	Various	John Hopkins University (JHU) Applied Physics Lab : MD	32.124	-		-		-		-		-	Continuing	Continuing	Continuing
MC4/TMIP System Engineering (new contract)	Various	TBD : TBD	0.000	-		2.150	Feb 2014	0.892	Feb 2015	-		0.892	Continuing	Continuing	-
		Subtotal	43.877	2.521		2.301		0.892		-		0.892	-	-	-

Remarks

4QFY13 new competitive contract was awarded. PMO Testing Spt is provided by other Government agencies.

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	62.216	3.760		3.634		1.466		-		1.466	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605013A / *Information Technology Development*	**Project (Number/Name)** 193 / *Medical Communications For Combat Casualty*

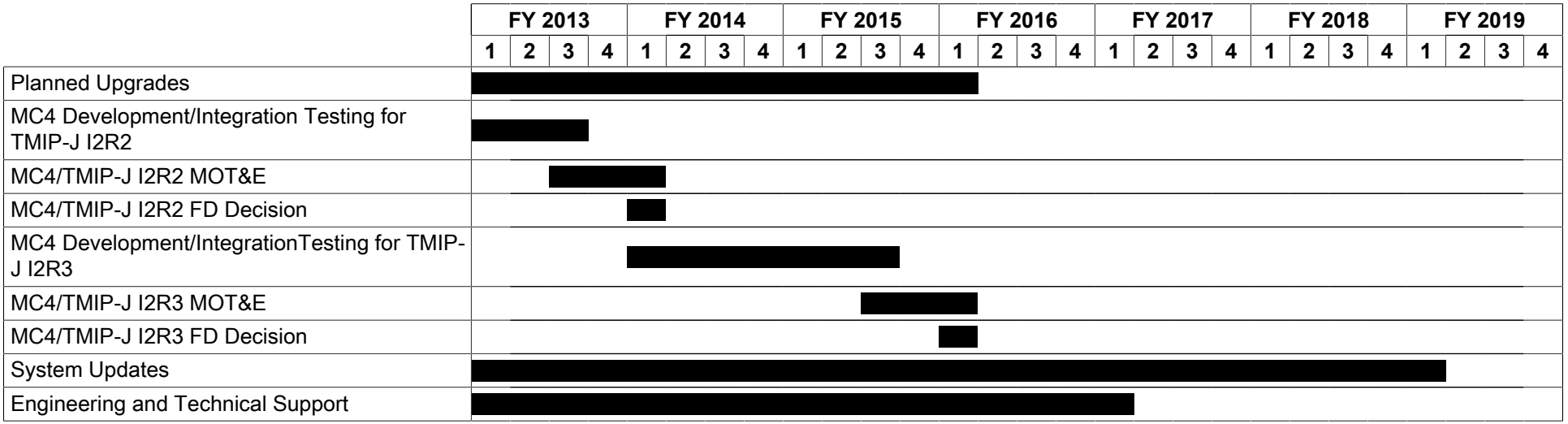

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605013A / *Information Technology Development*	**Project (Number/Name)** 193 / *Medical Communications For Combat Casualty*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Planned Upgrades	1	2007	1	2016
MC4 Development/Integration Testing for TMIP-J I2R2	2	2012	3	2013
MC4/TMIP-J I2R2 MOT&E	3	2013	1	2014
MC4/TMIP-J I2R2 FD Decision	1	2014	1	2014
MC4 Development/IntegrationTesting for TMIP-J I2R3	1	2014	3	2015
MC4/TMIP-J I2R3 MOT&E	3	2015	1	2016
MC4/TMIP-J I2R3 FD Decision	1	2016	1	2016
System Updates	1	2007	1	2019
Engineering and Technical Support	1	2007	1	2017

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605013A / *Information Technology Development*	Project (Number/Name) 474 / *ENTERPRISE TRANSMISSION SYSTEMS*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
474: *ENTERPRISE TRANSMISSION SYSTEMS*	-	2.229	-	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Combat Service Support (CSS) Automated Information System Interface (CAISI) is a high-data-rate wireless system that provides sensitive information (SI) and is the backbone for logistics connectivity down to individual Combat Service Support (CSS) computer systems located within the sustainment area. The CAISI design effort focuses on integrating Commercial Off-The-Shelf (COTS) equipment from various manufacturers to create a standard deployable set of communications equipment. Current CAISI equipment is being fielded with new equipment training to logistics units Army-wide. Maintenance support is provided at depot-level with additional support at forward repair activities. Computer based training, on-line refresher training and technical support is also provided for CAISI users. CAISI employs a deployable wireless LAN infrastructure linking Army Logistics Information Systems (LIS) computers in a 7 square-kilometer area using wireless bridging. CAISI design incorporates full lifecycle sustainability features to ensure reliability and supportability in full spectrum operations.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: CAISI system testing, evaluation, and IAVM efforts	2.229	-	-
Articles:	-	-	-
Description: Funding is provided for the following effort: ***FY 2013 Accomplishments:*** Continue to conduct tests, evaluations, and support Information Assurance Vulnerability Management (IAVM) compliance and technical requirements.			
Accomplishments/Planned Programs Subtotals	2.229	-	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• OPA, BD3512: *CAISI*	10.500	-	-	-	-	-	-	-	-	-	10.500
• OMA, 423612: *OMA, 423612*	5.620	-	1.968	-	1.968	1.865	2.127	2.339	2.489	-	16.408

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605013A / *Information Technology Development*	**Project (Number/Name)** 474 / *ENTERPRISE TRANSMISSION SYSTEMS*

D. Acquisition Strategy

Acquisition strategy will be to obtain engineering support, as well as applicable hardware and software to enhance current CAISI capabilities. Funding provides functional assesment, technical support and integration of IA requirements. Integral to this strategy is the imperative of developing the capability for inserting and integrating emerging technologies into CAISI 2.0.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605013A / *Information Technology Development*	Project (Number/Name) 474 / *ENTERPRISE TRANSMISSION SYSTEMS*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Research, modification/ integration and testing of CAISI 2.0.	MIPR	ISEC : Fort Huachuca, AZ	27.311	0.800		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	27.311	0.800		-		-		-		-	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Office Support	MIPR	ISEC : Fort Huachuca, AZ	1.641	0.906		-		-		-		-	1.814	4.361	-
		Subtotal	1.641	0.906		-		-		-		-	1.814	4.361	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Research, modification/ integration and testing of CAISI 2.0.	MIPR	ISEC : Fort Huachuca, AZ	26.615	0.523		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	26.615	0.523		-		-		-		-	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	55.567	2.229		-		-		-		-	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605013A / *Information Technology Development*	**Project (Number/Name)** 474 / *ENTERPRISE TRANSMISSION SYSTEMS*

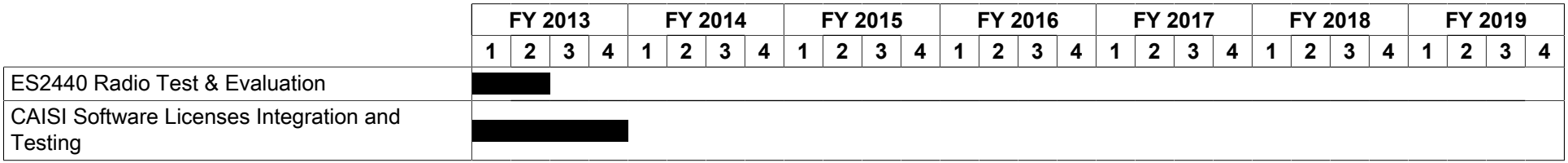

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605013A / *Information Technology Development*	**Project (Number/Name)** 474 / *ENTERPRISE TRANSMISSION SYSTEMS*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
ES2440 Radio Test & Evaluation	1	2012	2	2013
CAISI Software Licenses Integration and Testing	3	2012	4	2013

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605013A / *Information Technology Development*	Project (Number/Name) 738 / *AcqBiz*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
738: *AcqBiz*	-	13.305	12.362	8.674	-	8.674	11.242	12.641	11.767	20.047	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

PM AcqBusiness establishes and sustains consistent, efficient, and effective IT base solutions for all levels of the Army Acquisition Domain to enable powerful decisions using trusted and authoritative data. Whenever possible, PM AcqBusiness provides access to external enterprise tools and services from other business domains, Army, OSD and DISA and does not duplicate those capabilities. PM AcqBusiness provides Army Acquisition practitioners with a consistent set of unique business tools, web services, and decision support tools integrated through a common architecture, which provide visibility of authoritative data, consistency in business process, more timely support to acquisition decisions and enterprise control over IT investments. The enterprise tools provided via PM AcqBusiness enable the reduction and eventual elimination of stovepipe and redundant tools that exist in the domain today. PM AcqBusiness provides an environment that will enable a standard capability to allow access to disparate Acquisition Domain data sources. PM AcqBusiness will provide role-based access to authoritative data sources and services. In addition, PM AcqBusiness provides a framework for information providers to publish their data and provide their services to authorized users.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Design, Development, and Test	11.442	10.631	7.460
Articles:	-	-	-
Description: This effort supports the ultimate integration of the AcqBusiness Portfolio			
FY 2013 Accomplishments: Analysis and Design, Development, Test and Integration of AcqBusiness Portfolio.			
FY 2014 Plans: Analysis and Design, Development, Test and Integration of AcqBusiness Portfolio.			
FY 2015 Plans: Analysis and Design, Development, Test and Integration of AcqBusiness Portfolio.			
Title: Program Management	1.863	1.731	1.214
Articles:	-	-	-
Description: This effort provides program management in support of the AcqBusiness Portfolio.			
FY 2013 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Program Management ***FY 2014 Plans:*** Program Management ***FY 2015 Plans:*** Program Management			
Accomplishments/Planned Programs Subtotals	13.305	12.362	8.674

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• OMA: *OMA APE*	11.871	12.062	12.314	-	12.314	12.662	11.710	11.909	12.294	Continuing	Continuing

Remarks

D. Acquisition Strategy

PM AcqBusiness was established to acquire a centrally managed and funded suite of standard net-centric business capabilities to provide Army acquisition practitioners the data visibility necessary to optimize the acquisition of supplies, services, and materiel for the Warfighter. PM AcqBusiness is using an evolutionary acquisition strategy, incorporating the use of COTS hardware and software, along with custom-developed software, in order to realize benefits early and reduce risk. The AcqBusiness acquisition approach embraces the tenets of Subtitle III of Title 40, U.S.C. (formerly the Clinger-Cohen Act of 1996).

PM AcqBusiness leverages existing DoD and Army enterprise capabilities to fulfill Acquisition Domain business needs whenever possible. When no Army enterprise systems satisfy approved requirements, priority is given to existing acquisition business systems or services where they are scalable and in conformance with technical architecture standards. In the event neither of these options is available to satisfy a business need, capabilities are acquired as commercial off-the-shelf (COTS) products. PM AcqBusiness maximizes use of COTS technology by implementing an architecture and infrastructure based on services and virtualization. If there are no available COTS solutions, PM AcqBusiness will develop the capability, leveraging an incremental approach to enable: (1) consistent and phased definition of requirements, (2) mature technologies, and (3) collaboration among user, tester and developer.

As such, PM AcqBusiness is:

- collaborating with the ASA(ALT) community to perform Business Process Reengineering in advance of development of AcqBusiness capabilities.

- encouraging the purchase of commercial products and innovations from private industry.

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- involving potential suppliers early in the requirements generation process.

- employing outsourcing wherever possible, and

- acquiring AcqBusiness capabilities in interoperable modules, minimizing the time required to deliver new capabilities to users.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
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Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	Various	Government : various	9.103	1.863		1.731		1.214		-		1.214	Continuing	Continuing	Continuing
		Subtotal	9.103	1.863		1.731		1.214		-		1.214	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Analysis and Design, Development, Integration	Various	Booz, Allen and Hamilton : Springfield	49.663	11.442		10.631		7.460		-		7.460	Continuing	Continuing	Continuing
		Subtotal	49.663	11.442		10.631		7.460		-		7.460	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	58.766	13.305		12.362		8.674		-		8.674	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
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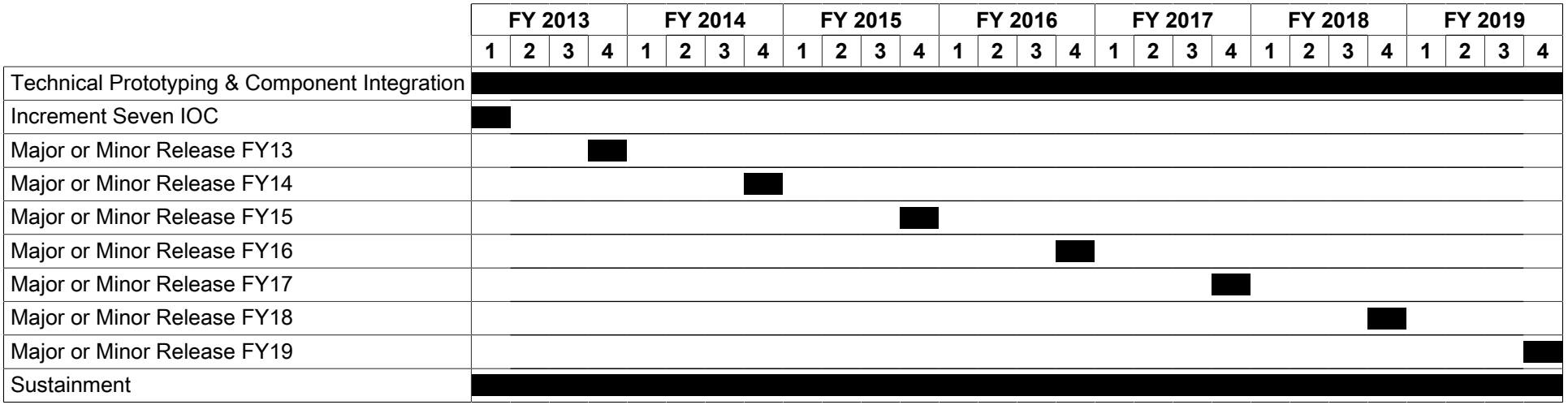

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
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Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Technical Prototyping & Component Integration	1	2006	4	2019
Increment Seven IOC	1	2013	1	2013
Major or Minor Release FY13	4	2013	4	2013
Major or Minor Release FY14	4	2014	4	2014
Major or Minor Release FY15	4	2015	4	2015
Major or Minor Release FY16	4	2016	4	2016
Major or Minor Release FY17	4	2017	4	2017
Major or Minor Release FY18	4	2018	4	2018
Major or Minor Release FY19	4	2019	4	2019
Sustainment	1	2006	4	2019

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
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COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
M05: *Enterprise Army Workload & Performance Sys*	-	0.733	0.701	-	-	-	-	-	-	-	-	1.434
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The General Fund Business Enterprise System (GFEBS) is a Major Automated Information System program and is currently in the sustainment phase. It followed the DoD Business Enterprise Architecture which is aligned to the mandated Federal Enterprise Architecture. GFEBS was implemented to fulfill the needs and comply with the Federal Financial Management Improvement Act, The Chief Financial Officers Act of 1990, the Government Performance and Results Act of 1993, the Government Management Reform Act of 1994, and the Clinger-Cohen Act of 1996 and to fulfill the stated mission of the Assistant Secretary of the Army for Financial Management and Comptroller. GFEBS replaced, in full or in part, financial systems operating in excess of 40 years including the Standard Finance Systems and other costly feeder systems which do not allow the Department of Defense or the U.S. government to achieve an unqualified audit opinion on its financial statements. GFEBS is used to administering the Army's General Fund. GFEBS was developed using a commercial off-the-shelf Enterprise Resource Planning system that is certified by the Chief, Financial Officer Council and provides six core financial functions. GFEBS allows tactical commanders to make informed decisions on a virtually real time system.

On 1 October 2008, GFEBS deployed to Wave 1 end users at Fort Jackson Garrison, Defense Finance Accounting Service (DFAS) Indianapolis, Indiana and several other organizations. On 1 April 2009, GFEBS deployed to Wave 2 users at Fort Benning, Fort Stewart, DFAS Rome and several other organizations. Wave 3 deployed in October FY10, Wave 4 in January of FY11, Wave 5 in April 2011, Wave 6 in July 2011, Wave 7 in October 2011, Wave 8A in April 2012 and the final Wave 8B in July 2012. GFEBS is fielded to 53,000 trained end users. Each fielded release subsumes the previous release keeping all deployed sites executing under the same GFEBS release. The Full Deployment Decision was received by the Milestone Decision Authority on 24 June 2011 and Full Deployment was Full Deployment was achieved on 1 July 2012. Information Technology Development Project M05 provided GFEBS the ability to develop and build reports to meet auditability mandates and to accomplish efforts which enhance the GFEBS system with new reports and interfaces requiring technology development. It provided RDT&E funding to support evolutionary delivery of emerging capabilities.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: System Development	0.733	0.701	-
Articles:	-	-	-
Description: Software and architecture development			
FY 2013 Accomplishments: Product development			
FY 2014 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Product Software and Architecture Development			
Accomplishments/Planned Programs Subtotals	0.733	0.701	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Development	TBD	Solfware and architecture development : TBD	0.000	-		0.701		-		-		-	-	0.701	-
		Subtotal	0.000	-		0.701		-		-		-	-	0.701	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TBD	Various	TBD : TBD	0.000	0.733		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	0.000	0.733		-		-		-		-	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.733		0.701		-		-		-	-	-	-

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
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COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
T04: *USMEPCOM TRANSFORMTION - IT MODERNIZATION*	-	-	-	15.434	-	15.434	30.454	22.066	9.867	4.940	-	82.761
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

US Military Entrance Processing Command Integrated Resource System (MIRS) provides automation and communications capability to meet peacetime, mobilization and wartime military manpower accession mission for the Armed Services. MIRS interfaces with recruiting capabilities for the services, incorporating the concept of electronic data sharing using standard DoD data elements between USMEPCOM and all Armed Services recruiting commands. This project includes Computerized Adaptive Testing-Armed Services Vocational Aptitude Battery (CAT-ASVAB), automated Armed Services Vocational Aptitude Battery is given to determine applicants' mental abilities. Data Services mission consists of automatic data processing in support of USMEPCOM, the Selective Service System (SSS) and other external agencies for both peacetime and mobilization requirements. MIRS directly supports mobilization in the event of a military draft, through electronic links with the SSS and its ability to process and ship. USMEPCOM/MIRS is the only DoD organization legally authorized to collect civilian, medical and testing data for purposes of processing into military services and is the only DoD joint support system used to enforce congressional, DoD and Armed Forces qualification criteria for enlistment. USMEPCOM has established interfaces with US Citizenship and Immigration Services to verify citizenship status for applicants of military service to screen out undesired or security threat and Federal Bureau of Investigation for background screening using digital fingerprints to eliminate people with criminal records from entering military service. USMEPCOM's IT sustainment effort will maintain MIRS and the associated network certification and accreditation until the end of system lifecycle. MIRS was scheduled to be replaced by the Virtual Interactive Processing System (VIPS). VIPS program cancellation has placed USMEPCOMs legacy IT infrastructure at high risk. The resultant system leaves a non-compliant and non-networthy accession system with processing gaps that need to be addressed for secure, compliant, sustainable, and reliable capabilities to meet DoD and Service requirements. USMEPCOM must continue toward security and data integrity regulatory/security compliance (PII and HIPAA) or lose Authority to Operate.

Customers/beneficiaries of this investment include the Accessions Community of Interest (ACOI) including components of the Army, Navy, Air Force, Marines, Coast Guard, USMEPCOM and OSD (P&R).

Stakeholders include: All Uniformed Services, Asst Sec of Defense (Health Affairs), Defense Transportation Mgmt Office, USD P&R, USD Intel, Defense Manpower Data Center and Department of Veterans Affairs.

Requested funding would mitigate inefficient system sustainability and scalability through an update of the applications underlying database, operating system and middleware software. The current legacy system requires time consuming and expensive efforts to make operational changes (even minor ones) to military accessions processing to meet DoD and individual Services requirements. MIRS operational processes exist in a system where business rules and workflow are hard coded throughout the system. Any changes require extensive review and analysis of the code to see what is impacted before a change can be made, then extensive testing afterwards to make sure it works correctly throughout the accession process. Currently there are over 600 Problem Reports (PR) and System Change Requests (SCRs) pending.

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Requested funding also provides for a follow-on acquisition plan that will be informed by the recent DCMO initiated Technical Demonstration. The acquisition will provide future enhancements and additional capabilities like those to be proven through the currently evolving Tech Demo. These efforts will culminate in new USMEPCOM business process vision of an anytime, anywhere accession processing capability.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Phase 3 Application update ***Description:*** Initiate update of MIRS and associated Applicant Processing applications to secure applicant data ***FY 2015 Plans:*** Initiate update of MIRS and associated Applicant Processing applications to secure applicant data	-	-	8.952
Title: Project Support ***Description:*** Funding will support Information Technology ***FY 2015 Plans:*** Provide funding for the update of MIRS and associated Applicant Processing Applications to facilitate DoDAF 2.0 and BEA compliant architecture.	-	-	6.482
Accomplishments/Planned Programs Subtotals	-	-	15.434

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
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Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor PM Support	Various	TBD : TBD	0.000	-		-		15.434		-		15.434	Continuing	Continuing	2.400
		Subtotal	0.000	-		-		15.434		-		15.434	-	-	2.400

	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		-		15.434		-		15.434	-	-	2.400

Remarks

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COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
T05: *Army Business System Modernization Initiatives*	-	22.238	49.758	41.953	-	41.953	43.262	55.848	68.225	97.734	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Army Contract Writing System (ACWS) is the Army's strategy for a single enterprise-wide contract writing and management solution that will meet the Army current critical functional contract writing requirements and expand to meet future functional needs. The Army's goal is to streamline Acquisition, Technology and Logistics (AT&L) end-to-end business processes; reduce operating, maintenance and support costs; minimize the number interfaces; support financial auditability; and promote and improve efficiencies when integrating with existing Enterprise Resource Planning (ERPs) solutions. This is consistent with Undersecretary of Defense, Acquisition, Technology and Logistics Memorandum; Department of Defense (DoD) Functional Contract Writing and Administration, dated 21 October 2011, which set goals that no new contracts should be entered in the DoD legacy Standard Procurement System (SPS) after 30 September 2015 and that all use of SPS would cease on 30 September 2017. Funds are to perform all requisite activities to concurrently develop pre-Milestone A documentation and perform pre-solicitation/source selection activities expected of an ACAT III program in order to comply with the USD AT&L direction.

Adapt/improve/install/field government off the shelf (GOTS), commercial off the shelf (COTS), and new software to perform various tasks in a networked environment such as data warehousing, force management, personnel, installation and environmental databases and applications to support Business System Transformation and Installation Management, to include Commander's Risk Reduction Dashboard.

The Army Human Resources Command (HRC) has two efforts for which RDT&E will be applied. One is to prepare those systems for subsumption into the Integrated Personnel and Pay System(IPPS-A). The other is to disconnect and upgrade those systems not being subsumed by IPPS-A. Many systems have delayed upgrade do to the planned release of DIMHRS. Systems that will be targeted by HRC to prepare for IPPS-A subsumption or upgrade are the Automated Orders and resources System (AORS), Army Selection Board System (ASBS), Data Base Administration Suite of System (DBA), Enlisted Distribution and Assignment system (EDAS), Enlisted Promotion Model (EPM), Enterprise Service Bus (ESB), Human Resource Command Identity Management System (HIMS), Integrated Total Army Personnel Database (ITAPDB), Officer Selection Support System (OSSS), Reserve Statistics Accounting System/Reserve Component Common Personnel Data System (RSAS/RCCPDS), Senior Enlisted Promotions Model (SEPM), Single Evaluation Processing System (SEPS), Soldier Management System Webified Suite of System (SMSWEB), Total Army Personnel Data Base - Active Enlisted (TAPDB-AE), Total Army Personnel Data Base - Active Officer (TAPDB-AO), Total Army Personnel Data Base - Active Reserve (TAPDB-AR), Total Officer Personnel Management Information System (TOPMIS), Total Officer Personnel Management Information System II (TOPMIS II), Keystone Request/Retain System, and the Interactive Personnel Electronic Records Management System (iPERMS).

The Program Planning Budget (PPB)- Business Operating System (BOS) will standardize and better integrate the transactional automated information systems used in the HQDA level programming and budgeting processes. These systems are core to the PPBE business processes of the HQ for gathering programmatic requirements,

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balancing resources and delivering the Army's program budget to OSD. This project is streamlining programming and budgeting processes and significantly improving strategic analysis capabilities. The project is architecting, reengineering, streamlining and consolidating HQDA systems, feeder data base systems, and streamlining the associated processes. These improvements will improve capability, eliminate redundancies and reduce overall cost of operations. The PPB BOS project is complementary to the Army's General Fund Enterprise Business System (GFEBS) program. It includes a new effort in FY14, the Army Contract Writing System, a replacement for the DoD Standard Procurement System (SPS).

Will field the full operating capability of the Army Mapper system, which is the Army Geospatial data base of record and the HQDA repository for all Installation & Environment related geo-spatial data systems.

The Law Enforcement Advisory Program (LEAP), formerly known as the Criminal Information Management System (CIMS), is a collection of mission essential information technology (IT) systems within the Criminal Investigation Command (CIDC) and the Office of the Provost Marshal General (OPMG). USACIDC and OPMG has been tasked by the Army Health Promotion/Risk Reduction (HP/RR)task force to develop and integrate a unified, comprehensive enterprise program / system that shall house Classified and Unclassified - Law Enforcement Sensitive (LES) data which shall leverage existing and future Army LE enterprise information technology (IT) assets and other external data sources providing a full range of law enforcement functions to support business objectives and mission. This new comprehensive enterprise system will be known as the Army Law Enforcement Reporting and Tracking System (ALERTS) and shall provide US Army LE stakeholders the enhanced capability to rapidly and efficiently manage a variety of LE and criminal intelligence (CrimIntel) functions; as well as a broader range of senior executive reporting requirements.

The Laboratory Information Management System (LIMS) is a web-based software system used at the Defense Forensics Science Center (DFSC), formerly known as the United States Army Criminal Investigation Laboratory (USACIL) at Fort Gillem, GA for the management of casework and tracking of all evidence received and processed. The DFSC requires RDT&E funding to complete the configuration, installation and validation of additional LIMS modules in support of forensics (to include the Materials Management,Equipment Management, Proficiency Testing, Training and Crime Scene support); and, to support the development, configuration and implementation of an Expeditionary Forensics Laboratory Information Management System (eLIMS) in theater. The eLIMS is the conduit between the deployed labs and the laboratory located at Ft. Gillem. The eLIMS would provide the forensic analysts with the ability to collect, track, store and analyze evidence collected from battlefield crime scenes at required competency levels of testing and calibration. It will allow the results to be electronically maintained and transmitted to the permanent physical lab at Ft. Gillem, Ga.
In addition, the system would afford the analysts electronic access to shared case management and evidence databases at the LAB from their deployed positions. At the current configuration of LIMS from CONUS locations, transmission of case related information can be processed in real time; however, transmission of case related information in theater takes approximately 1-2 hours. If requirements are not funded, the DFSC will not be able to complete and implement the additional forensic modules for the core LIMS or develop and implement the eLIMS for the deployable labs. The stated objective will be delayed, resulting in a less than efficient process for handling of cases in theater and an inability to meet acceptable levels of turnaround time for casework.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Army Contract Writing System (ACWS)	-	25.559	24.065
Articles:	-	-	-

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Description: ACWS is the Army strategy for a single enterprise-wide contract writing and management solution that will meet the Army's current critical functional contract writing requirement and can expand to meet future functional needs. The Army's goal is to streamline Acquistion, Technology and Logistics (AL&T) end-to-end business processes; reduce operating, maintenance and support costs; decrease, and where applicable, mitigate the number of existing and future interfaces. ***FY 2014 Plans:*** FY14 funds will be used to award a systems integrator contract and begin engineering/development ***FY 2015 Plans:*** FY15 funds will be used to develop Army Contract Writing System capabilities, perform development efforts and system integration.			
Title: Army Business System Modernization Initiatives	22.238	24.199	17.888
Articles:	-	-	-
Description: The Army Human Resources Command (HRC) modernization requirements will add new capabilities to legacy IT systems that support human resource functions such as organization and position management, training, and employment. The PPB BOS system standardize and integrate the transactional information systems used in the Headquarters Department of Army (HQDA) Programming and Budgeting processes. The program is streamlining programming and budgeting business processes and significantly improving strategic analysis capabilities. The PPB BOS architecture reengineers, streamlines, and consolidates HQDA systems and financial feeder systems; aligns to the DoD Business Enterprise Architecture (BEA); implements powerful business intelligence analytical tools to support strategic planning, programming, and budgeting within HQDA; and provides access to GFEBS funds management and execution data through system interfaces with required SFIS compliancy integral to the PPB BOS data model. The LEAP program will provide criminal intelligence querying and reporting capabilities in compliance with regulatory and policy standards for Army Law Enforcement regarding investigation of felony crimes. LEAP will captures criminal case investigative information regarding incidents, location descriptors, entities (name, social security number, rank, title, physical characteristics, sex, birth place, and date), agent assignment, crime description and identifiers, statements, property data, laboratory tests; verifies and stores this data for criminal intelligence purposes: and reports this information to the proper authorities from the Division Commanding Officer to the United States Grand Jury. The system will extract necessary data for consolidation and input to Defense Incident-Based Reporting System (DIBRS) monthly reports, National Incident-Based Reporting System (NIBRS) monthly reports and the Defense Clearance and Investigations Index (DCII) daily updates. The LIMS system will automate business processes that support the forensic examiners. These processes include, but are not limited to, analytics, materials management, management reporting, Freedom of Information Act requests (FOIA), legal discovery request, court preparation and outsource processing.			

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Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605013A / *Information Technology Development*	**Project (Number/Name)** T05 / *Army Business System Modernization Initiatives*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
FY 2013 Accomplishments: Army Human Resources Command will update and add new capabilities to several IT systems currently in sustainment, and prepare systems for subsumption by the Integrated Personnel and Pay system (IPPS-A) and disconnect and upgrade those systems not being subsumed by IPPS-A, to include the Commander's Risk Reduction Dashboard. ***FY 2014 Plans:*** Will continue deployment and final fielding of the enterprise-level PPB BOS application throughout HQDA and the transfer of budget data to the Army's financial enterprise resource system, the General Fund Enterprise Business System. Will fund preliminary efforts to develop the Army Contract Writing System. Will field the full operating capability of the Army Mapper system, which is the Army Geospatial data base of record and the HQDA repository for all Installation & Environment related geo-spatial data systems. ***FY 2015 Plans:*** Funds for the initial research, design, building and testing of the new Army Contract Writing System that will replace the current Standard Procurement System (SPS) as directed by the SECDEF. Will continue deployment and final fielding of the enterprise-level PPB BOS application throughout HQDA and the transfer of budget data to the Army's financial enterprise resource system, the General Fund Enterprise Business System. Will field the full operating capability of the Army Mapper system, which is the Army Geospatial data base of record and the HQDA repository for all Installation & Environment related geo-spatial data systems.			
Accomplishments/Planned Programs Subtotals	22.238	49.758	41.953

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• OPA: *Army Contract Writing System (ACWS)*	-	-	3.000	-	3.000	6.600	-	-	-	-	9.600

Remarks

D. Acquisition Strategy

Modernize IT legacy systems across Army IT domains by adapting/improving government off the shelf (GOTS), commercial off the shelf (COTS), and new software development to perform various tasks in a networked environment. These efforts include Soldier Management System (SMS), Commander's Risk Reduction Dashboard, the Army Strategic Readiness Update (ASRU), Law Enforcement Advisory Program (LEAP), the Laboratory Information Management System (LIMS), Program Planning Budget Execution (PPBE) - Business Operating System (BOS), Automated Orders and Resources System (AORS), Army Selection Board System (ASBS), Data Base Administration Suite of System (DBA), Enlisted Distribution and Assignment system (EDAS), Enlisted Promotion Model (EPM), Enterprise Service Bus (ESB), Human Resource Command Identity Management System (HIMS), Integrated Total Army Personnel Database (ITAPDB), Officer Selection Support System (OSSS), Reserve

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605013A / *Information Technology Development*	**Project (Number/Name)** T05 / *Army Business System Modernization Initiatives*

Statistics Accounting System/Reserve Component Common Personnel Data System (RSAS/RCCPDS), Senior Enlisted Promotions Model (SEPM), Single Evaluation Processing System (SEPS), Soldier Management System Webified Suite of System (SMSWEB), Total Army Personnel Data Base - Active Enlisted (TAPDB-AE), Total Army Personnel Data Base - Active Officer (TAPDB-AO), Total Army Personnel Data Base -Active Reserve (TAPDB-AR), Total Officer Personnel Management Information System (TOPMIS), Total Officer Personnel Management Information System II (TOPMIS II), KEYSTONE Retain System, Army Contract Writing System (ACWS), Army Mapper, and the Interactive Personnel Electronic Records Management System (iPERMS).

ACWS strategy is to perform all requisite activities to concurrently develop pre-milestone A/B documentation and perform pre-solicitation/source selection activities to meet the USD AT&L timelines for building a contract writing system to replace legacy contract systems to include the Standard Procurement System (SPS).

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605013A / *Information Technology Development*	**Project (Number/Name)** T05 / *Army Business System Modernization Initiatives*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PRODUCT DEVELOPMENT FOR KEYSTONE RETAIN SYSTEM, i-PERMS PRODUCT DEVELOPMENT	MIPR	M&RA/G-1 : ARLINGTON, VA	6.571	9.999		-		-		-		-	Continuing	Continuing	Continuing
PPBOS PRODUCT DEVELOPMENT	MIPR	OAA : FORT BELVOIR, VA	3.860	1.820		16.151		13.434		-		13.434	Continuing	Continuing	Continuing
Product Development for ACWS	Various	Development : Alexandria, VA	0.000	-		25.559		24.065		-		24.065	-	49.624	-
		Subtotal	10.431	11.819		41.710		37.499		-		37.499	-	-	-

Remarks

FY15 includes an increase (included in the PPBOS Product Develoment line) for development of the Army Contract Writing Management System ($24.5 Million in FY15).The Under Secretary of Defense, Acquisition, Technology and Logistics directed that the Standard Procurement System (SPS) be decommissioned by FY17, with no new contracts being written by the SPS software effective FY15. ACWS will replace SPS. In order for the Army to meet appropriate legislative mandates, the new capability will provide improved functionality in general contract writing and contract administration while seamlessly operating in the NIPR, SIPR, CONUS, OCONUS, and in low/no bandwidth environments. In addition, the replacement capability will produce data that is trackable and auditable by the Army designated finance account system(s) and will be in compliance with the Secretary of Defense's mandate for implementing internal controls to facilitate full financial audit readiness and accountability.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
IPPS-A SUPPORT COSTS	MIPR	HRC : FORT KNOX, KY	7.615	7.742		-		-		-		-	Continuing	Continuing	25.119
HRC SYSTEMS KEYSTONE, IPERMS	MIPR	HRC : FORT KNOX, KY	0.000	-		5.683		4.454		-		4.454	Continuing	Continuing	-
ARMY MAPPER	C/TBD	TBD : TBD	0.000	-		2.365		-		-		-	-	2.365	-
Law Enforcement Advisory Program(LEAP)	MIPR	ACC/NCR : Quantico, VA	0.000	2.677		-		-		-		-	Continuing	Continuing	-
		Subtotal	7.615	10.419		8.048		4.454		-		4.454	-	-	25.119

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605013A / *Information Technology Development*	Project (Number/Name) T05 / *Army Business System Modernization Initiatives*	

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	18.046	22.238		49.758		41.953		-		41.953	-	-	-

Remarks

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0605018A *I Integrated Personnel and Pay System-Army (IPPS-A)*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	122.168	69.253	138.465	-	138.465	141.521	123.112	121.261	12.126	-	727.906
ED9: *Integrated Personnel and Pay System Army Inc 2*	-	-	-	138.465	-	138.465	141.521	123.112	121.261	12.126	-	536.485
HR5: *Integrated Personnel And Pay System - Army Inc 1*	-	122.168	69.253	-	-	-	-	-	-	-	-	191.421

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Integrated Personnel and Pay System - Army (IPPS-A) provides the Army with an integrated, multi-Component, personnel and pay system which streamlines Army Human Resources (HR), enhances the efficiency and accuracy of Army personnel and pay procedures, and supports Soldiers and their families. IPPS-A will subsume approximately 50 Army legacy systems across the Army, Army Reserve, and National Guard, into an integrated system. IPPS-A will be a web-based tool, available 24 hours a day, accessible to HR professionals, combatant commanders, personnel and pay managers, and other authorized users throughout the Army. IPPS-A addresses major deficiencies in the delivery of military personnel and pay services and also provides internal controls and audit procedures that prevent erroneous payments and loss of funds.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	158.646	137.290	147.273	-	147.273
Current President's Budget	122.168	69.253	138.465	-	138.465
Total Adjustments	-36.478	-68.037	-8.808	-	-8.808
• Congressional General Reductions	-22.100	-68.037			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-10.503	-	-8.808	-	-8.808
• Other Adjustments 2	-3.875	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605018A / *Integrated Personnel and Pay System-Army (IPPS-A)*	Project (Number/Name) ED9 / *Integrated Personnel and Pay System Army Inc 2*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
ED9: *Integrated Personnel and Pay System Army Inc 2*	-	-	-	138.465	-	138.465	141.521	123.112	121.261	12.126	-	536.485
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Please note that effective from PB15 and beyond, Project HR5 has realigned to IPPS-A Increment I; all funding under PE 0605018A prior to FY14 has realigned to Project HR5 and all funding under PE 0605018A from FY15 and beyond has realigned to IPPS-A Increment II under Project ED9, respectively.

A. Mission Description and Budget Item Justification

The Integrated Personnel and Pay System - Army (IPPS-A) Increment II will deliver full integrated personnel and pay services for all Army Components, building on the trusted database delivered by the IPPS-A Increment I program. Increment II will be able to link the personnel and pay functions for all Army personnel, eliminating duplicate data entry, reducing complex system maintenance, and minimizing pay discrepancies. IPPS-A Increment II will account for status changes between Active, Reserve, and National Guard components to ensure accurate service time minimizing impact on individual pay, credit for service, and other benefits as well as enable disciplined human resource management.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Analysis and Design, Development, and Integration of IPPS-A Increment II	-	-	138.465
Description: Funding is provided for the following efforts: ***FY 2015 Plans:*** IPPS-A will complete critical activities to obtain Limited Fielding Decision for Release 2.0. Major activities will include completion of Primary Design Review, Critical Design Review, as well as development and integration associated critical activities and proceed to Government Acceptance Test (GAT). IPPS-A will also initiate critical activities to support an Authority to Proceed Decision for Both Releases 3.0 and 4.0. IPPS-A will complete the Primary Design Review and Critical Design Review for Release 3.0 and will continue support the data management activities to include data call from legacy systems, data analysis, data cleansing, and data conversion; design and build out the system technical architecture for IPPS-A; and configure the Enterprise Resource Planning system against functional personnel specifications. IPPS-A will complete the Limited User Testing (LUT) for Increment 1 Wave 3 in Q1 FY2015 and begin sustainment of Increment I.			
Accomplishments/Planned Programs Subtotals	-	-	138.465

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605018A / *Integrated Personnel and Pay System-Army (IPPS-A)*	**Project (Number/Name)** ED9 / *Integrated Personnel and Pay System Army Inc 2*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• Sustainment and Support: *OMA - Army Integrated Personnel and Pay System - Army (IPPS-A)*	-	-	5.080	-	5.080	5.245	6.004	5.600	40.133	-	62.062
• System Implementation/Fielding: *OPA - Army Integrated Personnel and Pay System - Army (IPPS-A)*	-	-	32.970	-	32.970	18.383	17.083	11.483	0.370	-	80.289

Remarks

0308610A (OMA): Funding will be used for the operations and maintenance support of IPPS-A which includes civilian salaries, program office contractor support, travel and training for program office personnel, software license renewal, and Help Desk support.

B66706000 (OPA): Funding will be used for initial system implementation and fielding of IPPS-A, to include New Equipment Training (NET) as well as procurement of hardware and software which is required to build out the infrastructure of IPPS-A Data Centers.

D. Acquisition Strategy

On September 8, 2009, the USD(AT&L) issued an Acquisition Decision Memorandum (ADM) directing the Services to develop Service-specific integrated personnel and pay systems (IPPSs). The ADM also directed the Services to use the DIMHRS IT Investment to the maximum extent practical to develop their IPPS system from a DoD program to a Service-specific program. As a result of this decision, on October 1, 2009, the DoD Business Transformation Agency (BTA) began to transition the work done on DIMHRS to the Services. The Army G-1 and Program Executive Office Enterprise Information Systems (PEO EIS) are partnered to develop the Integrated Personnel and Pay System - Army (IPPS-A), leveraging the IT investment to the maximum extent practical. This new direction for the program will ensure the system meets Army specific requirements while also feeding a planned DoD Enterprise Data Warehouse to satisfy joint Services and Office of the Secretary of Defense (OSD) information requirements. The Army will address personnel and pay management requirements by implementing a COTS Enterprise Resource Planning (ERP) product using the Oracle PeopleSoft software and building on the DIMHRS solution delivered by BTA.

The Army will employ a hybrid solution using ERP software and Agile Development to deliver integrated personnel and pay capabilities, capitalizing on the PeopleSoft product delivered by BTA as part of the DIMHRS program. The Army plans to use current Army upgraded PeopleSoft 9.1 ERP and Oracle 11g database capabilities, along with Application Technologies outside of the core ERP to meet user requirements.

IPPS-A will be developed in two Increments with multiple releases. The Army will follow the new DoDI 5000.02 Defense Acquisition Program Model 3 dated 26 Nov 2013 to develop each release with the goal of fielding capabilities every year. Each Release will include Fit/Gap analysis, development, testing, training and fielding. Fielding of Increment I will lay the foundation for the authoritative database in Increment II and will allow for development of Increment II functionalities. Increment I will build out the infrastructure to provide Increment II with the ability to support all three Army components with accurate and timely data needed to track the movement of Active, Reserve, and National Guard personnel from location to location in support of operational requirements. Increment II will be able to link the personnel and pay

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605018A / *Integrated Personnel and Pay System-Army (IPPS-A)*	**Project (Number/Name)** ED9 / *Integrated Personnel and Pay System Army Inc 2*

functions for all Army personnel eliminating duplicate data entry, reducing complex system maintenance, and minimizing pay discrepancies. IPPS-A will account for status changes between Active, Reserve, and National Guard components to ensure accurate service time minimizing impact on individual pay, credit for service, and other benefits as well as enable disciplined human resource management.

