

**UNCLASSIFIED**

**Exhibit R-2, RDT&E Budget Item Justification:** PB 2017 Army **Date:** February 2016

<b>Appropriation/Budget Activity</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army / BA 4: Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0603801A / <i>Aviation - Adv Dev</i>
---	---

COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	10.014	-	10.014	9.008	7.840	21.998	55.423	Continuing	Continuing
B47: <i>Future Vertical Lift Medium</i>	-	0.000	0.000	10.014	-	10.014	9.008	7.840	21.998	55.423	Continuing	Continuing

**Note**

In Fiscal Year (FY) 2015, funding for Advanced Maintenance Concepts was realigned to Program Element (PE) 0605830A Project EE5 to reflect development efforts in Budget Activity 05, System Development and Demonstration.

In FY 2017, Future Vertical Lift, Project B47, will receive funds in PE 0603801A.

**A. Mission Description and Budget Item Justification**

PE 0603801A Project B32, Advanced Maintenance Concepts provides advanced development aviation support of programs that include advanced maintenance concepts and equipment. This program provides for 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 project are: diagnostics/prognostic monitoring systems, Aviation Ground Power Unit (AGPU) redesign and incorporation of AGPU modularity capabilities, Aviation Light Utility Mobile Maintenance Cart (ALUMMC), Aviation Unit Maintenance Shop Set (AVUM SS), Unit Maintenance Aerial Recovery Kit (UMARK) and development support for tools needed to provide maintenance support to modernized/future force aircraft. There is no funding for this project in FY 2015 and beyond.

PE 0603801A Project B47, Future Vertical Lift (FVL) is an initiative, not yet an acquisition program, to develop a family of vertical lift aircraft for the United States Armed Forces. FVL was established in 2009 by the Secretary of Defense to focus all Department of Defense (DoD) vertical lift capabilities and technology development, as well as retaining long-term engineering capabilities. In October 2011, the Deputy Secretary of Defense issued the FVL Strategic Plan to outline a joint approach for the next generation vertical lift aircraft for all military services. The Strategic Plan provided a foundation for replacing the current fleet with advanced capability by shaping the development of vertical lift aircraft for the next 25 to 40 years. The development and fielding of FVL will significantly improve vertical lift capabilities providing critical aviation support to the Joint warfighting community. Increases in range, speed, payload, survivability, reliability, and reduced logistical footprint can only be achieved through the FVL approach of developing a new aircraft design. FVL will integrate advancements in technologies and design configurations balanced with appropriate trades to ensure affordability.

FY 2017 funding provides for Analysis of Alternatives (AoA) Modeling, Simulation, and Analysis and provides for Systems Engineering and Program Management (SEPM). FY 2018 continues to fund AoA efforts and provides funding for SEPM. FY 2019 supports Milestone A, Request for Proposal (RFP) development, RFP release, and SEPM. FY 2020 funds Source Selection Evaluation Board (SSEB), and continues to provide funding for SEPM. FY 2021 provides for air vehicle contract award and provides funding for SEPM.

**UNCLASSIFIED**

<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2017 Army	<b>Date:</b> February 2016
---	----------------------------

<b>Appropriation/Budget Activity</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army / BA 4: Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0603801A / <i>Aviation - Adv Dev</i>
---	---

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.000	0.000	10.014	-	10.014
Total Adjustments	0.000	0.000	10.014	-	10.014
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-	-	10.014	-	10.014

**Change Summary Explanation**

Initial funding for the program.

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Army										<b>Date:</b> February 2016		
<b>Appropriation/Budget Activity</b> 2040 / 4					<b>R-1 Program Element (Number/Name)</b> PE 0603801A / Aviation - Adv Dev				<b>Project (Number/Name)</b> B47 / Future Vertical Lift Medium			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
B47: Future Vertical Lift Medium	-	0.000	0.000	10.014	-	10.014	9.008	7.840	21.998	55.423	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

In Fiscal Year (FY) 2017, Future Vertical Lift (FVL), Project B47, will receive funds in Program Element (PE) 0603801A. Project B47 will be a New Start program and is forecasting a Materiel Development Decision in 1st Quarter 2017.

**A. Mission Description and Budget Item Justification**

Future Vertical Lift is an initiative, not yet an acquisition program, to develop a family of vertical lift aircraft for the United States Armed Forces. FVL was established in 2009 by the Secretary of Defense to focus all Department of Defense (DoD) vertical lift capabilities and technology development, as well as retaining long-term engineering capabilities. In October 2011, the Deputy Secretary of Defense issued the FVL Strategic Plan to outline a joint approach for the next generation vertical lift aircraft for all military services. The Strategic Plan provided a foundation for replacing the current fleet with advanced capability by shaping the development of vertical lift aircraft for the next 25 to 40 years. The development and fielding of FVL will significantly improve vertical lift capabilities providing critical aviation support to the Joint warfighting community. Increases in range, speed, payload, survivability, reliability, and reduced logistical footprint can only be achieved through the FVL approach of developing a new aircraft design. FVL will integrate advancements in technologies and design configurations balanced with appropriate trades to ensure affordability.

