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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army	DATE: April 2013
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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0203744A: <i>Aircraft Modifications/Product Improvement Programs</i>
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COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	144.904	280.247	257.187	-	257.187	334.521	335.543	279.072	385.407	Continuing	Continuing
430: <i>Impr Cargo Helicopter</i>	-	47.370	71.563	50.601	-	50.601	66.000	47.766	44.569	45.343	Continuing	Continuing
504: <i>Black Hawk Recapitalization/Modernization</i>	-	7.711	83.255	79.922	-	79.922	111.056	172.023	180.291	340.064	Continuing	Continuing
D17: <i>Apache Block III</i>	-	89.823	124.450	124.831	-	124.831	156.256	115.062	53.200	0.000	Continuing	Continuing
D18: <i>Fixed Wing Aircraft</i>	-	0.000	0.979	1.833	-	1.833	1.209	0.692	1.012	0.000	Continuing	Continuing

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

^{##} The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

FY 2014 budget request funds aviation development of modifications and improvements for the Improved Cargo Helicopter (ICH), the UH-60L Black Hawk Recapitalization/Modernization, Apache Block III, and Fixed Wing Aircraft.

B. Program Change Summary (\$ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	149.469	280.247	337.363	-	337.363
Current President's Budget	144.904	280.247	257.187	-	257.187
Total Adjustments	-4.565	0.000	-80.176	-	-80.176
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-4.565	-			
• Adjustments to Budget Years	-	-	-80.176	-	-80.176

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>					R-1 ITEM NOMENCLATURE PE 0203744A: <i>Aircraft Modifications/ Product Improvement Programs</i>				PROJECT 430: <i>Impr Cargo Helicopter</i>			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013[#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
430: <i>Impr Cargo Helicopter</i>	-	47.370	71.563	50.601	-	50.601	66.000	47.766	44.569	45.343	Continuing	Continuing
Quantity of RDT&E Articles												
[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012 ^{##} The FY 2014 OCO Request will be submitted at a later date												
Note Not applicable for this item.												
A. Mission Description and Budget Item Justification The CH-47 Chinook is the only heavy lift helicopter for the Army and is an essential element of the current Army Aviation master plan. This program funds improvements to the CH-47F System that include: T55-GA-714A engine control and component upgrades to increase power to support emerging 6K/95 requirements, continued development and testing of the Advanced Chinook Rotor Blades (ACRB) which will provide increased lift in high/hot conditions and reduce O&S costs. Production of the ACRB will begin in FY 16. Funding also initiates advanced flight control and drive train component improvements to improve aircraft performance. Development of requirements specifications, studies and risk reduction prototyping are also part of this effort.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014	
Title: 714 Engine Component Improvement Program									5.500	5.955	19.828	
Articles:									0	0		
Description: Included in the Engine Component Improvement Program are improvements that address increased performance, reduced Specific Fuel Consumption, improved safety, and increased reliability leading to reduced O&S costs. Improvements include an improved compressor and related component design and improved electronic control unit software. Performance improvements are aimed at providing additional power across the current operating envelope and support emerging 6K/95 requirements.												
FY 2012 Accomplishments: Included in the Engine Component Improvement Program are improvements that address safety, reliability, and readiness issues such as those to the electronic control unit software.												
FY 2013 Plans:												