Increment II will deliver total integrated personnel and pay capabilities across four releases: SIDPERS Functionality in FY2015 (Release 2.0), Accountability and Essential Personnel Services in FY2016 (Release 3.0), Pay Services in FY2017 (Release 4.0), and remaining Personnel Services in FY2017 (Release 5.0). The Army is on-track to obtain Increment II MS B in Q3 FY2014. The Army will begin the Design, Development and Integration efforts for Increment II, Release 2.0 and plans to obtain Limited Fielding Decision in FY2016.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605018A / *Integrated Personnel and Pay System-Army (IPPS-A)*	Project (Number/Name) ED9 / *Integrated Personnel and Pay System Army Inc 2*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Contract Support	C/CPIF	TBD : TBD	0.000	-		-		2.327		-		2.327	Continuing	Continuing	Continuing
Independent Verification and Validation (IV&V)	C/CPIF	TBD : TBD	0.000	-		-		2.570		-		2.570	Continuing	Continuing	Continuing
In-house Government Management Support	Allot	Program oversight, resource justification, budget and programming, milestone and schedule tracking : Alexandria, VA	0.000	-		-		3.190		-		3.190	Continuing	Continuing	Continuing
		Subtotal	0.000	-		-		8.087		-		8.087	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Licenses - All Others	C/FFP	Various : Various	0.000	-		-		3.000		-		3.000	Continuing	Continuing	Continuing
Software Licenses - IBM	C/FFP	Immixtechnology, INC. : Mclean, VA	0.000	-		-		1.558		-		1.558	Continuing	Continuing	Continuing
Software Lincenses - GRC	C/FFP	Mythics : Virginia Beach, VA	0.000	-		-		0.906		-		0.906	Continuing	Continuing	Continuing
Software Licenses - PeopleSoft Enterprise Licenses	SS/FFP	Oracle America, INC : Reston, VA	0.000	-		-		2.437		-		2.437	Continuing	Continuing	Continuing
Software Licenses - CA	SS/FFP	ImmixTechnology : McLean, VA	0.000	-		-		0.872		-		0.872	Continuing	Continuing	Continuing
Software Licenses - Actuate eReport/BIRT	SS/FFP	Actuate Corp : San Mateo, CA	0.000	-		-		0.512		-		0.512	Continuing	Continuing	Continuing
Software Product Level SME Consulting Service	SS/FFP	TBD : TBD	0.000	-		-		2.500		-		2.500	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605018A / *Integrated Personnel and Pay System-Army (IPPS-A)*	Project (Number/Name) ED9 / *Integrated Personnel and Pay System Army Inc 2*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
In-house contract support of system development	C/CPFF	TBD : TBD	0.000	-		-		14.000		-		14.000	Continuing	Continuing	Continuing
Functional In-house contract support of system development - Army National Guard/Army Reserve/FMD	MIPR	Various : Various	0.000	-		-		5.000		-		5.000	Continuing	Continuing	Continuing
Design, Development, and Integration - Increment II	C/CPIF	TBD : TBD	0.000	-		-		70.465		-		70.465	Continuing	Continuing	Continuing
Network Support/ Production Hosting Services/Hardware Leasing (SLAs)	MIPR	Network support from various : various	0.000	-		-		10.966		-		10.966	Continuing	Continuing	Continuing
		Subtotal	0.000	-		-		112.216		-		112.216	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Facilities/Lease/Rents	MIPR	Facilities/Lease/ Rents : Various	0.000	-		-		3.000		-		3.000	Continuing	Continuing	Continuing
Equipment and Supplies, MISC	Various	Various : Various	0.000	-		-		0.832		-		0.832	Continuing	Continuing	Continuing
		Subtotal	0.000	-		-		3.832		-		3.832	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Increment II - Government Acceptance Testing/	MIPR	Various Government Agencies : Various	0.000	-		-		10.070		-		10.070	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
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Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Test and Evaluation															
Increment II - Capability Acceptance Testing (CAT)/ DT	Various	Government & Support Contractors : Various	0.000	-		-		4.260		-		4.260	Continuing	Continuing	Continuing
		Subtotal	0.000	-		-		14.330		-		14.330	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		-		138.465		-		138.465	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605018A / *Integrated Personnel and Pay System-Army (IPPS-A)*	**Project (Number/Name)** ED9 / *Integrated Personnel and Pay System Army Inc 2*

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Milestone B (MS B) - Increment II							■																					

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605018A / *Integrated Personnel and Pay System-Army (IPPS-A)*	**Project (Number/Name)** ED9 / *Integrated Personnel and Pay System Army Inc 2*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Milestone B (MS B) - Increment II	3	2014	3	2014

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605018A / *Integrated Personnel and Pay System-Army (IPPS-A)*	Project (Number/Name) HR5 / *Integrated Personnel And Pay System - Army Inc 1*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
HR5: *Integrated Personnel And Pay System - Army Inc 1*	-	122.168	69.253	-	-	-	-	-	-	-	-	191.421
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Please note the name of Army Integrated Military Human Resources System (A-IMHRS) has changed to Integrated Personnel and Pay System - Army (IPPS-A) effective 22 September 2010. IPPS-A more accurately identifies the program as the military personnel and pay solution for the Army.

Please note that effective from PB15 and beyond, Project HR5 has realigned to IPPS-A Increment I; all funding under PE 0605018A prior to FY14 has realigned to Project HR5 and all funding under PE 0605018A from FY15 and beyond has realigned to IPPS-A Increment II under Project ED9, respectively.

A. Mission Description and Budget Item Justification

The Integrated Personnel and Pay System - Army (IPPS-A) Increment I will provide a single, multi-Component trusted database with a single record for all Army Soldiers, and serve as a trusted data source for personnel and human resources data for the entire Army. Increment I will provide Soldiers with 24/7, web-based access to their personnel data from a single source, enabling them to better manage their careers and ensure accuracy of information through generation of new multi-Component reports, including a Soldier Record Brief. Overall, IPPS-A Increment I will provide three capabilities not currently available within the Army: consolidation of personnel data from all Components into a single, trusted source, enhanced visibility of personnel across all Components, and a Soldier Record Brief for all Army Component Soldiers (Active, Guard and Reserve).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Analysis and Design, Development, and Integration of IPPS-A	122.168	69.253	-
Articles:	-	-	-
Description: Funding is provided for the following efforts:			
FY 2013 Accomplishments: IPPS-A completed the following critical activities for an Increment I Milestone C Decision and an Increment II Milestone B decision: (1) Built-out of the Production environment and data centers. (2) developed interfaces with legacy systems to support data management activities (3) Developed acquisition documentation for Increment II Milestone B and conducted Source Selection activities to award the Increment II System Integrator contract. (4) Finalized Increment II System Integrator solicitation package and complete all source selection activities for award in FY14.			
FY 2014 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605018A / *Integrated Personnel and Pay System-Army (IPPS-A)*	**Project (Number/Name)** HR5 / *Integrated Personnel And Pay System - Army Inc 1*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
IPPS-A anticipates a Increment I MS C and Full Deployment Decision (FDD) in Q2 FY2014 and Full Deployment in Q4 FY2014. IPPS-A Increment I critical activities include loading and testing all Army Components (Active, National Guard, and Reserve) data in three waves and meets the established Full Deployment Decision exit criteria for full deployment. IPPS-A also anticipates a MS B Decision for Increment II and begin preliminary design efforts to support the Preliminary Design Review. Major activities include: development of regulatory and statutory acquisition documentation to support Increment II Milestone B Decision; award the Increment II System Development and Integration Services contract; continue data management activities to include legacy systems data calls, data analysis, data cleansing and data conversion.			
Accomplishments/Planned Programs Subtotals	122.168	69.253	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• Sustainment and Support: *OMA - Army Integrated Personnel and Pay System - Army (IPPS-A)*	-	11.346	20.460	-	20.460	20.712	20.968	21.228	21.493	Continuing	Continuing
• System Implementation/Fielding: *OPA - Army Integrated Personnel and Pay System - Army (IPPS-A)*	0.460	-	-	-	-	-	-	-	-	Continuing	Continuing

Remarks

0308610A (OMA): Funding will be used for the operations and maintenance support of IPPS-A which includes civilian salaries, program office contractor support, travel and training for program office personnel, software license renewal, and Help Desk support.

0219900A (OPA): Funding will be used for procurement of hardware and software which is required to build out the infrastructure of IPPS-A Data Centers, as well as Hardware lifecycle refresh.

D. Acquisition Strategy

On September 8, 2009, the USD(AT&L) issued an Acquisition Decision Memorandum (ADM) directing the Services to develop Service-specific integrated personnel and pay systems (IPPSs). The ADM also directed the Services to use the DIMHRS IT Investment to the maximum extent practical to develop their IPPS system from a DoD program to a Service-specific program. As a result of this decision, on October 1, 2009, the DoD Business Transformation Agency (BTA) began to transition the work done on DIMHRS to the Services. The Army G-1 and Program Executive Office Enterprise Information Systems (PEO EIS) are partnered to develop the Integrated Personnel and Pay System - Army (IPPS-A), leveraging the IT investment to the maximum extent practical. This new direction for the program will ensure the system meets Army specific requirements while also feeding a planned DoD Enterprise Data Warehouse to satisfy joint Services and Office of the Secretary of Defense (OSD)

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605018A / *Integrated Personnel and Pay System-Army (IPPS-A)*	**Project (Number/Name)** HR5 / *Integrated Personnel And Pay System - Army Inc 1*

information requirements. The Army will address personnel and pay management requirements by implementing a COTS Enterprise Resource Planning (ERP) product using the Oracle PeopleSoft software and building on the DIMHRS solution delivered by BTA.

The Army will employ a hybrid solution using ERP software and Agile Development to deliver integrated personnel and pay capabilities, capitalizing on the PeopleSoft product delivered by BTA as part of the DIMHRS program. The Army plans to use current Army upgraded PeopleSoft 9.1 ERP and Oracle 11g database capabilities, along with Application Technologies outside of the core ERP to meet user requirements.

IPPS-A will be developed in two Increments with multiple releases. The Army will follow the new DoDI 5000.02 Defense Acquisition Program Model 3 dated 26 Nov 2013 to develop each release with the goal of fielding capabilities every year. Increment I will provide a multi-component Trusted Database with single record for all Army Soldiers. Fielding of Increment I will lay the foundation for the authoritative database in Increment II and will allow for development of Increment II functionalities. Increment I will build out the infrastructure to provide Increment II with the ability to support all three Army components with accurate and timely data needed to track the movement of Active, Reserve, and National Guard personnel from location to location in support of operational requirements. On July 29, 2011, the Deputy Chief Management Officer (DCMO) granted an ADM for IPPS-A Increment I to enter the Engineering and Manufacturing Development (EMD) phase of the acquisition life-cycle.

Increment I will deliver a Trusted Database with reporting capabilities. The Army is on-track to obtain Increment I MS C and Full Deployment Decision (FDD) in Q2 FY2014 and Full Deployment (FD) in Q4 FY2014.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605018A / *Integrated Personnel and Pay System-Army (IPPS-A)*	**Project (Number/Name)** HR5 / *Integrated Personnel And Pay System - Army Inc 1*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Contract Support	C/T&M	Booz Allen Hamilton INC. : Mclean, VA	5.449	2.891	Jul 2013	2.327		-		-		-	-	10.667	-
Independent Verification and Validation (IV&V)	C/T&M	Capgemini Government Solutions LLC : Herndon, VA	2.634	-		-		-		-		-	-	2.634	-
In-house Government Management Support	Various	Program oversight, resource justification, budget and programming, milestone and schedule tracking : Alexandria, VA	7.573	2.995		3.012		-		-		-	-	13.580	-
		Subtotal	15.656	5.886		5.339		-		-		-	-	26.881	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Licenses - All Others	SS/FP	Various : Various	9.737	13.927		3.719		-		-		-	-	27.383	-
Software Licenses - IBM	SS/FFP	Immixtechnology, INC. : Mclean, VA	5.344	2.263	Mar 2012	1.610		-		-		-	-	9.217	-
Software Lincenses - GRC	C/FFP	Mythics : Virginia Beach, VA	5.069	0.822	May 2013	0.836		-		-		-	-	6.727	-
Software Licenses - PeopleSoft Enterprise Licenses	SS/FFP	Oracle America, INC : Reston, VA	4.654	2.327	Dec 2012	2.327		-		-		-	-	9.308	-
Software Licenses - CA	SS/FFP	ImmixTechnology : McLean, VA	1.993	0.810	Aug 2013	0.816		-		-		-	-	3.619	-
Software Licenses - Actuate eReport/BIRT	SS/FFP	Actuate Corp : San Mateo, CA	1.200	0.423	Aug 2013	0.465		-		-		-	-	2.088	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605018A / *Integrated Personnel and Pay System-Army (IPPS-A)*	Project (Number/Name) HR5 / *Integrated Personnel And Pay System - Army Inc 1*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
In-house contract support of system development	C/T&M	Booz Allen Hamilton INC : Mclean, VA	23.063	15.259	Jul 2013	15.000		-		-		-	-	53.322	-
Functional In-house contract support of system development - Army National Guard/Army Reserve/FMD	MIPR	Various : Various	6.074	2.887		3.002		-		-		-	-	11.963	-
Design, Development, and Integration - Increment I	C/CPIF	EDC Consulting, LLC : Washington, DC	13.415	15.651		-		-		-		-	-	29.066	27.849
Design, Development, and Integration of Increment II	C/CPIF	TBD : TBD	0.000	52.084	Sep 2013	16.793		-		-		-	-	68.877	-
Design, Development, and Integration	C/CPAF	Northrop Grumman Information Technology : Mclean, VA	16.070	-		-		-		-		-	-	16.070	16.070
Network Support/ Production Hosting Services/Hardware Leasing (SLAs)	MIPR	Network support from various activities : Various	15.695	5.689		10.000		-		-		-	-	31.384	-
		Subtotal	102.314	112.142		54.568		-		-		-	-	269.024	43.919

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Facilities/Lease/Rents	MIPR	Facilities/Lease/ Rents : Various	4.750	2.060		3.000		-		-		-	-	9.810	-
Equipment and Supplies, MISC	Various	Various : Various	0.400	0.200		0.400		-		-		-	-	1.000	-
		Subtotal	5.150	2.260		3.400		-		-		-	-	10.810	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605018A / *Integrated Personnel and Pay System-Army (IPPS-A)*	Project (Number/Name) HR5 / *Integrated Personnel And Pay System - Army Inc 1*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Increment I - Government Acceptance Testing/ Operational Test and Evaluation	MIPR	Various Government Agencies : Various	0.780	1.330		4.887		-		-		-	-	6.997	-
Increment I - Capability Acceptance Testing (CAT)	C/T&M	Booz Allen Hamilton INC : Mclean, VA	1.060	0.550		1.059		-		-		-	-	2.669	Continuing
		Subtotal	1.840	1.880		5.946		-		-		-	-	9.666	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	124.960	122.168		69.253		-		-		-	-	316.381	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605018A / *Integrated Personnel and Pay System-Army (IPPS-A)*	**Project (Number/Name)** HR5 / *Integrated Personnel And Pay System - Army Inc 1*

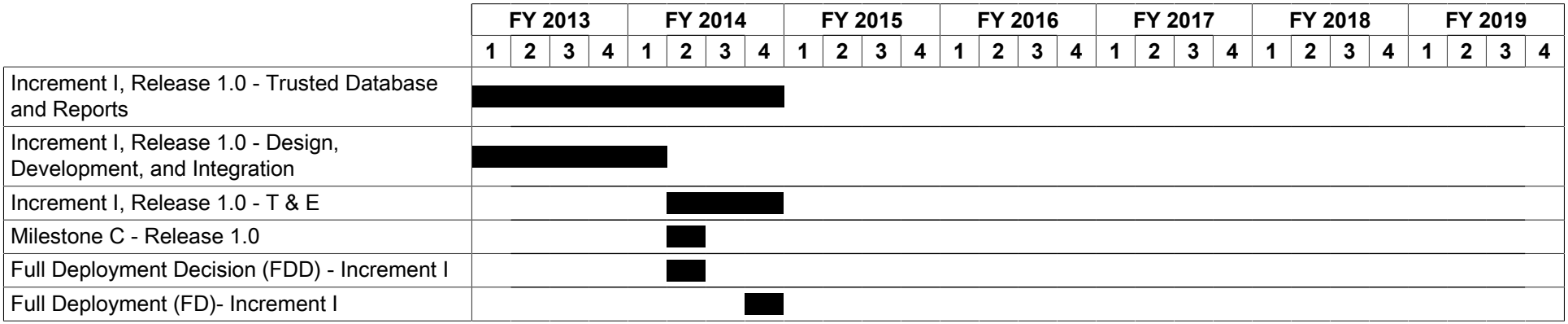

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605018A / *Integrated Personnel and Pay System-Army (IPPS-A)*	**Project (Number/Name)** HR5 / *Integrated Personnel And Pay System - Army Inc 1*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Increment I, Release 1.0 - Trusted Database and Reports	2	2012	4	2014
Increment I, Release 1.0 - Design, Development, and Integration	2	2012	1	2014
Increment I, Release 1.0 - T & E	2	2014	4	2014
Milestone C - Release 1.0	2	2014	2	2014
Full Deployment Decision (FDD) - Increment I	2	2014	2	2014
Full Deployment (FD)- Increment I	4	2014	4	2014

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0605028A / *Armored Multi-Purpose Vehicle (AMPV)*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	-	28.285	92.353	-	92.353	234.119	178.367	117.487	37.157	132.691	820.459
EB5: *Armored Multi-Purpose Vehicle*	-	-	28.285	92.353	-	92.353	234.119	178.367	117.487	37.157	132.691	820.459

The FY 2015 OCO Request will be submitted at a later date.

Note

The Armored Multi Purpose Vehicle Program is submitted under a new Program Element for the FY 2014 President's Budget. The previous program element was 0203735A, Project DS5, Combat Vehicle Improvement Program. The new program element is 0605028A, Project EB5, Armored Multi Purpose Vehicle (AMPV).

A. Mission Description and Budget Item Justification

Armored Multi-Purpose Vehicle (AMPV) replaces the Army's Armored Personnel Carrier (M113) Family of Vehicles (FoV). The Armored Multi-Purpose Vehicle (AMPV) is a materiel solution to support the Armored Brigade Combat Team (ABCT) across the Spectrum of Conflict by replacing five mission roles currently performed by the M113 Family of Vehicles (FOV) and integrating the current M113 FOV Mission Equipment Package (MEP) onto a Military Vehicle Derivative (MVD).

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	-	116.298	172.012	-	172.012
Current President's Budget	-	28.285	92.353	-	92.353
Total Adjustments	-	-88.013	-79.659	-	-79.659
• Congressional General Reductions	-	-88.000			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-	-0.013	-79.659	-	-79.659

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605028A / *Armored Multi-Purpose Vehicle (AMPV)*	Project (Number/Name) EB5 / *Armored Multi-Purpose Vehicle*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EB5: *Armored Multi-Purpose Vehicle*	-	-	28.285	92.353	-	92.353	234.119	178.367	117.487	37.157	132.691	820.459
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

The previous program element was 0203735A, Project DS5, Combat Vehicle Improvement Program. FY2014 Presidents Budget established the new program element, 0605028A, Project EB5, Armored Multi Purpose Vehicle (AMPV). Cost to Complete includes FY 2020 and FY 2021

A. Mission Description and Budget Item Justification

Armored Multi-Purpose Vehicle (AMPV) replaces the Army's Armored Personnel Carrier (M113) Family of Vehicles (FoV). The Armored Multi-Purpose Vehicle (AMPV) is a materiel solution to support the Armored Brigade Combat Team (ABCT) across the Spectrum of Conflict by replacing five mission roles currently performed by the M113 Family of Vehicles (FOV) and integrating the current M113 FOV Mission Equipment Package (MEP) onto a Military Vehicle Derivative (MVD).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Armored Multi-Purpose Vehicle (AMPV)	-	28.285	92.353
Articles:	-	-	-

Description: Armored Multi-Purpose Vehicle (AMPV)
Replaces the Army's Armored Personnel Carrier (M113) Family of Vehicles (FoV). The Armored Multi-Purpose Vehicle (AMPV) is a materiel solution to support the Armored Brigade Combat Team (ABCT) across the Spectrum of Conflict by replacing five mission roles currently performed by the M113 Family of Vehicles (FOV) and integrating the current M113 FOV Mission Equipment Package (MEP) onto a Military Vehicle Derivative (MVD).

FY 2014 Plans:
Product Manager (PdM) AMPV released the Request for Proposal (RFP) on 26 November 2013 as a full and open competition. Proposals are due on 28 May 2014. Initial buys for Government Furnished Equipment and Materiel (GFE/M) began as well. PdM AMPV will conduct a Source Selection Evaluation Board (SSEB) beginning 29 May 2014 to select a single vendor to integrate and build the AMPV. FY 2014 Funding will be used to support the following: preparation of Milestone Documentation, Source Selection activities, test support activities for development and purchasing of Mission Equipment Package for integration.

FY 2015 Plans:

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605028A / *Armored Multi-Purpose Vehicle (AMPV)*	**Project (Number/Name)** EB5 / *Armored Multi-Purpose Vehicle*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
PdM AMPV will conclude the SSEB, conduct Milestone B (MSB) and award the EMD contract for one contractor to integrate the MEP and technologies currently in development under other existing Army programs. PdM AMPV will continue to develop and update Milestone Documentation and conduct a Preliminary Design Review (PDD).			
Accomplishments/Planned Programs Subtotals	-	28.285	92.353

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• Armored Multi Purpose Vehicle(AMPV): *Armored Multi Purpose Vehicle(AMPV) G80819*	-	-	-	-	-	-	-	224.419	508.250	11,734.340	12,467.009

Remarks

D. Acquisition Strategy

The Army will award an Engineering, Manufacturing and Development (EMD) contract with Low Rate Initial Production (LRIP) options for mission equipment package integration, vehicle production and contractor test support on a competitive basis using a performance specification. A formal Source Selection Evaluation Board (SSEB) will evaluate the EMD/LRIP) proposals and recommend the best value solution to the Source Selection Authority (SSA). One (1) EMD contract will be awarded.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605028A / *Armored Multi-Purpose Vehicle (AMPV)*	Project (Number/Name) EB5 / *Armored Multi-Purpose Vehicle*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering, Manufacturing and Development	C/CPIF	Unknown : TBD	0.000	-		-		70.492	Jan 2015	-		70.492	534.654	605.146	-
		Subtotal	0.000	-		-		70.492		-		70.492	534.654	605.146	-

Remarks

Armored Multi Purpose Vehicle Tech data and system level product development costs. Cost to complete includes FY 2016 through FY 2021.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Office (PMO)	MIPR	PMO : Warren, MI	0.000	-		5.830	Dec 2013	5.940	Dec 2014	-		5.940	24.843	36.613	-
Other Program Support	MIPR	OGA : Various Locations	0.000	-		22.455	Jan 2014	15.921	Dec 2014	-		15.921	140.324	178.700	-
		Subtotal	0.000	-		28.285		21.861		-		21.861	165.167	215.313	-

Remarks

Armored Multi Purpose Vehicle Support Costs. Cost to complete includes FY 2016 through FY 2021.

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		28.285		92.353		-		92.353	699.821	820.459	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605028A / *Armored Multi-Purpose Vehicle (AMPV)*	**Project (Number/Name)** EB5 / *Armored Multi-Purpose Vehicle*

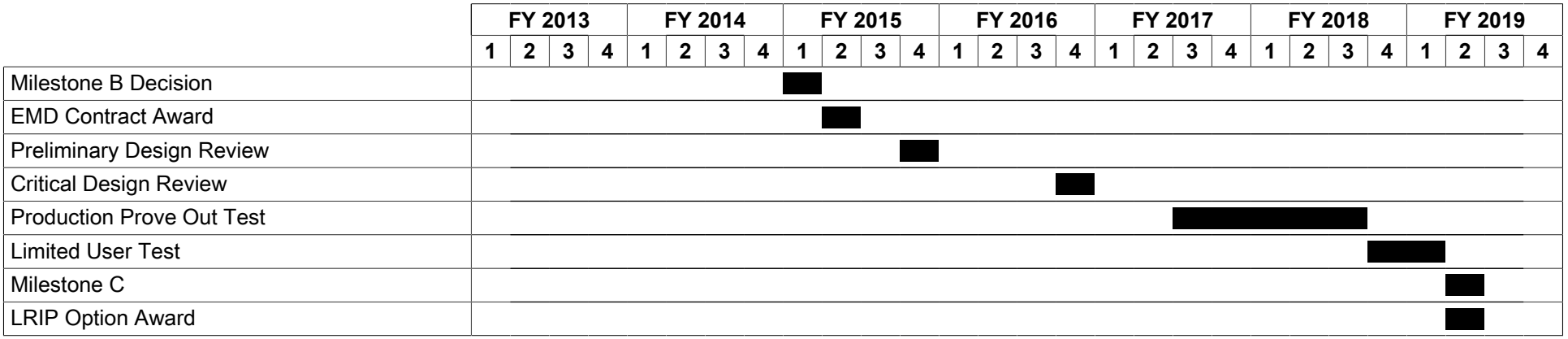

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605028A / *Armored Multi-Purpose Vehicle (AMPV)*	**Project (Number/Name)** EB5 / *Armored Multi-Purpose Vehicle*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Milestone B Decision	1	2015	1	2015
EMD Contract Award	2	2015	2	2015
Preliminary Design Review	4	2015	4	2015
Critical Design Review	4	2016	4	2016
Production Prove Out Test	3	2017	3	2018
Limited User Test	4	2018	1	2019
Milestone C	2	2019	2	2019
LRIP Option Award	2	2019	2	2019

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0605030A *I Joint Tactical Network Center (JTNC)*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	-	68.112	8.440	-	8.440	21.460	26.474	24.668	24.723	Continuing	Continuing
EA8: *Joint Tactical Network Center (JNTC)*	-	-	68.112	8.440	-	8.440	21.460	26.474	24.668	24.723	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

In accordance with the ADM and Charter dated 20 January 2014, the JTNC Program will remain under a joint budget strategy in the three MILDEPs in new PEs (Army PE 0605030A, Navy PE 0605030N, and Air Force PE 0605030F). As part of the joint program budget strategy, each MILDEP budgets for approximately one-third of the total program RDT&E funds. Prior to the year of execution, the JTNC funding is consolidated in the Army PE (0605030A). JTN funding will be executed out of Army PE (0605031A).

A. Mission Description and Budget Item Justification

Joint Tactical Networking Center (JTNC) will ensure interoperable, secure and affordable waveform and wireless communications by recommending standards, conducting compliance and certification assessments in accordance with DoD policies, and maintaining a DoD Waveform Information Repository (IR).
This mission is executed in conjunction with other government agencies to include the National Security Agency (NSA), the Joint Interoperability Test Command (JITC), and the National Telecommunication and Information Administration (NTIA), as well as the Services. Particular attention is paid to ensuring that interagency work is collaborative and eliminates duplicative capability.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	-	68.148	19.909	-	19.909
Current President's Budget	-	68.112	8.440	-	8.440
Total Adjustments	-	-0.036	-11.469	-	-11.469
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-0.036	-11.469	-	-11.469

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605030A / *Joint Tactical Network Center (JTNC)*	Project (Number/Name) EA8 / *Joint Tactical Network Center (JNTC)*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EA8: *Joint Tactical Network Center (JNTC)*	-	-	68.112	8.440	-	8.440	21.460	26.474	24.668	24.723	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

In FY 2013, the Joint Tactical Networking Center (JTNC) was funded in the Navy Program Element (PE) 0604280N Project No. 3076 formally known as JTRS Network Enterprise Domain (JNED). In FY 2014 funding that resides in Army PE 0605030A represents the total JTNC and Joint Tactical Networks (JTN) Budget. FY 2015 PE 0605030A represents only the JTNC funding. FY 2016-19 0605030A represents Army's portion of both the Joint Tactical Networks and JTNC funding.
In accordance with the Joint Tactical Networking Center Acquisition Decision Memorandum and Charter dated 20 January 2014, the JTNC Program will remain under a joint budget strategy in the three MILDEPs in new PEs (Army PE 0605030A, Navy PE 0605030N, and Air Force PE 0605030F). As part of the joint program budget strategy, each MILDEP budgets for approximately one-third of the total program RDT&E funds. Prior to the year of execution, the JTNC funding is consolidated in the Army PE (0605030A). JTN funding will be executed out of Army PE (0605031A). JTN and JTNC funding allocation will be separated based on the Tri-Service Resource Plan, which is projected to be completed in the 3rd quarter of FY14.
The Joint Tactical Networking Center (JTNC) is responsible for the management and maintenance of a jointly funded common Waveform Information Repository (IR), sustainment and evolution of the Software Communications Architecture, Application Program Interfaces, and wireless communications standards, and conducting technical assessments of waveforms, software, and associated artifacts and recommending designation of such products as compliant or certified with regard to Department of Defense (DoD) applicable policies.

A. Mission Description and Budget Item Justification

Joint Tactical Networking Center (JTNC) will ensure interoperable, secure and affordable waveform and wireless communications by recommending standards, conducting compliance and certification assessments in accordance with DoD policies, and maintaining a Department of Defense (DoD) Waveform Information Repository (IR).
This mission is executed in conjunction with other government agencies to include the National Security Agency (NSA), the Joint Interoperability Test Command (JITC), and the National Telecommunication and Information Administration (NTIA), as well as the Services. Particular attention is paid to ensuring that interagency work is collaborative and eliminates duplicative capability.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Wideband Networking Waveform (WNW)	-	3.150	-
Articles:	-	-	-
Description: Wideband Networking Waveform (WNW) is a high data rate Mobile Adhoc NETworking (MANET) waveform application that provides the mid tier tactical Internet backbone and connects tactical forces across the battle sphere. WNW will			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605030A / *Joint Tactical Network Center (JTNC)*	**Project (Number/Name)** EA8 / *Joint Tactical Network Center (JNTC)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
provide high throughput, dynamically adaptable connectivity for the exchange of Internet Protocol (IP) based voice, data, and video traffic. WNW will feature two signals-in-space (SiS), which are the Orthogonal Frequency Division Multiplexing (OFDM) and Anti-Jam (AJ). WNW will support network nodes on mobile, airborne, and maritime platforms. WNW includes networking services, security, High Assurance IP Equipment (HAIPE) capabilities, red black switching, and internal routing of other WNW signals. WNW is currently ported on 8 platforms with 8 different vendors. ***FY 2014 Plans:*** Maintain test facility to conduct WNW test and evaluation. Develop test plans and procedures for full WNW Waveform Conformance for WNW 4.0.7. Continue enhancements, software modifications and software version drops (v4.0.8).			
Title: Soldier Radio Waveform (SRW)	-	1.107	-
Articles:	-	-	-
Description: Soldier Radio Waveform (SRW) will operate on tactical radio sets to provide a networked battlefield communications capability for power disadvantaged users engaged in land combat operations and will support voice, data, and video communications on the immediate battlefield. These forces include vehicles, rotary wing, dismounted soldiers, munitions, sensors, and unmanned air vehicles (UAV). Functional software applications will use SRW enabled JTR sets over IP capable networks and sub-networks. SRW will be interoperable with higher throughput, IP-based network waveforms, such as WNW. As applicable, these IP-based networking waveforms will enable information exchanges through the GIG to the soldier and provide entirely new capabilities for battlefield communications and information sharing. SRW is currently ported on 20 different platforms with 13 different vendors. ***FY 2014 Plans:*** Continue Information Assurance (IA) assessments, develop test plans and procedures for full SRW waveform conformance, enhancement to SRW v1.2 and software version drop (v1.2E).			
Title: Mobile User Objective System (MUOS) Waveform	-	0.613	-
Articles:	-	-	-
Description: Mobile User Objective System (MUOS) Waveform will enable MUOS satellites to provide worldwide communication satellite coverage for DoD requirements. MUOS will provide functionality comparable to commercial mobile phone systems. MUOS offers secure streaming video, netted communications, and voice/data in real time to provide essential connectivity. The JTN program will modify this waveform, making it compatible and certifiable with DoD security requirements while enabling porting to tactical radio sets. MUOS is currently being ported by 7 vendors on 7 different platforms. ***FY 2014 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605030A / *Joint Tactical Network Center (JTNC)*	**Project (Number/Name)** EA8 / *Joint Tactical Network Center (JNTC)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Continue software testing, upgrades, enhancements, software modifications and software version drop (v3.1.2) to meet DoD requirements.			
Title: JTRS Network Enterprise Services (JNES)/Joint Enterprise Net Manager (JENM)	-	20.875	-
Articles:	-	-	-
Description: Joint Enterprise Net Manager (JENM): Prior to FY13, JTRS Network Enterprise Services (JNES) included the development and acquisition of JTRS WNW Network Manager (JWNM), Joint Enterprise Net Manager (JENM), Soldier Radio Waveform Network Manager (SRWNM), and Enterprise Network Services (ENS). In FY13 and out, JENM provides consolidated communications planning, network configuration, network activation, position reporting, fault management, security management, and network health and status reporting needed to establish and maintain a mobile wireless network comprised of JTN network waveforms. JENM can interface with other external network managers, mission planning systems, network planning systems, key management systems, and spectrum planning systems. JENM is considered a mission essential system. JENM is also considered a critical element within the J-TNT configuration management tool kit. ***FY 2014 Plans:*** Continue Information Assurance (IA) assessments, enhancements, software modifications, upgrades with full capability to JENM v1 and JENM v2 and software version drops (v1.2.7, v1.2.8, v1.2.9, v1.2.11, v2.5.3, v2.6-2.8).			
Title: Legacy Radio Waveforms/Program Management	-	42.367	8.440
Articles:	-	-	-
Description: Legacy Radio Waveforms/Program Management: Includes the continued development, incremental upgrades, and software efficiencies of legacy software and other related activities to support the legacy waveform integration into hardware solutions in the field. ***FY 2014 Plans:*** Continue to support waveform integration, test and evaluation to include hardware and software waveform Certification Process to meet program requirements. Continue Joint Tactical Networking Center (JTNC) and Joint Tactical Networks (JTN) program management office support. ***FY 2015 Plans:*** Continue to support waveform integration, test and evaluation to include hardware and software waveform Certification Process to meet program requirements. Continue to provide DoD Waveform IR management, configuration control, and technical assessments of DoD Waveform Information Repository products for Legacy waveforms. Continue JTNC program management office support.			
Accomplishments/Planned Programs Subtotals	-	68.112	8.440

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605030A / *Joint Tactical Network Center (JTNC)*	**Project (Number/Name)** EA8 / *Joint Tactical Network Center (JNTC)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• 0604280N: *0604280N: JNED, RDTE,N*	59.077	-	-	-	-	-	-	-	-	-	59.077
• 0605030N: *0605030N: JTNC, RDTE,N*	-	-	-	-	-	12.407	12.527	12.913	13.242	Continuing	Continuing
• 0605030F: *0605030F: JTNC, RDTE,F*	-	-	-	-	-	22.346	22.255	22.656	23.064	Continuing	Continuing
• 0303109N: *0303109N: JNED, O&M,N*	42.264	-	-	-	-	-	-	-	-	-	42.264

Remarks

In FY 2013, the Joint Tactical Networking Center (JTNC) was funded in the Navy Program Element (PE) 0604280N, Project No. 3076 formally known as JTRS Network Enterprise Domain (JNED). This was a shared line with JTN. In FY 2014 funding that resides in Army PE 0605030A represents the total JTNC and Joint Tactical Networks (JTN) Budget. FY 2015 PE 0605030A represents only the JTNC funding. FY16-19 0605030A represents both the Joint Tactical Networks and JTNC funding. In accordance with the Joint Tactical Networking Center Acquisition Decision Memorandum and Charter dated 20 January 2014, the JTNC Program will remain under a joint budget strategy in the three MILDEPs in new PEs (Army PE 0605030A, Navy PE 0605030N, and Air Force PE 0605030F). As part of the joint program budget strategy, each MILDEP budgets for approximately one-third of the total program RDT&E funds. Prior to the year of execution, the JTNC funding is consolidated in the Army PE (0605030A). JTN funding will be executed out of Army PE (0605031A). JTN and JTNC funding allocation will be separated based on the Tri-Service Resource Plan, which is projected to be completed in the 3rd quarter of FY14.

D. Acquisition Strategy

Joint Tactical Networking Center core functions as defined in the JTNC Acquisition Decision Memorandum and Charter signed on 20 January 2014 include: Department of Defense (DoD) Waveform Standards and Software Communications Architecture (SCA), technical assessments of DoD Waveform Information Repository (IR) products, DoD Waveform IR Management and Configuration Control. The services derived from these core functions reinforce an acquisition environment where wireless communications products are interoperable, secure, and affordable.

The FY 2015 Budget supports continued development of waveforms/supporting software, testing support, and the National Security Agency (NSA) evaluation of software Information Assurance (IA) compliance.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605030A / *Joint Tactical Network Center (JTNC)*	Project (Number/Name) EA8 / *Joint Tactical Network Center (JNTC)*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	Various	Various: : Various	0.000	-		6.101	Mar 2014	2.159	Dec 2014	-		2.159	Continuing	Continuing	Continuing
		Subtotal	0.000	-		6.101		2.159		-		2.159	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Network Enterprise Services Development	C/CPIF	Boeing: : Huntington Beach, CA	0.000	-		15.371	Apr 2014	-		-		-	-	15.371	-
Product Development WNW	C/CPIF	General Dynamics : Scottsdale, AZ	0.000	-		2.150	Apr 2014	-		-		-	-	2.150	-
Product Development SRW	C/CPIF	Harris Corp : Rochester, NY	0.000	-		1.107	Mar 2014	-		-		-	-	1.107	-
Post Formal Qualification Testing- LINK 16	C/CPIF	BAE: : Wayne, NJ	0.000	-		3.150	Mar 2014	-		-		-	Continuing	Continuing	Continuing
Post Formal Qualification Testing- JENM	C/CPIF	Boeing: : Huntington Beach, CA	0.000	-		0.823	Mar 2014	-		-		-	Continuing	Continuing	Continuing
Post Formal Qualification Testing: JENM	C/CPFF	Exelis Inc. : Alexandria, VA	0.000	-		4.681	Apr 2014	-		-		-	-	4.681	-
Post Formal Qualification Testing- MUOS	C/CPIF	Lockheed Martin Corp : Sunnyvale, CA	0.000	-		0.613	Mar 2014	-		-		-	Continuing	Continuing	Continuing
Post Formal Qualification Testing- WNW	C/CPIF	General Dynamics: : Scottsdale, AZ	0.000	-		1.000	Mar 2014	-		-		-	Continuing	Continuing	Continuing
Post Formal Qualification Testing- SRW	C/CPIF	Harris: : Rochester, NY	0.000	-		-		-		-		-	Continuing	Continuing	Continuing
Post FQT / Software Sustainment	MIPR	SSC PAC: : San Diego, CA	0.000	-		10.142	Feb 2014	-		-		-	Continuing	Continuing	Continuing
Certification (Interim SCA Compliance Testing)	MIPR	NSA: : Ft. Meade, MD	0.000	-		0.435	Mar 2014	0.611	Oct 2014	-		0.611	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605030A / *Joint Tactical Network Center (JTNC)*	**Project (Number/Name)** EA8 / *Joint Tactical Network Center (JNTC)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Post FQT/ software Sustainment	MIPR	SSC LANT : Charleston, SC	0.000	-		5.379	Feb 2014	-		-		-	-	5.379	-
Post FQT/ Software Sustainment	MIPR	CERDEC : APG, MD	0.000	-		1.445	Feb 2014	-		-		-	-	1.445	-
		Subtotal	0.000	-		46.296		0.611		-		0.611	-	-	-

Remarks

In accordance with the Joint Tactical Networking Center Acquisition Decision Memorandum and Charter dated 20 January 2014, the JTNC Program will remain under a joint budget strategy in the three MILDEPs in new PEs (Army PE 0605030A, Navy PE 0605030N, and Air Force PE 0605030F). As part of the joint program budget strategy, each MILDEP budgets for approximately one-third of the total program RDT&E funds. Prior to the year of execution, the JTNC funding is consolidated in the Army PE (0605030A). JTN funding will be executed out of Army PE (0605031A). JTN and JTNC funding allocation will be separated based on the Tri-Service Resource Plan, which is projected to be completed in the 3rd quarter of FY14.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JTN/JTNC Engineering/ Technical Support	Various	Various: : Various	0.000	-		15.479	Mar 2014	5.670	Dec 2014	-		5.670	Continuing	Continuing	Continuing
Engineering Support	FFRDC	MITRE Corporation : McLean, VA	0.000	-		0.236	Feb 2014	-		-		-	-	0.236	-
		Subtotal	0.000	-		15.715		5.670		-		5.670	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		68.112		8.440		-		8.440	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605030A / *Joint Tactical Network Center (JTNC)*	**Project (Number/Name)** EA8 / *Joint Tactical Network Center (JNTC)*

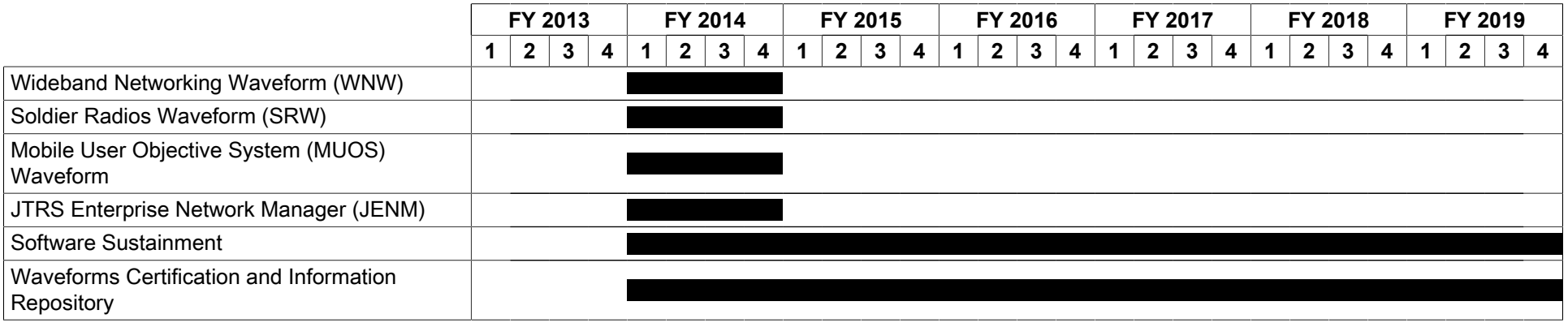

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605030A / *Joint Tactical Network Center (JTNC)*	**Project (Number/Name)** EA8 / *Joint Tactical Network Center (JNTC)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Wideband Networking Waveform (WNW)	1	2014	4	2014
Soldier Radios Waveform (SRW)	1	2014	4	2014
Mobile User Objective System (MUOS) Waveform	1	2014	4	2014
JTRS Enterprise Network Manager (JENM)	1	2014	4	2014
Software Sustainment	1	2014	4	2019
Waveforms Certification and Information Repository	1	2014	4	2019

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0605031A *I Joint Tactical Network (JTN)*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	-	-	17.999	-	17.999	-	-	-	-	-	17.999
EF5: *Joint Tactical Network (JTN)*	-	-	-	17.999	-	17.999	-	-	-	-	-	17.999

The FY 2015 OCO Request will be submitted at a later date.