FY 2017 funding provides for Analysis of Alternatives (AoA) Modeling, Simulation, and Analysis and provides for Systems Engineering and Program Management (SEPM). FY 2018 continues to fund AoA efforts, Request for Proposal (RFP) development and provides funding for SEPM. FY 2019 supports Milestone A, RFP development, RFP release, and SEPM. FY 2020 funds Source Selection Evaluation Board (SSEB), and continues to provide funding for SEPM. FY 2021 provides for Technology Maturation and Risk Reduction contract awards and provides funding for SEPM.

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

	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
<b>Title:</b> Future Vertical Lift (FVL) Analysis of Alternatives	-	-	8.700
<b>Description:</b> FVL is an initiative, not yet an acquisition program, to develop a family of vertical lift aircraft for the United States Armed Forces.			
<b>FY 2017 Plans:</b> AoA and Modeling, Simulation, and Analysis, Systems Engineering and Program Management, travel, contractor support, and Program Management administrative cost.			
<b>Title:</b> Engineering Services / Research Studies and Program Management	-	-	1.314
<b>Description:</b> jfjffuj			
<b>FY 2017 Plans:</b>			

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Army	<b>Date:</b> February 2016
--	----------------------------

<b>Appropriation/Budget Activity</b> 2040 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603801A / Aviation - Adv Dev	<b>Project (Number/Name)</b> B47 / Future Vertical Lift Medium
--	--	---

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	FY 2015	FY 2016	FY 2017
hhhhh			
<b>Accomplishments/Planned Programs Subtotals</b>	-	-	10.014

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

N/A

**Remarks**

**D. Acquisition Strategy**

FVL is pre Materiel Development Decision (MDD). MDD is expected in 1st Quarter 2017. The FVL Acquisition Strategy, including Program Schedule, are being developed to be presented at the MDD.

**E. Performance Metrics**

N/A

**UNCLASSIFIED**

**Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Army** **Date:** February 2016

<b>Appropriation/Budget Activity</b> 2040 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603801A / Aviation - Adv Dev	<b>Project (Number/Name)</b> B47 / Future Vertical Lift Medium
--	--	---

<b>Management Services (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management	MIPR	FVL Program Office : Redstone Arsenal, AL	0.000	-		-		0.420	Oct 2016	-		0.420	0	0.420	0
<b>Subtotal</b>			0.000	-		-		0.420		-		0.420	0.000	0.420	0.000

<b>Product Development (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Analysis of Alternatives (AoA)	TBD	TRADOC Analysis Center : Fort Leavenworth, KS	0.000	-		-		8.700	Nov 2016	-		8.700	0	8.700	0
<b>Subtotal</b>			0.000	-		-		8.700		-		8.700	0.000	8.700	0.000

<b>Support (\$ in Millions)</b>				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Engineering Services / Research Studies - Organic	MIPR	FVL Program Office : Redstone Arsenal AL	0.000	-		-		0.454	Oct 2016	-		0.454	0	0.454	0
Engineering Services / Research Studies - Other	TBD	FVL Program Office : Redstone Arsenal AL	0.000	-		-		0.440	Nov 2016	-		0.440	0	0.440	0
<b>Subtotal</b>			0.000	-		-		0.894		-		0.894	0.000	0.894	0.000

	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract	
<b>Project Cost Totals</b>		0.000	-	0.000	10.014	-	10.014	0.000	10.014	0.000

**Remarks**

**UNCLASSIFIED**

**Exhibit R-4, RDT&E Schedule Profile: PB 2017 Army** **Date:** February 2016

<b>Appropriation/Budget Activity</b> 2040 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603801A / Aviation - Adv Dev	<b>Project (Number/Name)</b> B47 / Future Vertical Lift Medium
--	--	---

Event Name	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021							
	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				
Analysis of Alternatives									AoA																							
(1) Materiel Development Decision																	▲ MDD															
Request For Proposal Development																					RFP											
Proposal Preparation																									Proposal Prep							
(2) Milestone A																									▲ MS A							
Source Selection Evaluation Board																													SSEB			
(3) Technology Maturation and Risk Reduction Contract Award																									▲ Contract Award							

**UNCLASSIFIED**

**Exhibit R-4A, RDT&E Schedule Details:** PB 2017 Army **Date:** February 2016

<b>Appropriation/Budget Activity</b> 2040 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603801A / Aviation - Adv Dev	<b>Project (Number/Name)</b> B47 / Future Vertical Lift Medium
--	--	---

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Analysis of Alternatives	1	2017	2	2018
Materiel Development Decision	1	2017	1	2017
Request For Proposal Development	3	2018	2	2019
Proposal Preparation	3	2019	1	2020
Milestone A	2	2019	2	2019
Source Selection Evaluation Board	1	2020	1	2021
Technology Maturation and Risk Reduction Contract Award	2	2021	3	2024