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development		R-1 ITEM NOMENCLATURE PE 0203744A: Aircraft Modifications/ Product Improvement Programs		PROJECT 430: Impr Cargo Helicopter	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2012	FY 2013	FY 2014
Included in the Engine Component Improvement Program are improvements that address increased performance, reduced Specific Fuel Consumption, improved safety, and increased reliability leading to reduced O&S costs. Improvements include an improved compressor and related component design and improved electronic control unit software. FY 2014 Plans: Included in the Engine Component Improvement Program are improvements that address increased performance, reduced Specific Fuel Consumption, improved safety, and increased reliability leading to reduced O&S costs. Improvements include an improved compressor and related component design, and improved electronic control unit software.					
Title: Airframe Component Improvement Program Articles: Description: Included in the Airframe Component Improvement Program are the continued development and flight testing of the Advanced Chinook Rotor Blade (ACRB) and development of advanced flight control and drive train components. The ACIP will also assess potential improvements to the electrical system, fuel system, and structural improvements for improved aircraft performance, aircraft weight reduction, and reduction of O&S costs. FY 2012 Accomplishments: Included in this effort is the development and testing of the new Advanced Chinook Rotor Blade (ACRB) that will result in significant performance improvement such as providing approximately 1,975 lbs of additional lift, improving erosion protection, and reducing O&S costs. Funding initiates advanced flight control component development and drive train improvements to improve aircraft performance, completes development and testing of the M24A1 gun mount, and initiates studies to assess potential improvements to the electrical system, fuel system, and structural improvements. Results are not only aimed at performance improvement, but aircraft weight reduction, and reduced O&S costs. FY 2013 Plans: Included in these efforts are development and testing of the new Advanced Chinook Rotor Blade (ACRB) that will result in significant performance improvement such as providing approximately 1,975 lbs of additional lift, improving erosion protection, and reducing O&S costs. Funding also continues development of advanced flight control and drive train components to increase aircraft performance, reduce aircraft weight, and reduce O&S costs. FY 2014 Plans: Included in these efforts are development and testing of the new Advanced Chinook Rotor Blade (ACRB) that will result in significant performance improvement such as providing approximately 1,975 lbs of additional lift, improving erosion protection,			39.614 0	62.200 0	28.363

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APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0203744A: Aircraft Modifications/ Product Improvement Programs				PROJECT 430: Impr Cargo Helicopter			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014
and reducing O&S costs. Funding also continues development of advanced flight control and drive train components to increase aircraft performance, reduce aircraft weight, and reduce O&S costs.											
Title: In-house and Program Management Administration									2.256	3.408	2.410
Articles:									0	0	
Description: This funding provides support costs for various government agencies.											
FY 2012 Accomplishments: This funding provides future support costs for various government agencies.											
FY 2013 Plans: This funding provides future support costs for various government agencies											
FY 2014 Plans: This funding provides future support costs for various government agencies.											
Accomplishments/Planned Programs Subtotals									47.370	71.563	50.601
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• AA0252: CH-47 CARGO HELICOPTER MODS (MYP) (Including Adv Proc and Initial Spares)	69.012	39.135	149.764		149.764	89.975	144.811	280.431	406.910	Continuing	Continuing
• A05105: CH-47 SLEP	489.917	634.241	679.053		679.053	772.084	777.519	753.318	164.018	Continuing	Continuing
• A05008: CH-47 CARGO HELICOPTER NEW BUILD (Including Adv Proc)	870.399	525.141	375.373		375.373	147.200	396.700	0.200		Continuing	Continuing
Remarks											
D. Acquisition Strategy											
The CH-47F program replaces one for one, the aging CH-47D aircraft by FY2020, incorporates a new machined airframe, and includes a new Common Avionics Architecture System (CAAS) cockpit with digital communication/navigation capability allowing improved interoperability on the digital battlefield. The CH-47F program includes recapitalization of key dynamic components, bringing them to a near zero time.											

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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0203744A: <i>Aircraft Modifications/ Product Improvement Programs</i>	PROJECT 430: <i>Impr Cargo Helicopter</i>

E. Performance Metrics

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

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army													DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>							R-1 ITEM NOMENCLATURE PE 0203744A: <i>Aircraft Modifications/ Product Improvement Programs</i>					PROJECT 430: <i>Impr Cargo Helicopter</i>			

Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
714 Engine Component Improvement Program	Various	Honeywell:Phoenix, AZ	2.400	5.500	Dec 2011	5.955	Mar 2013	19.828	Mar 2014	-		19.828	Continuing	Continuing	Continuing
Airframe Component Improvement Program	Various	Boeing:Ridley Park PA	7.625	39.614	Aug 2012	62.200	Dec 2012	28.363	Mar 2014	-		28.363	Continuing	Continuing	Continuing
Subtotal			10.025	45.114		68.155		48.191		0.000		48.191			

Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
PMO/OGA	Various	Various government:Redstone Arsenal AL	0.484	2.256	Mar 2012	3.408	Mar 2013	2.410	Mar 2014	-		2.410	Continuing	Continuing	Continuing
Subtotal			0.484	2.256		3.408		2.410		0.000		2.410			

			All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			10.509	47.370		71.563		50.601		0.000		50.601			