Note

In accordance with the signed Joint Tactical Networking Center Acquisition Decision Memorandum and Charter dated 20 January 2014, funds from PE 0605030A were aligned to PE 0605031A prior to the year of execution.

A. Mission Description and Budget Item Justification

Joint Tactical Networks (JTN) Deliver, maintain, upgrade and enhance portable, interoperable, mobile ad hoc networking waveforms and network enterprise services to enhance tactical warfighting capabilities.

JTN applications are: (1) Interoperable – among all Services, capable of operating in a variety of hardware items, for both Program of Record and commercial Non-Developmental Item (NDI) radios; (2) Secure – meet all DoD and US Govt information assurance requirements; (3) Operationally Relevant – quickly and effectively meet evolving network mission requirements of Combatant Commanders and the Services; (4) Affordable – drive down procurement and support costs via a robust, competitive NDI market which adheres to open government standards.

In accordance with the Joint Tactical Networking Center ADM and Charter dated 20 January, 2014, the JTN is to actively manage and fund the development, update and sustaining of the Soldier Radio Waveform (SRW), the Wideband Networking Waveform (WNW), the Mobile User Objective System (MUOS), the Link-16 waveform, and the Joint Enterprise Network Manager (JENM). Due to the JTN's extensive knowledge and expertise, the JTN will also enhance, update, and sustain the following legacy waveforms on a reimbursable basis: the High Frequency (HF) waveform, the merged HAVE QUICK II (HQII) and Very High Frequency (VHF)/Ultra High Frequency (UHF) Line of Sight (VULOS) waveforms, the JTRS Bowman waveform (JBW), the SINCGARS waveform and the UHF Satellite Communications (SATCOM) waveform.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army					Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*			R-1 Program Element (Number/Name) PE 0605031A / *Joint Tactical Network (JTN)*		
B. Program Change Summary ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO**	**FY 2015 Total**
Previous President's Budget	-	-	-	-	-
Current President's Budget	-	-	17.999	-	17.999
Total Adjustments	-	-	17.999	-	17.999
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	17.999	-	17.999

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0605031A / *Joint Tactical Network (JTN)*				Project (Number/Name) EF5 / *Joint Tactical Network (JTN)*			
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
EF5: *Joint Tactical Network (JTN)*	-	-	-	17.999	-	17.999	-	-	-	-	-	17.999
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

In FY 2013 and Prior Years, the Joint Tactical Networks (JTN) was funded in the Navy Program Element (PE) 0604280N, Project No. 3076 formally known as JTRS Network Enterprise Domain (JNED). Program Element (PE) 0604280N represents the total JTRS RDT&E Budget (includes Multifunctional Information Distribution System (MIDS), Airborne and Maritime/Fixed Station (AMF) JTRS, Ground Mobile Radio (GMR) JTRS, Handheld/Manpack/Small Form Fit (HMS) JTRS, and JTRS Network Enterprise Domain (JNED) and Digital Modular Radios (DMR)).
In FY 2014 funding that resides in Army PE 0605030A represents the total JTN and Joint Tactical Networking Center (JTNC) budget.
In FY 2015 PE 0605031A represents the total JTN budget.

In accordance with the Acquisition Decision Memorandum (ADM) dated 11 July 2012, the JTRS Program of Records (PORs) transitioned to Military Department (MILDEP) managed programs. The continuing Joint Tactical Networks (JTN) will remain under a joint budget strategy in three MILDEPs in PEs (Army PE 0605030A, Navy PE 0605030N, and Air Force PE 0605030F). As part of the joint program budget strategy, each MILDEP budgets for approximately one-third of the total program RDT&E funds. The Joint Tactical Networking Center (JTNC) ADM and Charter dated 20 January 2014, disseminate the JTNC from JTN. Prior to the year of execution, the JTN funding is consolidated in the Army PE (0605031A) and software sustainment funds to be transferred from RDT&E to O&M,A PE (4326750A) in fiscal year of execution as part of the JTN joint program acquisition strategy.

The Joint Tactical Networks (JTN) is a joint Department of Defense (DoD) effort to develop and sustain waveforms and network enterprise services that are used by DoD software defined radios.

A. Mission Description and Budget Item Justification

Joint Tactical Networks (JTN) Deliver, maintain, upgrade and enhance portable, interoperable, mobile ad hoc networking waveforms and network enterprise services to enhance tactical warfighting capabilities.
JTN applications are: (1) Interoperable – among all Services, capable of operating in a variety of hardware items, for both Program of Record and commercial Non-Developmental Item (NDI) radios; (2) Secure – meet all DoD and US Govt information assurance requirements; (3) Operationally Relevant – quickly and effectively meet evolving network mission requirements of Combatant Commanders and the Services; (4) Affordable – drive down procurement and support costs via a robust, competitive NDI market which adheres to open government standards.
In accordance with the Joint Tactical Networking Center Acquisition Decision Memorandum (ADM) and Charter dated 20 January, 2014, the JTN is to actively manage and fund the development, update and sustaining of the Soldier Radio Waveform (SRW), the Wideband Networking Waveform (WNW), the Mobile User Objective System (MUOS), the Link-16 waveform, and the Joint Enterprise Network Manager (JENM). Due to the JTN's extensive knowledge and expertise, the JTN will also

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605031A / *Joint Tactical Network (JTN)*	**Project (Number/Name)** EF5 / *Joint Tactical Network (JTN)*

enhance, update, and sustain the following legacy waveforms on a reimbursable basis: the High Frequency (HF) waveform, the merged HAVE QUICK II (HQII) and Very High Frequency (VHF)/Ultra High Frequency (UHF) Line of Sight (VULOS) waveforms, the JTRS Bowman waveform (JBW), the SINCGARS waveform and the UHF Satellite Communications (SATCOM) waveform.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Legacy Radio Waveforms/Program Management ***Description:*** Legacy Radio Waveforms/Program Management: Includes the continued development, incremental upgrades, and software efficiencies of legacy software and other related activities to support the legacy waveform integration into hardware solutions in the field. ***FY 2015 Plans:*** Continue to support waveform integration, test and evaluation, and program management office support.	-	-	10.493
Title: Solder Radio Waveform (SRW) ***Description:*** Soldier Radio Waveform (SRW) will operate on tactical radio sets to provide a networked battlefield communications capability for power disadvantaged users engaged in land combat operations and will support voice, data, and video communications on the immediate battlefield. These forces include vehicles, rotary wing, dismounted soldiers, munitions, sensors, and unmanned air vehicles (UAV). Functional software applications will use SRW enabled JTR sets over Internet Protocol (IP) capable networks and sub-networks. SRW will be interoperable with higher throughput, IPbased network waveforms, such as Wideband Networks Waveform (WNW). As applicable, these IP-based networking waveforms will enable information exchanges through the GIG to the soldier and provide entirely new capabilities for battlefield communications and information sharing. SRW is currently ported on 19 different platforms with 11 different vendors. ***FY 2015 Plans:*** Continue to develop test plans and procedures for full SRW waveform conformance, enhancements to SRW v1.2.1.	-	-	0.961
Title: Wideband Networking Waveform (WNW) ***Description:*** Wideband Networking Waveform (WNW) is a high data rate Mobile Adhoc NETworking (MANET) waveform application that provides the mid tier tactical Internet backbone and connects tactical forces across the battle sphere. WNW will provide high throughput, dynamically adaptable connectivity for the exchange of Internet Protocol (IP) based voice, data, and video traffic. WNW will feature two signals-in-space (SiS), which are the Orthogonal Frequency Division Multiplexing (OFDM) and Anti-Jam (AJ). WNW will support network nodes on mobile, airborne, and maritime platforms. WNW includes networking services, security, High Assurance IP Equipment (HAIPE) capabilities, red black switching, and internal routing of other WNW signals. WNW is currently ported on 7 platforms with 7 different vendors. ***FY 2015 Plans:***	-	-	2.758

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605031A / *Joint Tactical Network (JTN)*	**Project (Number/Name)** EF5 / *Joint Tactical Network (JTN)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Continue enhancements, software modifications and version drop. Maintain test facility to conduct WNW test and evaluation. Develop test plans and procedures for full WNW Waveform Conformance for WNW v4.0.9.			
Title: Mobile User Objective System (MUOS) Waveform ***Description:*** Mobile User Objective System (MUOS) Waveform will enable MUOS satellites to provide worldwide communication satellite coverage for DoD requirements. MUOS will provide functionality comparable to commercial mobile phone systems. MUOS offers secure streaming video, netted communications, and voice/data in real time to provide essential connectivity. The JTN program will modify this waveform, making it compatible and certifiable with DoD security requirements while enabling porting to tactical radio sets. MUOS is currently being ported by 7 vendors on 7 different platforms. ***FY 2015 Plans:*** Continue software testing, upgrades, enhancements, software modifications and software version drops to meet DoD requirements.	-	-	0.871
Title: Joint Enterprise Net Manager (JENM) ***Description:*** JTRS Network Enterprise Services (JNES)/Joint Enterprise Net Manager (JENM): Prior to FY13, JTRS Network Enterprise Services (JNES) included the development and acquisition of JTRS WNW Network Manager (JWNM), Joint Enterprise Net Manager (JENM), Soldier Radio Waveform Network Manager (SRWNM), and Enterprise Network Services (ENS). In FY13 and out, JENM provides consolidated communications planning, network configuration, network activation, position reporting, fault management, security management, and network health and status reporting needed to establish and maintain a mobile wireless network comprised of JTN network waveforms. JENM can interface with other external network managers, mission planning systems, network planning systems, key management systems, and spectrum planning systems. JENM is considered a mission essential system. JENM is also considered a critical element within the J-TNT configuration management tool kit. ***FY 2015 Plans:*** Continue enhancements, software modifications, upgrades with full capabilities to JENM v1 and JENM v2 and software version drops (v2.8 and v2.9).	-	-	2.916
Accomplishments/Planned Programs Subtotals	-	-	17.999

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• 0604280N: *0604280N: JNED, RDTE,N*	59.077	-	-	-	-	-	-	-	-	-	59.077

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605031A / *Joint Tactical Network (JTN)*	**Project (Number/Name)** EF5 / *Joint Tactical Network (JTN)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• 0303109N: *0303109N: JNED, O&M,N*	34.653	-	-	-	-	-	-	-	-	-	34.653
• 0605030A: *0605030A; JTNC, RDTE,A*	-	68.112	-	-	-	21.460	26.474	24.668	24.723	Continuing	Continuing
• 0605030F: *0605030F; JTNC, RDTE,F*	-	-	-	-	-	22.346	22.255	22.656	23.064	Continuing	Continuing
• 0605030N: *0605030N; JTNC, RDTE,N*	-	-	-	-	-	12.407	12.527	12.913	13.242	Continuing	Continuing
• 4326750A: *4326750A: JTN, O&M,A*	-	-	28.406	-	28.406	-	-	-	-	Continuing	Continuing

Remarks

In FY2013, the Joint Tactical Networking Center (JTNC) was funded in the Navy Program Element (PE) 0604280N, Project No. 3076 formally known as JTRS Network Enterprise Domain (JNED). This was a shared line with JTN.

In FY 2015 PE 0605031A represents the total JTN funding.

In accordance with the Acquisition Decision Memorandum (ADM) dated 11 July 2012, the JTRS Program of Records (PORs) transitioned to Military Department (MILDEP) managed programs. The continuing Joint Tactical Networks (JTN) will remain under a joint budget strategy in three MILDEPs in PEs (Army PE 0605030A, Navy PE 0605030N, and Air Force PE 0605030F). As part of the joint program budget strategy, each MILDEP budgets for approximately one-third of the total program RDT&E funds. The Joint Tactical Networking Center (JTNC) ADM and Charter dated 20 January 2014, disseminate the JTNC from JTN. Prior to the year of execution, the JTN funding is consolidated in the Army PE (0605031A) and software sustainment funds are realigned from RDT&E to O&M,A PE (4326750A) to support the JTN joint program acquisition strategy.

D. Acquisition Strategy

JTN develops, enhances, and sustains all portable, interoperable, mobile ad hoc joint waveforms and network manager products/applications. The networking waveforms (Soldier Radio Waveform (SRW), Wideband Networking Waveform (WNW), and Mobile User Objective System (MUOS)) and legacy (Link-16) waveforms and network enterprise services products (JTRS Enterprise Network Manager (JENM), etc.) are capable of operating in a variety of hardware transport solutions for both Program of Record (PoR) and commercial, non-developmental item (NDI) radios, increasing the level of joint interoperability for the tactical networks. JTN employs a competitive contracting strategy to ensure warfighter access to the best technology and capabilities while addressing threats and future requirements affordably, effectively, and in a timely fashion. The FY 2015 Budget supports continued development of waveforms/supporting software and testing.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605031A / *Joint Tactical Network (JTN)*	Project (Number/Name) EF5 / *Joint Tactical Network (JTN)*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	C/CPFF	Various : Various	0.000	-		-		1.799	Mar 2014	-		1.799	-	1.799	-
		Subtotal	0.000	-		-		1.799		-		1.799	-	1.799	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Post Formal Qualification Testing-Link 16	C/CPIF	BAE : Wayne, NJ	0.000	-		-		0.444	Dec 2014	-		0.444	-	0.444	-
Post Formal Qualitfication Testing-JENM	C/CPIF	Boeing : Huntington Beach, CA	0.000	-		-		2.916	Oct 2014	-		2.916	-	2.916	-
Post Formal Qualitfication Testing-MUOS	C/CPIF	Lockheed Martin Corp. : Sunnyvale, CA	0.000	-		-		0.871	Dec 2014	-		0.871	-	0.871	-
Post Formal Qualitfication Testing-WNW	C/CPIF	General Dynamiccs : Scottsdale, AZ	0.000	-		-		2.758	Dec 2014	-		2.758	-	2.758	-
Post Formal Qualitfication Testing-SRW	C/CPIF	Harris : Rochester, NY	0.000	-		-		0.961	Dec 2014	-		0.961	-	0.961	-
Post FQT/Software Sustainment	MIPR	SSC PAC : San Diego, CA	0.000	-		-		3.566	Oct 2014	-		3.566	-	3.566	-
Post FQT/Software Sustainment	MIPR	CERDEC : APG, MD	0.000	-		-		0.917	Oct 2014	-		0.917	-	0.917	-
Post FQT/Software Sustainment	MIPR	SSC LANT : Charleston, SC	0.000	-		-		0.917	Oct 2014	-		0.917	-	0.917	-
		Subtotal	0.000	-		-		13.350		-		13.350	-	13.350	-

Remarks

FY 2015 PE 0605031A represents the total JTN RDTE budget.

In accordance with the Acquisition Decision Memorandum (ADM) dated 11 July 2012, the JTRS Program of Records (PORs) transitioned to Military Department (MILDEP) managed programs. The continuing Joint Tactical Networks (JTN) will remain under a joint budget strategy in three MILDEPs in PEs (Army PE 0605030A, Navy PE 0605030N, and Air Force PE 0605030F). As part of the joint program budget strategy, each MILDEP budgets for approximately one-third of the total program RDT&E funds. The Joint

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605031A / *Joint Tactical Network (JTN)*	Project (Number/Name) EF5 / *Joint Tactical Network (JTN)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Tactical Networking Center (JTNC) ADM and Charter dated 20 January 2014, disseminate the JTNC from JTN. Prior to the year of execution, the JTN funding is consolidated in the Army PE (0605031A) and software sustainment funds are realigned from RDT&E to O&M,A PE (4326750A) to support the JTN joint program acquisition strategy.															

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development/Engineering/ Technical Support	C/CPFF	Various : various	0.000	-		-		2.850	Oct 2014	-		2.850	-	2.850	-
		Subtotal	0.000	-		-		2.850		-		2.850	-	2.850	-

	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		-		17.999		-		17.999	-	17.999	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605031A / *Joint Tactical Network (JTN)*	**Project (Number/Name)** EF5 / *Joint Tactical Network (JTN)*

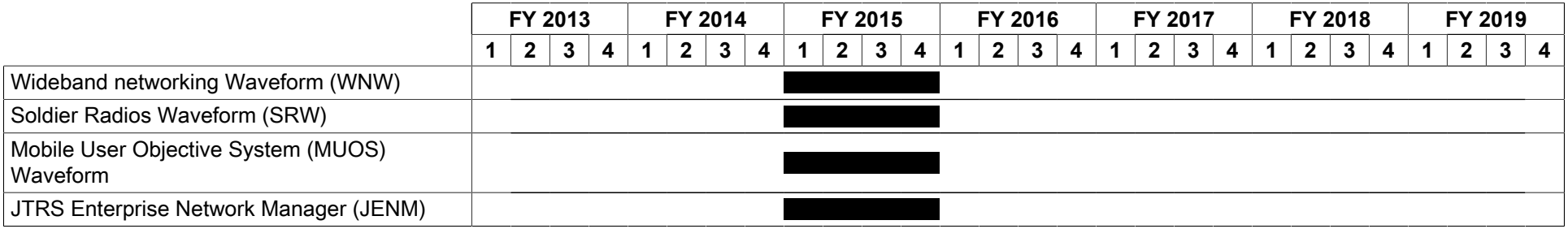

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605031A / *Joint Tactical Network (JTN)*	**Project (Number/Name)** EF5 / *Joint Tactical Network (JTN)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Wideband networking Waveform (WNW)	1	2015	4	2015
Soldier Radios Waveform (SRW)	1	2015	4	2015
Mobile User Objective System (MUOS) Waveform	1	2015	4	2015
JTRS Enterprise Network Manager (JENM)	1	2015	4	2015

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0605035A / *Aircraft Survivability Development*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	-	-	145.409	-	145.409	143.099	91.930	78.079	68.505	Continuing	Continuing
EB4: *COMMON INFRARED COUNTER MEASURE (CIRCM)*	-	-	-	128.252	-	128.252	116.166	68.601	50.500	62.681	Continuing	Continuing
EE3: *A/C SURV EQUIP DEV*	-	-	-	14.846	-	14.846	22.449	19.186	23.866	1.520	Continuing	Continuing
EE4: *COMMON MISSILE WARNING SYSTEM (CMWS)*	-	-	-	2.311	-	2.311	4.484	4.143	3.713	4.304	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Aircraft Survivability Development budget line includes Common Missile Warning System (EE4), Aircraft Survivability Equipment Development (EE3), and Common IR Counter Measure (EB4).

EE4:
The US Army operational requirements concept for Aviation Infrared (IR) countermeasure systems is known as the Suite of Integrated Infrared Countermeasures (SIIRCM). SIIRCM is an integrated warning and countermeasure system to enhance aircraft survivability against IR-guided threat missile systems. The Common Missile Warning System (CMWS) is a core element of the SIIRCM concept. CMWS is an integrated ultraviolet (UV) missile warning system, with an Improved Countermeasure Dispenser (ICMD) serving as a subsystem to a host aircraft.

The CMWS program is a UV missile warning system that cues both flare and laser-based countermeasures to defeat incoming IR-seeking missiles and will alert aircrews to the presence of certain incoming unguided munitions. The B-Kit consists of the components which perform the missile detection and aircrew notification, unguided munitions detection and aircrew notification, false alarm rejection, and countermeasure employment/cueing functions of the system. The CMWS Electronic Control Unit (ECU) receives UV missile detection data from Electro-Optic Missile Sensors (EOMS) and sends a missile alert signal to warn aircrews via on-board avionics. Tier 1 threat missiles detected and tracked by the CMWS are subsequently defeated by a combination of missile seeker countermeasures, including decoy flares and IR Laser Jamming (currently ATIRCM-equipped CH-47 platform only). In addition, the CMWS ECU receives from the EOMS unguided munitions detection data which it also passes to the aircrew through aural and visual alerts. The aircrew then applies the appropriate Tactics, Techniques and Procedures (TTPs) to break contact or engage the enemy with own-ship ordnance. The CMWS Generation 3 (Gen 3) ECU in conjunction with ongoing software development efforts will address outstanding material release conditions to achieve a Full Material Release (FMR) for CMWS and ensure protection against emerging IR-guided missile threats.

The A-Kit for CMWS includes mounting hardware, wiring harnesses, cables, and other components necessary to install and interface the mission kit on host aircraft. The A-Kit ensures the mission kit is functionally and physically operational with a specific host aircraft type.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0605035A *I Aircraft Survivability Development*

EE3:
The objective of the Aircraft Survivability Equipment (ASE) Development project is to improve Radio Frequency (RF) ASE for Army aviation. The APR-39 Radar Warning Receiver (RWR) detects, categorizes, and prioritizes Radio Frequency (RF) emitters and provides a visual / aural alert to aircrew members warning them of targeting by RF-guided weapons. The Milestone Decision Authority (MDA) approved Phases 1 and 2 of a 3-phased path forward.

Phase 1 serves as an obsolescence / sustainment upgrade to the Processor Line Replaceable Unit (LRU) of the AN/APR-39A(V) Radar Warning Receiver (RWR) implemented to ensure that the currently fielded system remains viable until affordable improved RF ASE capability can be pursued in Phases 2 and 3. Phase 2, RWR Modernization, adopts the ongoing United States Navy Class I RWR Engineering Change Proposal (ECP), commonly referred to as the APR-39D(V)2 system. APR-39D(V)2 will significantly improve the near-spherical RF threat coverage, automatic detection and identification of threat types, bearing, and lethality. Under Phase 2, the Army will develop enhancements to the APR-39D(V)2, including integrated suite control functionality, threat correlation and off-boarding capability, and hardware modifications required to maintain planned integrated jamming growth capability. Phase 3 adds active Electronic Countermeasures (ECM) jamming capability for selected aircraft; Materiel Development Decision (MDD) for this ECM jamming capability phase is not expected until later in the Future Years Defense Program (FYDP).

EB4:
The Common Infrared Countermeasure (CIRCM) is an infrared (IR) countermeasure system that interfaces with a Missile Warning System (MWS) to provide near spherical coverage of the host platform in order to defeat IR threat missiles. The CIRCM will provide the sole acquisition of future laser-based IR countermeasure systems for all rotary-wing, tilt-rotor, and small fixed-wing aircraft across the Department of Defense. The US Army's concept of CIRCM is part of the Suite of Integrated Infrared Countermeasures (SIIRCM). The core components of the SIIRCM concept are: a Missile Warning System (MWS), IR expendables countermeasures (flares) and a laser-based IRCM. The SIIRCM detects, declares and initiates IRCM against IR-guided Surface-to-Air Missiles (SAM) or Air-to-Air Missiles (AAM). The CIRCM is the next generation of the laser-based IRCM component and will interface with both the Army's Common Missile Warning System (CMWS) and the Navy's Joint and Allied Threat Awareness System (JATAS). CIRCM was approved to be funded to the Director, Cost Assessment and Program Evaluation Independent Cost Estimate (CAPE ICE) through Milestone B (MS B) per Defense Acquisition Executive Acquisition Decision Memorandum (DAE) (ADM), December 28, 2011.

The A-Kit for CIRCM includes mounting hardware, wiring harnesses, cables, and other components necessary to install and interface the mission kit on host aircraft. The A-Kit ensures the mission kit is functionally and physically operational with a specific host aircraft type. The CIRCM B-Kit is the mission kit (laser, pointer tracker, and controller) required to achieve near spherical coverage for an aircraft.

EE4 Justification:
Fiscal Year (FY) 2015 Base RDT&E dollars in the amount of $2.311 million supports development engineering of the Threat Analysis Database (TAD) and integration with other Aircraft Survivability Equipment systems.

EE3 Justification:

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0605035A *I Aircraft Survivability Development*

Fiscal Year (FY) 2015 Base RDT&E funding of $14.846 million funds testing of Phase 2 APR-39D(V)2 RWR prototypes, Mission Data Set (MDS) development, continued platform integration on AH-64E, and integration with other ASE systems.

EB4 Jsutification:
Fiscal Year 2015 Base RDT&E in the amount of $128.252 million supports the Engineering and Manufacturing Development (EMD) phase to include platform integration as well as integration with other Aircraft Survivability Equipment (ASE) systems.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	-	-	-	-	-
Current President's Budget	-	-	145.409	-	145.409
Total Adjustments	-	-	145.409	-	145.409
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-	-	145.409	-	145.409

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605035A / *Aircraft Survivability Development*	Project (Number/Name) EB4 / *COMMON INFRARED COUNTER MEASURE (CIRCM)*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EB4: *COMMON INFRARED COUNTER MEASURE (CIRCM)*	-	-	-	128.252	-	128.252	116.166	68.601	50.500	62.681	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Previously funded in L20 and VU8, PE 0604270A (Electronic Warfare Development)

A. Mission Description and Budget Item Justification

The Common Infrared Countermeasure (CIRCM) is an infrared (IR) countermeasure system that interfaces with a Missile Warning System (MWS) to provide near spherical coverage of the host platform in order to defeat IR threat missiles. The CIRCM will provide the sole acquisition of future laser-based IR countermeasure systems for all rotary-wing, tilt-rotor, and small fixed-wing aircraft across the Department of Defense. The US Army's concept of CIRCM is part of the Suite of Integrated Infrared Countermeasures (SIIRCM). The core components of the SIIRCM concept are: a Missile Warning System (MWS), IR expendables countermeasures (flares) and a laser-based IRCM. The SIIRCM detects, declares and initiates IRCM against IR-guided Surface-to-Air Missiles (SAM) or Air-to-Air Missiles (AAM). The CIRCM is the next generation of the laser-based IRCM component and will interface with both the Army's Common Missile Warning System (CMWS) and the Navy's Joint and Allied Threat Awareness System (JATAS). CIRCM was approved to be funded to the Director, Cost Assessment and Program Evaluation Independent Cost Estimate (CAPE ICE) through Milestone B (MS B) per Defense Acquisition Executive Acquisition Decision Memorandum (DAE) (ADM), December 28, 2011.

The A-Kit for CIRCM includes mounting hardware, wiring harnesses, cables, and other components necessary to install and interface the mission kit on host aircraft. The A-Kit ensures the mission kit is functionally and physically operational with a specific host aircraft type. The CIRCM B-Kit is the mission kit (laser, pointer tracker, and controller) required to achieve near spherical coverage for an aircraft.

Justification:
Fiscal Year 2015 Base RDT&E in the amount of $128.252 million supports the Engineering and Manufacturing Development (EMD) phase to include platform integration as well as integration with other Aircraft Survivability Equipment (ASE) systems.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Development Efforts	-	-	128.252
Description: RDT&E dollars begin the design and development of the CIRCM system.			
FY 2015 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605035A / *Aircraft Survivability Development*	**Project (Number/Name)** EB4 / *COMMON INFRARED COUNTER MEASURE (CIRCM)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
RDT&E dollars support the CIRCM EMD phase, prototype manufacturing for 14 prototypes, and platform integration. "Other Testing" includes funds to acquire test threat assets.			
Accomplishments/Planned Programs Subtotals	-	-	128.252

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• .: *APA Funding:* *APA, BA 4, AZ3537*	-	-	-	-	-	-	51.417	100.409	157.627	Continuing	Continuing

Remarks

D. Acquisition Strategy

The December 28, 2011 DAE ADM authorized entry into the Technology Development (TD) phase, designated the program a pre-Major Defense Acquisition Program (MDAP), and approved the updated exit criteria. After a full and open competition beginning in the second quarter of Fiscal Year 2011 (FY11), two contractors were selected and awarded Technology Development contracts on January 31, 2012 for the CIRCM. The CIRCM contract awards were followed by a contractor protest which resulted in a work stoppage of 100 days. Government Accountability Office (GAO) ruled in favor of the Government on all counts and the effort was re-initiated on May 23, 2012. CIRCM will continue pre-MS B activities and initiate a competitive procurement for EMD in the third quarter of FY14. MS B approval is anticipated in first quarter of FY15, followed by award of the EMD contract in the second quarter of FY15 to one vendor. The EMD contract will include priced options for Low Rate Initial Production (LRIP) 1 and 2, Engineering Support, A-Kit development for other aircraft, a Technical Data Package (TDP) (which will enable competition for Full Rate Production (FRP)), and Defense Exportability Features (DEF). Upon CIRCM MS C approval in the second quarter of FY17, the LRIP and Engineering Support options may be exercised and the program may immediately enter the Production & Deployment phase. Currently, the Product Manager (PdM) Countermeasures intends to pursue competition for the award of a fixed price contract for CIRCM FRP if the option is exercised to procure the TDP.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605035A / *Aircraft Survivability Development*	Project (Number/Name) EB4 / *COMMON INFRARED COUNTER MEASURE (CIRCM)*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Data	Various	Various : -	0.000	-		-		0.111		-		0.111	Continuing	Continuing	Continuing
System Engineering Program Management	Various	Various : -	0.000	-		-		12.297		-		12.297	Continuing	Continuing	Continuing
		Subtotal	0.000	-		-		12.408		-		12.408	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Non-Recurring Engineering (NRE)	C/CPFF	Various : -	0.000	-		-		41.253	Mar 2015	-		41.253	Continuing	Continuing	Continuing
TD Bridge Activity	C/CPFF	Various : -	0.000	-		-		-		-		-	Continuing	Continuing	Continuing
Prototype Manufacturing	C/FFP	Various : -	0.000	-		-		39.456	Mar 2015	-		39.456	Continuing	Continuing	Continuing
Development Facilities	Various	Various : -	0.000	-		-		-		-		-	Continuing	Continuing	Continuing
Other R&D	Various	Various : -	0.000	-		-		6.100		-		6.100	Continuing	Continuing	Continuing
		Subtotal	0.000	-		-		86.809		-		86.809	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Support Equipment	Various	Various : -	0.000	-		-		1.806		-		1.806	Continuing	Continuing	Continuing
		Subtotal	0.000	-		-		1.806		-		1.806	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government System Test and Evaluation	Various	Various : -	0.000	-		-		-		-		-	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605035A / *Aircraft Survivability Development*	Project (Number/Name) EB4 / *COMMON INFRARED COUNTER MEASURE (CIRCM)*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Other Testing	Various	Various : -	0.000	-		-		27.229		-		27.229	Continuing	Continuing	Continuing
		Subtotal	0.000	-		-		27.229		-		27.229	-	-	-

	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		-		128.252		-		128.252	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605035A / *Aircraft Survivability Development*	**Project (Number/Name)** EB4 / *COMMON INFRARED COUNTER MEASURE (CIRCM)*

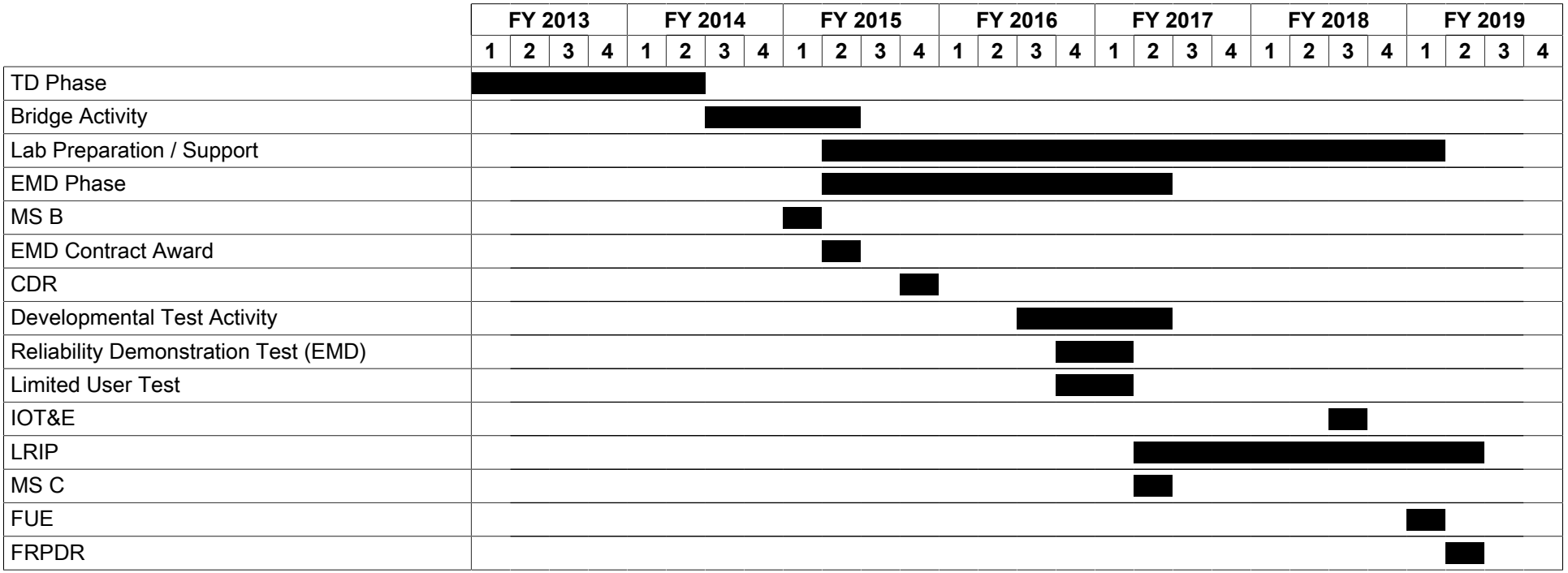

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605035A / *Aircraft Survivability Development*	**Project (Number/Name)** EB4 / *COMMON INFRARED COUNTER MEASURE (CIRCM)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
TD Phase	3	2012	2	2014
Bridge Activity	3	2014	2	2015
Lab Preparation / Support	2	2015	1	2019
EMD Phase	2	2015	2	2017
MS B	1	2015	1	2015
EMD Contract Award	2	2015	2	2015
CDR	4	2015	4	2015
Developmental Test Activity	3	2016	2	2017
Reliability Demonstration Test (EMD)	4	2016	1	2017
Limited User Test	4	2016	1	2017
IOT&E	3	2018	3	2018
LRIP	2	2017	2	2019
MS C	2	2017	2	2017
FUE	1	2019	1	2019
FRPDR	2	2019	2	2019

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605035A / *Aircraft Survivability Development*	Project (Number/Name) EE3 / *A/C SURV EQUIP DEV*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EE3: *A/C SURV EQUIP DEV*	-	-	-	14.846	-	14.846	22.449	19.186	23.866	1.520	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Previously funded in 665, PE 0604270A Electronic Warfare Development

A. Mission Description and Budget Item Justification

The objective of the Aircraft Survivability Equipment (ASE) Development project is to improve Radio Frequency (RF) ASE for Army aviation. The APR-39 Radar Warning Receiver (RWR) detects, categorizes, and prioritizes Radio Frequency (RF) emitters and provides a visual / aural alert to aircrew members warning them of targeting by RF-guided weapons. The Milestone Decision Authority (MDA) approved Phases 1 and 2 of a 3-phased path forward.

Phase 1 serves as an obsolescence / sustainment upgrade to the Processor Line Replaceable Unit (LRU) of the AN/APR-39A(V) Radar Warning Receiver (RWR) implemented to ensure that the currently fielded system remains viable until affordable improved RF ASE capability can be pursued in Phases 2 and 3. Phase 2, RWR Modernization, adopts the ongoing United States Navy Class I RWR Engineering Change Proposal (ECP), commonly referred to as the APR-39D(V)2 system. APR-39D(V)2 will significantly improve the near-spherical RF threat coverage, automatic detection and identification of threat types, bearing, and lethality. Under Phase 2, the Army will develop enhancements to the APR-39D(V)2, including integrated suite control functionality, threat correlation and off-boarding capability, and hardware modifications required to maintain planned integrated jamming growth capability. Phase 3 adds active Electronic Countermeasures (ECM) jamming capability for selected aircraft; Materiel Development Decision (MDD) for this ECM jamming capability phase is not expected until later in the Future Years Defense Program (FYDP).

Justification: Fiscal Year (FY) 2015 Base RDT&E funding of $14.846 million funds testing of Phase 2 APR-39D(V)2 RWR prototypes, Mission Data Set (MDS) development, continued platform integration on AH-64E, and integration with other ASE systems.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Phase 2 Radio Frequency CM	-	-	14.846
Description: Phase 2 Product Development (Digital RWR)			
FY 2015 Plans: Will fund testing of Phase 2 prototypes, Mission Data Set (MDS) development, platform integration on AH-64E, and integration with other ASE systems.			
Accomplishments/Planned Programs Subtotals	-	-	14.846

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605035A / *Aircraft Survivability Development*	**Project (Number/Name)** EE3 / *A/C SURV EQUIP DEV*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• AZ3511: *Radio Frequency CM (AZ3511)*	-	-	33.554	-	33.554	103.916	147.039	23.752	41.228	Continuing	Continuing

Remarks

D. Acquisition Strategy

Army RF ASE is managed by Project Manager ASE (PM ASE) for development, testing, procurement, integration and installation on Army rotary wing and small fixed wing aviation platforms. PM ASE proposed a three-phased path forward commensurate with user priorities and affordability considerations. Phase 1, approved by the Milestone Decision Authority (MDA), addresses obsolescence/Diminishing Manufacturing Sources (DMS) issues associated with the currently fielded AN/APR-39A(V) Radar Warning Receiver (RWR) via sole source Engineering Change Proposal (ECP) awarded to the APR-39A manufacturer. Phase 2 adopts the on-going United States Navy (USN) RWR Class I Correction of Deficiencies ECP commonly referred to as the APR-39D(V)2 system, limiting service-unique design, test, and integration expenses. Full Army participation throughout the remaining development, testing, procurement, fielding, and sustainment of the APR-39D(V)2 Digital RWR will address the significant Army RF capability gap while avoiding as much as $1 billion in additional costs associated with a single-Service solution. This multi-Service approach also fields an effective and suitable Material Solution 3 years sooner to support the re-balance of the National Defense Strategy to the RF threat-heavy Asia-Pacific Region. Phase 3 will develop and integrate active Electronic Countermeasures jamming capability for select aircraft.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605035A / *Aircraft Survivability Development*	Project (Number/Name) EE3 / *A/C SURV EQUIP DEV*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Other Development	TBD	Various : -	7.985	-		-		-		-		-	Continuing	Continuing	Continuing
Project Management	Various	Various : -	0.182	-		-		0.202		-		0.202	Continuing	Continuing	Continuing
		Subtotal	8.167	-		-		0.202		-		0.202	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Digital Radar Warning Receiver (RWR)	Various	Lab Demo / Study : Various	10.634	-		-		-		-		-	Continuing	Continuing	Continuing
S/W Development	MIPR	ARAT : Aberdeen Proving Ground, MD	0.000	-		-		1.000		-		1.000	Continuing	Continuing	Continuing
SIL Updates	MIPR	I2WD : Aberdeen Proving Ground, MD	0.000	-		-		1.000		-		1.000	Continuing	Continuing	Continuing
Depot Standup	MIPR	Tobyhanna : Tobyhanna, PA	0.000	-		-		-		-		-	Continuing	Continuing	Continuing
Platform Integration	Various	TBD : -	0.000	-		-		6.042		-		6.042	Continuing	Continuing	Continuing
		Subtotal	10.634	-		-		8.042		-		8.042	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Support	Various	Various : -	2.359	-		-		0.400		-		0.400	Continuing	Continuing	Continuing
Matrix Support	Various	Various : -	6.236	-		-		0.590		-		0.590	Continuing	Continuing	Continuing
		Subtotal	8.595	-		-		0.990		-		0.990	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605035A / *Aircraft Survivability Development*	Project (Number/Name) EE3 / *A/C SURV EQUIP DEV*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Multi-Service DT/OT	TBD	Various : -	0.025	-		-		5.612		-		5.612	Continuing	Continuing	Continuing
		Subtotal	0.025	-		-		5.612		-		5.612	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	27.421	-		-		14.846		-		14.846	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605035A / *Aircraft Survivability Development*	**Project (Number/Name)** EE3 / *A/C SURV EQUIP DEV*

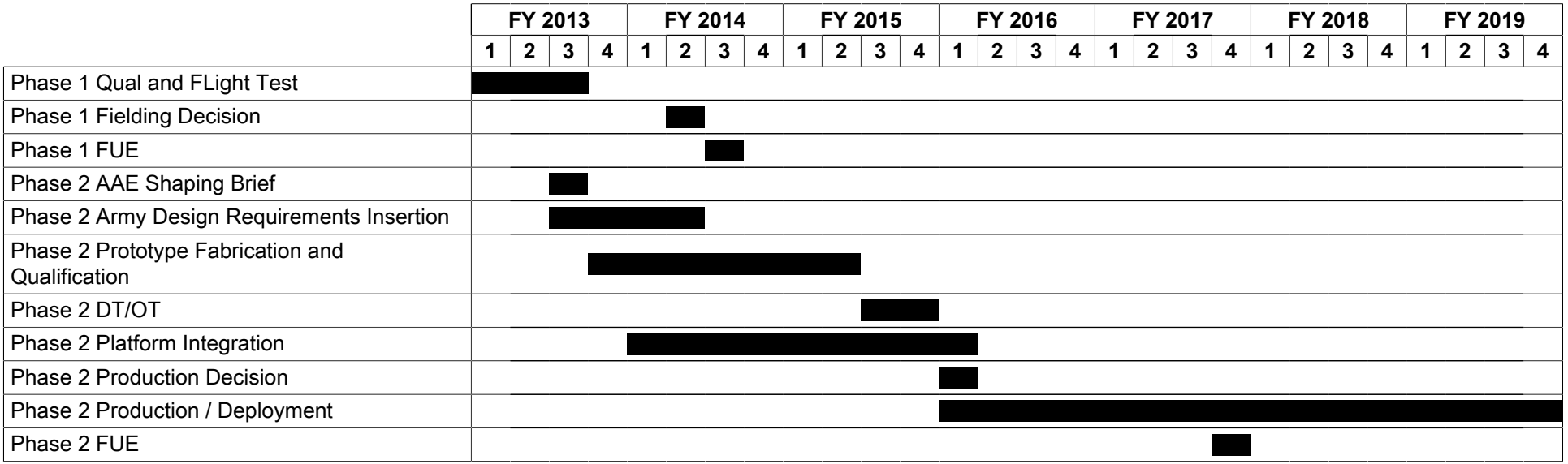

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605035A / *Aircraft Survivability Development*	**Project (Number/Name)** EE3 / *A/C SURV EQUIP DEV*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Phase 1 Qual and FLight Test	3	2012	3	2013
Phase 1 Fielding Decision	2	2014	2	2014
Phase 1 FUE	3	2014	3	2014
Phase 2 AAE Shaping Brief	3	2013	3	2013
Phase 2 Army Design Requirements Insertion	3	2013	2	2014
Phase 2 Prototype Fabrication and Qualification	4	2013	2	2015
Phase 2 DT/OT	3	2015	4	2015
Phase 2 Platform Integration	1	2014	1	2016
Phase 2 Production Decision	1	2016	1	2016
Phase 2 Production / Deployment	1	2016	4	2019
Phase 2 FUE	4	2017	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605035A / *Aircraft Survivability Development*	Project (Number/Name) EE4 / *COMMON MISSILE WARNING SYSTEM (CMWS)*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EE4: *COMMON MISSILE WARNING SYSTEM (CMWS)*	-	-	-	2.311	-	2.311	4.484	4.143	3.713	4.304	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Previously funded in L20 and VU7, PE 0604270A Electronic Warfare Development

A. Mission Description and Budget Item Justification

The US Army operational requirements concept for Aviation Infrared (IR) countermeasure systems is known as the Suite of Integrated Infrared Countermeasures (SIIRCM). SIIRCM is an integrated warning and countermeasure system to enhance aircraft survivability against IR-guided threat missile systems. The Common Missile Warning System (CMWS) is a core element of the SIIRCM concept. CMWS is an integrated ultraviolet (UV) missile warning system, with an Improved Countermeasure Dispenser (ICMD) serving as a subsystem to a host aircraft.

The CMWS program is a UV missile warning system that cues both flare and laser-based countermeasures to defeat incoming IR-seeking missiles and will alert aircrews to the presence of certain incoming unguided munitions. The B-Kit consists of the components which perform the missile detection and aircrew notification, unguided munitions detection and aircrew notification, false alarm rejection, and countermeasure employment/cueing functions of the system. The CMWS Electronic Control Unit (ECU) receives UV missile detection data from Electro-Optic Missile Sensors (EOMS) and sends a missile alert signal to warn aircrews via on-board avionics. Tier 1 threat missiles detected and tracked by the CMWS are subsequently defeated by a combination of missile seeker countermeasures, including decoy flares and IR Laser Jamming (currently ATIRCM-equipped CH-47 platform only). In addition, the CMWS ECU receives from the EOMS unguided munitions detection data which it also passes to the aircrew through aural and visual alerts. The aircrew then applies the appropriate Tactics, Techniques and Procedures (TTPs) to break contact or engage the enemy with own-ship ordnance. The CMWS Generation 3 (Gen 3) ECU in conjunction with ongoing software development efforts will address outstanding material release conditions to achieve a Full Material Release (FMR) for CMWS and ensure protection against emerging IR-guided missile threats.

The A-Kit for CMWS includes mounting hardware, wiring harnesses, cables, and other components necessary to install and interface the mission kit on host aircraft. The A-Kit ensures the mission kit is functionally and physically operational with a specific host aircraft type.

Justification: Fiscal Year (FY) 2015 Base RDT&E dollars in the amount of $2.311 million supports development engineering of the Threat Analysis Database (TAD) and integration with other Aircraft Survivability Equipment systems.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Development Effort	-	-	2.311

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605035A / *Aircraft Survivability Development*	**Project (Number/Name)** EE4 / *COMMON MISSILE WARNING SYSTEM (CMWS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Description: - ***FY 2015 Plans:*** RDT&E funding supports continuing development engineering of the Threat Analysis Database (TAD), salaries, and integration with other ASE systems.			
Accomplishments/Planned Programs Subtotals	-	-	2.311

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• APA: *BA 4 AZ3517*	125.200	103.021	107.364	-	107.364	131.641	53.736	38.678	33.654	Continuing	Continuing

Remarks

D. Acquisition Strategy

The acquisition strategy includes buying CMWS B-Kits to support the Army Force Generation (ARFORGEN) model and installation of A-Kits on all modernized aircraft. The previous CMWS production contract was a firm fixed-priced (FFP), Indefinite Delivery, Indefinite Quantity (IDIQ) contract. A FFP bridge contract was awarded March 2013 for CMWS hardware. The follow-on CMWS production FFP/CPFF IDIQ contract will be a 3 year firm fixed price contract to procure the remaining Generation 3 Electronic Control Units (ECUs) and A-Kits and will be awarded in late FY2013 / early FY2014. The Gen 3 ECU, which provides increased processing capacity and enables unguided munitions detection, became a part of the system in FY 2010; First Unit Equipped (FUE) for the Gen 3 ECU was achieved in Operation Enduring Freedom (OEF) on 18 September 2013. All aircraft deployed to OEF have received the new processor with hostile fire detection capability. Gen 3 ECU's will gradually replace all Gen 2 ECU's across the Aviation fleet between now and 2017.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605035A / *Aircraft Survivability Development*	Project (Number/Name) EE4 / *COMMON MISSILE WARNING SYSTEM (CMWS)*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CMWS Systems Engineering Program Management	Various	Various : PM ASE, HSV, AL	2.670	-		-		0.208		-		0.208	Continuing	Continuing	Continuing
		Subtotal	2.670	-		-		0.208		-		0.208	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CMWS Tier 2/3 Upgrades	Various	Various : -	2.000	-		-		-		-		-	Continuing	Continuing	Continuing
CMWS Threat Analysis Database Design	Various	BAE : Various	0.455	-		-		-		-		-	Continuing	Continuing	Continuing
Threat Analysis Database (TAD)	Various	BAE : TBD	0.000	-		-		2.103	Apr 2015	-		2.103	Continuing	Continuing	Continuing
CMWS Enhanced Sensor Study & Evaluation	TBD	Various : -	11.466	-		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	13.921	-		-		2.103		-		2.103	-	-	-

	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	16.591	-		-		2.311		-		2.311	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605035A / *Aircraft Survivability Development*	**Project (Number/Name)** EE4 / *COMMON MISSILE WARNING SYSTEM (CMWS)*

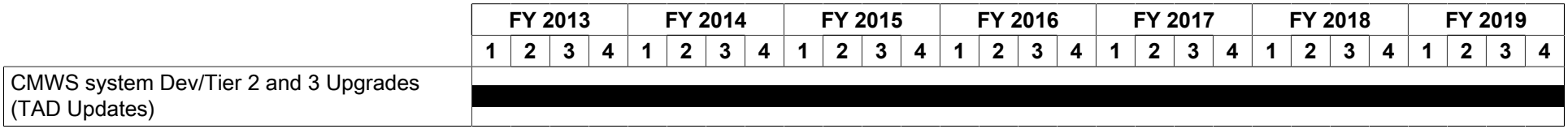

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605035A / *Aircraft Survivability Development*	**Project (Number/Name)** EE4 / *COMMON MISSILE WARNING SYSTEM (CMWS)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
CMWS system Dev/Tier 2 and 3 Upgrades (TAD Updates)	2	2011	4	2019

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0605350A / *WIN-T Increment 3 - Full Networking*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	-	-	113.210	-	113.210	39.700	9.000	-	-	-	161.910
EE8: *WIN-T Increment 3 - Full Networking*	-	-	-	113.210	-	113.210	39.700	9.000	-	-	-	161.910

The FY 2015 OCO Request will be submitted at a later date.

Note

PE 0605350/EE8 was formerly 0603782/372 in FY 2014 and prior. FY 2015 request in the 2014 President's Budget was $325.6 million. The Warfighter Information Network – Tactical (WIN-T) Increment (Inc) 3 program has been de-scoped to a software-only program due to FY 2015-19 budgetary pressure.

A. Mission Description and Budget Item Justification

The Warfighter Information Network – Tactical (WIN-T) Increment (Inc) 3 program has been de-scoped to a software-only program due to FY 2015-19 budgetary pressure. WIN-T Inc 3 develops the Network Operations (NetOps) software to meet the Army's Network Convergence goals. NetOps provides the monitoring, control and planning tools to ensure management of the voice, data and internet transport networks. The NetOps software will also provide Information Assurance and Network Centric Enterprise Services. This allows for seamless integration of the tactical network planning, management, monitoring, and defense for the Signal staff. These NetOps improvements simplify the management of the network and increase the automation of tools and reporting. The developed NetOps software enhancements will be provided as a technical insertion to WIN-T Incs 1 and 2.

Inc 3 also develops the enhanced Net Centric Waveform (NCW) version 10.x for increased throughput capability beyond the line of sight satellite communication and the Highband Networking Waveform (HNW) version 3.0 for line of sight communications. NCW version 10.x testing will support Army Strategic Command certification of the waveform for use on Wideband Global Satellites and subsequent insertion into WIN-T Inc 1 and Inc 2. HNW version 3.0 will be delivered to the Joint Tactical Networking Center Information Repository for commercial development application. Both NCW and HNW provide improved network capacity and robustness.

FY 2015 continues funding the the Engineering and Manufacturing Development (EMD) phase of the program, as well as preparing for the NetOps Technology Insertions into WIN-T Incs 1 and 2. Funds development of NetOps Build 4/5 and Developmental Test. Key Technology Insertions are associated with Full NetOps.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army					Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*			R-1 Program Element (Number/Name) PE 0605350A / *WIN-T Increment 3 - Full Networking*		
B. Program Change Summary ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO**	**FY 2015 Total**
Previous President's Budget	-	-	-	-	-
Current President's Budget	-	-	113.210	-	113.210
Total Adjustments	-	-	113.210	-	113.210
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-	-	113.210	-	113.210

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605350A / *WIN-T Increment 3 - Full Networking*	Project (Number/Name) EE8 / *WIN-T Increment 3 - Full Networking*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EE8: *WIN-T Increment 3 - Full Networking*	-	-	-	113.210	-	113.210	39.700	9.000	-	-	-	161.910
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

This program is not a new start in FY15. This effort is funded under PE 0603782 Project 372 through FY14. It is funded under PE 0605350 Project EE8 in FY15 and out.

A. Mission Description and Budget Item Justification

The Warfighter Information Network – Tactical (WIN-T) Increment (Inc) 3 program has been de-scoped to a software-only program due to FY 2015-19 budgetary pressure. WIN-T Inc 3 develops the Network Operations (NetOps) software to meet the Army's Network Convergence goals. NetOps provides the monitoring, control and planning tools to ensure management of the voice, data and internet transport networks. The NetOps software will also provide Information Assurance and Network Centric Enterprise Services. This allows for seamless integration of the tactical network planning, management, monitoring, and defense for the Signal staff. These NetOps improvements simplify the management of the network and increase the automation of tools and reporting. The developed NetOps software enhancements will be provided as a technical insertion to WIN-T Incs 1 and 2.

Inc 3 also develops the enhanced Net Centric Waveform (NCW) version 10.x for increased throughput capability beyond the line of sight satellite communication and the Highband Networking Waveform (HNW) version 3.0 for line of sight communications. NCW version 10.x testing will support Army Strategic Command certification of the waveform for use on Wideband Global Satellites and subsequent insertion into WIN-T Inc 1 and Inc 2. HNW version 3.0 will be delivered to the Joint Tactical Networking Center Information Repository. Both NCW and HNW provide improved network capacity and robustness.

FY 2015 continues funding the the EMD phase of the program, as well as preparing for the Technology Insertions into WIN-T Incs 1 and 2. Funds development of NetOps Build 4/5 and Developmental Test. Key Technology Insertions are associated with Full NetOps.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Product Development	-	-	89.149
Description: Increment 3 Engineering Manufacturing Development (EMD) continues development of Inc 3 system software development, prototype manufacturing of test assets for the Inc 3 system.			
FY 2015 Plans: Continues development of NetOps software Build 4/5, completes the Highband Networking Waveform version 3.0 development and Net Centric Waveform version 10.x certification. Manufacture the NetOps and Waveform specific hardware for test assets.			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605350A / *WIN-T Increment 3 - Full Networking*	**Project (Number/Name)** EE8 / *WIN-T Increment 3 - Full Networking*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
This will start the integration efforts of HNW 3.0 on limited surrogate ground and air platforms in order to conduct an over the air demonstration of HNW 3.0 capability.			
Title: Support Services ***Description:*** Technical Engineering Services and Research Studies ***FY 2015 Plans:*** Technical Engineering Services and Research Studies	-	-	2.775
Title: Test and Engineering ***Description:*** Test and Evaluation ***FY 2015 Plans:*** Build 4/5 Developmental Test. Complete the HNW 3.0 Functional Qualification Test and NCW 10.x upgrade integration test.	-	-	9.874
Title: Management Services ***Description:*** Provides System Engineering and Program Management Support. ***FY 2015 Plans:*** Provides System Engineering and Program Management Support.	-	-	11.412
Accomplishments/Planned Programs Subtotals	-	-	113.210

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• WIN-T Inc 3: *Procurement*	-	-	-	-	-	-	61.692	534.323	551.511	-	1,147.526
• Inc 3 RDTE: *RDTE PE 0603782/372*	158.799	121.219	-	-	-	-	-	-	-	-	280.018

Remarks

D. Acquisition Strategy

The Defense Acquisition Executive (DAE), through the Nunn-McCurdy certification process, certified a restructured WIN-T program on June 5, 2007. The certification Acquisition Decision Memorandum (ADM) stated that the Army will restructure the WIN-T Major Defense Acquisition Program (MDAP) to absorb the former Joint Network Node (JNN) Network program. It further stated that the restructured program will consist of four Increments: Incs 1, 2, 3, and 4.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605350A / *WIN-T Increment 3 - Full Networking*	**Project (Number/Name)** EE8 / *WIN-T Increment 3 - Full Networking*

An evolutionary acquisition strategy is being utilized to provide for the timely insertion of new technologies into Army communication systems by adhering to the basic principles of the DoD Modular Open Systems Approach (MOSA). This allows the Army to keep pace with changing commercial technology and maintain required interoperability with other joint, strategic and commercial standards-based networks. Applying integrated Network Operations (NetOps) capability, WIN-T provides the capability to manage, prioritize, and protect information. It ensures NetOps commonality with Joint, Allied, Coalition, Current Force, and Commercial voice and data networks.

The program is presently in its Engineering, Manufacturing, and Development (EMD) phase, as WIN-T Inc 3 technology is being tested and released over time and will be inserted into WIN-T Increment 1 and Increment 2.

ADM issued June 24 2013 required:
Delay of follow on contract award until Key Performance Parameters (KPP) and Key System Attributes (KSA) are approved and traced to contract specifications.

KPP memo signed August 13 2013 (JROCM 143-13)
KSAs approved via Army memo August 22 2013

June 25 2013: Delivered Reliability Growth Plan and Curves; Delivered Flight Test Plan and Procedures.

August 30 2013: Delivered draft System Engineering Plan (SEP), draft Test and Evaluation Master Plan (TEMP), Acquisition Strategy.

August 6 2013: Army Acquisition Executive (AAE) briefed Defense Acquisition Executive (DAE) on proposed strategy to de-scope Inc 3 program, based on FY 2015 budget.

October 27 2013: ADM approved contract award and proceeding to Critical Design Review and directed Inc 3 to return to the DAE for approval of the updated program strategy.

November 7 2013: Army conducted WIN-T Inc 2 and Inc 3 Configuration Steering Board (CSB) proposing program de-scope; Army CSB memorandum was signed 16 Jan 14. This decision de-scoped Inc 3 to NetOps and waveform development due to FY 2015-19 budgetary pressure. A program restructure to implement this de-scope is underway.

February 21 2014: DAE briefed on Army WIN-T Inc 3 strategy; approval pending.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605350A / *WIN-T Increment 3 - Full Networking*	Project (Number/Name) EE8 / *WIN-T Increment 3 - Full Networking*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	C/Various	Various : Various	0.000	-		-		11.412		-		11.412	-	11.412	-
		Subtotal	0.000	-		-		11.412		-		11.412	-	11.412	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Increment 3 Engineering Manufacturing and Development	SS/FPIF	General Dynamics C4 Systems Inc : Taunton, MA	0.000	-		-		88.872		-		88.872	-	88.872	-
Prototype Manufacturing	SS/FPIF	General Dynamics C4 Systems Inc : Taunton, MA	0.000	-		-		0.277		-		0.277	-	0.277	-
		Subtotal	0.000	-		-		89.149		-		89.149	-	89.149	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Technical Engineering Services and Research Studies	SS/FPIF	General Dynamics C4 Systems Inc : Taunton, MA	0.000	-		-		2.775		-		2.775	-	2.775	-
		Subtotal	0.000	-		-		2.775		-		2.775	-	2.775	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Testing	C/Various	Various : Various	0.000	-		-		9.874		-		9.874	-	9.874	-
		Subtotal	0.000	-		-		9.874		-		9.874	-	9.874	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605350A / *WIN-T Increment 3 - Full Networking*	Project (Number/Name) EE8 / *WIN-T Increment 3 - Full Networking*	

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		-		113.210		-		113.210	-	113.210	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605350A / *WIN-T Increment 3 - Full Networking*	**Project (Number/Name)** EE8 / *WIN-T Increment 3 - Full Networking*

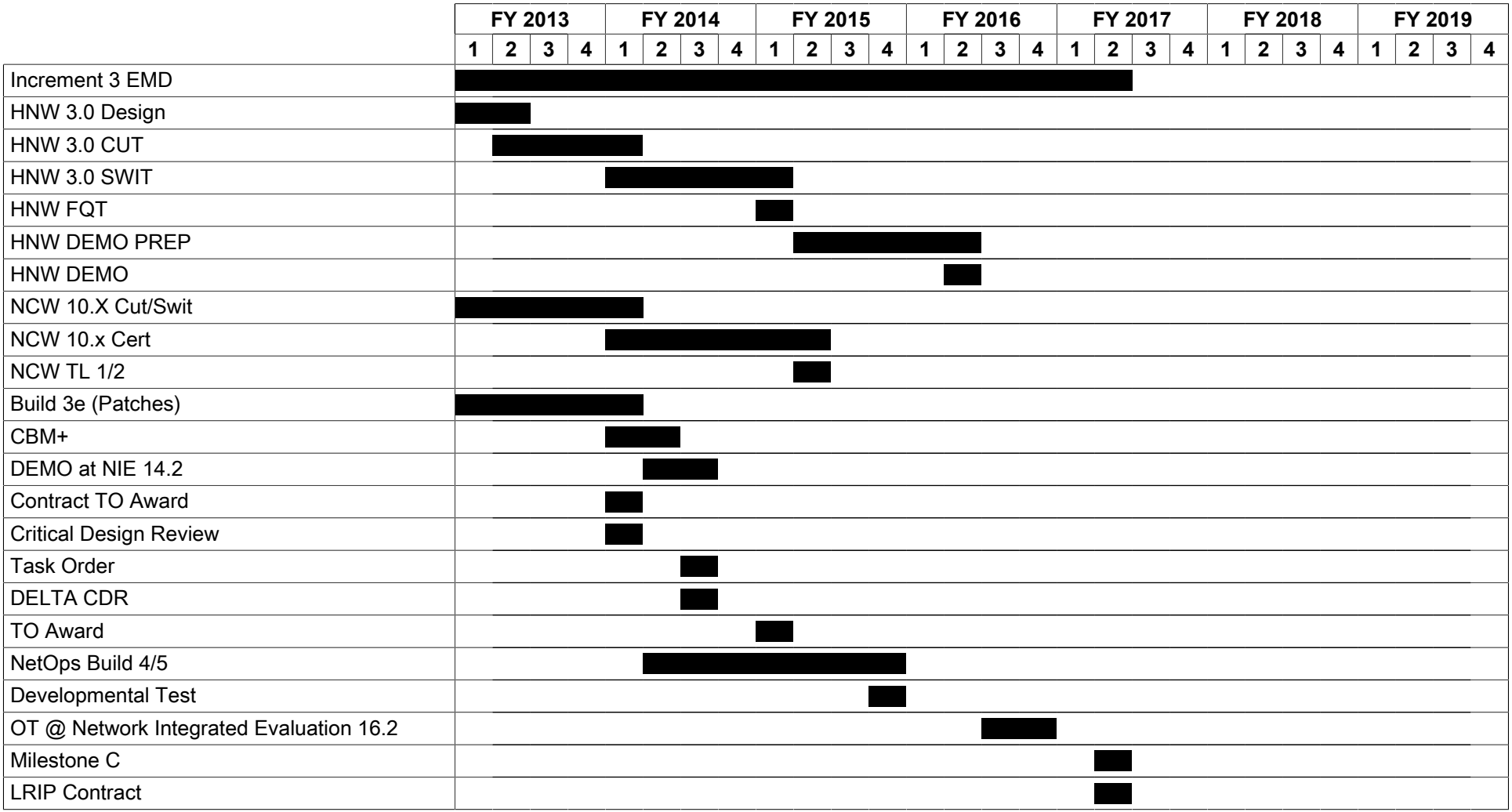

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605350A / *WIN-T Increment 3 - Full Networking*	**Project (Number/Name)** EE8 / *WIN-T Increment 3 - Full Networking*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Increment 3 EMD	4	2007	2	2017
HNW 3.0 Design	2	2012	2	2013
HNW 3.0 CUT	2	2013	1	2014
HNW 3.0 SWIT	1	2014	1	2015
HNW FQT	1	2015	1	2015
HNW DEMO PREP	2	2015	2	2016
HNW DEMO	2	2016	2	2016
NCW 10.X Cut/Swit	4	2012	1	2014
NCW 10.x Cert	1	2014	2	2015
NCW TL 1/2	2	2015	2	2015
Build 3e (Patches)	4	2012	1	2014
CBM+	1	2014	2	2014
DEMO at NIE 14.2	2	2014	3	2014
Contract TO Award	1	2014	1	2014
Critical Design Review	1	2014	1	2014
Task Order	3	2014	3	2014
DELTA CDR	3	2014	3	2014
TO Award	1	2015	1	2015
NetOps Build 4/5	2	2014	4	2015
Developmental Test	4	2015	4	2015
OT @ Network Integrated Evaluation 16.2	3	2016	4	2016
Milestone C	2	2017	2	2017

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605350A / *WIN-T Increment 3 - Full Networking*	**Project (Number/Name)** EE8 / *WIN-T Increment 3 - Full Networking*

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
LRIP Contract	2	2017	2	2017

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0605380A *I AMF Joint Tactical Radio System (JTRS)*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	-	10.213	6.882	-	6.882	12.346	-	-	-	-	29.441
EA9: *Airborne Maritime Fixed - Small Airborne (AMF-SA)*	-	-	10.213	6.882	-	6.882	12.346	-	-	-	-	29.441

The FY 2015 OCO Request will be submitted at a later date.

Note

Small Airborne Networking Radio (SANR) capability deferment; duration is to be determined.

A. Mission Description and Budget Item Justification

The Airborne Maritime/Fixed Station - Small Airborne (AMF-SA) radios are software programmable, multi-band, multi-mode, mobile ad hoc networking radios, providing simultaneous voice, data, and video communications. The radios will support the Common Operating Picture (COP), Situational Awareness (SA), and interoperability of Mission Command (MC) systems throughout the battlefield. AMF-SA must ensure the Soldier's ability to communicate both horizontally and vertically via voice and data within all mission areas and Common Operating Environment (COE). AMF radios will help close capability gaps by extending data networking to company and below echelons, enabling network services to the platform and connecting Army Aviation platforms to Army ground and Joint air network domains. Per Milestone Decision Authority (MDA) direction, the redefined AMF Program will procure radios as Non-Developmental Items (NDI).

AMF-SA will operate networking waveforms that are deployed by Joint Forces today, enable interoperability between different types of platforms, and transport operational and MC information through the tactical network. AMF-SA is relevant to the Joint Functional Concept (Net-Centric Environment), Joint Integrating Concept (Net-Centric Operational Environment), Joint Operating Concept (Major Combat Operations, Stability Operations), and JTRS Concept of Operations (Tactical Wireless Joint Networks).

The FY 2015 budget will provide funding that is necessary to complete integration and testing of the Small Airborne Link-16 Terminal (SALT) intended for fielding to AH-64E Apache Block III, exclusively Lot 6 and beyond aircraft . Specifically, the funding is needed to conduct Operational Assessments of the candidate products to demonstrate compliance with program requirements; assess effectiveness, suitability, and survivability; and to obtain material release. The funding will also support safety, spectrum supportability, and other certifications necessary to prepare the products for fielding .

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army					Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*		R-1 Program Element (Number/Name) PE 0605380A / *AMF Joint Tactical Radio System (JTRS)*			
B. Program Change Summary ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO**	**FY 2015 Total**
Previous President's Budget	-	33.219	64.574	-	64.574
Current President's Budget	-	10.213	6.882	-	6.882
Total Adjustments	-	-23.006	-57.692	-	-57.692
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-23.006	-57.692	-	-57.692

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605380A / *AMF Joint Tactical Radio System (JTRS)*	Project (Number/Name) EA9 / *Airborne Maritime Fixed - Small Airborne (AMF-SA)*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EA9: *Airborne Maritime Fixed - Small Airborne (AMF-SA)*	-	-	10.213	6.882	-	6.882	12.346	-	-	-	-	29.441
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

In FY 2014-FY 2016, Project No. EA9 represents the total Airborne Maritime Fixed Small Airborne (AMF-SA) RDT&E budget for those years. In FY 2014, RDT&E funding for Airborne Maritime/Fixed Station Joint Tactical Radio Systems (AMF JTRS) transitioned from a Navy Program Element (PE) 0604280N to Army PE 0605380A. Prior to FY 2014, JTRS AMF was funded under Navy PE 0604280N aligned under the Navy Joint Tactical Radio System (JTRS) Programs. In accordance with the Acquisition Decision Memorandum (ADM) dated 11 July 2012, the JTRS Program of Record (POR) transitioned to a Military Department-managed program. AMF JTRS is now managed by Program Executive Office Command, Control and Communications (PEO C3T) under Project Manager Tactical Radios (PM TR), funded by Army PE 0605380A.

A. Mission Description and Budget Item Justification

The Airborne Maritime/Fixed Station - Small Airborne (AMF-SA) radios are software programmable, multi-band, multi-mode, mobile ad hoc networking radios, providing simultaneous voice, data, and video communications. The radios will support the Common Operating Picture (COP), Situational Awareness (SA), and interoperability of Mission Command (MC) systems throughout the battlefield. AMF-SA must ensure the Soldier's ability to communicate both horizontally and vertically via voice and data within all mission areas and Common Operating Environment (COE). AMF radios will help close capability gaps by extending data networking to company and below echelons, enabling network services to the platform and connecting Army Aviation platforms to Army ground and Joint air network domains. Per Milestone Decision Authority (MDA) direction, the redefined AMF Program will procure radios as Non-Developmental Items (NDI).

AMF-SA will operate networking waveforms that are deployed by Joint Forces today, enable interoperability between different types of platforms, and transport operational and MC information through the tactical network. AMF-SA is relevant to the Joint Functional Concept (Net-Centric Environment), Joint Integrating Concept (Net-Centric Operational Environment), Joint Operating Concept (Major Combat Operations, Stability Operations), and JTRS Concept of Operations (Tactical Wireless Joint Networks).

The FY 2015 budget will provide funding that is necessary to complete integration and testing of the Small Airborne Link-16 Terminal (SALT) intended for fielding to AH-64E Apache Block III, exclusively Lot 6 and beyond aircraft . Specifically, the funding is needed to conduct Operational Assessments of the candidate products to demonstrate compliance with program requirements; assess effectiveness, suitability, and survivability; and to obtain material release. The funding will also support safety, spectrum supportability, and other certifications necessary to prepare the products for fielding .

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605380A / *AMF Joint Tactical Radio System (JTRS)*	**Project (Number/Name)** EA9 / *Airborne Maritime Fixed - Small Airborne (AMF-SA)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Airborne Maritime Fixed Small Airborne (AMF-SA).	-	10.213	6.882
Articles:	-	-	-
Description: Airborne Maritime Fixed Small Airborne (AMF-SA). ***FY 2014 Plans:*** The PMO will conduct source selection and source selection testing with a contract award. The RDT&E funding in FY14 will allow AMF to purchase approximately half of the required Small Airborne Link 16 Terminal (SALT) units for testing and delivery to the customer. Production Qualification Testing (PQT) for the Small Airborne Link 16 Terminal (SALT) to be conducted in FY15 will be funded with FY14 dollars due to a Q1FY15 start. Small Airborne Networking Radio (SANR) capability deferment duration is TBD . ***FY 2015 Plans:*** With the funding in FY2015, the PMO will only be able to conduct the Production Qualification Testing (PQT) for Small Airborne Link 16 Terminal (SALT). Army Test and Evaluation Command (ATEC) will be funded to support program test & evaluation and requirements efforts.			
Accomplishments/Planned Programs Subtotals	-	10.213	6.882

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• B90110: *B90902 JTRS (AMF)*	-	-	-	-	-	15.536	23.700	19.000	20.000	-	78.236

Remarks

D. Acquisition Strategy

The AMF-SA program's original acquisition strategy was to procure two variations of the SA radio: 1. The Small Airborne Link 16 Terminal (SALT) for the AH-64E Apache Block III aircraft, and 2. The Small Airborne Networking Radio (SANR) for the Apache, Blackhawk, Kiowa Warrior, Chinook, Gray Eagle and other Special Operations Forces aircraft. The SALT radio will be capable of operating Link-16 and the Soldier Radio Waveform (SRW). The SANR radio will be capable of operating the Wideband Networking Waveform (WNW), Soldier Radio Waveform (SRW), and Single Channel Ground and Airborne Radio System (SINCGARS). The AMF Acquisition Decision Memorandum (ADM), once signed by the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics (OUSD(AT&L)), will officially split AMF-SA into the sub-programs of SALT and SANR while also delegating Milestone Decision Authority for SALT to the Army Acquisition Executive (AAE). The revised acquisition strategy for SALT changes it from sole source to a full and open competition using a Non-Developmental Item (NDI) procurement approach. The strategy supports a concept in which NDI radios can be selected from a qualified vendor base and tailored to platform needs. SANR capability deferment duration is TBD.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605380A / *AMF Joint Tactical Radio System (JTRS)*	**Project (Number/Name)** EA9 / *Airborne Maritime Fixed - Small Airborne (AMF-SA)*

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605380A / *AMF Joint Tactical Radio System (JTRS)*	Project (Number/Name) EA9 / *Airborne Maritime Fixed - Small Airborne (AMF-SA)*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AMF-SA Business Operations Management and Support	Various	Various : Various	0.000	-		2.598		3.018	Oct 2014	-		3.018	-	5.616	-
		Subtotal	0.000	-		2.598		3.018		-		3.018	-	5.616	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AMF-SA - System Engineering and Requirements Validation	Various	Various : Various	0.000	-		1.160		1.325	Oct 2014	-		1.325	-	2.485	-
AMF-SA - NDI Integration and Certification	C/CPFF	TBD : TBD	0.000	-		3.604	Sep 2014	-		-		-	-	3.604	-
		Subtotal	0.000	-		4.764		1.325		-		1.325	-	6.089	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AMF-SA - Integrated Logistics Support	Various	Various : Various	0.000	-		0.897		1.267	Oct 2014	-		1.267	-	2.164	-
		Subtotal	0.000	-		0.897		1.267		-		1.267	-	2.164	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AMF-SA - Test and Evaluation and Test Support	Various	Various : Various	0.000	-		1.954		1.272	Oct 2014	-		1.272	-	3.226	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605380A / *AMF Joint Tactical Radio System (JTRS)*	Project (Number/Name) EA9 / *Airborne Maritime Fixed - Small Airborne (AMF-SA)*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	-		1.954		1.272		-		1.272	-	3.226	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		10.213		6.882		-		6.882	-	17.095	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605380A / *AMF Joint Tactical Radio System (JTRS)*	**Project (Number/Name)** EA9 / *Airborne Maritime Fixed - Small Airborne (AMF-SA)*

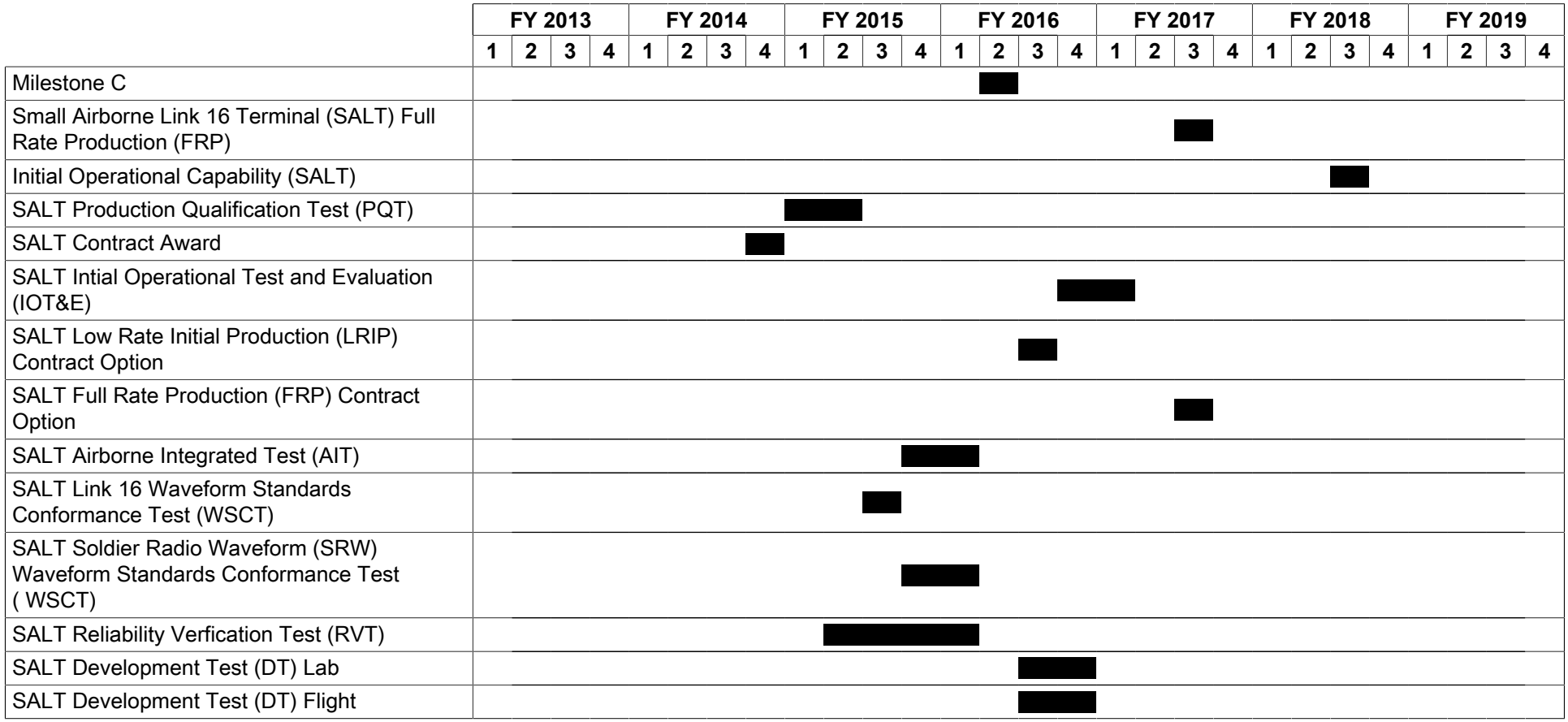

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605380A / *AMF Joint Tactical Radio System (JTRS)*	**Project (Number/Name)** EA9 / *Airborne Maritime Fixed - Small Airborne (AMF-SA)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Milestone C	2	2016	2	2016
Small Airborne Link 16 Terminal (SALT) Full Rate Production (FRP)	3	2017	3	2017
Initial Operational Capability (SALT)	3	2018	3	2018
SALT Production Qualification Test (PQT)	1	2015	2	2015
SALT Contract Award	4	2014	4	2014
SALT Intial Operational Test and Evaluation (IOT&E)	4	2016	1	2017
SALT Low Rate Initial Production (LRIP) Contract Option	3	2016	3	2016
SALT Full Rate Production (FRP) Contract Option	3	2017	3	2017
SALT Airborne Integrated Test (AIT)	4	2015	1	2016
SALT Link 16 Waveform Standards Conformance Test (WSCT)	3	2015	3	2015
SALT Soldier Radio Waveform (SRW) Waveform Standards Conformance Test (WSCT)	4	2015	1	2016
SALT Reliability Verfication Test (RVT)	2	2015	1	2016
SALT Development Test (DT) Lab	3	2016	4	2016
SALT Development Test (DT) Flight	3	2016	4	2016

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0605450A / *Joint Air-to-Ground Missile (JAGM)*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	9.686	15.119	83.838	-	83.838	67.757	23.451	2.420	0.005	Continuing	Continuing
JA6: *Joint Air-To-Ground Missile (JAGM)*	-	9.686	15.119	83.838	-	83.838	67.757	23.451	2.420	0.005	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Joint Air-to-Ground Missile (JAGM) program is an Army led, ACAT 1C program with joint interest with the U.S. Marine Corps (USMC) and U.S. Navy to develop the next generation of aviation launched missile to replace the HELLFIRE laser and Longbow radar missiles. JAGM can overcome adverse weather, jamming and advanced countermeasures in both land and maritime combat environments.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	10.000	15.127	91.571	-	91.571
Current President's Budget	9.686	15.119	83.838	-	83.838
Total Adjustments	-0.314	-0.008	-7.733	-	-7.733
• Congressional General Reductions	-0.013	-0.008			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.301	-			
• Adjustments to Budget Years	-	-	-7.733	-	-7.733

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605450A / *Joint Air-to-Ground Missile (JAGM)*	Project (Number/Name) JA6 / *Joint Air-To-Ground Missile (JAGM)*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
JA6: *Joint Air-To-Ground Missile (JAGM)*	-	9.686	15.119	83.838	-	83.838	67.757	23.451	2.420	0.005	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Not applicable for this item.

A. Mission Description and Budget Item Justification

The Joint Air-to-Ground Missile (JAGM) program is an Army led, ACAT 1C program with joint interest with the U.S. Marine Corps (USMC) and U.S. Navy to develop the next generation of aviation launched missile to replace the HELLFIRE laser and Longbow radar missiles. JAGM can overcome adverse weather, jamming and advanced countermeasures in both land and maritime combat environments.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Preliminary Design Review (PDR)	5.000	-	-
Articles:	-	-	-
Description: The JAGM Product Office will review the Preliminary Design and Design Verification Test results.			
FY 2013 Accomplishments: The JAGM Product Office and contractors prepared and conducted preliminary design review and design verification testing. Results indicated the system is ready to proceed into detailed design and can meet stated performance requirements within cost and schedule.			
Title: Milestone (MS) B Preparation	4.686	4.919	11.238
Articles:	-	-	-
Description: The JAGM Product Office will prepare documentation for MS B decision.			
FY 2013 Accomplishments: The JAGM Product Office began preparing documentation for MS B.			
FY 2014 Plans: The JAGM Product Office will continue to prepare documentation for a MS B.			
FY 2015 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605450A / *Joint Air-to-Ground Missile (JAGM)*	**Project (Number/Name)** JA6 / *Joint Air-To-Ground Missile (JAGM)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
The JAGM Product Office will complete documentation for MS B and an EMD Request for Proposal (RFP). Additionally the office will conduct a Source Selection Evaluation Board (SSEB) in response to the RFP. MS B decision expected mid-FY15.			
Title: Critical Design Review (CDR), Component Qualification Testing (CQT), System Integration and Qualification Testing ***Articles:*** ***Description:*** The JAGM Product Office will integrate the JAGM Guidance Section to the HELLFIRE missile backend and perform System Qualification testing. ***FY 2014 Plans:*** The CDR and CQT will be completed in FY 14. The JAGM Product Office will integrate the JAGM Guidance section to the HELLFIRE missile backend and perform System Qualification Testing. The required testing includes Temperature and Vibration, Electromagnetic Environmental Effects (E3), Tower/Captive Flight Testing, Lethality Testing and use of hardware-in-the-loop facilities to evaluate missile performance. ***FY 2015 Plans:*** The JAGM Product Office and prime contractor will continue System Qualification Testing that includes E3 and Tower/Captive Flight Testing. The Government will conduct ground launched flight tests of the missile as a risk reduction effort prior to EMD.	- -	10.200 -	16.400 -
Title: Engineering, Manufacturing & Development (EMD) Contract Award ***Description:*** The JAGM prime contractor will conduct qualification of the production line and deliver missiles to support both Developmental and Operational Testing. The prime contractor will support government led activities to qualify the JAGM on the AH-64 Longbow Apache. ***FY 2015 Plans:*** The JAGM prime contractor will establish subcontracts, procure hardware and initiate production of the JAGM missile. The prime contractor will support airworthiness qualification of the JAGM missile on the AH-64 Longbow Apache.	-	-	38.200
Title: System Critical Design Review (CDR) ***Description:*** System CDR occurs in the EMD phase. Assess the JAGM system final design as captured in product specifications. Ensures that each item in the product baseline has been captured in the detailed design documentation. ***FY 2015 Plans:*** The JAGM Product Office and the prime contractor will prepare for and conduct the JAGM System CDR.	-	-	6.000
Title: Engineering, Manufacturing & Development (EMD) Aircraft Qualification and Missile Developmental Testing	-	-	12.000

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605450A / *Joint Air-to-Ground Missile (JAGM)*	**Project (Number/Name)** JA6 / *Joint Air-To-Ground Missile (JAGM)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Description: The Government will conduct system developmental testing and aircraft qualification testing. ***FY 2015 Plans:*** The JAGM Product Office will conduct warhead lethality testing, integrated flight simulations, captive carry testing and missile flight testing. The JAGM Product Office, platform product office and platform prime contractor will conduct aircraft qualification testing. Test data and interface requirements will support initial airworthiness qualification required for testing on AH-64 Longbow Apache.			
Accomplishments/Planned Programs Subtotals	9.686	15.119	83.838

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• C7030200: *JAGM Missile Procurement; SSN C7030200*	-	-	-	-	-	4.961	51.588	71.955	110.908	Continuing	Continuing

Remarks

D. Acquisition Strategy

The JAGM Acquisition Strategy is being updated to define the program's EMD phase and Low Rate Initial Production (LRIP) required to achieve Initial Operational Capability (IOC) in FY18 and Full Operational Capability (FOC) in FY22. The Army funded JAGM EMD phase consists of qualifying the JAGM production line and qualification on the AH-64 Longbow Apache. The Army will demonstrate all performance requirements for the JAGM system including maritime capabilities prior to MS C and Full Rate Production decisions.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605450A / *Joint Air-to-Ground Missile (JAGM)*	Project (Number/Name) JA6 / *Joint Air-To-Ground Missile (JAGM)*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Eng/ Project Management	C/LH	Various : Performers	29.858	4.426	Dec 2012	6.045	Dec 2013	20.070	Nov 2014	-		20.070	-	60.399	-
		Subtotal	29.858	4.426		6.045		20.070		-		20.070	-	60.399	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TD Prime Contract	C/FFP	TD : Prime Contract	371.319	-		-		8.568	Nov 2014	-		8.568	-	379.887	-
Rocket Motor IM Qual	C/CPFF	Defense Ordnance Technology Consortium (DOTC) : Picatinny Arsenal, NJ	30.534	-		-		-		-		-	-	30.534	-
Electro-Mechanical Control Actuator System (EMCAS)	C/CPFF	Defense Ordnance Technology Consortium (DOTC) : Picatinny Arsenal, NJ	4.033	-		-		-		-		-	-	4.033	-
Integrated Warhead	C/CPFF	Defense Ordnance Technology Consortium (DOTC) : Picatinny Arsenal, NJ	2.982	-		-		-		-		-	-	2.982	-
Development Engineering	C/LH	Various : Performers	17.644	3.428	Feb 2013	1.979	Feb 2014	-		-		-	-	23.051	-
EMD Prime Contract	TBD	TBD; : TBD	0.000	-		-		43.200	May 2015	-		43.200	-	43.200	-
		Subtotal	426.512	3.428		1.979		51.768		-		51.768	-	483.687	-

Remarks

(C / FFP) - Competitive / Firm Fixed Price
(C / CPFF) - Competitive / Cost-Plus Fixed Fee
(C / LH) - Labor Hour

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605450A / *Joint Air-to-Ground Missile (JAGM)*	Project (Number/Name) JA6 / *Joint Air-To-Ground Missile (JAGM)*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Other Gov Agencies	C/LH	Various : Performers	13.906	1.832	Dec 2012	7.095	Dec 2013	12.000	Nov 2014	-		12.000	-	34.833	-
		Subtotal	13.906	1.832		7.095		12.000		-		12.000	-	34.833	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	470.276	9.686		15.119		83.838		-		83.838	-	578.919	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605450A / *Joint Air-to-Ground Missile (JAGM)*	**Project (Number/Name)** JA6 / *Joint Air-To-Ground Missile (JAGM)*

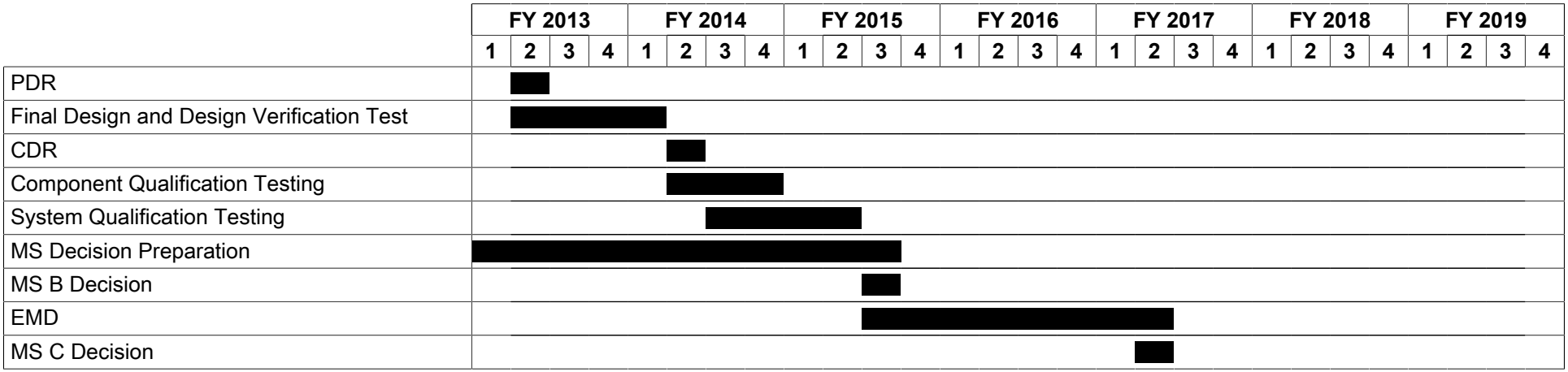

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605450A / *Joint Air-to-Ground Missile (JAGM)*	**Project (Number/Name)** JA6 / *Joint Air-To-Ground Missile (JAGM)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
PDR	2	2013	2	2013
Final Design and Design Verification Test	2	2013	1	2014
CDR	2	2014	2	2014
Component Qualification Testing	2	2014	4	2014
System Qualification Testing	3	2014	2	2015
MS Decision Preparation	1	2013	3	2015
MS B Decision	3	2015	3	2015
EMD	3	2015	2	2017
MS C Decision	2	2017	2	2017

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0605456A / *PAC-3/MSE Missile*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	63.123	68.807	35.009	-	35.009	2.271	-	-	-	Continuing	Continuing
PA3: *PAC-3/MSE Missile*	-	63.123	68.807	35.009	-	35.009	2.271	-	-	-	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

FY15 Adjustments to Budget Years: Decrease of $78.758 million realigned to PE 0205456A (EF9); Decrease of $15.860 million realigned to suppport Army higher priority requirement.