Remarks

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army									DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0203744A: Aircraft Modifications/ Product Improvement Programs				PROJECT 504: Black Hawk Recapitalization/ Modernization			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
504: Black Hawk Recapitalization/Modernization	-	7.711	83.255	79.922	-	79.922	111.056	172.023	180.291	340.064	Continuing	Continuing
Quantity of RDT&E Articles												
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
A. Mission Description and Budget Item Justification												
The Improved Turbine Engine Program (ITEP) develops, tests and qualifies a nominal three thousand (3,000) shaft horsepower (shp) class turboshaft engine with 25% better specific fuel consumption (SFC) as compared to other equivalent horsepower category engines. The engine will be designed to fit in the same engine envelope as a T700 engine for the Black Hawk and Apache aircraft. Other goals of the program are 65% greater horsepower to weight ratio, 35% less production and maintenance cost and 20% greater design life. The program consists of system engineering and program management, detailed design engineering, design assurance hardware manufacturing and testing, component and module level development and testing, system level testing and qualification, as well as, integration testing into the airframe.												
FY2014 funds initial airframe engine integration efforts and continuing component testing. FY2015 funds ITEP contract award and initial component design. FY2016 funds continuing design effort, Preliminary Design Review (PDR), component testing and airframe and integration design effort. FY2017 funds Critical Design Review (CDR) and development testing. FY2018 funds airframe integration and flight testing.												
The UH-60L Digital provides an integrated digital map, integrated performance planning, common functionality and commonality of training with UH-60M.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014	
Title: ITEP									7.711	72.255	79.922	
									0	0		
Description: Improved Turbine Engine Program (ITEP) - a multi-platform turbine engine improvement required across existing Army aircraft to fill the capability gaps for Army Aviation Operations.												
FY 2012 Accomplishments: Systems Engineering/Program Management requirements. Activity to support Material Development Decision (MDD), preparation for Milestone entry.												
FY 2013 Plans:												

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0203744A: Aircraft Modifications/ Product Improvement Programs			PROJECT 504: Black Hawk Recapitalization/ Modernization				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)										FY 2012	FY 2013	FY 2014
Systems Engineering/Program Management requirements. Continue preparation for Milestone entry, development of contractor requirements package, and support to Analysis of Alternatives (AoA). FY 2014 Plans: Systems Engineering/Program Management Milestone requirements. Source selection board activities leading to contract award. Title: UH-60L Digital Description: Three year program to upgrade UH-60L. Provide an integrated digital map, integrated performance planning, common functionality and commonality of training with UH-60M. FY 2013 Plans: Begin UH-60L Digital effort. Activity to support Material Development Decision (MDD), preparation for Milestone entry, development of contractor requirements package.												
Articles:										0.000	11.000 0	0.000
Accomplishments/Planned Programs Subtotals										7.711	83.255	79.922
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost	
• BLACK HAWK (Modifications) AA0492: BLACK HAWK (Modifications) AA0492	74.745	73.804	74.095		74.095	77.214	89.066	117.494	149.944	Continuing	Continuing	
Remarks AA0492 BLACK HAWK (Modifications) provides funding for the UH-60L Digital starting in FY 2016. This line also includes other post production modifications to the UH-60 A/L aircraft.												
D. Acquisition Strategy Full and Open Competition is planned for the ITEP development contract. Award cost plus contracts to dual vendors and continue competition to down select at Milestone B.												
E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.												

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>						R-1 ITEM NOMENCLATURE PE 0203744A: <i>Aircraft Modifications/</i> <i>Product Improvement Programs</i>						PROJECT 504: <i>Black Hawk Recapitalization/</i> <i>Modernization</i>			
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
ITEP SEPM - Organic	Various	PMO:Huntsville, AL	0.000	4.330	Oct 2011	4.577	Oct 2012	4.784	Oct 2013	-		4.784	Continuing	Continuing	Continuing
ITEP SEPM - Contractor	Various	TBD:TBD	0.000	0.631	Oct 2011	0.612	Oct 2012	1.780	Oct 2013	-		1.780	Continuing	Continuing	Continuing
ITEP SEPM - OGA	Various	PMO:Huntsville, AL	0.000	0.100	Oct 2011	0.832	Oct 2012	2.773	Oct 2013	-		2.773	Continuing	Continuing	Continuing
ITEP OTHER	Various	TBD:Various	0.000	-		54.154	Oct 2012	-		-		-	Continuing	Continuing	Continuing
Subtotal			0.000	5.061		60.175		9.337		0.000		9.337			
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
ITEP Development Engineering	Various	Various:Various	0.000	-		-		-		-		-	Continuing	Continuing	Continuing
ITEP Air Vehicle Integration	SS/BOA	Various:Various	0.000	-		-		31.322	Jan 2014	-		31.322	Continuing	Continuing	Continuing
UH-60L Digital	C/CPFF	TBD:Various	0.000	-		11.000	May 2013	-		-		-	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		11.000		31.322		0.000		31.322			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
ITEP Other OGA - AoA Development Support	Various	AMSAA:Huntsville, AL	0.000	0.650	Jan 2012	2.080	Jan 2013	-		-		-	Continuing	Continuing	Continuing
Subtotal			0.000	0.650		2.080		0.000		0.000		0.000			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>						R-1 ITEM NOMENCLATURE PE 0203744A: <i>Aircraft Modifications/ Product Improvement Programs</i>				PROJECT 504: <i>Black Hawk Recapitalization/ Modernization</i>				