Development efforts after FY15 are reported under PE 0205456A (EF9).

A. Mission Description and Budget Item Justification

This system is an integral part of the overall Air and Missile Defense (AMD) architecture and enables the incremental fielding of the Integrated Air and Missile Defense Fire Control System/capability for the composite Army Air and Missile Defense Battalions.

The Missile Segment Enhancement (MSE) is the latest version of the PAC-3 Missile. It provides a more agile and lethal interceptor that increases the engagement envelop/defended area of the PATRIOT System. Both Live Fire Test and Evaluation (LFT&E) and Initial Operational Test & Evaluation (IOT&E) activities are required to be executed during Low Rate Initial Production (LRIP) in support of the planned FY16 Full Rate Production (FRP) decision. As software and hardware improvements are developed there is a continuing need for system level modeling, simulations, and tests. Modeling and Simulation allow for performance assessment against all threats that would not be possible in flight tests due to cost, target, and range constraints. Flight testing is periodically required for validation of the Modeling and Simulation as well as satisfying Army Test & Evaluation Command/Director, Operational Test & Evaluation (ATEC/DOTE) requirements.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	69.029	68.843	129.627	-	129.627
Current President's Budget	63.123	68.807	35.009	-	35.009
Total Adjustments	-5.906	-0.036	-94.618	-	-94.618
• Congressional General Reductions	-0.091	-0.036			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.974	-			
• Adjustments to Budget Years	-	-	-94.618	-	-94.618

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army				Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*		R-1 Program Element (Number/Name) PE 0605456A / *PAC-3/MSE Missile*			
• Other Adjustments	-3.841	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605456A / *PAC-3/MSE Missile*	Project (Number/Name) PA3 / *PAC-3/MSE Missile*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
PA3: *PAC-3/MSE Missile*	-	63.123	68.807	35.009	-	35.009	2.271	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Missile Segment Enhancement (MSE) is the latest version of the PAC-3 Missile. It provides a more agile and lethal interceptor that increases the engagement envelope/defended area of the PATRIOT System. Both LFT&E and IOT&E activities are required to be executed during Low Rate Initial Production (LRIP) in support of the planned FY16 Full Rate Production (FRP) decision. As software and hardware improvements are developed there is a continuing need for system level modeling, simulations, and tests. Modeling and Simulation allow for performance assessment against all threats that would not be possible in flight tests due to cost, target and range constraints. Flight testing is periodically required for validation of the Modeling and Simulation as well as satisfying ATEC/DOTE requirements.

PATRIOT is an integral part of the overall Air and Missile Defense (AMD) Architecture and enables the incremental fielding of the system capability for Army Air and Missile Defense Battalions.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: MSE PAC-3	3.998	2.090	14.300
Articles:	-	-	-
Description: Funding is provided for the following efforts			
FY 2013 Accomplishments: MSE technical support for Follow-On flight tests and MSE specific qualification activities to include Solid Rocket Motor (SRM), Ignition Safety Device (ISD), canister, Functional Configuration Audit (FCA) completed.			
FY 2014 Plans: MSE hardware procurement and Live Fire Test & Evaluation (LFT&E) and IOT&E technical support for IOT&E and completiton of LFT&E.			
FY 2015 Plans: MSE technical support for initial PDB-8 testing.			
Title: Program Integration Efforts	24.531	27.617	-
Articles:	-	-	-
Description: Funding is provided for the following efforts			
FY 2013 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605456A / *PAC-3/MSE Missile*	**Project (Number/Name)** PA3 / *PAC-3/MSE Missile*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Integrated PAC-3 modernization hardware items in support of MSE follow-on flight tests (task 7.4 and 7.5) and MSE ground system integration. ***FY 2014 Plans:*** Integration of missile and ground system hardware and software.			
Title: Testing, Targets, and Modeling and Simulation	34.594	39.100	20.709
Articles:	-	-	-
Description: Funding is provided for the following efforts ***FY 2013 Accomplishments:*** Continued range support for Live Fire Test and Evaluation (LFTE), modeling and simulation, and MSE follow-on test. ***FY 2014 Plans:*** Continued testing program to include utilization of targets/threat simulators, test missiles, flight simulator, modeling efforts and test activities to support Test and Evaluation Master Plan (TEMP). ***FY 2015 Plans:*** Continues testing program to include utilization of targets/threat simulators, test missiles, flight simulator, modeling efforts and test activities to support Test and Evaluation Master Plan (TEMP) for initial IOT&E activities.			
Accomplishments/Planned Programs Subtotals	63.123	68.807	35.009

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• PE 0604869A: *PE 0604869A, Proj M06, PATRIOT/MEADS Combined Aggregate Program (CAP)*	348.234	-	-	-	-	-	-	-	-	-	348.234
• SSN C53101: *SSN C53101, MSE Missile*	8.249	690.401	384.605	-	384.605	419.791	422.527	458.724	497.553	Continuing	Continuing
• PE 0205456: *PE 0205456, Proj EF9, System Integration and Test*	-	-	78.758	-	78.758	64.628	67.461	65.734	117.666	Continuing	Continuing
• SSN C50016: *SSN C50016, Lower-Tier Air and Missile Defense (AMD)*	-	-	110.300	-	110.300	116.416	131.549	114.678	113.281	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605456A / *PAC-3/MSE Missile*	**Project (Number/Name)** PA3 / *PAC-3/MSE Missile*	

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• PE 0102419A: *PE 0102419A, Proj E55, JLENS*	142.508	83.406	54.076	-	54.076	50.167	39.590	2.566	0.003	Continuing	Continuing
• PE 0605457A: *PE 0605457A, Proj S40 Army Integrated Air and Missile Defense (AIAMD)*	233.892	369.452	142.584	-	142.584	215.659	228.791	170.828	154.565	Continuing	Continuing
• PE 0604319A: *PE 0604319A, Proj DU3, IFPC2, (FY12 PE 0603305A IFPC II - Intercept)*	25.710	79.190	96.177	-	96.177	156.523	90.980	58.214	27.663	Continuing	Continuing
• SSN BZ5075: *SSN BZ5075, IAMD Battle Command System (IBCS)*	-	-	-	-	-	21.091	206.300	298.990	379.981	Continuing	Continuing
• PE 0604820A: *PE 0604820A, Proj E10, SENTINEL*	3.734	1.548	5.224	-	5.224	12.213	11.389	10.906	12.132	Continuing	Continuing
• PE 0604741A: *PE 0604741A, Proj 126,146,149, Air Defense C2I Eng Dev*	42.876	18.284	15.906	-	15.906	20.248	19.632	19.878	20.165	Continuing	Continuing

Remarks

This program is an integral part of the Army Integrated Air and Missile Defense (IAMD) architecture.

D. Acquisition Strategy

The design objective of the PATRIOT system is to provide an element of an integrated Ballistic Missile Defense system capable of being modified to cope with the evolving threat. This strategy minimizes technological risks and provides a means of enhancing system capability through planned upgrades of deployed systems. PAC-3 system development efforts further improve system capabilities against emerging and reactive threats. The PAC-3 Missile Program focuses on developing, fabricating and testing the high velocity, hit to kill, surface to air missile and associated ground support equipment to provide essential increases in battle space, accuracy, lethality and firepower to counter and destroy evolving air defense threats. The missile performance is demonstrated through a series of flight tests and modeling and simulation activities. The PAC-3 MSE program evolves the PAC-3 system providing extended ranges, insensitive munitions enhancements, and greater logistical flexibility. The PAC-3 MSE will be fielded to U.S. PATRIOT units.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605456A / *PAC-3/MSE Missile*	Project (Number/Name) PA3 / *PAC-3/MSE Missile*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Program Management	Various	Various : Huntsville, AL	2.006	1.003	Dec 2012	1.100	Dec 2013	-		-		-	Continuing	Continuing	Continuing
		Subtotal	2.006	1.003		1.100		-		-		-	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Integration	Various	Various : Huntsville, AL	38.477	5.321	Dec 2012	5.775	Dec 2013	-		-		-	Continuing	Continuing	Continuing
MSE/PAC-3 Raytheon	Various	Raytheon : Waltham, Massachusetts	21.500	20.409	Dec 2012	10.900	Dec 2013	-		-		-	Continuing	Continuing	Continuing
SETA Contracts	Various	Various : Huntsville, AL	5.989	2.887	Jan 2013	3.764	Feb 2014	-		-		-	Continuing	Continuing	Continuing
		Subtotal	65.966	28.617		20.439		-		-		-	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Targets/Threat Simulators	Various	Various : Huntsville, AL	26.166	1.500	Dec 2012	4.585	Dec 2013	-		-		-	Continuing	Continuing	Continuing
Modeling and simulation	Various	Various : Huntsville, AL	2.974	1.000	Dec 2012	3.930	Dec 2013	-		-		-	Continuing	Continuing	Continuing
Contractor T&E funding	Various	Various : Huntsville, AL / Dallas, TX	5.278	5.150	Dec 2012	1.048	Dec 2013	12.709	Feb 2015	-		12.709	Continuing	Continuing	Continuing
Other T&E Funding (Live Fire)	MIPR	Various : Holloman AFB, NM	10.112	13.350	Dec 2012	3.605	Dec 2013	7.000	Dec 2014	-		7.000	Continuing	Continuing	Continuing
Mobile Flight Mission Simulator	TBD	Raytheon : Massachusetts	9.700	-		11.800	Dec 2013	-		-		-	Continuing	Continuing	Continuing
PDB 8 DT/OT	TBD	Various : Huntsville, AL	0.000	-		9.900	Dec 2013	-		-		-	-	9.900	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605456A / *PAC-3/MSE Missile*	Project (Number/Name) PA3 / *PAC-3/MSE Missile*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PAC-3 Product Office	Various	Inhouse : Huntsville, AL	7.324	2.304	Dec 2012	2.400	Dec 2013	1.000	Dec 2014	-		1.000	-	13.028	-
U.S. Other Government Agencies (OGAs)	MIPR	Various : Huntsville, AL	9.948	6.201	Dec 2012	7.900	Nov 2013	3.000	Dec 2014	-		3.000	-	27.049	-
Missile Segment Enhancement (MSE) - Lockheed Martin Missiles and Fire Control (LMMFC)	C/CPIF	LMMFC Dallas, : Texas	68.140	3.998	Dec 2012	2.100	Dec 2013	11.300	Dec 2014	-		11.300	-	85.538	-
		Subtotal	139.642	33.503		47.268		35.009		-		35.009	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	207.614	63.123		68.807		35.009		-		35.009	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605456A / *PAC-3/MSE Missile*	**Project (Number/Name)** PA3 / *PAC-3/MSE Missile*

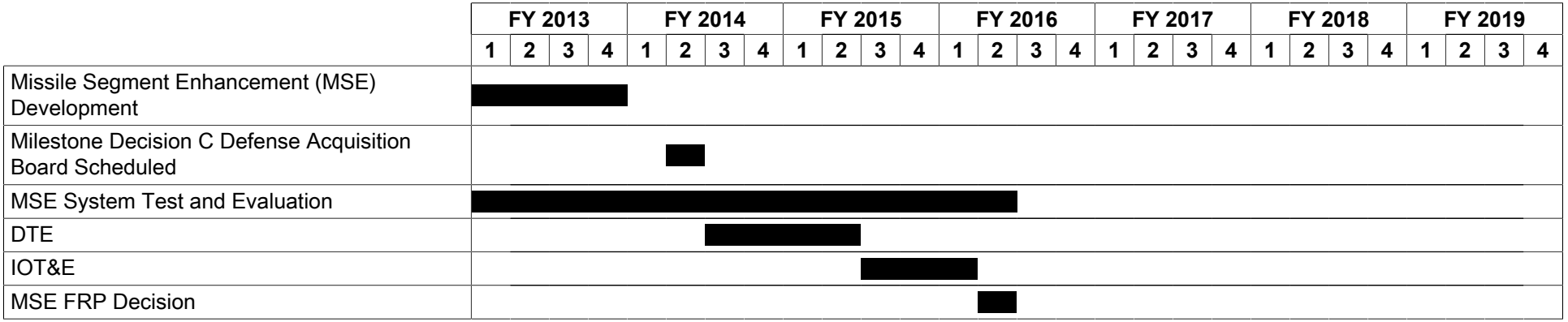

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605456A / *PAC-3/MSE Missile*	**Project (Number/Name)** PA3 / *PAC-3/MSE Missile*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Missile Segment Enhancement (MSE) Development	1	2011	4	2013
Milestone Decision C Defense Acquisition Board Scheduled	2	2014	2	2014
MSE System Test and Evaluation	1	2011	2	2016
DTE	3	2014	2	2015
IOT&E	3	2015	1	2016
MSE FRP Decision	2	2016	2	2016

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0605457A *I Army Integrated Air and Missile Defense (AIAMD)*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	247.407	369.452	142.584	-	142.584	215.659	228.791	170.828	154.565	Continuing	Continuing
DU4: *Advanced Electronic Protection Enhancements AEPE*	-	13.515	-	-	-	-	-	-	-	-	-	13.515
S40: *Army Integrated Air and Missile Defense*	-	233.892	369.452	142.584	-	142.584	215.659	228.791	170.828	154.565	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

FY15 adjustment reflects the Army's decision to move Initial Operational Capability (IOC) to FY18.

A. Mission Description and Budget Item Justification

The Army Integrated Air and Missile Defense (AIAMD) Program is a direct response to the U.S. Army Air and Missile Defense (AMD) Concept and Operational and Organizational (O&O) Plan for the Future Force, the Army Integrated Air and Missile Defense System of Systems (SoS) Capabilities Development Document (CDD) and the new Air and Missile Defense Task Force Concept of Operations (CONOPS). The AIAMD Program is uniquely structured to enable the development of an overarching SoS capability with all participating Air Defense Artillery (ADA) components functioning interdependently to provide total operational capabilities not achievable by the individual element systems. The AIAMD program achieves this objective by establishing the AIAMD architecture and developing (1) the IAMD Battle Command Systems (IBCS) Engagement Operations Center (EOC) that provides the common Mission Command capability, (2) the Integrated Fire Control Network (IFCN) capability for fire control connectivity and distributed operations, and (3) the common Plug and Fight (P&F) Kits that network enable multiple sensor components, weapon components, and the IBCS EOC.

The AIAMD Program will provide advanced capabilities to the Army and the soldier by allowing transformation to a network-centric system-of-systems capability (also referred to as "Plug and Fight") that integrates AMD sensors and weapons with the IBCS EOC. The AIAMD SoS architecture will enable extended range and non-line-of-sight engagements, to include joint kill chain engagements across the full spectrum of aerial threats, providing fire control quality data to the most appropriate weapon to complete the mission successfully. Further, it will mitigate the coverage gaps and the single points of failure that have plagued AMD defense design in the past. The AIAMD program will provide the user with the ability to train on a single command and control (C2) system that will result in overall training savings. The AIAMD program will also provide the Army with the ability to procure components that will build to established interfaces allowing them to "connect" to the IFCN alleviating the cost of procuring total system capabilities in the future.

As a result of sequestration reductions in FY13 and budget reductions beginning in FY15, the program will defer Initial Operational Capability (IOC) from FY16 to FY18. The FY18 capabilities will be delivered through fielding of the IBCS EOC-based AIAMD architecture including the IBCS EOC, Sentinel, and Patriot components connected via an IFCN, working in an integrated manner. Additional capabilities include the incorporation of IBCS functionality into Air Defense Airspace Management

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0605457A *I Army Integrated Air and Missile Defense (AIAMD)*

(ADAM) Cells, ADA Brigade Headquarters and Army Air and Missile Defense Command (AAMDC) Headquarters. Future additional capabilities include incorporation of Theater High Altitude Air Defense (THAAD) batteries and composite Indirect Fire Protection Capability (IFPC)/Avenger battalions into the AIAMD architecture.

Funding in FY15 will provide for the EMD developmental test phase. There is no Advanced Electronic Protection Enhancement (AEPE) funding in this PE after FY14.

Fielding of the IBCS is the Army Air Defense Artillery User's number one priority. The AIAMD Program is on track to deliver the IOC in FY18.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	277.374	364.649	382.869	-	382.869
Current President's Budget	247.407	369.452	142.584	-	142.584
Total Adjustments	-29.967	4.803	-240.285	-	-240.285
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	5.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.366	-			
• SBIR/STTR Transfer	-7.614	-			
• Adjustments to Budget Years	-	-0.197	-240.285	-	-240.285
• Other Adjustments 1	-21.987	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*	Project (Number/Name) DU4 / *Advanced Electronic Protection Enhancements AEPE*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
DU4: *Advanced Electronic Protection Enhancements AEPE*	-	13.515	-	-	-	-	-	-	-	-	-	13.515
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

This funding provides for a new start in FY13.

A. Mission Description and Budget Item Justification

The advanced electronic protection (EP) enhancement program funds efforts to assess and initiate development of fixes to the Army's air and missile defense systems vulnerability to deceptive electronic attack (EA). The assessment effort includes both radars and Radio Frequency (RF) data links and will incorporate the latest threat information, comparable work being executed by the other services and conceptual EP solutions. The conceptual solutions will be a combination of direct individual sensor mitigation techniques and multiple sensor network approaches. The tasks are: (1) Conduct individual radar and RF guided missile digital simulations capable of assessing system performance when exposed to current and future deceptive EA techniques. (2) Purchase and modify commercial and military off-the-shelf injection units to insert actual high fidelity EA signals into the radar's and guided missile's receivers. (3) In conjunction with the Joint Electronic Protection for Air Combat (JEPAC) unit and the Army Research Laboratory's Survivability Assessment Directorate conduct and evaluate field tests of deceptive EA against Army air and missile defense systems. Use results to formulate near term tactics, technique and procedures for immediate fielding and to identify the highest priority areas to concentrate future development efforts. (4) Develop and implement models of Army air and missile defense systems and electronic attack effects to be used to the Extended Air Defense Simulation (EADSIM) for initial assessment of deceptive EA effects on the overall defense capability and potential network-based solutions. (5) Based on the results obtained from the simulations and field tests initiate the development of countermeasure EP techniques for air and missile defense radars and guided missile seekers.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Advanced Electronic Protection Enhancements	13.515	-	-
Articles:	-	-	-
Description: Funding is provided for the following effort			
FY 2013 Accomplishments: Conducting Threat Assessments and Modeling and Simulation to formulate near term tactics, technique and procedures for immediate fielding and to identify the highest priority areas to concentrate future development efforts.			
Accomplishments/Planned Programs Subtotals	13.515	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*	**Project (Number/Name)** DU4 / *Advanced Electronic Protection Enhancements AEPE*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Not applicable for this item.

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*	Project (Number/Name) DU4 / *Advanced Electronic Protection Enhancements AEPE*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Other Government Agencies & Government Program Management	Various	various : various	0.000	2.252		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	0.000	2.252		-		-		-		-	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Integration Assessment	Various	various : various	0.000	1.218		-		-		-		-	Continuing	Continuing	Continuing
Concept Solutions	Various	various : various	0.000	1.531		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	0.000	2.749		-		-		-		-	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Component Assessments & Research and Trade Studies	Various	various : various	0.000	5.137		-		-		-		-	Continuing	Continuing	Continuing
Modeling and Simulation	Various	various : various	0.000	3.377		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	0.000	8.514		-		-		-		-	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	13.515		-		-		-		-	-	-	-

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*				Project (Number/Name) S40 / *Army Integrated Air and Missile Defense*			
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
S40: *Army Integrated Air and Missile Defense*	-	233.892	369.452	142.584	-	142.584	215.659	228.791	170.828	154.565	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Beginning in FY11, Army IAMD (AIAMD) funding was transferred from the AIAMD Program Element (PE) 0603327A, Project Code S34, to continue funding the Engineering and Manufacturing Development (EMD) phase of the program.

A. Mission Description and Budget Item Justification

The Army Integrated Air and Missile Defense (AIAMD) Program is a direct response to the U.S. Army Air and Missile Defense (AMD) Concept and Operational and Organizational (O&O) Plan for the Future Force, the Army Integrated Air and Missile Defense System of Systems (SoS) Capabilities Development Document (CDD) and the new Air and Missile Defense Task Force Concept of Operations (CONOPS). The AIAMD Program is uniquely structured to enable the development of an overarching SoS capability with all participating Air Defense Artillery (ADA) components functioning interdependently to provide total operational capabilities not achievable by the individual element systems. The AIAMD program achieves this objective by establishing the AIAMD architecture and developing (1) the IAMD Battle Command Systems (IBCS) Engagement Operations Center (EOC) that provides the common Mission Command capability, (2) the Integrated Fire Control Network (IFCN) capability for fire control connectivity and distributed operations, and (3) the common Plug and Fight (P&F) Kits that network enable multiple sensor components, weapon components, and the IBCS EOC.

The AIAMD Program will provide advanced capabilities to the Army and the soldier by allowing transformation to a network-centric system-of-systems capability (also referred to as "Plug and Fight") that integrates AMD sensors and weapons with the IBCS EOC. The AIAMD SoS architecture will enable extended range and non-line-of-sight engagements, to include joint kill chain engagements across the full spectrum of aerial threats, providing fire control quality data to the most appropriate weapon to complete the mission successfully. Further, it will mitigate the coverage gaps and the single points of failure that have plagued AMD defense design in the past. The AIAMD program will provide the user with the ability to train on a single command and control (C2) system that will result in overall training savings. The AIAMD program will also provide the Army with the ability to procure components that will build to established interfaces allowing them to "connect" to the IFCN alleviating the cost of procuring total system capabilities in the future.

As a result of sequestration reductions in FY13 and budget reductions beginning in FY15, the program will defer Initial Operational Capability (IOC) from FY16 to FY18. The FY18 capabilities will be delivered through fielding of the IBCS EOC-based AIAMD architecture including the IBCS EOC, Sentinel, and Patriot components connected via an IFCN, working in an integrated manner. Additional capabilities include the incorporation of IBCS functionality into Air Defense Airspace Management (ADAM) Cells, ADA Brigade Headquarters and Army Air and Missile Defense Command (AAMDC) Headquarters. Future additional capabilities include incorporation of Theater High Altitude Air Defense (THAAD) batteries and composite Indirect Fire Protection Capability (IFPC)/Avenger battalions into the AIAMD architecture.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*	**Project (Number/Name)** S40 / *Army Integrated Air and Missile Defense*

Funding in FY15 will provide for the EMD developmental test phase.

Fielding of the IBCS is the Army Air Defense Artillery User's number one priority. The AIAMD Program is on track to deliver the IOC in FY18.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Product Development	198.174	322.880	100.402
Articles:	-	-	-
Description: Funding is provided for the following effort ***FY 2013 Accomplishments:*** Completion of successful 2013 Demonstration. Completion of Software Build version 2.0 and version 2.1. Continuing product development in support of Prototype Deliveries of EOCs and P&F kits. Risk reduction test. ***FY 2014 Plans:*** Continuing product development in support of Prototype Deliveries of EOCs and P&F kits. Risk reduction test. Cyber Security and supply chain risk management. Advanced Electronic Protection Enhancements. ***FY 2015 Plans:*** Continuing product development in support of EMD Developmental Test and risk reduction test.			
Title: Government Program Management	4.172	4.501	4.538
Articles:	-	-	-
Description: Funding is provided for the following effort ***FY 2013 Accomplishments:*** Government Program Management in support of developing the P&F kits, IFCN, and Modeling and Simulation. Other contracts and OGAs support of EMD phase activities. ***FY 2014 Plans:*** Government Program Management in support of developing the P&F kits, IFCN, and Modeling and Simulation. Other contracts and OGAs support of the EMD phase. Risk reduction test. ***FY 2015 Plans:*** Government Program Management in support of developing the P&F kits, IFCN, and Modeling and Simulation. Other contracts and OGAs support of the EMD phase. Risk reduction test.			
Title: Test and Evaluation	31.546	42.071	37.644
Articles:	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*	**Project (Number/Name)** S40 / *Army Integrated Air and Missile Defense*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Description: Funding is provided for the following effort ***FY 2013 Accomplishments:*** Provides for Modeling and Simulation, Joint Interoperability Test Support, Army Evaluation Center/Developmental Test Command/ Operational Test Command support and White Sands Missile Range Test Support. ***FY 2014 Plans:*** Provides for Modeling and Simulation, Joint Interoperability Test Support, Army Evaluation Center/Developmental Test Command/ Operational Test Command support and White Sands Missile Range Test Support to include design testing. Risk reduction test. Range activation preparation. Target preparation. ***FY 2015 Plans:*** Provides for Modeling and Simulation, Joint Interoperability Test Support, Army Evaluation Center/Developmental Test Command/ Operational Test Command support and White Sands Missile Range Test Support for EMD Developmental Test. Risk reduction test. Target preparation.			
Accomplishments/Planned Programs Subtotals	233.892	369.452	142.584

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• PE 0604869A, Project M06: *PE 0604869A, Project M06, PATRIOT/MEADS Combined Aggregate Program (CAP)*	348.234	-	-	-	-	-	-	-	-	-	348.234
• PE 0605456A, Project PA3: *PE 0605456A, Project PA3, PAC- 3/MSE Missile*	63.123	68.807	35.009	-	35.009	2.271	-	-	117.666	Continuing	Continuing
• SSN C53101: *SSN C53101, MSE Missile*	8.249	690.401	384.605	-	384.605	419.791	422.527	458.724	497.553	Continuing	Continuing
• PE 0205456, Project EF9: *PE 0205456, Project EF9, System Integration and Test*	-	-	78.758	-	78.758	64.628	67.461	65.734	117.666	Continuing	Continuing
• SSN C50016: *SSN C50016, Lower Tier Air and Missile Defense (AMD)*	-	-	110.300	-	110.300	116.416	131.549	114.678	113.281	-	586.224

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*	**Project (Number/Name)** S40 / *Army Integrated Air and Missile Defense*	

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• PE 0102419A, Proj E55: *PE 0102419A, Proj E55, JLENS*	142.508	83.406	54.076	-	54.076	50.167	39.590	2.566	0.003	Continuing	Continuing
• PE 0604319A, Proj DU3: *PE 0604319A, Proj DU3, IFPC2 (FY12 PE0603305A IFPC II- Intercept)*	25.710	79.190	96.177	-	96.177	156.523	90.980	58.214	27.663	Continuing	Continuing
• SSN BZ5075: *SSN BZ5075, Army IAMD Battle Command System (IBCS)*	-	-	-	-	-	21.091	206.300	298.990	379.981	Continuing	Continuing
• PE 0604820A, Proj E10: *PE 0604820A, Proj E10, SENTINEL*	3.734	1.548	5.224	-	5.224	12.213	11.389	10.906	12.132	Continuing	Continuing
• PE 0604741A, Proj 126, 146, 149: *PE 0604741A, Proj 126, 146, 149, Counter-Rockets, Artillery and Mortar (C-RAM)*	42.876	18.284	15.906	-	15.906	20.248	19.632	19.878	20.165	Continuing	Continuing

Remarks

This program is an integral part of the Army Integrated Air and Missile Defense (AIAMD) architecture. It provides for development of a common Mission Command (MC) through an open architecture approach allowing for integration of Air Defense Artillery (ADA) components as they become available. This approach enables the AIAMD program to pursue its baseline program independent of fluctuation of other programs.

D. Acquisition Strategy

The AIAMD acquisition strategy is to deliver an Initial Operational Capability (IOC) in FY18. The capabilities are delivered through the fielding of the IAMD Battle Command System (IBCS) Engagement Operations Center (EOC)-based AIAMD architecture including the IBCS EOC, Sentinel, and Patriot (through an Radar Interface Unit (RIU) interface) components connected via an Integrated Fire Control Network (IFCN), working in an integrated manner. The capabilities are delivered through employing the Patriot radar directly on the IFCN, eliminating the RIU from the architecture. Additional capabilities include the incorporation of IBCS functionality into Air Defense Airspace Management (ADAM) Cells, ADA Brigade Headquarters and Army Air and Missile Defense Command (AAMDC) Headquarters. Future additional capabilities include incorporation of Terminal High Altitude Area Defense (THAAD) batteries and other Army and Joint net-centric architectures to ensure compatibility.

Key principles of the AIAMD acquisition approach are the following:
- Migrate from system-based acquisition to component-based acquisition
- Use system-of-systems acquisition approach with collaboration among AIAMD, PEO MS, PEO C3T, and Brigade Combat Team (BCT) Modernization Component Project Offices, Missile Defense Agency (MDA), and other Service Project Offices to network enable weapons and sensor components

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*	**Project (Number/Name)** S40 / *Army Integrated Air and Missile Defense*

- Develop and procure common Army IAMD Battle Command System (IBCS) Engagement Operations Center (EOC) that replaces seven weapon system unique Battle Management Command, Control, Communications, Computers and Intelligence (BMC4I) components
- Establish product lines used to evaluate and select, modify and integrate modular open systems hardware (HW) and software (SW) common configuration items
- Conduct architecture-based System Engineering, Integration and Test (SEI&T) activities for an incremental fielded configuration of the AIAMD Integrated Fire Control (IFC) Network-compatible IBCS EOC, weapons and sensor system components

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*	Project (Number/Name) S40 / *Army Integrated Air and Missile Defense*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Program Management	TBD	Various : Huntsville, AL	10.017	4.172		4.501		4.538		-		4.538	Continuing	Continuing	Continuing
		Subtotal	10.017	4.172		4.501		4.538		-		4.538	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Air Space and Missile Defense (ASMD) System of Systems (SOS) Hardware-in-the- Loop Testbed	C/CPFF	Various : Huntsville, AL and multiple other locations	17.697	-		-		-		-		-	-	17.697	-
AIAMD System Engineering & Integration	C/CPFF	Contractor : Huntsville, AL	35.376	16.155		22.431		21.544		-		21.544	Continuing	Continuing	Continuing
IAMD Engineering Manufacturing and Development	C/CPIF	Northrop Grumman, Raytheon and Other : Huntsville, AL and Various other locations	389.369	172.023		262.331		65.248		-		65.248	Continuing	Continuing	Continuing
Government Furnished Equipment	TBD	Various : Multiple	10.920	1.135		2.032		2.017		-		2.017	Continuing	Continuing	Continuing
Government Systems Engineering and Logistics	TBD	Various : Huntsville, AL	10.092	8.861		10.086		11.593		-		11.593	Continuing	Continuing	Continuing
Advanced Electronic Protection Enhancement (AEPE)	TBD	Various : TBD	0.000	-		21.000		-		-		-	-	21.000	-
Cyber Security	TBD	Huntsville, AL : TBD	0.000	-		5.000		-		-		-	-	5.000	-
		Subtotal	463.454	198.174		322.880		100.402		-		100.402	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*	Project (Number/Name) S40 / *Army Integrated Air and Missile Defense*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Army Evaluation Center/ Developmental Test Command/Operational Test Command	TBD	Various : Multiple Locations	3.107	0.956		3.106		3.129		-		3.129	Continuing	Continuing	Continuing
Modeling & Sim/Joint Interoperability Test Spt	MIPR	SED : Huntsville, AL	29.731	26.687		28.813		28.804		-		28.804	Continuing	Continuing	Continuing
White Sands Missile Range (WSMR)	TBD	WSMR : White Sands, NM	2.414	3.903		10.152		5.711		-		5.711	Continuing	Continuing	Continuing
		Subtotal	35.252	31.546		42.071		37.644		-		37.644	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	508.723	233.892		369.452		142.584		-		142.584	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*	**Project (Number/Name)** S40 / *Army Integrated Air and Missile Defense*

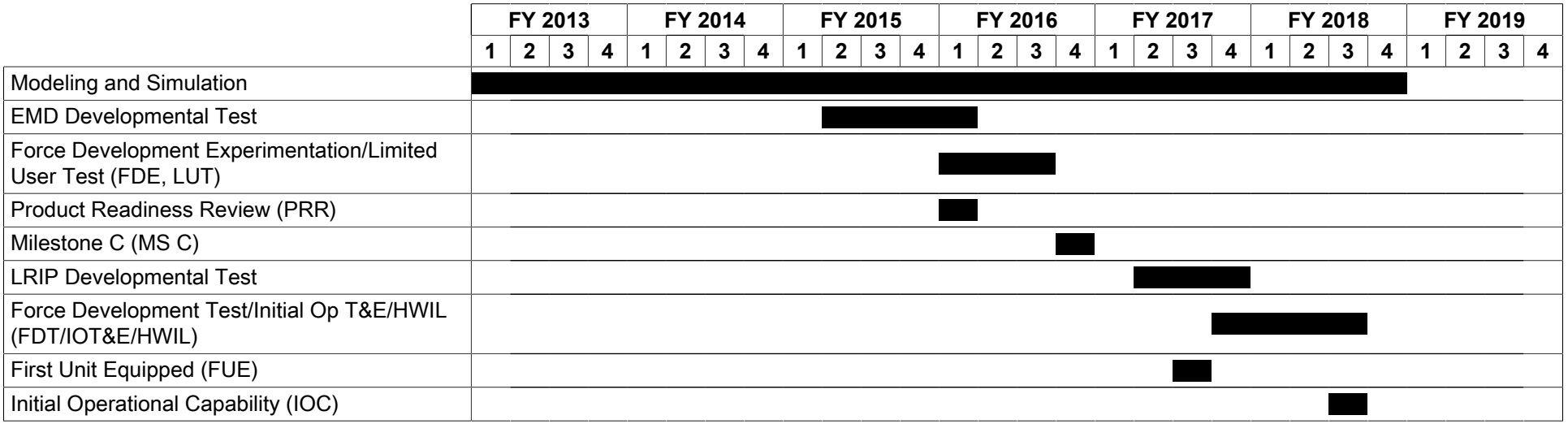

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605457A / *Army Integrated Air and Missile Defense (AIAMD)*	**Project (Number/Name)** S40 / *Army Integrated Air and Missile Defense*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Modeling and Simulation	1	2013	4	2018
EMD Developmental Test	2	2015	1	2016
Force Development Experimentation/Limited User Test (FDE, LUT)	1	2016	3	2016
Product Readiness Review (PRR)	1	2016	1	2016
Milestone C (MS C)	4	2016	4	2016
LRIP Developmental Test	2	2017	4	2017
Force Development Test/Initial Op T&E/HWIL (FDT/IOT&E/HWIL)	4	2017	3	2018
First Unit Equipped (FUE)	3	2017	3	2017
Initial Operational Capability (IOC)	3	2018	3	2018

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0605625A *I Manned Ground Vehicle*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	570.121	100.147	49.160	-	49.160	49.247	-	-	-	-	768.675
FC8: *BCT Ground Combat Vehicle*	-	570.121	100.147	49.160	-	49.160	49.247	-	-	-	-	768.675

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Ground Combat Vehicle (GCV) program was initiated on the basis of an Initial Capabilities Document (ICD) that was approved 10 December 2009. An Acquisition Decision Memorandum (ADM) was signed 17 August 2011 and it granted the Army approval to enter a 24 month Technology Development (TD) phase. Two contracts were awarded: one contract was awarded to BAE Systems Land & Armaments, Limited Partnership (L.P.) and one was awarded to General Dynamics Land Systems Inc. Revisions to the GCV strategy were approved via an ADM that was signed on 16 January 2013. The Army's exploration of the capabilities trade-space prior to finalizing requirements led to a modified set of requirements that required additional preliminary design effort. The ADM directed the TD phase to be extended by six months (for a total of 30 months) and envisioned a MS B in late FY2014. The GCV Project Manager took steps to incorporate these decisions into the program by issuing Undefinitized Change Orders to both contractors in April, 2013. The following funding requirements/justifications reflect these decisions.

Fiscal constraints and competing demands during budget uncertainty forced the Army to make hard choices between near-term readiness and modernizing current systems to meet near term capability gaps and developing the GCV. Given fiscal constraints and where we are in current technology, the Army concludes this is not the right time to develop the GCV and will end the program following the Technology Development phase. We have benefitted from our investment in GCV and will use the insights gained to inform technology maturation efforts in support of a strategy for the Army's future Infantry Fighting Vehicle (IFV) modernization program.

The funding in FY2015 will support continuing advanced concept development, trade studies, technology maturation, technical / operational / affordability analyses, and perhaps limited prototyping to assess future designs that integrate emerging S&T technologies.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army					Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*			R-1 Program Element (Number/Name) PE 0605625A / *Manned Ground Vehicle*		
B. Program Change Summary ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO**	**FY 2015 Total**
Previous President's Budget	639.874	592.201	953.081	-	953.081
Current President's Budget	570.121	100.147	49.160	-	49.160
Total Adjustments	-69.753	-492.054	-903.921	-	-903.921
• Congressional General Reductions	-0.845	-			
• Congressional Directed Reductions	-	-492.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-17.860	-			
• Other Adjustments 1	-51.048	-0.054	-903.921	-	-903.921

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605625A / *Manned Ground Vehicle*	Project (Number/Name) FC8 / *BCT Ground Combat Vehicle*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
FC8: *BCT Ground Combat Vehicle*	-	570.121	100.147	49.160	-	49.160	49.247	-	-	-	-	768.675
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Ground Combat Vehicle (GCV) program was initiated on the basis of an Initial Capabilities Document (ICD) that was approved 10 December 2009. An Acquisition Decision Memorandum (ADM) was signed 17 August 2011 and it granted the Army approval to enter a 24 month Technology Development (TD) phase. Two contracts were awarded: one contract was awarded to BAE Systems Land & Armaments, Limited Partnership (L.P.) and one was awarded to General Dynamics Land Systems Inc. Revisions to the GCV strategy were approved via an ADM that was signed on 16 January 2013. The Army's exploration of the capabilities trade-space prior to finalizing requirements led to a modified set of requirements that required additional preliminary design effort. The ADM directed the TD phase to be extended by six months (for a total of 30 months) and envisioned a MS B in late FY2014. The GCV Project Manager took steps to incorporate these decisions into the program by issuing Undefinitized Change Orders to both contractors in April, 2013. The following funding requirements/justifications reflect these decisions.

Fiscal constraints and competing demands during budget uncertainty forced the Army to make hard choices between near-term readiness and modernizing current systems to meet near term capability gaps and developing the GCV. Given fiscal constraints and where we are in current technology, the Army concludes this is not the right time to develop the GCV and will end the program following the Technology Development phase. We have benefitted from our investment in GCV and will use the insights gained to inform technology maturation efforts in support of a strategy for the Army's future Infantry Fighting Vehicle (IFV) modernization program.

The funding in FY2015 will support continuing advanced concept development, trade studies, technology maturation, technical / operational / affordability analyses, and perhaps limited prototyping to assess future designs that integrate emerging S&T technologies.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Government System Engineering & Program Management	51.516	12.725	9.160
Articles:	-	-	-
Description: Provides for basic Government oversight of the Ground Combat Vehicle (GCV) program. Includes funding for government personnel (labor, travel, training, supplies) and other support (other government agencies, support contractors, automated data processing, communications, and equipment).			
FY 2013 Accomplishments: Provided integrated program management for all development activities by continuing to execute the GCV knowledge based management plan and by providing USC Title 10 oversight to the TD contractors. The GCV Earned Value Management (EVM) team continued to evaluate cost and schedule performance against the established Performance Measurement Baselines			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605625A / *Manned Ground Vehicle*	**Project (Number/Name)** FC8 / *BCT Ground Combat Vehicle*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
(PMB) and Integrated Master Schedules (IMS) for each separate contractor. The GCV IPTs continued to oversee the technical development efforts of each separate contractor in order to monitor and track technical progress related to the development of the various subsystems. This included review and acceptance of all formal contract deliverables for the two contractor teams. The government management team also continued to oversee each separate contractor as they performed systems engineering, requirements analysis, functional analysis, configuration management, risk management, interface management, data management, technical reviews, trade studies, modeling and simulation, specialty engineering, software engineering, test and training. An emphasis for the Government team in FY2013 was on supporting each contractor's Preliminary Design Review (PDR), completed 4QFY2013 for the BAE team and completed 1QFY2014 for the GDLS team. Approximately 35 contract deliverables were associated with each PDR and they were reviewed and approved by the Government team prior to the reviews. Information generated from the three-pronged strategy was used to complete an updated performance specification for inclusion in both the TD contracts and the EMD Request for Proposal (RFP), which was planned for release in 1QFY2014. The final reports for both the non developmental vehicle assessment and the Dynamic AoA Update were completed. Drafts of approximately 40 documents to support the originally planned Milestone B were completed. ***FY 2014 Plans:*** Oversight of the TD contracts will continue through 3QFY2014. Preliminary Design Reviews will be complete 1QFY2014 and a PDR report will be completed. The GCV IPTs will continue to oversee the technical development efforts of each separate contractor in order to monitor and track technical progress related to the development of the various subsystems. This includes review and acceptance of all formal contract deliverables for the two contractor teams. The Project Management team will support TD contract close-outs 3QFY2014 and then develop detailed plans to facilitate the transition of the program to supporting S&T efforts in FY2015 and FY2016. ***FY 2015 Plans:*** The Project Management team will be significantly scaled back, but will continue to provide oversight to planned contract efforts. The contract effort will be focused on advanced concept development, technology risk reduction, and integration of S&T developed components. The Government Future Fighting Vehicle (FFV) team will also lead, integrate, and collaborate across technical and analytical efforts with the S&T and Requirements communities.			
Title: Contractor Systems Engineering/Program Management	424.819	67.226	40.000
Articles:	-	-	-
Description: Provides for contractor basic development, engineering, and management for the GCV prime contracts, less prototype hardware and software development (which are captured in the following sections). Includes material consumed in support of component level engineering efforts.			
FY 2013 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605625A / *Manned Ground Vehicle*	**Project (Number/Name)** FC8 / *BCT Ground Combat Vehicle*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Contractors conducted and supported TD subsystem prototype testing. Utilized the System Integration Environment and the Hot Bench to mature subsystem designs. Delivered approximately 35 data items and then conducted the GCV system level Preliminary Design Review (PDR) (4QFY2013 for BAE and 1QFY2014 for GDLS). Conducted subsystem PDRs 2-4QFY2013. Following PDRs, initiated detailed design of subsystems focusing on size, weight, power, and cooling requirements. Performed program management using EVM and TPMs to report cost, schedule and technical status. Prepared and submitted all contract deliverables. ***FY 2014 Plans:*** Contractors will perform program management using EVM and TPMs to report cost, schedule and technical status. All required contract deliverables will be prepared and delivered. Each of the current contractors will continue and complete the Technology Development phase. This includes: conducting system level Preliminary Design Reviews by 1QFY2014, conducting and completing component/subsystem maturation testing by 3QFY2014, conducting hot-bench integration 1-3QFY2014, and conducting and performing assessments of initial component/subsystem reliability growth tests. ***FY 2015 Plans:*** Contractors will conduct concept development work and subsystem risk reduction, in collaboration with planned S&T efforts. Concept development effort will initially evolve from the design concepts developed under the GCV TD phase and will result in development and delivery of concept data packages that include: 3 dimensional/Computer Aided Design (CAD) model representations, bill of materials, product structure / weight tape / power and energy balance, and cost estimate. In addition, a variety of technical and operational analyses and trades are expected to be completed.			
Title: Contractor Prototypes	58.779	-	-
Articles:	-	-	-
Description: Provides for procurement and fabrication of subsystem test assets required by the Technology Development (TD) contract and for system level prototypes planned in the EMD phase. Does not include material consumed in support of component level engineering efforts. ***FY 2013 Accomplishments:*** Completed fabrication, integration, and delivery of the subsystem test assets required of each contractor (Rocket Propelled Grenade (RPG) Protection Subsystem Prototype and Mine Blast Subsystem Prototype Test Article). Following modification of the current TD contracts, hardware procurements were initiated for additional risk mitigation assets that will be fabricated and delivered 2-3QFY2014. The risk mitigation assets include automotive test rigs, selected turret/lethality subsystems, battery test assets, and selected electronic components. For the purposes of this Budget Item Justification, only the defined subsystem test assets and the automotive test rigs are included within Contractor Prototypes.			
Title: Government Tests	15.527	1.800	-
Articles:	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605625A / *Manned Ground Vehicle*	**Project (Number/Name)** FC8 / *BCT Ground Combat Vehicle*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Description: Provides for costs incurred by the government to perform and validate system-related test activities. This element also includes costs of the detailed planning, conduct, support, data reduction, and reports from such testing. The actual test articles (i.e., functionally configured systems) are excluded from this element as they are included in the prototype manufacturing section. ***FY 2013 Accomplishments:*** Subsystem Prototype testing was conducted at Government test facilities during 2-3QFY2013. The subsystem test assets were tested, as required. This included testing of the Rocket Propelled Grenade (RPG) Protection Subsystem Prototypes and Mine Blast Subsystem Prototype Test Articles against relevant threats. A draft of the TEMP was completed to support a pre-Milestone B review that had been planned for 1QFY2014. PM GCV procured test threats to support Survivability/Force Protection testing, and test ammunition to support integration testing and Lethality testing. Detailed test planning was initiated for the Engineering and Manufacturing Development (EMD) phase. Army Test and Evaluation Command was funded to develop the System Evaluation Plan. ***FY 2014 Plans:*** The additional TD phase risk mitigation assets will be tested at Government test facilities 1-3QFY2014. In addition, re-test of the existing subsystem test assets will be performed after updates that reflect the revised performance specification. The TEMP will be finalized.			
Title: Contractor Software	19.480	18.396	-
Articles:	-	-	-
Description: Provides for contractor software development efforts for the GCV prime contracts. This includes all software related to the various subsystems, training, logistics, vehicle management, and battle command integration. ***FY 2013 Accomplishments:*** All software requirements and interfaces for the early software build were baselined to allow software development to complete in support of iterative software integration. Conducted early software integration using emulators and surrogates to verify correct subsystem behaviors and interfaces. Conducted qualification and regression testing and delivery of the software build to support subsystem level integration. Initiated subsequent software build/development efforts to incrementally build up the functionalities in meeting vehicle delivery schedules. Updated software architecture with specific implementation features for all Government furnished software subsystems. ***FY 2014 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605625A / *Manned Ground Vehicle*	**Project (Number/Name)** FC8 / *BCT Ground Combat Vehicle*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
TD contractors will refine Software Architecture Design Documents (SADDs) and all architectural significant use case and software requirement specifications.			
Accomplishments/Planned Programs Subtotals	570.121	100.147	49.160

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

An Acquisition Decision Memorandum (ADM) was signed 17 August 2011. It granted the Project Management Office approval to enter a 24 month Technology Development (TD) phase. Two contracts were awarded on 18 August 2011. One contract was awarded to BAE Systems Land & Armaments, L.P. and one was awarded to General Dynamics Land Systems Inc. Due to a protest, stop work orders were issued on 29 August 2011. The Government Accountability Office denied the protest on 5 December 2011, and work resumed 6 December 2011.

For the ongoing TD phase, the Army has been maturing its requirements by using key program imperatives to shape trade space and to ensure convergence on an affordable and achievable set of requirements. The TD phase contracts have allowed contractors to trade selected capability to support the path to an affordable set of requirements and to reduce program cost and risk. In addition to the effort related to the TD contracts, PM GCV has conducted assessments of selected non-developmental vehicles and supported a dynamic update to the Analysis of Alternatives (AoA). This "three pronged effort" (TD contracts, vehicle assessments, and dynamic AoA update) generated data necessary to ensure a well informed Milestone B.

Revisions to the GCV strategy were approved via an Acquisition Decision Memorandum signed on 16 January 2013.It recognized that the Army's exploration of the capabilities trade-space and full range of alternatives prior to finalizing requirements has led to a modified set of requirements that require additional preliminary design effort. It likewise acknowledged that the results of the three pronged development effort were considered in revising the GCV strategy. Decisions included in the ADM were: 1) The TD phase is to be extended by six months, 2) A full and open competition for the Engineering and Manufacturing Development (EMD) phase will be conducted and contract award will be to a single vendor, 3) Planned procurement of long lead items for EMD prototypes is not authorized, 4) The Milestone C decision shall be planned for FY2019, and 5) Milestone B will be conducted in late FY2014, following a pre-EMD Defense Acquisition Board first quarter FY2014 (which must occur prior to releasing the EMD Request for Proposal). The GCV Project Manager is took steps to incorporate these decisions into the program.

Fiscal constraints and competing demands during budget uncertainty forced the Army to make hard choices between near-term readiness and modernizing current systems to meet near term capability gaps and developing the GCV. Given fiscal constraints and where we are in current technology, the Army concludes this is not the right time to develop the GCV and will end the program following the Technology Development phase. We have benefitted from our investment in GCV and will use the insights gained to inform technology maturation efforts in support of a strategy for the Army's future Infantry Fighting Vehicle (IFV) modernization program.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605625A / *Manned Ground Vehicle*	**Project (Number/Name)** FC8 / *BCT Ground Combat Vehicle*

For the FY2015 Budget, the Army will complete the ongoing Technology Development (TD) phase and not transition into EMD. Continuing combat vehicle concept development and synchronization with planned Government S&T investments will eventually form the foundation for a future fighting vehicle program. The Project Management Office is assessing the full impact of this decision and has not yet formalized a revised acquisition strategy.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605625A / *Manned Ground Vehicle*	Project (Number/Name) FC8 / *BCT Ground Combat Vehicle*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor System Engineering and Prog. Mgt	PO	TD Phase - BAE / GDLS, Sterling Heights, MI : EMD Phase TBD	560.724	424.819	Nov 2012	67.226	Dec 2013	40.000	Oct 2014	-		40.000	Continuing	Continuing	Continuing
Contractor Prototypes	PO	TD Phase - BAE / GDLS, Sterling Heights, MI : EMD Phase TBD	6.880	58.779	Nov 2012	-		-		-		-	Continuing	Continuing	Continuing
Contractor Software	PO	TD Phase - BAE / GDLS, Sterling Heights, MI : EMD Phase TBD	44.602	19.480	Nov 2012	18.396	Dec 2013	-		-		-	Continuing	Continuing	Continuing
		Subtotal	612.206	503.078		85.622		40.000		-		40.000	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government System Engineering and Prog. Mgt	Various	PM Ground Combat Vehicle : Warren, MI	160.958	51.516	Mar 2013	12.725	Nov 2013	9.160	Oct 2014	-		9.160	Continuing	Continuing	Continuing
Assessment of Selected Non-developmental Vehicles (ASNV)	Various	Various Locations : Various Locations	38.304	-		-		-		-		-	-	38.304	-
		Subtotal	199.262	51.516		12.725		9.160		-		9.160	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Tests & Modeling & Simulation	Various	PM Ground Combat Vehicle : Warren, MI	13.783	15.527	Mar 2013	1.800	Jan 2014	-		-		-	Continuing	Continuing	Continuing
		Subtotal	13.783	15.527		1.800		-		-		-	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605625A / *Manned Ground Vehicle*	Project (Number/Name) FC8 / *BCT Ground Combat Vehicle*	

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	825.251	570.121		100.147		49.160		-		49.160	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605625A / *Manned Ground Vehicle*	**Project (Number/Name)** FC8 / *BCT Ground Combat Vehicle*

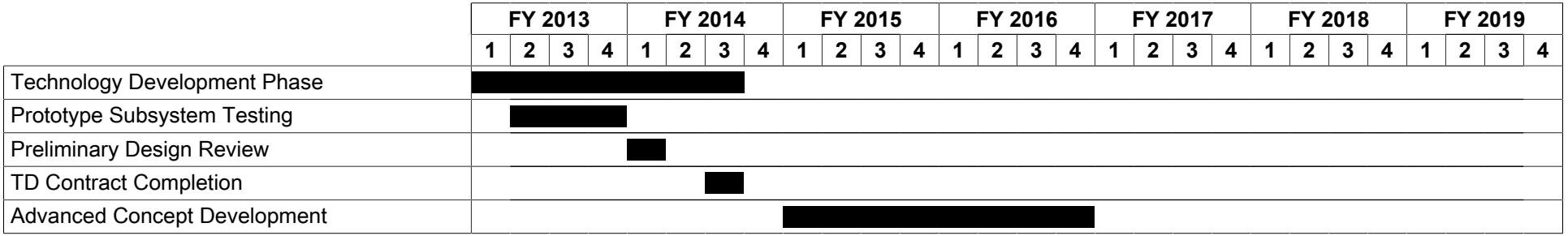

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605625A / *Manned Ground Vehicle*	**Project (Number/Name)** FC8 / *BCT Ground Combat Vehicle*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Technology Development Phase	4	2011	3	2014
Prototype Subsystem Testing	2	2013	4	2013
Preliminary Design Review	1	2014	1	2014
TD Contract Completion	3	2014	3	2014
Advanced Concept Development	1	2015	4	2016

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0605626A / *Aerial Common Sensor*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	108.566	10.377	17.748	-	17.748	22.896	0.131	0.134	8.012	-	167.864
AC5: *Enhanced Medium Alt Recon Surv Sys*	-	108.566	10.377	17.748	-	17.748	22.896	0.131	0.134	8.012	-	167.864

The FY 2015 OCO Request will be submitted at a later date.

Note

FY15 - This is EMARSS RDTE funding line which contains funding for Airborne Reconnaissance Low - Enhanced (ARL-E) in FY15 ($10.174 million).

A. Mission Description and Budget Item Justification

The Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS) is the Army's next generation C-12 based, direct support, manned airborne intelligence collection, processing, and targeting support system. EMARSS provides a persistent capability to detect, locate, classify/identify, and track surface targets with a high degree of timeliness and accuracy. EMARSS aircraft will be assigned to the U.S. Army Intelligence and Security Command's (INSCOM) Aerial Exploitation Battalions (AEB). EMARSS is an improvement over the existing Medium Altitude Reconnaissance and Surveillance System Quick Reaction Capability (MARSS QRC) in that it hosts an on board Distributed Common Ground System - Army (DCGS-A) capability, improved satellite communications, improved aircraft performance, and life cycle logistics sustainment capability.

EMARSS will consist of a commercial derivative aircraft equipped with an Electro-optical/Infrared (EO/IR) sensor with Full Motion Video (FMV), a Communications Intelligence (COMINT) collection system, an Aerial Precision Geolocation (APG) system, tactical line-of-site (LOS) and beyond line-of-site (BLOS) communications suite, two DCGS-A enabled operator workstations and a self-protection suite. EMARSS is built to allow future capabilities to be integrated on platform with the addition of a third carry-on workstation.

EMARSS will operate as a single platform in direct support of tactical missions. EMARSS, integrating elements of the DCGS-A, will provide efficient response to Combat Forces with Intelligence, Surveillance and Reconnaissance (ISR) tasking. EMARSS' flexibility, endurance, sensor capability, communications architecture, and Processing, Exploitation & Dissemination (PED) support is relevant to the entire Find, Fix, Finish, Exploit, Analyze, and Disseminate (F3EAD) cycle.

The EMARSS funding line contains funding for the Airborne Reconnaissance Low - Enhanced (ARL-E) program. ARL-E supports the Aerial ISR 2020 Strategy which recommended replacement of the current Airborne Reconnaissance Low Multifunction (ARL-M) and migrates the current ARL sensors plus new niche sensors to the meet the ARL-E Capabilities Production Document (CPD) requirements. ARL-E procures the hardware, software, and infrastructure to rapidly install sensors which support a rapid plug and play, quick connect/disconnect, mounting system to allow the installation of various combinations of sensor-types in support of a wide-range of theater operations. The sensor suite will consist of a COMINT subsystem capable of supporting theater net centric geo-location efforts, High Definition FMV; Improved Synthetic Aperture Radar / Moving Target Indicator (SAR/MTI) radar capability and updated mission workstations, as well as radio and data/communications

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0605626A *I Aerial Common Sensor*

architecture. ARL-E will leverage existing sensors as well as integrating and installing niche sensors to augment current capabilities. Niche capabilities include Wide-Area Augmentation System (WAAS), Laser Imaging Detection and Ranging (LIDAR) and Hyper Spectral Imaging (HSI) sensors.

FY15 Base funding in the amount of $17.748 million funds research and development activities for EMARSS in the amount of $7.574 million and ARL-E in the amount of $10.174 million.

EMARSS portion, in the amount of $7.574 million, funds sensor related Engineering Change Proposals (ECP) and contractor system support.

ARL-E portion, in the amount of $10.174 million, funds the engineering, manufacturing and development of a Long Range radar prototype to replace the current ARL Phoenix Eye to meet requirement for increased performance for ARL-E. Funding will also provide design of the COMINT Direction Finding (DF) antenna array for integration on the replacement aircraft for ARL-E. The Radar and COMINT systems will be integrated into DCH-8 platforms.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	47.426	10.382	36.102	-	36.102
Current President's Budget	108.566	10.377	17.748	-	17.748
Total Adjustments	61.140	-0.005	-18.354	-	-18.354
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	61.140	-0.005	-18.354	-	-18.354

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605626A / *Aerial Common Sensor*	Project (Number/Name) AC5 / *Enhanced Medium Alt Recon Surv Sys*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
AC5: *Enhanced Medium Alt Recon Surv Sys*	-	108.566	10.377	17.748	-	17.748	22.896	0.131	0.134	8.012	-	167.864
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

This is EMARSS RDTE funding line which contains funding for Airborne Reconnaissance Low - Enhanced (ARL-E) in FY15 ($10.174 million) and FY16 ($17.598 million).

A. Mission Description and Budget Item Justification

The Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS) is the Army's next generation C-12 based, direct support, manned airborne intelligence collection, processing, and targeting support system. EMARSS provides a persistent capability to detect, locate, classify/identify, and track surface targets with a high degree of timeliness and accuracy. EMARSS aircraft will be assigned to the U.S. Army Intelligence and Security Command's (INSCOM) Aerial Exploitation Battalions (AEB). EMARSS is an improvement over the existing Medium Altitude Reconnaissance and Surveillance System Quick Reaction Capability (MARSS QRC) in that it hosts an on board Distributed Common Ground System - Army (DCGS-A) capability, improved satellite communications, improved aircraft performance, and life cycle logistics sustainment capability.

EMARSS will consist of a commercial derivative aircraft equipped with an Electro-optical/Infrared (EO/IR) sensor with Full Motion Video (FMV), a Communications Intelligence (COMINT) collection system, an Aerial Precision Geolocation (APG) system, tactical line-of-site (LOS) and beyond line-of-site (BLOS) communications suite, two DCGS-A enabled operator workstations and a self-protection suite. EMARSS is built to allow future capabilities to be integrated on platform with the addition of a third carry-on workstation.

EMARSS will operate as a single platform in direct support of tactical missions. EMARSS, integrating elements of the DCGS-A, will provide efficient response to Combat Forces with Intelligence, Surveillance and Reconnaissance (ISR) tasking. EMARSS' flexibility, endurance, sensor capability, communications architecture, and Processing, Exploitation & Dissemination (PED) support is relevant to the entire Find, Fix, Finish, Exploit, Analyze, and Disseminate (F3EAD) cycle.

The EMARSS funding line contains funding for the Airborne Reconnaissance Low - Enhanced (ARL-E) program. ARL-E supports the Aerial ISR 2020 Strategy which recommended replacement of the current Airborne Reconnaissance Low Multifunction (ARL-M) and migrates the current ARL sensors plus new niche sensors to the meet the ARL-E Capabilities Production Document (CPD) requirements. ARL-E procures the hardware, software, and infrastructure to rapidly install sensors which support a rapid plug and play, quick connect/disconnect, mounting system to allow the installation of various combinations of sensor-types in support of a wide-range of theater operations. The sensor suite will consist of a COMINT subsystem capable of supporting theater net centric geo-location efforts, High Definition FMV; Improved Synthetic Aperture Radar / Moving Target Indicator (SAR/MTI) radar capability and updated mission workstations, as well as radio and data/communications

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605626A / *Aerial Common Sensor*	**Project (Number/Name)** AC5 / *Enhanced Medium Alt Recon Surv Sys*

architecture. ARL-E will leverage existing sensors as well as integrating and installing niche sensors to augment current capabilities. Niche capabilities include Wide-Area Augmentation System (WAAS), Laser Imaging Detection and Ranging (LIDAR) and Hyper Spectral Imaging (HSI) sensors.

FY15 Base funding in the amount of $17.748 million funds research and development activities for EMARSS in the amount of $7.574 million and ARL-E in the amount of $10.174 million.

EMARSS portion, in the amount of $7.574 million, funds sensor related Engineering Change Proposals (ECP) and contractor system support.

ARL-E portion, in the amount of $10.174 million, funds the engineering, manufacturing and development of a Long Range radar prototype to replace the current ARL Phoenix Eye to meet requirement for increased performance for ARL-E. Funding will also provide design of the COMINT Direction Finding (DF) antenna array for integration on the replacement aircraft for ARL-E. The Radar and COMINT systems will be integrated into DCH-8 platforms.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: EMARSS - Product Development	49.998	7.177	5.474
Articles:	-	-	-
Description: Funding is provided for the following efforts: ***FY 2013 Accomplishments:*** Continues integration of prime mission equipment, software integration, and risk mitigation effort. Purchase of EMD #5 & #6 green aircraft. ***FY 2014 Plans:*** Finalizes integration of prime mission equipment, software integration, and risk mitigation efforts. Partially funds an ICLS capability to support testing. ***FY 2015 Plans:*** EMARSS RDTE funds Sensor Engineering Change Proposals (ECPs) and contractor system support.			
Title: EMARSS - Support Costs	4.800	0.400	0.800
Articles:	-	-	-
Description: Support costs for matrix government, matrix contractor and PM Fixed Wing. ***FY 2013 Accomplishments:*** Support costs for matrix government, matrix contractor and PM Fixed Wing. ***FY 2014 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605626A / *Aerial Common Sensor*	**Project (Number/Name)** AC5 / *Enhanced Medium Alt Recon Surv Sys*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Support costs for matrix government, matrix contractor and PM Fixed Wing. ***FY 2015 Plans:*** Support costs for matrix government, matrix contractor and PM Fixed Wing.			
Title: EMARSS - Test and Evaluation	5.483	2.170	-
Articles:	-	-	-
Description: Funding is provided for the following effort: ***FY 2013 Accomplishments:*** Government DT/OT, LUT, Contractor CT/DT and JTIF. ***FY 2014 Plans:*** Delta testing and corrective actions resulting from LUT.			
Title: EMARSS - Program Management Support	8.685	0.630	1.300
Articles:	-	-	-
Description: Funding is provided for the following effort: ***FY 2013 Accomplishments:*** Continues Program Management Office (PMO) support and travel, Systems Engineering and Technical Assistance (SETA) and MITRE support. ***FY 2014 Plans:*** Continues Program Management Office (PMO) support and travel, Systems Engineering and Technical Assistance (SETA) and MITRE support. ***FY 2015 Plans:*** Continues Program Management Office (PMO) support and travel, Systems Engineering and Technical Assistance (SETA) and MITRE support.			
Title: EMARSS - EMD Contract Cost Growth	19.600	-	-
Articles:	-	-	-
Description: Boeing EMD contract cost growth. ***FY 2013 Accomplishments:***			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605626A / *Aerial Common Sensor*	**Project (Number/Name)** AC5 / *Enhanced Medium Alt Recon Surv Sys*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Government share of agreed upon cost growth and risk reduction.			
Title: EMARSS - EMD 5	20.000	-	-
Articles:	-	-	-
Description: Funds released for build of EMD 5 system. ***FY 2013 Accomplishments:*** Currently held for potential REAs from the Boeing Company.			
Title: ARL-E - Product Development	-	-	10.174
Description: ARL-E RDTE in EMARSS funding line until new RDTE line can be established. ***FY 2015 Plans:*** ARL-E RDTE funds the development of a Long Range Radar prototype for ARL-E.			
Accomplishments/Planned Programs Subtotals	108.566	10.377	17.748

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• Aerial Common Sensor (ACS): *EMARSS - A02005*	-	142.050	186.780	-	186.780	5.000	5.000	5.000	43.205	-	387.035
• ARL Mod: *ARL Mods - AZ2050*	-	-	133.096	-	133.096	109.424	132.761	82.459	42.370	-	500.110
• EMARSS - TENCAP - TNG: *EMARSS - TENCAP - TNG*	-	-	3.550	-	3.550	0.550	0.550	0.550	0.550	-	5.750
• ARL - TENCAP - TNG: *ARL - TENCAP - TNG*	-	-	-	-	-	-	-	0.550	-	-	0.550

Remarks

ACS - A02005 - FY15 base procurement dollars in the amount of $186.780 million supports the modification and conversion of the balance of QRC systems redeploying out of Afghanistan to meet the EMARSS Capabilities Production Document (CPD).

ARL Mods- AZ2050 - (AZ2001 Multi Sensor Airborne Reconnaissance summary budget line). FY15 Base Procurement dollars in the amount of $133.096 million supports purchasing of 5 aircraft, COMINT Sensors, Short Range Radar, Mini-T & Beyond Line of Sight (BLOS) Data Links, DCGS-A Workstations, software, mission radio sets, Full Motion Video (FMV) Sensors, and Mission Equipment Payload/Processing Exploitation and Dissemination (MEP/PED) integration of two systems.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605626A / *Aerial Common Sensor*	**Project (Number/Name)** AC5 / *Enhanced Medium Alt Recon Surv Sys*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
ARL-E / EMARSS Theater Net-centric Geolocation (TNG) - TNG funding included in TENCAP funding line.											

D. Acquisition Strategy

The Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS) is a Program of Record based on an Army G-3/5/7 Directed Requirement (DR) signed 11 December 2009. The program entered the acquisition process in the Engineering and Manufacturing Development (EMD) phase with a 1QFY11 contract award that was competitively awarded to a single contractor. Program completed System Design Review in 1QFY12 and began modification and integration of the aircraft in 2QFY12. Following a Contractor Test / Development Test and Limited User Test, the Army will be positioned to inform a Milestone C Decision. Program currently has an Army validated CPD.

ARL-E portion, in the amount of $10.174 million, funds the engineering, manufacturing and development of a Long Range radar prototype to replace the current ARL Phoenix Eye to meet requirement for increased performance for ARL-E. Funding will also provide design of the COMINT Direction Finding (DF) antenna array for integration on the replacement aircraft for ARL-E. The Radar and COMINT systems will be integrated into DCH-8 platforms.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605626A / *Aerial Common Sensor*	Project (Number/Name) AC5 / *Enhanced Medium Alt Recon Surv Sys*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMO	Various	PM ARES : Aberdeen Proving Ground, MD	6.738	5.085		0.230		0.500	Oct 2014	-		0.500	-	12.553	-
SETA Support	C/CPFF	PM ARES : Aberdeen Proving Ground, MD	3.460	2.400		0.200		0.400	Nov 2014	-		0.400	-	6.460	-
MITRE - FFRDC Support	C/CPFF	PM ARES : Aberdeen Proving Ground, MD	2.533	1.200		0.200		0.400	Oct 2014	-		0.400	-	4.333	-
		Subtotal	12.731	8.685		0.630		1.300		-		1.300	-	23.346	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
EMARSS EMD (#5 & #6 green ACFT purchase)	C/CPIF	Boeing Company : Ridley Park, PA	55.738	16.700		-		-		-		-	-	72.438	-
Other GFE to include COMSEC Equipment, Airborne Precision Geo Location (APG), and Vortex Data Links	Allot	L3 COMM/NSA : Warner Robins AFB	3.903	6.446		-		-		-		-	-	10.349	-
Request for Equitable Adjustment (REA)	C/FP	Boeing Company : Ridley Park, PA	7.085	-		-		-		-		-	-	7.085	-
Prime Contractor Systems Support	C/CPFF	Boeing Company : Ridley Park, PA	8.000	7.535		7.177		3.736	Dec 2014	-		3.736	-	26.448	-
Engineering Change Proposals (ECP) for Sensors	C/CPIF	Boeing Company : Ridley Park, PA	0.000	12.966		-		1.738	Dec 2014	-		1.738	-	14.704	-
Sensors acquisition	SS/FFP	BAE Systems : Nashua, NH	0.000	6.351	Oct 2013	-		-		-		-	-	6.351	-
EMD Contract Cost Growth	Allot	Boeing Company : Ridley Park, PA	0.000	19.600	Aug 2013	-		-		-		-	-	19.600	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605626A / *Aerial Common Sensor*	Project (Number/Name) AC5 / *Enhanced Medium Alt Recon Surv Sys*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
EMARSS - EMD 5 (currently held for potential REAs)	C/CPIF	Boeing Company : Ridley Park, PA	0.000	20.000		-		-		-		-	-	20.000	-
DCGS-A & Orion S/W processing on board	Various	Various : Various	6.740	-		-		-		-		-	-	6.740	-
ARL-E - Radar Development	C/TBD	TBD : TBD	0.000	-		-		6.374	Mar 2015	-		6.374	28.225	34.599	-
ARL-E - COMINT Array	C/TBD	TBD : TBD	0.000	-		-		3.800	Mar 2015	-		3.800	-	3.800	-
		Subtotal	81.466	89.598		7.177		15.648		-		15.648	28.225	222.114	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Matrix Government	MIPR	Various : Various	11.508	3.679		0.200		0.400	Oct 2014	-		0.400	-	15.787	-
Matrix Contractor Support	Various	Various : Various	1.992	1.121		0.200		0.400	Nov 2014	-		0.400	-	3.713	-
		Subtotal	13.500	4.800		0.400		0.800		-		0.800	-	19.500	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government DT/OT, LUT	Various	Various : Various	7.590	2.000		2.170		-		-		-	-	11.760	-
Contractor Test (CT/DT)	C/CPIF	Various : Various	0.000	0.390		-		-		-		-	-	0.390	-
Test Flight Ranges	Various	Various : Various	7.517	-		-		-		-		-	-	7.517	-
Forward Operational Assessment (FOA)	MIPR	Various : Various	0.124	-		-		-		-		-	-	0.124	-
Initial Operational Test and Evaluation (IOT&E)	MIPR	Various : Various	0.000	1.000		-		-		-		-	-	1.000	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605626A / *Aerial Common Sensor*	**Project (Number/Name)** AC5 / *Enhanced Medium Alt Recon Surv Sys*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Joint Test & Integration Facility (JTIF)	Various	Various : various	9.678	2.093		-		-		-		-	-	11.771	-
		Subtotal	24.909	5.483		2.170		-		-		-	-	32.562	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	132.606	108.566		10.377		17.748		-		17.748	28.225	297.522	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605626A / *Aerial Common Sensor*	**Project (Number/Name)** AC5 / *Enhanced Medium Alt Recon Surv Sys*

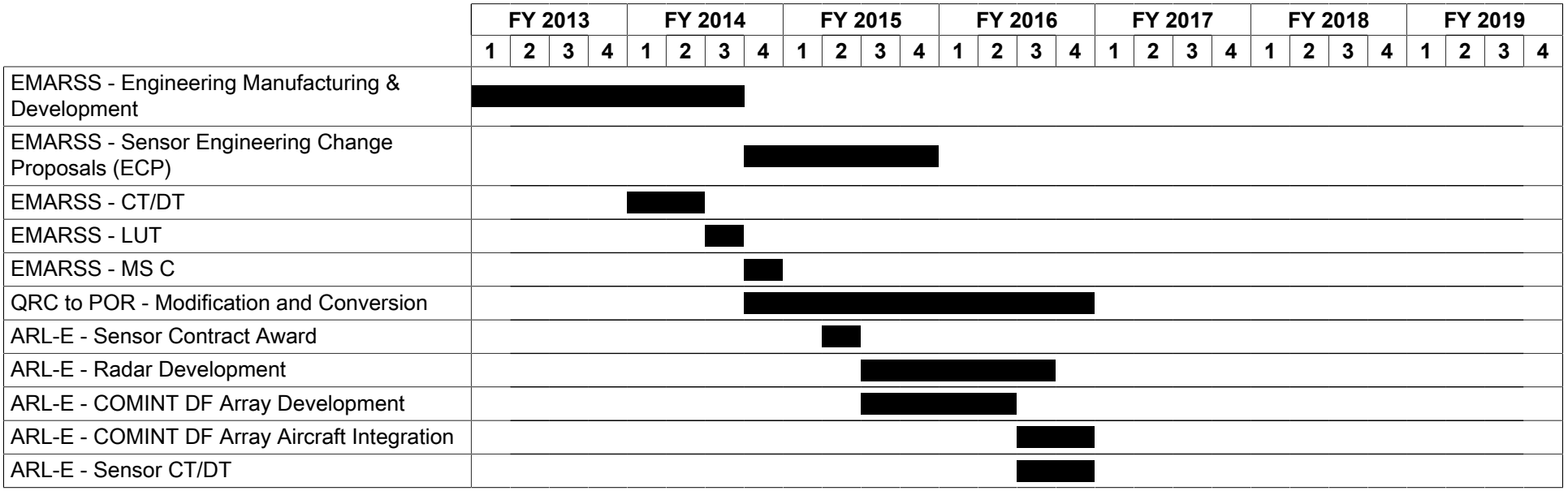

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605626A / *Aerial Common Sensor*	**Project (Number/Name)** AC5 / *Enhanced Medium Alt Recon Surv Sys*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
EMARSS - Engineering Manufacturing & Development	3	2011	3	2014
EMARSS - Sensor Engineering Change Proposals (ECP)	4	2014	4	2015
EMARSS - CT/DT	1	2014	2	2014
EMARSS - LUT	3	2014	3	2014
EMARSS - MS C	4	2014	4	2014
QRC to POR - Modification and Conversion	4	2014	4	2016
ARL-E - Sensor Contract Award	2	2015	2	2015
ARL-E - Radar Development	3	2015	3	2016
ARL-E - COMINT DF Array Development	3	2015	2	2016
ARL-E - COMINT DF Array Aircraft Integration	3	2016	4	2016
ARL-E - Sensor CT/DT	3	2016	4	2016

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0605766A / *National Capabilities Integration (MIP)*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	-	21.132	15.212	-	15.212	8.639	3.770	4.500	5.026	Continuing	Continuing
DX9: *National Integration To Tactical Systems(MIP)*	-	-	21.132	15.212	-	15.212	8.639	3.770	4.500	5.026	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

National Integration to Tactical Systems provides centralized monitoring and synchronization of the transition and integration of proven advanced technologies, prototypes and standards developed by the National Intelligence Community (IC) into Army systems and Programs of Record; enables efficient use and oversight of system development funds for final stage integration, development, and testing of successful technologies and prototypes to advance, or make compliant, Army systems and Programs of Record that have or use National capabilities.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	-	21.143	15.472	-	15.472
Current President's Budget	-	21.132	15.212	-	15.212
Total Adjustments	-	-0.011	-0.260	-	-0.260
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-0.011	-0.260	-	-0.260

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605766A / *National Capabilities Integration (MIP)*	Project (Number/Name) DX9 / *National Integration To Tactical Systems(MIP)*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
DX9: *National Integration To Tactical Systems(MIP)*	-	-	21.132	15.212	-	15.212	8.639	3.770	4.500	5.026	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Conducts National Capabilities Integration to transition and incorporate selected Intelligence Community (IC) emerging technologies and advanced capabilities into Army systems and Programs of Record. Provides Army the ability to deliver services and capabilities successfully demonstrated through advanced development and prototype activities determined technologically ready by the Army Tactical Exploitation of National Capabilities (TENCAP) program. Facilitates testing and program office ability to accept and integrate National capabilities and standards into Program of Record acquisition systems and baselines.

A. Mission Description and Budget Item Justification

National Integration To Tactical Systems provides for centralized monitoring and synchronization of the transition and integration of new, updated, and emerging National Intelligence Community (IC) technologies, capabilities, and standards into Programs of Record across the Army to (1) to maintain operational relevance of Army programs and address changes in technology and the threat, (2) to ensure Army programs maintain interoperability with and access to the National community architecture and systems , and (3) to advance Army ability to conduct analysis and tasking, collection, processing, exploitation, and dissemination (TCPED) of intelligence data.

FY2015 Base funding in the amount of $15.212 million provides integration funds for 2 validated National Intel Community (IC) efforts: (1) Air Vigilance (AV) software development with $7.362 million for the integration of advanced sensor developments into the Army Air Vigilance (AV) Program of Record; (2) Theater Net-Centric Geolocation (TNG) compliance with $7.850 million for the engineering and integration of the National standard for Airborne Overhead Cooperative Operations/Theater Net-Centric Geolocation (AOCO/TNG) into Army Programs of Record in compliance to Joint Requirement (JROCM 101-10).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Advanced Air Vigilance (AV) capabilities	-	8.032	7.362
Articles:	-	-	-
Description: Advanced development, modifications, and changes to the Air Vigilance (AV) system software.			
FY 2014 Plans: Provides for software development and integration of advances and/or changes to ensure continued system interoperability and viability.			
FY 2015 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605766A / *National Capabilities Integration (MIP)*	**Project (Number/Name)** DX9 / *National Integration To Tactical Systems(MIP)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Provides for software development and integration of advances and/or changes to ensure continued system interoperability and viability.			
Title: Airborne Overhead Cooperative Operations (AOCO) / Theater Net-Centric Geolocation (TNG)	-	13.100	7.850
Articles:	-	-	-
Description: National Intelligence Community (IC) standard for interoperability and use of specific intelligence networked capability. ***FY 2014 Plans:*** Provides funds to specified Army Programs of Record for software development and enhancements and for integration, ensuring compliance to the National requirement and standards and interoperability with this National Intelligence Community (IC) networked capability for tactical use and improved Army battlefield awareness. ***FY 2015 Plans:*** Provides funds to specified Army Programs of Record for software development and enhancements and for integration, ensuring compliance to the National requirement and standards and interoperability with this National Intelligence Community (IC) networked capability for tactical use and improved Army battlefield awareness.			
Accomplishments/Planned Programs Subtotals	-	21.132	15.212

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• 0603766A: *Tactical Electronic Surveillance System - Adv Dev (MIP), PE 0603766A*	7.960	6.890	8.953	-	8.953	8.938	9.079	9.181	12.048	Continuing	Continuing
• W60001: *Air Vigilance (AV), OPA2 (W60001)*	-	-	7.000	-	7.000	6.000	2.120	2.457	2.507	Continuing	Continuing

Remarks

W60001 OPA2 Line renamed to "Air Vigilance" in FY15 to provide better operational security of system capabilities.

D. Acquisition Strategy

The 'National Integration To Tactical Systems (Military Intelligence Program - MIP)' funds provide for transition and integration of National Intelligence Community (IC) advanced technologies and prototypes leveraged by the Army's Tactical Exploitation of National Capabilities (TENCAP) program office. The Army TENCAP acquisition strategy is driven by an annual TENCAP General Officer Steering Group (TGOSG), co-chaired by the Army G2; Army G8; and the Military Deputy to the Assistant

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605766A / *National Capabilities Integration (MIP)*	**Project (Number/Name)** DX9 / *National Integration To Tactical Systems(MIP)*

Secretary of the Army for Acquisition, Logistics, and Technology [ASA(ALT)]; and includes representatives from the Army G3; Army G6; Army Training and Doctrine Command (TRADOC); and the Program Executive Office for Intelligence, Electronic Warfare and Sensors (PEO IEW&S). The TGOSG reviews, validates, prioritizes, and guides Army TENCAP efforts, according to Army and Defense strategy. Based on this TGOSG guidance, Army TENCAP invests BA 6.4 RDTE in Intelligence Community (IC) developments during the more cost-effective advanced development phase to ensure Army requirements are met with minimal redundancy. Army TENCAP then uses BA 6.5 RDTE to manage the transition of these advanced development efforts through system development and integration into Army Programs of Record (POR). This strategy ensures these leveraged investments remain viable through multiple budget cycles, significantly increasing successful transition to recipient Army POR. With acquisition discipline and oversight provided by PEO IEW&S, Army TENCAP executes the TGOSG approved efforts through use of multiple contracts and agreements with the military, National agencies, Labs, Industry Partners and Academia for the full duration required to complete development and transition these National capabilities into enduring Army programs.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605766A / *National Capabilities Integration (MIP)*	Project (Number/Name) DX9 / *National Integration To Tactical Systems(MIP)*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Matrix Gov Engineers	MIPR	AGC : Alexandria, VA	0.000	-		0.195	Dec 2013	0.200	Dec 2014	-		0.200	Continuing	Continuing	-
Military Intelligence Engineers	C/FFP	TASC, Inc. : Chantilly, VA	0.000	-		0.675	Dec 2013	-		-		-	Continuing	Continuing	-
Military Intelligence Engineers	C/CPFF	TBD : TBD	0.000	-		-		0.695	Dec 2014	-		0.695	-	0.695	-
		Subtotal	0.000	-		0.870		0.895		-		0.895	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Air Vigilance (AV) software updates and ehancement integration	MIPR	Classified : MIPR	0.000	-		5.389	Dec 2013	4.761	Dec 2014	-		4.761	Continuing	Continuing	-
TNG compliance/ interoperability in PM DCGS-A, PD Prophet and PM Sensors Aerial Intelligence	MIPR	Multiple : Multiple	0.000	-		13.100	Feb 2014	7.850	Feb 2015	-		7.850	Continuing	Continuing	-
		Subtotal	0.000	-		18.489		12.611		-		12.611	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Air Vigilance (AV) program direct costs - Gov, travel, facilities, etc.	Allot	Army TENCAP/ Air Vigilance : Alexandria, VA	0.000	-		1.273	Oct 2013	1.206	Oct 2014	-		1.206	Continuing	Continuing	-
		Subtotal	0.000	-		1.273		1.206		-		1.206	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605766A / *National Capabilities Integration (MIP)*	Project (Number/Name) DX9 / *National Integration To Tactical Systems(MIP)*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Integration, interoperability testing	MIPR	Multiple : Multiple	0.000	-		0.500	Jan 2014	0.500	Jan 2015	-		0.500	Continuing	Continuing	-
		Subtotal	0.000	-		0.500		0.500		-		0.500	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		21.132		15.212		-		15.212	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605766A / *National Capabilities Integration (MIP)*	**Project (Number/Name)** DX9 / *National Integration To Tactical Systems(MIP)*

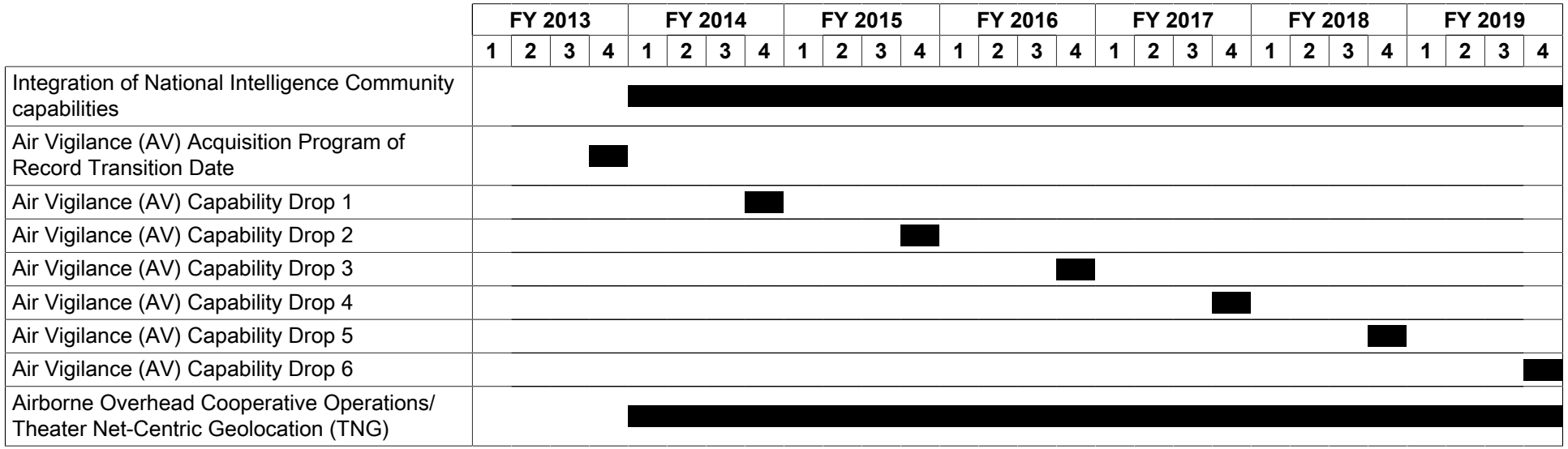

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605766A / *National Capabilities Integration (MIP)*	**Project (Number/Name)** DX9 / *National Integration To Tactical Systems(MIP)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Integration of National Intelligence Community capabilities	1	2014	4	2020
Air Vigilance (AV) Acquisition Program of Record Transition Date	4	2013	4	2013
Air Vigilance (AV) Capability Drop 1	4	2014	4	2014
Air Vigilance (AV) Capability Drop 2	4	2015	4	2015
Air Vigilance (AV) Capability Drop 3	4	2016	4	2016
Air Vigilance (AV) Capability Drop 4	4	2017	4	2017
Air Vigilance (AV) Capability Drop 5	4	2018	4	2018
Air Vigilance (AV) Capability Drop 6	4	2019	4	2019
Airborne Overhead Cooperative Operations/Theater Net-Centric Geolocation (TNG)	1	2014	4	2020

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0605812A / *Joint Light Tactical Vehicle - ED*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	59.205	84.185	45.718	-	45.718	32.724	25.758	3.237	3.107	Continuing	Continuing
VU9: *Joint Light Tactical Vehicle - ED*	-	59.205	84.185	45.718	-	45.718	32.724	25.758	3.237	3.107	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

At the request of the House Armed Services Committee - Air and Land Forces, a separate and distinct funding line (0605812A-VU9) was established for JLTV, transition of Project L50 funding to this newly established Program Element (PE) occurred in FY 2013.