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
AATD/AATE Testing Support	Various	Various:Various	0.000	2.000	Jan 2012	10.000	Jan 2013	39.263	Jan 2014	-		39.263	Continuing	Continuing	Continuing
ITEP System Test & Evaluation	C/CPAF	Various:Various	0.000	-		-		-		-		-	Continuing	Continuing	Continuing
Subtotal			0.000	2.000		10.000		39.263		0.000		39.263			

	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	7.711	83.255	79.922	0.000	79.922			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army																DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY								R-1 ITEM NOMENCLATURE								PROJECT			
2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development								PE 0203744A: Aircraft Modifications/ Product Improvement Programs								504: Black Hawk Recapitalization/ Modernization			

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0203744A: Aircraft Modifications/ Product Improvement Programs	PROJECT 504: Black Hawk Recapitalization/ Modernization

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
UH-60L Digital (Development)	1	2013	4	2013

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army									DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0203744A: Aircraft Modifications/ Product Improvement Programs				PROJECT D17: Apache Block III			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
D17: Apache Block III	-	89.823	124.450	124.831	-	124.831	156.256	115.062	53.200	0.000	Continuing	Continuing
Quantity of RDT&E Articles												
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
Note												
Not applicable for this item.												
A. Mission Description and Budget Item Justification												
The FY 2015 budget request for Apache Block III (AB3) will fund the non-recurring engineering (NRE), development, and testing work associated with the planned remanufacture and new build of 690 Apache aircraft in the Block III configuration (deliveries began in Oct 2011). The AB3 program consists of two Major Defense Acquisition Programs (MDAP), AB3A Remanufacture and AB3B New Build. This project also addresses obsolescence and reliability challenges and provides increased combat capability to the aircraft. Upgrades include: Unmanned Aircraft System (UAS) Level III-IV Control, Improved Situational Awareness, Upgraded Communications Suite, Improved Drive and Propulsion Systems, Improved Targeting Capability, Increased Computer Processing Capability and Speed, Improved Navigation Systems, and Improved Diagnostics and Maintainability. Upgrades are integrated as incremental block modifications. The program addresses operational shortfalls identified during real-world combat missions and meets Longbow Apache Capability Production Document (CPD) requirements for modernization.												
Funds will also provide for the development and testing of the Modernized Rocket Launcher (MRL) with digital launcher electronics.												
FY2015 funding totals do not include any previously requested funding for current FY2014 Overseas Contingency Operations (OCO) requirements, and no FY2014 OCO funds have been previously requested in the RDTE Project D17.												
FY2014 funding totals do not include any previously requested funding for current FY2013 Overseas Contingency Operations (OCO) requirements, and no FY2013 OCO funds have been previously requested in the RDTE Project D17.												
FY2013 funding totals did not include any previously requested funding for current FY2012 Overseas Contingency Operations (OCO) requirements, and no FY2012 OCO funds have been previously requested in the RDTE Project D17.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014	
Title: Product Development									65.008	91.809	104.886	
Articles:									0	0		