A. Mission Description and Budget Item Justification

Joint Light Tactical Vehicles (JLTV): Funding supports the development and testing of the JLTV Family of Vehicles (FoV). JLTV is a joint program between the U.S. Army and the Marine Corps, of which the U.S. Army has the lead. The JLTV goal is a FoV capable of performing multiple mission roles that will be designed to provide protected, sustained, networked mobility for personnel and payloads across the full range of military operations. JLTV objectives include increased protection and performance over the current fleet; minimizing ownership costs by maximizing commonality, fuel efficiency, reliability, and maintaining effective competition throughout throughout the lifecycle. Commonality of components, maintenance procedures, training, etc., between vehicles is expected to be inherent in FoV solutions across mission variants to minimize total ownership cost. Unique service requirements have been minimized.

Major FY 2015 budget activities include completion of three Engineering and Manufacturing Development (EMD) contracts, Ballistic Testing, completion of the Limited User Testing (LUT), and analysis of Live Fire & Operational Test reports in preparation for Milestone C. FY 2015 also includes efforts associated with the contract award for live fire test assets, Source Selection Evaluation activities, and completion of Milestone C documentation in preparation for the Defense Acquisition Board and program management support.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army					Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*			R-1 Program Element (Number/Name) PE 0605812A / *Joint Light Tactical Vehicle - ED*		
B. Program Change Summary ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO**	**FY 2015 Total**
Previous President's Budget	72.295	84.230	34.700	-	34.700
Current President's Budget	59.205	84.185	45.718	-	45.718
Total Adjustments	-13.090	-0.045	11.018	-	11.018
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-13.090	-0.045	11.018	-	11.018

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605812A / *Joint Light Tactical Vehicle - ED*	Project (Number/Name) VU9 / *Joint Light Tactical Vehicle - ED*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
VU9: *Joint Light Tactical Vehicle - ED*	-	59.205	84.185	45.718	-	45.718	32.724	25.758	3.237	3.107	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

FY 2012 funding for the Joint Light Tactical Vehicles (JLTV) program is under Program Element (PE) 0604804A, Project L50.
FY 2013 and out year funding is under Project Element (PE) 0605812A, Project VU9.

A. Mission Description and Budget Item Justification

Funding supports the development and testing of the Joint Light Tactical Vehicle (JLTV) Family of Vehicles (FoV). JLTV is a joint program between the U.S. Army and the U.S. Marine Corps, of which the U.S. Army has the lead. The JLTV goal is a FoV capable of performing multiple mission roles that will be designed to provide protected, sustained, networked mobility for personnel and payloads across the full range of military operations. JLTV objectives include increased protection and performance over the current fleet; minimizing ownership costs by maximizing commonality, fuel efficiency, reliability, and maintaining effective competition throughout the life cycle. Commonality of components, maintenance procedures, training, etc., between vehicles is expected to be inherent in FoV solutions across mission variants to minimize total ownership cost. Unique service requirements have been minimized.

Major FY 2015 budget activities include completion of three Engineering and Manufacturing Development (EMD) contracts, Ballistic Testing, completion of the Limited User Testing (LUT), and analysis of Live Fire & Operational Test reports in preparation for Milestone C. FY 2015 also includes efforts associated with the contract award for live fire test assets, Source Selection Evaluation activities, and completion of Milestone C documentation in preparation for the Defense Acquisition Board and program management support.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Contract and support for development and fabrication of test vehicles. ***Description:*** Funding is provided for the contract award for live fire test assets. ***FY 2015 Plans:*** Funding provides for contract award of live fire test assets that will be destroyed during ballistic testing.	-	-	33.603
Title: Joint Light Tactical Vehicles (JLTV) program management support	6.866	10.633	9.305
Articles:	-	-	-
Description: Funding is provided for the support of program management government operations.			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605812A / *Joint Light Tactical Vehicle - ED*	**Project (Number/Name)** VU9 / *Joint Light Tactical Vehicle - ED*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
FY 2013 Accomplishments: Various costs to provide effort during the Engineering and Manufacturing Development (EMD) phase ***FY 2014 Plans:*** Funding is provided for continued EMD prototype Joint Light Tactical Vehicles development and fabrication. Key events included the continued monitoring of the contract performance of the EMD vendors, as well as preparation of analysis and documentation in support of Milestone C. ***FY 2015 Plans:*** Continue support for the completion of the EMD phase to include program management, level of effort reports, test evaluation analyses, integrated logistics support, government furnished equipment management, Training Aids, Devices, Simulators, and Simulations (TADSS), building maintenance, building utilities, vehicle leases, close out of the EMD contracts, preparation of analysis and documentation in support of Milestone C, and LRIP source selection.			
Title: Engineering and Manufacturing Development Test and Evaluation. ***Articles:*** ***Description:*** Test and Evaluation Events ***FY 2013 Accomplishments:*** Initiated the Engineering and Manufacturing Development Test program to include armor coupons, rolling chassis, and ballistic cab testing. ***FY 2014 Plans:*** Continuation of Engineering and Manufacturing Development Test support to include Automatic Fire Extinguisher System (AFES), ballistic cab, LUT, performance and Reliability, Availability and Maintainability (RAM) testing. ***FY 2015 Plans:*** Completion of LUT testing and finalize the EMD test reports in support of Milestone C and Low Rate Initial Production (LRIP) source selection.	9.294 -	42.600 -	2.810 -
Title: Engineering and Manufacturing Development (EMD) prototype contract and support for development and fabrication. ***Articles:*** ***Description:*** Funding is provided for EMD prototype contract award for development and fabrication. ***FY 2013 Accomplishments:***	43.045 -	30.952 -	- -

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605812A / *Joint Light Tactical Vehicle - ED*	**Project (Number/Name)** VU9 / *Joint Light Tactical Vehicle - ED*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Initiated EMD prototype of the Joint Light Tactical Vehicles development and fabrication phase. It included shakedown testing, delivery of ballistic cabs and rolling chassis, delivery of EMD prototypes, and vendor test support. ***FY 2014 Plans:*** Funding is provided for continued EMD prototype Joint Light Tactical Vehicles development and fabrication. Test events included performance, reliability, live fire, and roof crush.			
Accomplishments/Planned Programs Subtotals	59.205	84.185	45.718

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• PM JLTV PRODUCTION D15603: *Joint Light Tactical Vehicles (JLTV), D15603, Army OPA 1*	-	-	164.615	-	164.615	310.820	603.738	843.944	1,101.770	Continuing	Continuing
• PM JLTV PROJECT 3209 0605812M: *Marine Corps Ground Combat/Support Systems, RDTE Project 3209 0605812M*	35.563	50.362	11.450	-	11.450	34.325	23.672	2.199	2.081	Continuing	Continuing
• PM JLTV PRODUCTION 5095: *Marine Corps Ground Combat/ Support Systems, Production 5095*	-	-	7.500	-	7.500	76.560	143.062	520.468	618.216	Continuing	Continuing

Remarks

D. Acquisition Strategy

Joint Light Tactical Vehicles (JLTV) is a Joint Services Program with the U.S. Army and Marine Corps as the two main components. The U.S. Army is the JLTV service lead. In addition, the Navy anticipates procuring JLTV vehicles upon successful Full Rate Production (FRP) decision.

The program will use an evolutionary approach to deliver capabilities in increments based on program priorities. All technologies entering the current Engineering and Manufacturing Development (EMD) phase were Technology Readiness Level (TRL) 6 or higher to achieve Capabilities Development Document (CDD) requirements.

The program revised the acquisition strategy in the first quarter of FY 2012, addressing better buying power initiatives, and reduced the program schedule by fifteen (15) months to enable a 33-month Non-Development Item approach for EMD, with Milestone B approved on 9 August 2012. The program anticipates Milestone C decision in July 2015.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605812A / *Joint Light Tactical Vehicle - ED*	**Project (Number/Name)** VU9 / *Joint Light Tactical Vehicle - ED*

Through a full and open competition, the program awarded three fixed price contracts for EMD phase on 22 August 2012 to AM General, Lockheed Martin, and Oshkosh Corporations.

Increment I will produce two Mission Role Variant (MRV) configurations (Combat Tactical Vehicle (CTV) and Combat Support Vehicle (CSV)) with mission packages (General Purpose, Heavy Guns Carrier, Close Combat Weapons Carrier, and Utility/Shelter Carrier). EMD vendors fabricated a total of 66 vehicles (22 test assets per vendor) representing mission packages for both MRVs, which the Government will fully test during EMD.

Vehicles were delivered in the fourth quarter of FY 2013 to begin the fourteen (14) month government performance and reliability testing, which will focus on demonstrating Key Performance Parameters/Key System Attributes (KPP/KSA) and safety requirements. Test strategy represents a mix of vendor risk reduction testing and formal government testing.

Market research has not identified a qualified non-EMD vendor. Unless subsequent market research identifies a qualified non-EMD vendor capable of delivering the required capabilities, there will be a down-select from among the EMD contractors for award of the Production and Deployment (PD) phase contract. The down-select will result in awarding a single fixed-price contract in FY 2015 with R&D funded test vehicles, consisting of three years of procurement funded Low-Rate Initial Production (LRIP) with an option of five years of FRP starting in FY 2018. The PD phase contract will also include interim contractor logistics support (ICLS) and one or more options for the procurement of the JLTV Technical Data Package (TDP).

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605812A / *Joint Light Tactical Vehicle - ED*	Project (Number/Name) VU9 / *Joint Light Tactical Vehicle - ED*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JLTV Contract Service Support	SS/CPFF	Booz-Allen Hamilton, : McLean, VA	0.000	2.725	Feb 2013	3.152	Jan 2014	1.855	Dec 2014	-		1.855	Continuing	Continuing	Continuing
JLTV Contract Service Support and PBL/BCA	SS/CPFF	Camber Corporation, : Huntsville, AL	0.000	0.421	Jun 2013	0.526	May 2014	0.300	Apr 2015	-		0.300	Continuing	Continuing	Continuing
JLTV Service Support	MIPR	US Army Combined Arms Support Commands - CASCOM, : Ft. Lee, VA	0.000	0.200	Aug 2013	0.409	Jul 2014	0.200	Apr 2015	-		0.200	Continuing	Continuing	Continuing
		Subtotal	0.000	3.346		4.087		2.355		-		2.355	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Joint Light Tactical Vehicles (JLTV) Engineering and Manufacturing Development Contract	C/FFP	Oshkosh Corporation, : Oshkosh, WI	0.000	3.914	Nov 2012	4.136	Nov 2013	-		-		-	-	8.050	55.698
JLTV Engineering and Manufacturing Development Contract	C/FFP	Lockheed Martin Corporation, : Grand Prairie, TX	0.000	0.106	Sep 2013	3.833	Nov 2013	-		-		-	-	3.939	65.106
JLTV Engineering and Manufacturing Development Contract	C/FFP	AM General, : South Bend, IN	0.000	27.560	Nov 2012	1.753	Nov 2013	-		-		-	-	29.313	63.808
JLTV Live Fire Test Assets	C/FFP	TBD : TBD	0.000	-		-		19.600	Jul 2015	-		19.600	16.830	36.430	56.350
		Subtotal	0.000	31.580		9.722		19.600		-		19.600	16.830	77.732	240.962

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605812A / *Joint Light Tactical Vehicle - ED*	Project (Number/Name) VU9 / *Joint Light Tactical Vehicle - ED*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Joint Light Tactical Vehicles (JLTV) is a Joint Services Program with the U.S. Army and U.S. Marine Corps as the two main components. Total value of Engineering and Manufacturing Development contracts is shared between the U.S. Army and the U.S. Marine Corps. Contract awards were funded in FY 2012, U.S. Army under PE 0604804A Project L50 and U.S. Marine Corps under PE 0603635M Project 3209.

Total estimated target value of the Live Fire Test contract ($56.350 million) is shared between the U.S. Army and the U.S. Marine Corps. The U.S. Marine Corps funds are under PE 0603635M Project 3209.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JLTV Program Management Support	Various	TACOM Life Cycle Management Command (LCMC), : Harrison Township, MI	0.000	6.866	Sep 2013	10.633	Sep 2014	9.305	Sep 2015	-		9.305	Continuing	Continuing	Continuing
GFE Management / Logistics / Training Aids, Devices, Simulators and Simulations (TADSS) / Analysis	MIPR	Various : TBD	0.000	1.016	Aug 2013	4.350	May 2014	3.491	Jan 2015	-		3.491	Continuing	Continuing	Continuing
Research and development level of effort studies.	C/ FFPLOE	TBD : TBD	0.000	-		3.500	Jun 2014	-		-		-	-	3.500	3.500
JLTV EMD phase for Engineering, Manufacturing, and Development Phase	MIPR	Tank-Automotive Reseach, Development, and Engineering Center - TARDEC : Warren, MI	0.000	4.517	Jan 2013	5.700	Jan 2014	5.053	Dec 2014	-		5.053	Continuing	Continuing	Continuing
JLTV Prototype EMD Phase - Cost and Systems, Legal, Budget,	MIPR	TACOM Life Cycle Management Command (LCMC), : Warren, MI	0.000	2.586	Jan 2013	3.593	Jan 2014	3.104	Dec 2014	-		3.104	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605812A / *Joint Light Tactical Vehicle - ED*	Project (Number/Name) VU9 / *Joint Light Tactical Vehicle - ED*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Safety, Security, Contracting, Logistics															
		Subtotal	0.000	14.985		27.776		20.953		-		20.953	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Complete JLTV EMD Test - e.g. Limited User Test (LUT)	Various	TBD : Various	0.000	9.294	Jul 2013	42.600	Jun 2014	2.810	Oct 2014	-		2.810	38.590	93.294	92.294
		Subtotal	0.000	9.294		42.600		2.810		-		2.810	38.590	93.294	92.294

	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	59.205		84.185		45.718		-		45.718	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605812A / *Joint Light Tactical Vehicle - ED*	**Project (Number/Name)** VU9 / *Joint Light Tactical Vehicle - ED*

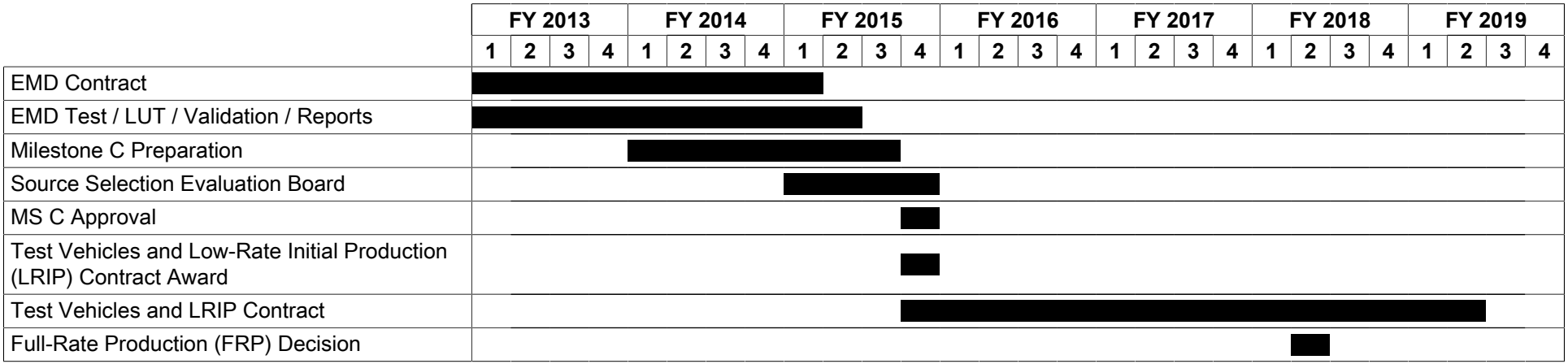

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605812A / *Joint Light Tactical Vehicle - ED*	**Project (Number/Name)** VU9 / *Joint Light Tactical Vehicle - ED*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
EMD Contract	4	2012	1	2015
EMD Test / LUT / Validation / Reports	1	2013	2	2015
Milestone C Preparation	1	2014	3	2015
Source Selection Evaluation Board	1	2015	4	2015
MS C Approval	4	2015	4	2015
Test Vehicles and Low-Rate Initial Production (LRIP) Contract Award	4	2015	4	2015
Test Vehicles and LRIP Contract	4	2015	2	2019
Full-Rate Production (FRP) Decision	2	2018	2	2018

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0605830A / *Aviation Ground Support Equipment*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	-	-	10.041	-	10.041	8.880	7.880	7.000	7.161	Continuing	Continuing
EE5: *Aviation Ground Support Equipment*	-	-	-	10.041	-	10.041	8.880	7.880	7.000	7.161	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

The increase of $10,041K reflects the realignment of funds from PE 0603801A.

A. Mission Description and Budget Item Justification

This Program Element provides advanced development aviation support of programs that include advanced maintenance concepts and equipment. The FY 2015 budget request funds Aviation Advanced Development which supports Aviation Ground Support Equipment developmental testing and prototypes which will enhance the functionality of current and future aircraft by improving the effectiveness of maintenance and servicing operations through validating new maintenance concepts to improve man and machine interfaces, improve aircraft maintenance processes, reduce Operation and Support costs, and insert diagnostics technologies for product supportability and maintainability to replace obsolete and unsupportable equipment. This program provides for the development of rapid battle repair procedures, tools development to speed the return of aircraft to a full mission status, and development of new equipment for aerial recovery of damaged aircraft. Included in this program are: Aircraft Cleaning and De-Icing System (ACDS - formerly ACS), Aviation Foot Locker (AFL), Aviation Ground Power Unit (AGPU) equipment familiarization software, redesign and incorporation of AGPU modularity capabilities, Aviation Unit Maintenance Shop Set (AVUM SS), Family of Aviation Lifting Devices (F-ALD), Common Aviation Tool System (CATS), Non-Destructive Test Equipment System (NDTE), Swaging Tool Kits (SWTK), Unit Maintenance Aerial Recovery Kit (UMARK) and development support for tools required to provide maintenance support to modernized/future force aircraft.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	-	-	-	-	-
Current President's Budget	-	-	10.041	-	10.041
Total Adjustments	-	-	10.041	-	10.041
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	10.041	-	10.041

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605830A / *Aviation Ground Support Equipment*	Project (Number/Name) EE5 / *Aviation Ground Support Equipment*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EE5: *Aviation Ground Support Equipment*	-	-	-	10.041	-	10.041	8.880	7.880	7.000	7.161	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Beginning in FY 2015, funding on this Project was realigned from PE/Project 0603801A/B32 to reflect the program's development efforts in Budget Activity 05, System Development and Demonstration.

A. Mission Description and Budget Item Justification

This Project provides advanced development aviation support of programs that include advanced maintenance concepts and equipment. The FY 2015 budget request funds Aviation Advanced Development which supports Aviation Ground Support Equipment developmental testing and prototypes which will enhance the functionality of current and future aircraft by improving the effectiveness of maintenance and servicing operations through validating new maintenance concepts to improve man and machine interfaces, improve aircraft maintenance processes, reduce Operation and Support costs, and insert diagnostics technologies for product supportability and maintainability to replace obsolete and unsupportable equipment. This program provides for the development of rapid battle repair procedures, tools development to speed the return of aircraft to a full mission status, and development of new equipment for aerial recovery of damaged aircraft. Included in this program are: Aircraft Cleaning and De-Icing System (ACDS - formerly ACS), Aviation Foot Locker (AFL), Aviation Ground Power Unit (AGPU) equipment familiarization software, redesign and incorporation of AGPU modularity capabilities, Aviation Unit Maintenance Shop Set (AVUM SS), Family of Aviation Lifting Devices (F-ALD), Common Aviation Tool System (CATS), Non-Destructive Test Equipment System (NDTE), Swaging Tool Kits (SWTK), Unit Maintenance Aerial Recovery Kit (UMARK) and development support for tools required to provide maintenance support to modernized/future force aircraft.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Aircraft Cleaning and De-Icing System (ACDS)	-	-	0.750
Description: The ACDS will provide aviation maintenance units with a capability to clean external and internal aircraft surfaces and components as well as de-ice aircraft when in the field and deployed locations. ***FY 2015 Plans:*** Perform market survey, trade studies, and generate Purchase Item Description (PID) and Request For Proposal (RFP). Perform technical review of proposals, source selection, test sample procurement, systems performance test demonstration for evaluation, and conduct systems safety evaluation to certify and qualify the ACDS for Army aircraft operation.			
Title: Aviation Foot Locker (AFL)	-	-	0.200

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605830A / *Aviation Ground Support Equipment*	**Project (Number/Name)** EE5 / *Aviation Ground Support Equipment*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Description: The AFL provides a standard Aviation Maintenance capability in a durable outer shell which augments the aviation maintainers' individual tool kits to maintain Army aircraft. ***FY 2015 Plans:*** Perform requirements analysis required to standardize AFL across the Force Structure.			
Title: Aviation Ground Power Unit (AGPU) ***Description:*** The AGPU provides the capability to meet Army helicopter servicing requirements into the next decade by providing a modular system with external hydraulic, pneumatic, and AC/DC electrical power to all Modernized Force Aircraft. ***FY 2015 Plans:*** Develop prototype AGPUs incorporating the redesigned hydraulic module, upgraded electrical system, and power generation replacement and perform prototype testing.	-	-	1.400
Title: Aviation Unit Maintenance Shop Set (AVUM SS) ***Description:*** The AVUM SS consists of three deployable shelters which provide deployable tool loads required for unit-level aviation maintenance tasks. ***FY 2015 Plans:*** Procure test samples, perform both developmental and operational testing, and finalize acquisition documentation in preparation for procurement.	-	-	2.309
Title: Family of Aviation Lifting Devices (F-ALD) ***Description:*** F-ALD provides Army Aviation Maintenance units with the required lifting capability ranging from simple scheduled maintenance lifting on the flight line and other improved areas, to maintenance lifting required during contact maintenance and Downed Aircraft Recovery Team operations while forward deployed. ***FY 2015 Plans:*** Perform Market Survey, prepare Statement of Work, create detailed test plan, prepare Contract Requirements Package, perform technical reviews of proposals, and procure samples for testing.	-	-	2.750
Title: Common Aviation Tool System (CATS) ***Description:*** CATS consists of individual aviation mechanics tool kit containers, aerospace standard tools, foam shadowed drawers and a component listing with picture diagrams for ease of inventory and to minimize foreign object damage to aircraft.	-	-	0.100

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605830A / *Aviation Ground Support Equipment*	**Project (Number/Name)** EE5 / *Aviation Ground Support Equipment*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
CATS provides standardized tools, kits and outfits which meet transformation modularity, flexibility and mobility requirements for repair of rotary wing aircraft during combat, contingency and training operations. ***FY 2015 Plans:*** Perform tool study analysis as required to determine whether Army Aviation Maintenance Units require further CATS modernization.			
Title: Non-Destructive Test Equipment (NDTE) ***Description:*** NDTE provides Army Aviation Maintenance units with an electronic test instrument to inspect aircraft components and structures without complete disassembly or removal of components from the aircraft. ***FY 2015 Plans:*** Begin research and development of Non-Destructive Test Equipment (eddy current, ultrasonic, harmonic bond, and radiography) for modernization and technology advancements, prepare Statement of Work, create detailed test plan, and prepare contract requirements package.	-	-	0.450
Title: Swaging Tool Kits (SWTK) ***Description:*** The SWTK provides Aviation Technicians with fast and reliable methods for joining aircraft tubing and repairing high pressure fluid, fuel, and hydraulic lines. ***FY 2015 Plans:*** Perform requirement analysis to ensure currently fielded SWTKs provide the required capability to service all Army rotary-winged aircraft requirements.	-	-	0.150
Title: Unit Maintenance Aerial Recovery Kit (UMARK) ***Description:*** UMARK provides Aviation Support Company and Aviation Maintenance Company units with the ability to quickly rig for transport crash-damaged non-flyable modernized aircraft or aircraft undergoing maintenance for evacuation. ***FY 2015 Plans:*** Finalize UMARK Test Data Package, procedures and manuals.	-	-	0.800
Title: Management Support Services ***Description:*** Management Support Services in support of the Aviation Ground Support Equipment Product Management Office. ***FY 2015 Plans:***	-	-	0.300

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605830A / *Aviation Ground Support Equipment*	**Project (Number/Name)** EE5 / *Aviation Ground Support Equipment*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Management Support Services.			
Title: RDTE Project Test Support ***Description:*** RDTE Project Test Support for the Aviation Ground Support Equipment Product Management Office. ***FY 2015 Plans:*** RDTE Project Test Support.	-	-	0.440
Title: Technical Engineering Services ***Description:*** Technical Engineering Services in support of the Aviation Ground Support Equipment Product Management Office. ***FY 2015 Plans:*** Technical Engineering Services.	-	-	0.392
Accomplishments/Planned Programs Subtotals	-	-	10.041

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• Aviation Ground Support Equipment: *Aviation Ground Support Equipment, SSN AZ3520*	-	-	29.231	-	29.231	65.367	69.017	91.931	63.568	-	319.114

Remarks

D. Acquisition Strategy

This project is an aggregate of advanced maintenance concepts related projects. While the detailed acquisition strategy varies from project to project, the general strategy for each individual project is to complete the development effort through Government test (developmental and operational). Program documentation for milestone decision is prepared, as appropriate, concurrently with the development effort.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605830A / *Aviation Ground Support Equipment*	Project (Number/Name) EE5 / *Aviation Ground Support Equipment*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Management Support Services	Various	PM AGSE : Redsone Arsenal, AL	0.000	-		-		0.300	Sep 2015	-		0.300	Continuing	Continuing	Continuing
		Subtotal	0.000	-		-		0.300		-		0.300	-	-	-

Remarks

None.

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ACDS	Various	AATD, Ft. Eustis, VA, , Aberdeen Test Center (ATC), Aberdeen Proving Ground, MD : APB	0.000	-		-		0.750	Mar 2015	-		0.750	Continuing	Continuing	Continuing
AFL	Various	AMCOM, SRA; TRADOC, : Fort Rucker, AL	0.000	-		-		0.200	Jan 2015	-		0.200	-	0.200	-
AGPU	Various	RTTC, Redstone Arsenal, AL; AMRDEC, RSA, AL; Aberdeen Test Center, : Aberdeen Proving Ground, MD	0.000	-		-		1.400	Jun 2015	-		1.400	Continuing	Continuing	Continuing
AVUM SS	Various	AMRDEC, RSA; RTTC, RSA; Aberdeen Test Center, : Aberdeen Proving Ground, MD	0.000	-		-		2.309	Jul 2015	-		2.309	-	2.309	-
CATS	MIPR	AMRDEC(RSA), AL; Aberdeen Test Center (ATC), :	0.000	-		-		0.100	Mar 2015	-		0.100	-	0.100	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605830A / *Aviation Ground Support Equipment*	Project (Number/Name) EE5 / *Aviation Ground Support Equipment*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Aberdeen Proving Gound, MD													
F-ALD	Various	AMCOM, RSA; AMRDEC, RSA : Redstone Arsenal, AL	0.000	-		-		2.750	Jan 2015	-		2.750	Continuing	Continuing	Continuing
NDTE	Various	AMRDEC, RSA, AL; ATC : Aberdeen Proving Ground, MD	0.000	-		-		0.450	Apr 2015	-		0.450	-	0.450	-
SWTK	Various	AMRDEC : Redstone Arsenal, AL	0.000	-		-		0.150	Mar 2015	-		0.150	-	0.150	-
UMARK	Various	AMRDEC, RSA, AL; Aberdeen Test Center, APG, MD; AATD : Fort Eustis, VA	0.000	-		-		0.800	Feb 2015	-		0.800	-	0.800	-
		Subtotal	0.000	-		-		8.909		-		8.909	-	-	-

Remarks

None.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Technical Engineering Services	MIPR	AATD : Ft. Eustis, VA	0.000	-		-		0.250	Apr 2015	-		0.250	Continuing	Continuing	Continuing
Technical Engineering Services	MIPR	AED : Redstone Arsenal, AL	0.000	-		-		0.142	Apr 2015	-		0.142	Continuing	Continuing	Continuing
		Subtotal	0.000	-		-		0.392		-		0.392	-	-	-

Remarks

None.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605830A / *Aviation Ground Support Equipment*	Project (Number/Name) EE5 / *Aviation Ground Support Equipment*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
RDTE Project Test Support	MIPR	ATC : Aberdeen Proving Gound, MD	0.000	-		-		0.300	Jan 2015	-		0.300	Continuing	Continuing	Continuing
RDTE Project Test Support	Various	AMRDEC : Redstone Arsenal, AL	0.000	-		-		0.100	May 2015	-		0.100	Continuing	Continuing	Continuing
RDTE Project Test Support	Various	AMCOM, : Redstone Arsenal, AL	0.000	-		-		0.040	Jan 2015	-		0.040	Continuing	Continuing	Continuing
		Subtotal	0.000	-		-		0.440		-		0.440	-	-	-

Remarks

None.

	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		-		10.041		-		10.041	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605830A / *Aviation Ground Support Equipment*	**Project (Number/Name)** EE5 / *Aviation Ground Support Equipment*

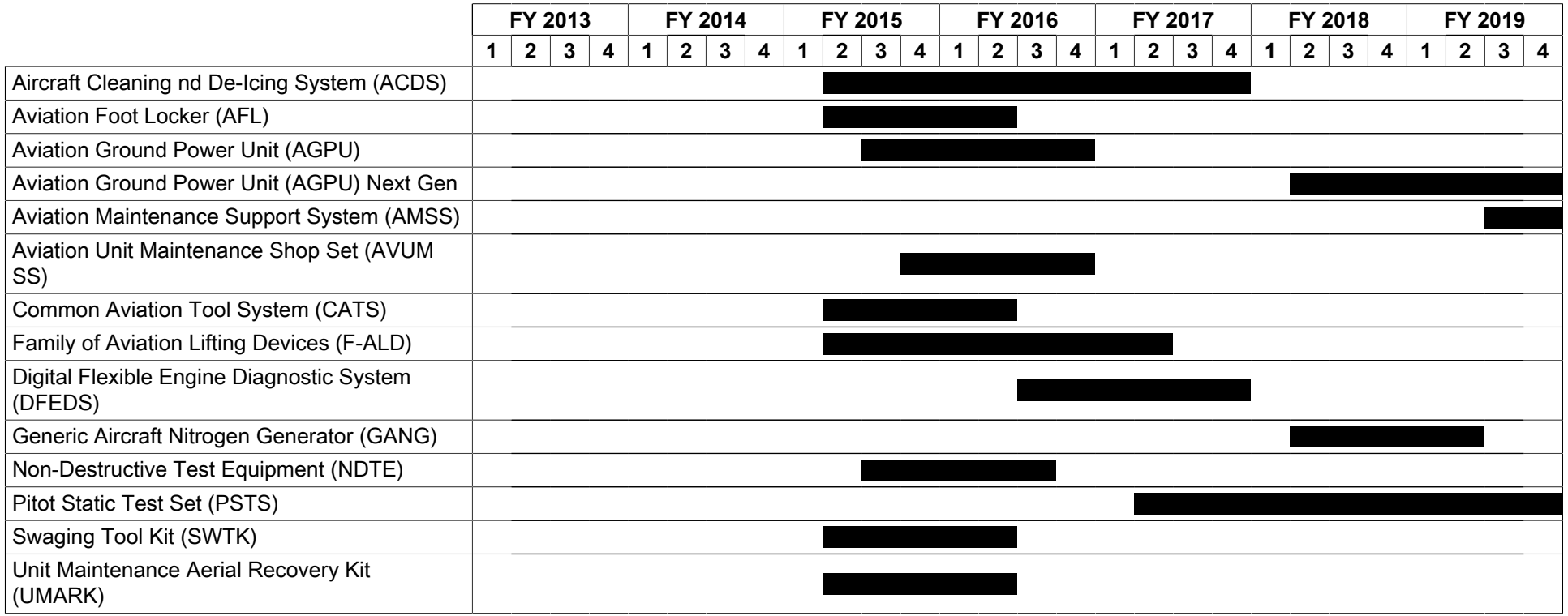

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605830A / *Aviation Ground Support Equipment*	**Project (Number/Name)** EE5 / *Aviation Ground Support Equipment*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Aircraft Cleaning nd De-Icing System (ACDS)	2	2015	4	2017
Aviation Foot Locker (AFL)	2	2015	2	2016
Aviation Ground Power Unit (AGPU)	3	2015	4	2016
Aviation Ground Power Unit (AGPU) Next Gen	2	2018	2	2020
Aviation Maintenance Support System (AMSS)	3	2019	2	2024
Aviation Unit Maintenance Shop Set (AVUM SS)	4	2015	4	2016
Common Aviation Tool System (CATS)	2	2015	2	2016
Family of Aviation Lifting Devices (F-ALD)	2	2015	2	2017
Digital Flexible Engine Diagnostic System (DFEDS)	3	2016	4	2017
Generic Aircraft Nitrogen Generator (GANG)	2	2018	2	2019
Non-Destructive Test Equipment (NDTE)	3	2015	3	2016
Pitot Static Test Set (PSTS)	2	2017	4	2019
Swaging Tool Kit (SWTK)	2	2015	2	2016
Unit Maintenance Aerial Recovery Kit (UMARK)	2	2015	2	2016

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0210609A / *Paladin Integrated Management (PIM)*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	-	-	83.300	-	83.300	152.440	42.060	6.112	-	-	283.912
ED8: *Paladin Integrated Management (PIM)*	-	-	-	83.300	-	83.300	152.440	42.060	6.112	-	-	283.912

The FY 2015 OCO Request will be submitted at a later date.

Note

The PIM program is submitted under a new Program Element for the FY 2015 President's Budget. The previous program element was 0604854A, project 516. Artillery Systems - EMD program.

A. Mission Description and Budget Item Justification

Paladin Integrated Management (PIM) is an ACAT 1D Acquisition Program. The program will replace the current fleet of M109 Family of Vehicles (FoV) consisting of the M109A6 Paladin Self Propelled Howitzer and M992A2 Field Artillery Ammunition Supply Vehicle (FAASV). PIM is an Army Modernization Program that addresses a critical capability gap created by the Non-Line of Sight Cannon termination in June of 2009 as well as obsolescence and size/weight and power (SWaP) issues in the M109 FoV current Fleet. The PIM system integrates current Bradley Fighting Vehicle suspension and drive train items, Future Combat Systems (FCS) developed Electric Gun Drive systems and current fleet (M109A6) fire control systems into a new chassis that provides better force protection, survivability and increases electrical power over the current fleet. PIM is a two vehicle system: Self Propelled Howitzer (SPH) and Carrier Ammunition Tracked (CAT). The SPH has all characteristics listed above. The CAT utilizes all these same components and traits less those that relate directly to the cannon system. The PIM system replaces the current M109 FoV on a one for one basis, in the cannon fires battalions in the Armored Brigade Combat Team Formations and the Echelons above Brigade (EAB). The overall intent is to increase Soldier force protection, vehicle survivability, provide an appropriate amount of SWaP capacity to add future capabilities, reduce life cycle costs and extend the life of the M109 FoV through FY2050.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	-	-	-	-	-
Current President's Budget	-	-	83.300	-	83.300
Total Adjustments	-	-	83.300	-	83.300
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-	-	83.300	-	83.300

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army												Date: March 2014
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0210609A / *Paladin Integrated Management (PIM)*				Project (Number/Name) ED8 / *Paladin Integrated Management (PIM)*			
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
ED8: *Paladin Integrated Management (PIM)*	-	-	-	83.300	-	83.300	152.440	42.060	6.112	-	-	283.912
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Paladin Integrated Management (PIM) is an ACAT 1D Acquisition Program. The program will replace the current fleet of M109 Family of Vehicles (FoV) consisting of the M109A6 Paladin Self Propelled Howitzer and M992A2 Field Artillery Ammunition Supply Vehicle (FAASV). PIM is an Army Modernization Program that addresses a critical capability gap created by the Non-Line of Sight Cannon termination in June of 2009 as well as obsolescence and size/weight and power (SWaP) issues in the M109 FoV current Fleet. The PIM system integrates current Bradley Fighting Vehicle suspension and drive train items, Future Combat Systems (FCS) developed Electric Gun Drive systems and current fleet (M109A6) fire control systems into a new chassis that provides better force protection, survivability and increases electrical power over the current fleet. PIM is a two vehicle system: Self Propelled Howitzer (SPH) and Carrier Ammunition Tracked (CAT). The SPH has all characteristics listed above. The CAT utilizes all these same components and traits less those that relate directly to the cannon system. The PIM system replaces the current M109 FoV on a one for one basis, in the cannon fires battalions in the Armored Brigade Combat Team Formations and the Echelons above Brigade (EAB). The overall intent is to increase Soldier force protection, vehicle survivability, provide an appropriate amount of SWaP capacity to add future capabilities, reduce life cycle costs and extend the life of the M109 FoV through FY2050.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Paladin/FAASV Integrated Management (PIM) Development	-	-	55.912
Description: Funding is provided for the following developmental efforts: ***FY 2015 Plans:*** Finalization of developmental fixes, sub-system qualification, and testing for production as well as the completion of the System Level Developmental testing. Continuance of engineering development and testing for CPOs and Software Phase III efforts required for LRIP production-continue Software Phase II maintenance efforts for Corrective Actions, Producibility, and Obsolescence (CPO) functionality and executing Software Formal Qualification Testing (FQT) for Software Phase III (SW PH III). Start the testing of an Objective Underbelly Kit per guidance of the Defense Acquisition Executive (DAE.) Execute the Log Demonstration and Manual validation supporting Initial Operational Test (IOT) and to meet requirements for fielding. Begin the execution of the Production Qualification Test (PQT) and Full Up System Live-Fire (FUSL) testing phase at Army test centers using Low Rate Initial Production (LRIP) platforms.			
Title: Test and Evaluation	-	-	19.803

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0210609A / *Paladin Integrated Management (PIM)*	**Project (Number/Name)** ED8 / *Paladin Integrated Management (PIM)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Description: Funding is provided for the following government test efforts: ***FY 2015 Plans:*** Complete testing of developmental fixes, sub-system qualification, and System Level Developmental testing. Complete testing for Corrective Actions, Producibility, and Obsolescence (CPO) and Software Phase III efforts required for Low Rate Initial Production (LRIP) production- complete SW Ph III Formal Qualification Testing (FQT) for the SPH and the CAT platforms. Start the testing of an Objective Underbelly Kit per guidance of the Defense Acquisition Executive (DAE.) Execute the Log Demonstration and Manual validation effort supporting IOT and to meet requirements for fielding. Begin the execution of the PQT and Full Up Systems Live-Fire (FUSL) testing phase at Army test centers using LRIP platforms.			
Title: Program Management ***Description:*** Funding is provided for the following program management support: ***FY 2015 Plans:*** Continue the Government System Engineering and Program Management for the total program including: Original Equipment Manufacturer (OEM) management consisting of weekly, monthly, and quarterly program management reviews; continue contract execution management for the EMD phase contract until completion of all efforts in FY 16. Manages Government Developmental System Test and Evaluation program as it enters the LRIP testing phase. Management of the program cost, schedule, and performance metrics including making programmatic trade-off decisions. Management of Other Governmental Agencies (OGAs) that support the PIM program.	-	-	1.901
Title: Training ***Description:*** Funding is provided for the following training government and contractor efforts: ***FY 2015 Plans:*** Complete basic training development to support LRIP Operational Test (OT), Maintenance training to support LOG DEMO and Technical Manual (TM) Validation efforts. Conduct training efforts to validate the training Programs of Instruction (POI's) for designated OT Army units. Complete Training Aids, Devices, Simulators and Simulations (TADSS) for OT designated units going into the Operational Test Phase of the program.	-	-	4.879
Title: Data ***Description:*** Funding is provided for the following data contractor efforts: ***FY 2015 Plans:***	-	-	0.805

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0210609A / *Paladin Integrated Management (PIM)*	**Project (Number/Name)** ED8 / *Paladin Integrated Management (PIM)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Maintain Contractor Technical Data Packages. Continue the validation of Technical Publications that support LOG DEMO and TM Validation as well as fielding's to active and reserve components organizations.			
Accomplishments/Planned Programs Subtotals	-	-	83.300

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• Paladin Integrated Management: *Paladin Integrated Management*	-	-	247.400	-	247.400	403.900	465.400	665.700	667.800	4,012.547	6,462.747

Remarks

D. Acquisition Strategy

The PIM Program was initiated on 16 August 07 under the BAE Systems, Inc., System Technical Support (STS) Contract W56HZV-07-C-0096. Subsequent work directives were awarded under BAE STS contract W56HZV-07-C-0256 to further define the configuration of the PIM vehicles. On 14 August 2009, a Research, Development, Test and Evaluation (RDT&E) Contract W56HZV-09-C-0550 was awarded to BAE Systems Inc. for the Prototype Development and Fabrication of 7 prototype vehicles (5 PIM Self Propelled Howitzer Systems (SPHS) and 2 PIM Carrier Ammunition Tracked (CAT) vehicles). A Comprehensive Contract Modification (CCM) award to the RDT&E contract was accomplished on 6 Jan 2012. This modification allows for the completion of the Engineering and Manufacturing Development (EMD) Phase and transfers the system responsibility for the program from the Government to BAE Systems Inc. The planned Low-Rate Initial Production (LRIP) contract is of a Fixed Price Incentive Firm Target (FPIF) contract type for procurement of vehicles with a period of performance running from Nov 2013 through approximately Jun 2019. The LRIP contract will provide for three LRIP years with the initial base year including 19 SPHs and 18 CATs and the remaining two option years with 18 sets and 30 sets, respectively (each set consisting of one each SPH and CAT) of PIM vehicles. The Full Rate Production (FRP) contract is planned as a FPIF contract that converts to a Firm Fixed Price (FFP) contract after the second year of FRP. The FRP contract provides for the remaining PIM vehicles to fulfill the requirement up to the Army Acquisition Objective of 580 sets.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0210609A / *Paladin Integrated Management (PIM)*	Project (Number/Name) ED8 / *Paladin Integrated Management (PIM)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Data	SS/CPIF	BAE Systems : York, PA	0.000	-		-		0.805	Dec 2014	-		0.805	-	0.805	-
Training	SS/CPIF	BAE Systems : York, PA	0.000	-		-		4.879	Dec 2014	-		4.879	-	4.879	-
PIM Development-Contractor	SS/CPIF	BAE Systems : York, PA	0.000	-		-		40.407	Dec 2014	-		40.407	-	40.407	-
PIM Development-Government	MIPR	Various OGAs : Various	0.000	-		-		15.505	Dec 2014	-		15.505	-	15.505	-
		Subtotal	0.000	-		-		61.596		-		61.596	-	61.596	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMO/PEO Support	MIPR	PM/PEO Paladin/FAASV : Picatinny	0.000	-		-		1.901	Dec 2014	-		1.901	-	1.901	-
		Subtotal	0.000	-		-		1.901		-		1.901	-	1.901	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Level Testing	MIPR	Various OGAs : Various	0.000	-		-		19.803	Dec 2014	-		19.803	-	19.803	-
		Subtotal	0.000	-		-		19.803		-		19.803	-	19.803	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		-		83.300		-		83.300	-	83.300	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0210609A / *Paladin Integrated Management (PIM)*	Project (Number/Name) ED8 / *Paladin Integrated Management (PIM)*	

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0210609A / *Paladin Integrated Management (PIM)*	**Project (Number/Name)** ED8 / *Paladin Integrated Management (PIM)*

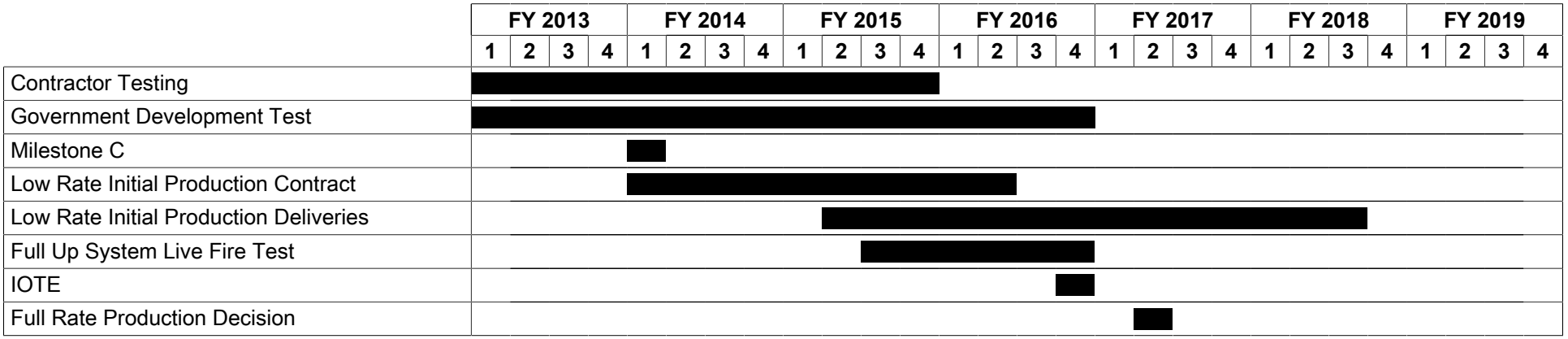

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0210609A / *Paladin Integrated Management (PIM)*	**Project (Number/Name)** ED8 / *Paladin Integrated Management (PIM)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Contractor Testing	4	2012	4	2015
Government Development Test	4	2012	4	2016
Milestone C	1	2014	1	2014
Low Rate Initial Production Contract	1	2014	2	2016
Low Rate Initial Production Deliveries	2	2015	3	2018
Full Up System Live Fire Test	3	2015	4	2016
IOTE	4	2016	4	2016
Full Rate Production Decision	2	2017	2	2017

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0303032A / *TROJAN - RH12*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	3.892	3.463	0.983	-	0.983	5.059	4.507	4.509	4.600	Continuing	Continuing
RH5: *TROJAN - RH12 - MIP*	-	3.892	3.463	0.983	-	0.983	5.059	4.507	4.509	4.600	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

Adjustment to FY15 funds the result of realignment to higher priorities.

A. Mission Description and Budget Item Justification

This project is a Military Intelligence Program (MIP). TROJAN research and development supports TROJAN Classic XXI (TCXXI) and next generation (NexGEN) future capabilities to fulfill the Army's need for a worldwide, deployable, remotable, intelligence, surveillance and reconnaissance support that can dynamically execute operations from sanctuary-based to deployed assets in theater. In support of Army Modernization and Army Force Generation, TCXXI TROJAN NexGen and TROJAN SWARM will provide soldiers with a real-world, hands-on, live and near-real time SIGINT training environment sustaining, maintaining and enhancing their military occupational specialty proficiencies and specific target expertise. This operational readiness training will fulfill the Army's larger intelligence training requirement via a secure, collaborative architecture.

A key factor for future force success is the ability to collect, process and use information about an adversary while preventing similar information from being disclosed. Trojan is a combined operational and readiness mission system which uses advanced networking technology to provide seamless rapid radio relay, secure communications to include voice, data, facsimile, and electronic reconnaissance support to U.S. forces throughout the world. TROJAN operations may be easily tailored to fit military intelligence unit training schedules and surged during specific events to involve every aspect of the tactical intelligence collection, processing, analysis and reporting systems. This project engineers, tests and evaluates new digital intelligence collection, processing and dissemination technology using the fielded TROJAN systems, prior to the acquisition of those technologies. As part of the objective intelligence architecture, these capabilities will enable processing and dissemination of real-time intelligence data from various sources to form the intelligence needed to issue orders inside the threat decision cycle. To that end, it is imperative that TROJAN keeps pace with digitization initiatives in order to respond aggressively to the emerging intelligence communication threats.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army					Date: March 2014
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*			R-1 Program Element (Number/Name) PE 0303032A / *TROJAN - RH12*		
B. Program Change Summary ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO**	**FY 2015 Total**
Previous President's Budget	4.232	3.465	4.204	-	4.204
Current President's Budget	3.892	3.463	0.983	-	0.983
Total Adjustments	-0.340	-0.002	-3.221	-	-3.221
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-0.340	-0.002	-3.221	-	-3.221

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0303032A / *TROJAN - RH12*	Project (Number/Name) RH5 / *TROJAN - RH12 - MIP*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
RH5: *TROJAN - RH12 - MIP*	-	3.892	3.463	0.983	-	0.983	5.059	4.507	4.509	4.600	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This project is a Military Intelligence Program (MIP). TROJAN research and development supports TROJAN Classic XXI (TCXXI) and Next Generation (NexGEN) future capabilities to fulfill the Army's need for a worldwide, deployable, remotable, intelligence, surveillance and reconnaissance support that can dynamically execute operations from sanctuary-based to deployed assets in theater. In support of Army Modernization and Army Force Generation, TCXXI TROJAN NexGEN and TROJAN SWARM will provide soldiers with a real-world, hands-on, live and near-real time SIGINT training environment sustaining, maintaining and enhancing their military occupational specialty proficiencies and specific target expertise. This operational readiness training will fulfill the Army's larger intelligence training requirement via a secure, collaborative architecture.

A key factor for future force success is the ability to collect, process and use information about an adversary while preventing similar information from being disclosed. Trojan is a combined operational and readiness mission system which uses advanced networking technology to provide seamless rapid radio relay, secure communications to include voice, data, facsimile, and electronic reconnaissance support to U.S. forces throughout the world. TROJAN operations may be easily tailored to fit military intelligence unit training schedules and surged during specific events to involve every aspect of the tactical intelligence collection, processing, analysis and reporting systems. This project engineers, tests and evaluates new digital intelligence collection, processing and dissemination technology using the fielded TROJAN systems, prior to the acquisition of those technologies. As part of the objective intelligence architecture, these capabilities will enable processing and dissemination of real-time intelligence data from various sources to form the intelligence needed to issue orders inside the threat decision cycle. To that end, it is imperative that TROJAN keeps pace with digitization initiatives in order to respond aggressively to the emerging intelligence communication threats.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Integrate and test specialized hardware/software	0.862	0.705	0.203
Articles:	-	-	-
Description: Integrate and test specialized hardware/software for classified pre-processing of new signals of interest utilizing enhanced signal processing algorithms. Resource development of GL Application Interface for Virtual Environments (GLAIVE) software (SW). Integrated several new National Security Agency (NSA) SW packages.			
FY 2013 Accomplishments: Integrated and tested specialized hardware/software for classified pre-processing of new signals of interest utilizing enhanced signal processing algorithms. Resource development of GLAIVE software. Integrated several new NSA SW packages.			
FY 2014 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0303032A / *TROJAN - RH12*	**Project (Number/Name)** RH5 / *TROJAN - RH12 - MIP*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Integrate and test specialized hardware/software for classified pre-processing of new signals of interest utilizing enhanced signal processing algorithms. Resource development of GLAIVE software. Integrate several new NSA SW packages. ***FY 2015 Plans:*** Will integrate and test a scaled back suite of specialized hardware/software for classified pre-processing of new signals of interest utilizing enhanced signal processing algorithms and resource development of GLAIVE software. Will begin limited effort to develop TROJAN SWARM Intelligence Surveillance Reconnaissance enterprise.			
Title: Multi-bandwidth compression algorithms	0.375	0.307	0.089
Articles:	-	-	-
Description: Acquire and apply multi-bandwidth compression algorithm technology to maximize TROJAN intelligence network throughput. ***FY 2013 Accomplishments:*** Acquired and applied multi-bandwidth compression algorithm technology to maximize TROJAN intelligence network throughput. ***FY 2014 Plans:*** Acquire and apply multi-bandwidth compression algorithm technology to maximize TROJAN intelligence network throughput. ***FY 2015 Plans:*** Examine increasing efficiency and maximizing throughput via hardware consolidation and virtualization.			
Title: Develop prototype quick reaction capability receiver	0.300	0.245	0.071
Articles:	-	-	-
Description: Develop prototype quick reaction capability receiver packages for fixed and transportable TROJAN systems to acquire non-standard modulations using Digital System Processing (DSP) and Field Programmable Gate Arrays (FPGAs) technologies. ***FY 2013 Accomplishments:*** Developed prototype quick reaction capability receiver packages for fixed and transportable TROJAN systems to acquire non-standard modulations using DSP and FPGAs. ***FY 2014 Plans:*** Develop prototype quick reaction capability receiver packages for fixed and transportable TROJAN systems to acquire non-standard modulations using DSP and FPGAs. ***FY 2015 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0303032A / *TROJAN - RH12*	**Project (Number/Name)** RH5 / *TROJAN - RH12 - MIP*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Will continue a limited effort relating to development of prototype quick reaction capability receiver packages for fixed and transportable TROJAN systems to acquire non-standard modulations using DSP and FPGAs.			
Title: Integrate Direction Finding ***Articles:*** ***Description:*** Integrate Direction Finding (DF) and geolocation technologies into TROJAN Remote Receiving Groups. ***FY 2013 Accomplishments:*** Integrated Direction Finding (DF) and geolocation technologies into TROJAN Remote Receiving Groups. ***FY 2014 Plans:*** Integrate Direction Finding (DF) and geolocation technologies into TROJAN Remote Receiving Groups. ***FY 2015 Plans:*** Will continue to explore an effort to integrate Direction Finding (DF) and geolocation technologies into TROJAN Remote Receiving Groups.	0.369 -	0.653 -	0.225 -
Title: Develop specialized software enhancements to the TROJAN ***Articles:*** ***Description:*** Develop specialized software enhancements to the TROJAN audio streaming subsystems to improve system redundancy and throughput capacity and system management capabilities; Investigate compression/processing technologies to reduce communications bandwidth requirements for remoted TROJAN systems, including streaming audio technologies. ***FY 2013 Accomplishments:*** Developed specialized software enhancements to the TROJAN audio streaming subsystems to improve system redundancy and throughput capacity and system management capabilities; Investigated compression/processing technologies to reduce communications bandwidth requirements for remoted TROJAN systems, including streaming audio technologies. ***FY 2014 Plans:*** Develop specialized software enhancements to the TROJAN audio streaming subsystems to improve system redundancy and throughput capacity and system management capabilities; Investigate compression/processing technologies to reduce communications bandwidth requirements for remoted TROJAN systems, including streaming audio technologies. ***FY 2015 Plans:*** Continue development of specialized software enhancements to the TROJAN audio streaming subsystems to improve system redundancy and throughput capacity.	0.300 -	0.246 -	0.071 -
Title: Development of Satellite Communication (SATCOM) dishes and receivers	0.741	0.532	0.101

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0303032A / *TROJAN - RH12*	**Project (Number/Name)** RH5 / *TROJAN - RH12 - MIP*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Articles:	-	-	-
Description: Development of smaller more mobile Satellite Communication (SATCOM) dishes and receivers. Development of more efficient use of bandwidth, communications on the move and man-packable intelligence collection systems. ***FY 2013 Accomplishments:*** Developed smaller more mobile SATCOM dishes and receivers. Developed more efficient use of bandwidth, communications on the move and man-packable intelligence collection systems. ***FY 2014 Plans:*** Develop smaller and more mobile SATCOM dishes and receivers. Develop more efficient use of bandwidth, communications on the move and man-packable intelligence collection systems. ***FY 2015 Plans:*** Continue development of smaller more mobile SATCOM dishes.			
Title: Labor cost software (SW) engineers	0.945	0.775	0.223
Articles:	-	-	-
Description: Labor for two software (SW) engineers at NSA in support of GLAIVE and other above applicable efforts. Labor for one Material Developer (MAT DEV) technologist, one MAT DEV software and one MAT DEV Hardware (HW) engineer. ***FY 2013 Accomplishments:*** Labor for two SW engineers at NSA in support of GLAIVE and other above applicable efforts. Labor for one MAT DEV technologist, one MAT DEV software and one MAT DEV HW engineer. ***FY 2014 Plans:*** Labor for two SW engineers at NSA in support of GLAIVE and other above applicable efforts. Labor for one MAT DEV technologist, one MAT DEV software and one MAT DEV HW engineer. ***FY 2015 Plans:*** Labor for one part-time SW engineer at NSA in support of GLAIVE and other above applicable efforts. Continued labor for one part-time MAT DEV software and one part-time MAT DEV HW engineer.			
Accomplishments/Planned Programs Subtotals	3.892	3.463	0.983

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0303032A / *TROJAN - RH12*	**Project (Number/Name)** RH5 / *TROJAN - RH12 - MIP*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• BA0326: *TROJAN (MIP)* *(OPA SSN BA0326)*	21.455	18.171	12.614	-	12.614	14.652	18.383	15.228	14.773	Continuing	Continuing

Remarks

D. Acquisition Strategy

This Acquisition Strategy for the TROJAN Classic XXI and TROJAN NexGEN Systems supported by TROJAN RDT&E is to adapt and leverage from Commercial Off the Shelf (COTS) and Government Off the Shelf (GOTS) products. Additionally leverage off of development by DoD and other Government agencies to the greatest extent possible. TROJAN RDT&E is used to fund the development of enhancing these technologies to meet specific user requirements. The funding for production and fielding of these capabilities are funded under TROJAN BA0331.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0303032A / *TROJAN - RH12*	Project (Number/Name) RH5 / *TROJAN - RH12 - MIP*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Labor Costs Software (SW) Engineers	Various	NSA : MD	0.844	0.945	Jun 2013	0.775		0.223	Jun 2014	-		0.223	-	2.787	-
		Subtotal	0.844	0.945		0.775		0.223		-		0.223	-	2.787	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Multi-Band Compression Algorithms	Various	APG : MD	0.358	0.375	Jun 2013	0.307		0.089	Jun 2014	-		0.089	Continuing	Continuing	-
Develop Prototype Quick Reaction Capability Receiver	Various	APG : MD	0.400	0.300	Jun 2013	0.245		0.071	Jun 2014	-		0.071	Continuing	Continuing	-
Integrate Direction Finding	Various	APG : MD	0.390	0.369	Jun 2013	0.653		0.225	Jun 2014	-		0.225	Continuing	Continuing	-
Specialized Software Enhancements	Various	APG : MD	0.285	0.300	Jun 2013	0.246		0.071	Jun 2014	-		0.071	Continuing	Continuing	-
Develop Satellite Communications (SATCOM) Dishes and Receivers	Various	APG : MD	0.780	0.741	Jun 2013	0.532		0.101	Jun 2014	-		0.101	Continuing	Continuing	-
Develop Hardware/ Software Interface	Various	APG : MD	0.445	-		-		-		-		-	-	0.445	-
		Subtotal	2.658	2.085		1.983		0.557		-		0.557	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Integration and Testing of Hardware/Software	Various	APG : MD	0.412	0.862	Jun 2013	0.705		0.203	Jun 2014	-		0.203	-	2.182	-
		Subtotal	0.412	0.862		0.705		0.203		-		0.203	-	2.182	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0303032A / *TROJAN - RH12*	Project (Number/Name) RH5 / *TROJAN - RH12 - MIP*	

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	3.914	3.892		3.463		0.983		-		0.983	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0303032A / *TROJAN - RH12*	**Project (Number/Name)** RH5 / *TROJAN - RH12 - MIP*

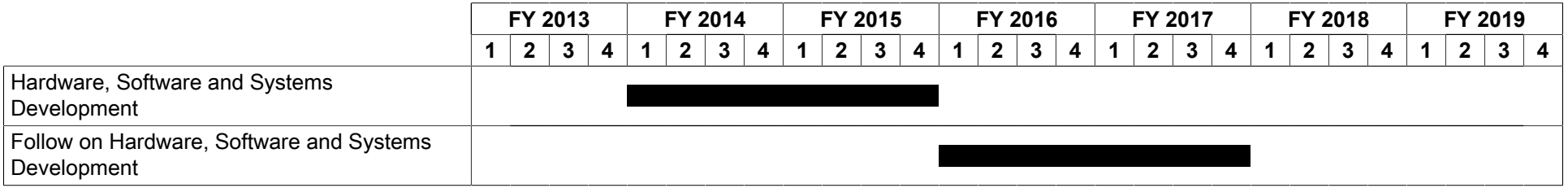

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0303032A / *TROJAN - RH12*	**Project (Number/Name)** RH5 / *TROJAN - RH12 - MIP*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Hardware, Software and Systems Development	1	2014	4	2015
Follow on Hardware, Software and Systems Development	1	2016	4	2017

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0304270A / *Electronic Warfare Development*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	12.828	10.801	8.961	-	8.961	12.693	12.733	11.103	14.157	Continuing	Continuing
EW5: *Electronic Warfare Development - MIP*	-	9.605	6.079	4.426	-	4.426	7.406	7.351	5.624	5.221	Continuing	Continuing
EW6: *ARAT-TSS - MIP*	-	3.223	4.722	4.535	-	4.535	5.287	5.382	5.479	8.936	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

FY 2015 budget request funds Electronic Warfare Development. This program element (PE) encompasses engineering and manufacturing development for tactical electronic warfare (EW). EW encompasses the development of tactical EW equipment and systems mounted in both ground and air vehicles. The systems under this program provides the Army with the capability to degrade or deny hostile forces the effective use of their communications, countermortar/counterbattery radars, surveillance radars, infrared/optical battlefield surveillance systems and electronically fused munitions. Existing Army EW systems must be replaced or upgraded to maintain their capability in the face of threats. Prophet Enhanced (PE) is the current system under the Prophet Ground acquisition program. Its primary mission is to provide 24-hour Situation Development and Information Superiority to the supported maneuver brigade to enable the most effective engagement of enemy forces. PE provides a modular, scalable, open architecture-based system solution optimized for ease of use in a variety of configurations (Stationary-Fixed, Mobile and Manpack).The Army Reprogramming Analysis Team (ARAT) Project will develop, test and equip an Army-wide infrastructure capable of rapidly reprogramming electronic combat software embedded in offensive and defensive weapon systems.

B. Program Change Summary ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO**	**FY 2015 Total**
Previous President's Budget	13.942	10.806	16.989	-	16.989
Current President's Budget	12.828	10.801	8.961	-	8.961
Total Adjustments	-1.114	-0.005	-8.028	-	-8.028
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	-8.028	-	-8.028
• Other Adjustments 1	-1.114	-0.005	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0304270A / *Electronic Warfare Development*	Project (Number/Name) EW5 / *Electronic Warfare Development - MIP*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EW5: *Electronic Warfare Development - MIP*	-	9.605	6.079	4.426	-	4.426	7.406	7.351	5.624	5.221	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Prophet Enhanced (PE) is the current system under the Prophet Ground acquisition program. Funds provide for development and integration of Pre-Planned Product Improvement (P3I) upgrades for Next Generation Signals and state-of-the-art Signals Intelligence (SIGINT) exploitation Techniques to increase the capabilities of the PE and maintain operational relevance. The PE is the tactical commander's sole organic ground-based SIGINT/Electronic Warfare system for the Brigade Combat Team (BCT), Stryker Brigade Combat Team (SBCT), and Battlefield Surveillance Brigade (BfSB). Its primary mission is to provide 24-hour Situation Development and Information Superiority to the supported maneuver brigade to enable the most effective engagement of enemy forces. PE provides a modular, scalable, open architecture-based system solution optimized for ease of use in a variety of configurations (Stationary-Fixed, Mobile and Manpack). It also incorporates productization, integration, and test of equipment for rapid integration of Tech Insertions and product development to ensure operational relevance.

Justification:
FY2015 Base dollars in the amount of $4.426 million supports the following activities: develops product upgrades for Next Generation Signals and SIGINT exploitation to increase the capabilities of the PE and maintain operational relevance.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Real-time Signal Processing architectural framework (software defined capabilities)	4.301	-	-
Articles:	-	-	-
Description: Develop Real-time Signal Processing architectural framework (software defined capabilities). ***FY 2013 Accomplishments:*** Develop Real-time Signal Processing architectural framework (software defined capabilities).			
Title: System Integration Lab (SIL)	1.000	-	-
Articles:	-	-	-
Description: Stand Up SIL ***FY 2013 Accomplishments:***			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Software and Hardware Integration			
Title: Next Generation Signals	4.304	3.008	2.173
Articles:	-	-	-
Description: Prophet P3I effort ***FY 2013 Accomplishments:*** Prophet P31 effort ***FY 2014 Plans:*** Prophet P3I effort ***FY 2015 Plans:*** Prophet P3I effort			
Title: Enhanced SIGINT Exploitation	-	3.071	2.253
Articles:	-	-	-
Description: Prophet P3I effort. ***FY 2014 Plans:*** Prophet P3I effort. ***FY 2015 Plans:*** Prophet P3I effort.			
Accomplishments/Planned Programs Subtotals	9.605	6.079	4.426

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• SSN BZ7326: *Prophet Ground (OPA) - BZ7326*	48.732	55.398	55.896	-	55.896	57.323	0.652	17.873	44.034	Continuing	Continuing
• SSN 9751: *Special Purpose Systems (MIP OPA) (Prophet Only) - BZ9751*	2.409	1.927	3.901	-	3.901	4.011	4.120	4.244	4.520	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0304270A / *Electronic Warfare Development*	**Project (Number/Name)** EW5 / *Electronic Warfare Development - MIP*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost

Remarks

Enhanced SIGINT Exploitation: H/W and/or S/W upgrades to increase system performance, to include but not limited to: Tuner upgrade, Processor upgrade, increase in memory, antenna upgrade and operating system upgrade.

D. Acquisition Strategy

PE entered production in 2QFY09 via Full and Open competition. The Prophet R&D Acquisition Strategy is structured to maintain operational relevancy of PE systems in a dynamic threat environment while reducing risk and streamlining business and engineering processes. The PE Pre-Planned Product Improvement (P3I) contract supports R&D and other developmental work, it also provides production and sustainment under the Indefinite-Delivery Indefinite-Quantity Contract.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
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Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	Various	PM Electronic Warfare : APG, MD	0.181	0.200		0.200		0.200		-		0.200	Continuing	Continuing	Continuing
		Subtotal	0.181	0.200		0.200		0.200		-		0.200	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software SIL	C/CPFF	GD C4 Systems : Scottsdale, AZ	0.889	-		-		-		-		-	-	0.889	-
Radio/Receiver Inegration (integrate software defined receiver)	C/CPFF	GD C4 Systems : Scottsdale, AZ	4.037	-		-		-		-		-	Continuing	Continuing	Continuing
Integrate Electronic Warfare Systems	C/CPFF	TRAC : Ft. Leavenworth, KS	4.900	-		-		-		-		-	Continuing	Continuing	Continuing
Next Generation Signals (TOS)	C/CPFF	GD C4 Systems : Scottsdale, AZ	1.200	-		-		-		-		-	Continuing	Continuing	Continuing
Precision Geo-Location	C/CPFF	GD C4 Systems : Scottsdale, AZ	4.200	-		-		-		-		-	Continuing	Continuing	Continuing
Real-time Signal Processing architectural framework (software defined capabilities)	C/CPFF	GD C4 Systems : Scottsdale, AZ	3.291	3.415	Jul 2013	-		-		-		-	Continuing	Continuing	Continuing
Next Generation Signals	C/CPFF	GD C4 Systems : Scottsdale, AZ	0.000	3.400	Jul 2013	2.768	Mar 2014	2.070	Mar 2015	-		2.070	Continuing	Continuing	Continuing
Enhance SIGINT Exploitation	C/CPFF	GD C4 Systems : Scottsdale, AZ	0.000	-		2.811	Mar 2014	2.156	Mar 2015	-		2.156	Continuing	Continuing	-
		Subtotal	18.517	6.815		5.579		4.226		-		4.226	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
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Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	Various	I2WD : APG, MD	0.314	0.350		0.300		-		-		-	-	0.964	-
System Integration Lab	Various	I2WD : APG, MD	1.500	1.000		-		-		-		-	-	2.500	-
		Subtotal	1.814	1.350		0.300		-		-		-	-	3.464	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prepare and Conduct Delta Testing	MIPR	EPG/AEC : Huachuca, AZ	0.000	1.240		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	0.000	1.240		-		-		-		-	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	20.512	9.605		6.079		4.426		-		4.426	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0304270A / *Electronic Warfare Development*	**Project (Number/Name)** EW5 / *Electronic Warfare Development - MIP*

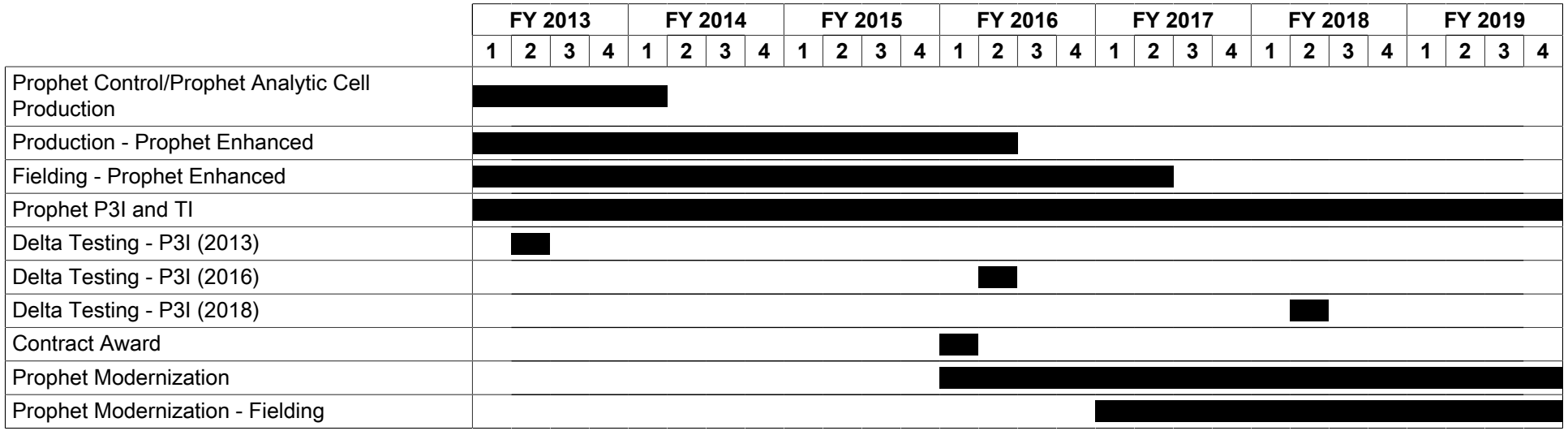

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0304270A / *Electronic Warfare Development*	**Project (Number/Name)** EW5 / *Electronic Warfare Development - MIP*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Prophet Control/Prophet Analytic Cell Production	4	2011	1	2014
Production - Prophet Enhanced	2	2009	2	2016
Fielding - Prophet Enhanced	2	2010	2	2017
Prophet P3I and TI	4	2008	4	2020
Delta Testing - P3I (2013)	2	2013	2	2013
Delta Testing - P3I (2016)	2	2016	2	2016
Delta Testing - P3I (2018)	2	2018	2	2018
Contract Award	1	2016	1	2016
Prophet Modernization	1	2016	4	2020
Prophet Modernization - Fielding	1	2017	4	2021

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
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COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EW6: *ARAT-TSS - MIP*	-	3.223	4.722	4.535	-	4.535	5.287	5.382	5.479	8.936	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

The Army Reprogramming Analysis Team (ARAT) is a Department of the Army established program to develop techniques, methods, tools and architecture to reprogram mission software embedded in Army Electronic Warfare (EW) systems, Force Protection Systems (FPS), and Target Sensing Systems (TSS) in response to changes in threat signatures. The regulatory guidance directing this mission is contained in AR 525-15, AR 525-22, and AR 95-1. Current military operations are conducted in a rapidly changing threat environment, where Improvised Explosive Devices (IEDs), Infra Red (IR) man-portable air defense systems (MANPADS) seekers, radar-guided surface-to-air-missiles (SAM), laser guided weapons, anti helicopter mines, and targeting sensors are proliferating and evolving. Integrated solutions are required to counter increasingly sophisticated EW threats, and the ARAT reprogramming infrastructure supports the tactical Commander by providing timely rapid-reprogramming of mission software and information dissemination for Army supported. Joint, allied service, EW integrated reprogramming of target acquisition, target engagement, vehicle survivability, and Aircraft Survivability Equipment (ASE). The ARAT rapid-reprogramming infrastructure supports tactical requirements for deployed aircraft and ground-based (e.g. CREW) survivability systems including those deployed in the CENTCOM area of responsibility (AOR). ARAT identifies and analyzes threat signature changes which affect EW, FPS and TSS; determines the impact of observed signature changes; creates new mission data software to adapt the system to changes; disseminates the mission software changes; and provides methods to upload new mission software into the affected EW, FPS and TSS. Each element within the ARAT infrastructure plays a specific role with in the program's rapid reprogramming process, providing the Soldier with the capability to install mission and target identification software at the lowest possible level- maximizing flexibility for tactical commanders. ARAT participates in the operational and developmental test design of Army EW, FPS and TSS, and supports Service and JCS reprogramming Exercises in all theaters. ARAT Research and Development enables continuous development of: 1)automated threat analysis tools to rapidly detect (flag) threat changes within intelligence systems, 2)tools to minimize the time to develop Aviation Mission Data Sets (MDS) and Ground loadsets, 3)tools and technology to minimize the time required to test and validate MDSs and loadsets, 4)improved communications conduits to transmit mission software changes to field users, and 5)enhanced mission-software uploading tools. These efforts allow for rapid threat analysis, simulation, mission software development, distribution and uploading of mission software changes directly to the supported Soldier in the field.

A. Mission Description and Budget Item Justification

Mission Description and Budget Item Justification:The Army Reprogramming Analysis Team (ARAT) is a Department of the Army established program to develop techniques, methods, tools and architecture to
reprogram mission software embedded in Army Electronic Warfare (EW) systems, Force Protection Systems (FPS), and Target Sensing Systems (TSS) in response to changes in threat signatures. The regulatory guidance directing this mission is contained in AR 525-15, AR 525-22, and AR 95-1. Current military operations are conducted in a rapidly changing threat environment, where Improvised Explosive Devices (IEDs), Infra Red (IR) man-portable air defense systems (MANPADS) seekers, radar guided surface-to-air-missiles (SAM), laser guided weapons, anti-helicopter mines, and targeting sensors are proliferating and evolving. Integrated solutions are

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
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required to counter increasingly sophisticated EW threats, and the ARAT reprogramming infrastructure supports the tactical Commander by providing timely rapidreprogramming
of mission software and information dissemination for Army supported, Joint, allied service, EW integrated reprogramming of target acquisition, target engagement, vehicle survivability, and Aircraft Survivability Equipment (ASE). The ARAT rapid-reprogramming infrastructure supports tactical requirements for deployed aircraft and ground-based (e.g. CREW) survivability systems including those deployed in the CENTCOM area of responsibility (AOR). ARAT identifies and analyzes threat signature changes which affect EW, FPS and TSS; determines the impact of observed signature changes; creates new mission data software to adapt the system to the changes; disseminates the mission software changes; and provides methods to upload the new mission software into the affected EW, FPS and TSS. Each element within the ARAT infrastructure plays a specific role within the program's rapid reprogramming process, providing the Soldier with the capability to install mission and target identification software at the lowest possible level - maximizing flexibility for tactical commanders. ARAT participates in the operational and developmental test design of Army EW, FPS and TSS, and supports Service and JCS Reprogramming Exercises in all theaters. ARAT Research and Development enables continuous development of: 1) automated threat analysis tools to rapidly detect (flag) threat changes within the intelligence system, 2) tools to minimize the time to develop Aviation Mission Data Sets (MDS) and Ground loadsets , 3) tools and technology to minimize the time required to test and validate MDSs and loadsets, 4) improved communications conduits to transmit mission software changes to field users, and 5) enhanced mission-software uploading tools. These efforts allow for rapid threat analysis, simulation, mission software development, distribution and uploading of mission software changes directly to the supported Soldier in the field.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Keeping Pace with the Enemy and Technology	2.028	3.423	3.258
Articles:	-	-	-

Description: Funding is provided for the following effort

FY 2013 Accomplishments:
This effort: 1) studied the intelligence data requirements to support MDS development for EO/UV/IR spectrums and other multi-spectral sensors for aviation and non-aviation EW systems, 2)Developed government organic knowledge and application-base enabling reprogramming of future systems, 3)Performed requirements analysis and concept development for the reprogramming of multi-spectral EW systems.

FY 2014 Plans:
This effort continues to: 1)study the intelligence data requirements to support MDS development for EO/UV/IR spectrums and other multi-spectral sensors for aviation and non-aviation EW systems, 2) Develop government organic knowledge and application-base enabling reprogramming of future systems, 3)Perform requirements analysis and concept development for the reprogramming of multi-spectral EW systems.

FY 2015 Plans:
This effort will continue to 1)study the intelligence date requirements to support MDS development for EO/UV/IR spectrums and other multi-spectral sensors for aviation and non-aviation EW systems, 2) Develop government organic knowledge and

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
application-base enabling reprogramming of future systems, 3)Perform requirements analysis and concept development for the reprogramming of multi-spectral EW systems.			
Title: Infrastructure Improvements Multispectral	0.507	0.646	0.746
Articles:	-	-	-
Description: Funding is provided for the following effort ***FY 2013 Accomplishments:*** Infrastructure improvements for OFP sustainment environment to enable the USG to develop and deploy the OFP environment for MWS. Determined data and analysis requirements for MANPADS characterization and established initial organic government analysis and sustainment process to support OFPs and subsequently adapt MWSs to new threats. No government organic capability exists, increasing the risk that systems cannot be readily adapted to changing threats. ***FY 2014 Plans:*** Infrastructure improvements for OFP sustainment environment to enable the USG to develop and deploy the OFP environment for MWS. Determine data and analysis requirements for MANPADS characterization and establish an organic government analysis and sustainment process to support OFPs and subsequently adapt MWSs to new threats. Establish initial government organic capability, decreasing the risk that systems cannot be readily adapted to changing threats. Currently, no government organic capability exists, increasing the risk that systems cannot be readily adapted to changing threats. ***FY 2015 Plans:*** Infrastructure improvements for OFP sustainment environment to enable the USG to develop and deploy OFP environment for MWS. Will determine data and analysis requirements for MANPADS characterization and establish an organic government analysis and sustainment process to support OFPs and subsequently adapt MWSs to new threats. Will establish initial government organic capability, decreasing the risk that systems cannot be readily adapted to changing threats. Currently, no government organic capability exists, increasing the risk that systems cannot be readily adapted to changing threats.			
Title: Infrastructure Improvement Radio Frequency General	0.478	0.463	0.419
Articles:	-	-	-
Description: Funding is provided for the following effort ***FY 2013 Accomplishments:***			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Enhanced the ARAT communications architecture to facilitate the rapid secure transmission of mission software changes to EWS, FPS and TSS users, with emphasis on remote user and highly mobile Soldier connectivity. Developed and implement an initial integrated ASE development and test environment to ensure MDS and threat CM Integration on the respective airborne platform. ***FY 2014 Plans:*** Enhance the ARAT communications architecture to facilitate the rapid secure transmission of mission software changes to EWS, FPS and TSS users, with emphasis on remote user and highly mobile Soldier connectivity. Develop and implement an initial integrated ASE development and test environment to ensure MDS and threat CM Integration on the respective airborne platform. ***FY 2015 Plans:*** Will enhance the ARAT communications architecture to facilitate the rapid secure transmission of mission software changes to EWS, FPS and TSS users, with emphasis on remote user and highly mobile Soldier connectivity. Will develop and implement an initial integrated ASE development and test environment to ensure MDS and threat CM Integration on the respective airborne platform.			
Title: Threat Flagging and Mission Data Set Reprogramming Tool Development	0.210	0.190	0.112
Articles:	-	-	-
Description: Funding is provided for the following effort ***FY 2013 Accomplishments:*** Threat Flagging and MDS Reprogramming Tool Development- Developed initial application requirements for ARAT internal system- specific threat flagging, threat analysis, MDS generation, and MDS testing process. Enhanced threat flagging (threat performance change detection) and intelligence analytical tools, based on supported systems performance criteria, to rapidly identify and counter emerging and changing threats that adversely affect the performance of the EW, FPS and TSS. Created initial MDS development, testing and validation tools to decrease time from threat-change detection to the distribution of MDS products in order to increase the accuracy and fidelity of threat identification, and reduce the engineering involvement/workload associated with the manually intensive analysis and MDS development processes. Defined requirements and develop tools to migrate to a data support infrastructure that employs NGES when the NGES is deployed and the current EWIR system is decommissioned. ***FY 2014 Plans:*** Threat Flagging and MDS Reprogramming Tool Development- Develop initial application requirements for ARAT internal system-specific threat flagging, threat analysis, MDS generation, and MDS testing process. Enhance threat flagging (threat performance change detection) and intelligence analytical tools, based on supported systems performance criteria, to rapidly identify and counter emerging and changing threats that adversely affect the performance of the EW, FPS and TSS. Create initial MDS development, testing and validation tools to decrease time from threat-change detection to the distribution of MDS products in order to increase the accuracy and fidelity of threat identification, and reduce the engineering involvement/workload associated			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
with the manually intensive analysis and MDS development processes. Define requirements and develop tools to migrate to a data support infrastructure that employs NGES when the NGES is deployed and the current EWIR system is decommissioned. ***FY 2015 Plans:*** Threat Flagging and MDS Reprogramming Tool Development- Will develop initial application requirements for ARAT internal system- specific threat flagging, threat analysis, MDS generation, and MDS testing process. Will enhance threat flagging (threat performance change detection) and intelligence analytical tools, based on supported systems performance criteria, to rapidly identify and counter emerging and changing threats that adversely affect the performance of the EW, FPS and TSS. Will create initial MDS development, testing and validation tools to decrease time from threat-change detection to the distribution of MDS products in order to increase the accuracy and fidelity of threat identification, and reduce the engineering involvement/workload associated with the manually intensive analysis and MDS development processes. Will define requirements and develop tools to migrate to a data support infrastructure that employs NGES when the NGES is deployed and the current EWIR system is decommissioned.			
Accomplishments/Planned Programs Subtotals	3.223	4.722	4.535

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The efforts to be funded in this project will require a combination of systems specific and high-tech knowledge. The contractual services portion for the project will be obtained from both the Communications-Electronics Command (CECOM) Software Engineering Center (SEC) competitive omnibus and the Research, Development and Engineering Command (RDECOM) high tech contracts.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army			Date: March 2014
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Travel	Various	Various locations : various	0.352	0.129		0.173		0.184		-		0.184	Continuing	Continuing	Continuing
USG Labor	Various	ARAT Research and Development element Various locations : APG, MD	1.300	0.438		0.710		0.663		-		0.663	Continuing	Continuing	Continuing
		Subtotal	1.652	0.567		0.883		0.847		-		0.847	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013 Cost	FY 2013 Award Date	FY 2014 Cost	FY 2014 Award Date	FY 2015 Base Cost	FY 2015 Base Award Date	FY 2015 OCO Cost	FY 2015 OCO Award Date	FY 2015 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support (CECOM RDEC Test and Evaluation CECOM SEC Omnibus)	Various	Various : various	7.372	2.656		3.839		3.688		-		3.688	Continuing	Continuing	Continuing
		Subtotal	7.372	2.656		3.839		3.688		-		3.688	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	9.024	3.223		4.722		4.535		-		4.535	-	-	-

Remarks