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
Description: Funding is provided for the following efforts by Boeing, Longbow Limited Liability (LBL), and Lockheed Martin. FY 2012 Accomplishments: Development & Testing capabilities associated with planned remanufacture and new build of Apache aircraft for Block III Lot 4 & 6 configuration (joint interoperability, crashworthy fuel tanks, embedded diagnostics, communications, mission processor, and navigation upgrades). FY 2013 Plans: Development & Testing work associated with the planned remanufacture and new build of Apache aircraft in the Block III Lot 4-6 configuration and to enhance operational capabilities. Provides for development of the MRL. FY 2014 Plans: Development & Testing capabilities associated with planned remanufacture and new build of Apache aircraft for Block III Lot 4 & 6 configuration (joint interoperability, crashworthy fuel tanks, embedded diagnostics, communications, mission processor, and navigation upgrades) and to enhance operational capabilities. Provides NRE for design of the Hydra Launcher Electronics Assemblyfor development of the MRL.				
Title: Support Costs Articles: Description: Funding is provided for the following effort FY 2012 Accomplishments: GFE supporting AB3 tests FY 2013 Plans: GFE supporting AB3 tests FY 2014 Plans: GFE supporting AB3 tests and government R&D Facilities		11.471 0	20.510 0	7.124
Title: Test and Evaluation Articles: Description: Funding is provided for Development Testing and Evaluation and Operational Test and Evaluation FY 2012 Accomplishments:		12.855 0	10.546 0	8.999

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)										FY 2012	FY 2013	FY 2014
Development Testing and Operational T&E, Government test oversight, test ranges, and other Government agencies FY 2013 Plans: Development Test & Evaluation and Operational Test & Evaluation FY 2014 Plans: Development Testing & Operational Test & Evaluation, Government test oversight, test ranges, flight hour costs for MRL testing, other Government Agencies and launcher testing.												
Title: Management Services Description: Funding is provided for the following effort FY 2012 Accomplishments: Payroll, TDY, Support Contractors, Matrix Support FY 2013 Plans: Payroll, TDY, Support Contractors, Matrix Support FY 2014 Plans: Payroll, TDY, Support Contractors, Matrix Support										Articles: 0.489 0	1.585 0	3.822
Accomplishments/Planned Programs Subtotals										89.823	124.450	124.831
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost	
• AA6605: AH-64 MODS	331.230	178.805	251.657		251.657	216.154	174.396	267.767	281.614	Continuing	Continuing	
• A05111: AH-64 APACHE BLOCK IIIA REMAN	561.269	684.822	859.400		859.400	842.500	870.300	880.200	878.000	Continuing	Continuing	
• A05133: AH-64 APACHE BLOCK IIIB NEW BUILD	104.263	371.114								Continuing	Continuing	
Remarks												

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0203744A: <i>Aircraft Modifications/ Product Improvement Programs</i>	PROJECT D17: <i>Apache Block III</i>
<u>D. Acquisition Strategy</u> The NRE will encompass subsystem integration and will utilize existing test aircraft, incorporate the technical insertions, and initiate appropriate qualification and operational flight-testing. The Low Rate Initial Production (LRIP) effort includes a total quantity of 51 aircraft, with deliveries completing in December 2013. These 51 LRIP aircraft will be used for operational testing, First Unit Equipped (FUE), and training base fielding. In Oct 2010, a contract for Apache Block III Lot 1 (8 aircraft) was awarded to initiate LRIP. In April 2012, additional options for Lot 2a (16 aircraft), Lot 2b (19 aircraft) and Lot 2c (8 aircraft) were definitized. In early 2012, the existing Engineering Manufacturing Development (EMD) effort was modified to incorporate development and testing to support the AB3 Lot 4 and Lot 6 production configurations. In FY13, a contract for Apache Block III Lot 3, initiating Full Rate Production, will be awarded with options for Lot 4 and will continue to a total of 690 remanufactured and new build aircraft. Training device concurrency will be maintained with each technical insertion. The EMD effort is managed as Cost Reimbursable. Production efforts will be awarded as Firm Fixed Price (FFP) and include the Advance Procurement requirements. In FY13, FY14, and FY15 MRL NRE will encompass US Government (USG) design of the Hydra Launcher Electronics Assembly (LEA), modification of the M261 launcher, launcher fabrication, and launcher testing. Multi-year authority may be requested for the out years. <u>E. Performance Metrics</u> Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development						R-1 ITEM NOMENCLATURE PE 0203744A: Aircraft Modifications/ Product Improvement Programs						PROJECT D17: Apache Block III			
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Management Services (In-House, Travel, etc.)	MIPR	PMO AAH, Matrix Support, AMCOM Express:Redstone Arsenal, AL	0.000	0.489	Dec 2011	0.774		3.010	Dec 2013	-		3.010	Continuing	Continuing	Continuing
Management Services (In-House, Travel, etc)	MIPR	PEO Missiles & Space, Matrix Support, AMCOM Express, SETA:Huntsville, AL	0.000	-		0.811		0.811		-		0.811	Continuing	Continuing	0.000
Subtotal			0.000	0.489		1.585		3.821		0.000		3.821			
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
The Boeing Company	SS/CPIF	Boeing Contracts:Mesa, AZ	78.200	52.984	Dec 2011	83.516	Dec 2012	82.811	Dec 2013	-		82.811	Continuing	Continuing	Continuing
Longbow Limited Liability (LBL) Contracts	SS/CPIF	Longbow Limited Liability (LBL) Contracts:Orlando, FL and Baltimore, MD	2.348	12.024	Dec 2011	1.810		14.500		-		14.500	Continuing	Continuing	Continuing
Lockheed Martin	SS/CPIF	Lockheed Martin Contracts:Orlando, FL	0.000	-		0.470		-		-		-	Continuing	Continuing	Continuing
Modernized Rocket Launcher Development - USG	MIPR	Various USG Activities:Various	0.000	-		5.253		7.125		-		7.125	Continuing	Continuing	0.000
Boeing - MRL Platform SW and Integration	SS/CPIF	Boeing Company:Mesa, AZ	0.000	-		0.760		0.451		-		0.451	Continuing	Continuing	0.000
Subtotal			80.548	65.008		91.809		104.887		0.000		104.887			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>						R-1 ITEM NOMENCLATURE PE 0203744A: <i>Aircraft Modifications/</i> <i>Product Improvement Programs</i>						PROJECT D17: <i>Apache Block III</i>			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Support Activities	MIPR	Various Activities:Various	3.320	11.471	Dec 2011	20.510	Dec 2012	7.124	Dec 2013	-		7.124	Continuing	Continuing	Continuing
Subtotal			3.320	11.471		20.510		7.124		0.000		7.124			
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Assessments, Test Integration Working Group (TWIG), TEMP, etc.	MIPR	Various Activities:Various	6.800	12.855	Dec 2011	8.700	Dec 2012	5.700	Dec 2013	-		5.700	Continuing	Continuing	Continuing
MRL Weapon Integration Lab, LFT, Qual Test, & Test Working Group	MIPR	AMRDEC:Huntsville, AL, Yuma Proving Grounds, AZ	0.000	-		1.846		3.299		-		3.299	Continuing	Continuing	0.000
Subtotal			6.800	12.855		10.546		8.999		0.000		8.999			
Project Cost Totals			90.668	89.823		124.450		124.831		0.000		124.831			
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army			DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>			R-1 ITEM NOMENCLATURE PE 0203744A: <i>Aircraft Modifications/ Product Improvement Programs</i>		
			PROJECT D17: <i>Apache Block III</i>		

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Initial Operational Test & Eval																												
Full Rate Production Decision																												
Follow-On Test & Eval I																												
Follow-On Test & Eval II																												
MRL Design																												
MRL PDR																												
MRL Prototypes & CDR																												
MRL Integration and Test																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0203744A: <i>Aircraft Modifications/ Product Improvement Programs</i>	PROJECT D17: <i>Apache Block III</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Initial Operational Test & Eval	2	2012	2	2012
Full Rate Production Decision	4	2012	4	2012
Follow-On Test & Eval I	2	2014	2	2014
Follow-On Test & Eval II	3	2016	3	2016
MRL Design	4	2013	3	2014
MRL PDR	2	2014	2	2014
MRL Prototypes & CDR	2	2014	2	2014
MRL Integration and Test	1	2015	3	2015

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Exhibit R-5, RDT&E Termination Liability: PB 2014 Army								DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0203744A: Aircraft Modifications/ Product Improvement Programs			PROJECT D17: Apache Block III	
Cost (\$ in Millions)	All Prior Years	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	
Program Termination Liability	-	9.265	12.445	15.160	12.820	9.980	4.140	-	

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army									DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0203744A: Aircraft Modifications/ Product Improvement Programs				PROJECT D18: Fixed Wing Aircraft			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
D18: Fixed Wing Aircraft	-	0.000	0.979	1.833	-	1.833	1.209	0.692	1.012	0.000	Continuing	Continuing
Quantity of RDT&E Articles												
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
Note												
Not applicable for this item.												
A. Mission Description and Budget Item Justification												
The budget line provides for Non-Recurring Engineering (NRE) and integration of all Army Fixed Wing aircraft to provide communications, navigation, surveillance (CNS) and Department of Defense (DoD) mandated safety equipment to meet current and evolving international standards. FY 2014 Research, Development, Test, and Evaluation (RDT&E) dollars in the amount of \$2.833 million provides funding for NRE of CNS equipment that meets current and future air traffic management requirements. The increased performance will permit the Army Fixed Wing aircraft to operate in compliance with other existing and emerging regulations. As requirements for new avionics equipment continue, aircraft delays and airspace exclusion are likely for aircraft not properly equipped. Upgrade of communication and navigation systems will improve aircraft performance and enhance reliability and maintainability, thereby improving aircraft availability for mission requirements. The associated aircraft modifications will assure worldwide deployability for those required to deploy. This budget line will also provide funding for studies, evaluations and Analysis of Alternatives to support emerging Army Fixed Wing requirements for product improvements to support the Army fleet.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014	
Title: Non-recurring Engineering Articles: Description: Non-recurring engineering efforts provide improved performance to Army fixed wing aircraft for communication, navigation, and surveillance equipment. FY 2013 Plans: Non-recurring engineering efforts provide improved performance to Army fixed wing aircraft for communication, navigation, and surveillance equipment. FY 2014 Plans: Initiate non-recurring engineering efforts in order to improve performance to Army fixed wing aircraft for communication, navigation, and surveillance equipment.									0.000	0.940 0	1.691	
Title: Program Management									0.000	0.039	0.142	

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army								DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>					R-1 ITEM NOMENCLATURE PE 0203744A: <i>Aircraft Modifications/ Product Improvement Programs</i>			PROJECT D18: <i>Fixed Wing Aircraft</i>			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)											
								FY 2012	FY 2013	FY 2014	
Articles: Description: Program Management of PM FW FY 2013 Plans: Program Management of PM FW FY 2014 Plans: Program Management of PM FW									0		
Accomplishments/Planned Programs Subtotals								0.000	0.979	1.833	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• AA0703: <i>GATM-Fixed Wing Aircraft</i>		17.179	12.072		12.072	12.569	15.063	19.065	15.645	0.000	91.593
• AA0270: <i>Utility/Cargo Airplane Mods</i>		24.842	17.500		17.500	15.167	16.612	17.833	16.695	0.000	108.649
Remarks											
D. Acquisition Strategy											
The US Army Fixed Wing acquisition and modernization strategy leverages commercial derivative aircraft and includes cockpit modernization for civil and tactical upgrades of military unique equipment. These equipment upgrades include items such as dual Flight Management Systems, Terrain Area Warning Systems, transponder, Mode S/5 transponders, Satellite Communications, Traffic Alert and Collision Avoidance II, Flight Data Recorders, Cockpit Voice Recorders, communication radios, military Global Positioning Sytem (GPS), Wide Area Augmentation System/ Localizer Performance with Vertical Guidance, Automatic Dependence Surveillance Broadcast (ADS-B) Out, M-code GPS, Blue Force Tracker, and Smart books. The Research Development Test & Evaluation funding associated with this program provides for Non-Recurring Engineering and integration for installation of these required modernization efforts on Army fixed wing aircraft.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development						R-1 ITEM NOMENCLATURE PE 0203744A: Aircraft Modifications/ Product Improvement Programs						PROJECT D18: Fixed Wing Aircraft			
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	Various	PM Fixed Wing:Redstone Arsenal, AL	0.000	-		0.039		0.142		-		0.142	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		0.039		0.142		0.000		0.142			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Fixed Wing Non-recurring Engineering	Various	Various:Various	0.000	-		0.940		1.691		-		1.691	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		0.940		1.691		0.000		1.691			
			All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	0.000		0.979		1.833		0.000		1.833			
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army																DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY								R-1 ITEM NOMENCLATURE								PROJECT			
2040: Research, Development, Test & Evaluation, Army								PE 0203744A: Aircraft Modifications/ Product Improvement Programs								D18: Fixed Wing Aircraft			
BA 7: Operational Systems Development																			

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0203744A: Aircraft Modifications/ Product Improvement Programs	PROJECT D18: Fixed Wing Aircraft	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
FW Non-recurring Engineering	1	2013	4	2018