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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Air Force										Date: February 2018		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 0605229F I Combat Rescue Helicopter							
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	622.875	263.327	354.485	457.652	0.000	457.652	232.047	37.711	21.488	21.879	0.000	2,011.464
654364: Combat Rescue Helicopter	622.875	263.327	354.485	457.652	0.000	457.652	232.047	37.711	21.488	21.879	0.000	2,011.464
Quantity of RDT&E Articles	4	5	-	-	-	-	-	-	-	-		
Program MDAP/MAIS Code: 479												
A. Mission Description and Budget Item Justification												
<p>The Combat Rescue Helicopter (CRH) program will replace the aging HH-60G. The HH-60G currently supports the Air Force's core function of Personnel Recovery. The primary mission of the HH-60G is to conduct day / night / marginal weather Combat Search and Rescue (CSAR) in order to recover downed aircrew or other isolated personnel in hostile or non-permissive environments.</p> <p>The CRH will be capable of employment day or night, in adverse weather, and in a variety of threat spectrums from terrorist attacks to chemical, biological, radiological, and nuclear threats. Onboard defensive capabilities will permit the CRH system to operate in an increased threat environment. An in-flight air refueling capability will provide an airborne alert capability and extend its combat mission range. The CRH system may conduct combat search and rescue airborne mission commander duties. The aircraft will be self-supporting to the maximum extent practical. The CRH system may also conduct other collateral missions inherent in their capabilities to conduct Personnel Recovery, such as non-conventional assisted recovery, non-conventional evacuation operations, defense support to civil authorities, civil search and rescue, international aid, emergency aeromedical evacuation, disaster/humanitarian relief, counterdrug activities, support for National Aeronautics and Space Administration flight operations, and insertion/extraction of combat forces.</p> <p>The CRH development effort will procure a total of four Engineering &amp; Manufacturing Development (EMD) aircraft and other necessary ground and flight assets. The exercised portion of the CRH contract also includes development of the complete CRH training system to include CRH Weapon System Trainer (WST), Operational Flight Trainer (OFT), Airframe Systems Trainer (AST), other maintenance training devices, as well as Type 1 training and courseware required to perform aircrew and maintenance training. Other efforts include, but are not limited to, development of a systems integration laboratory and an avionics integration support facility, as well as procurement of data rights and licenses, spares, procuring five System Demonstration Test Article (SDTA) aircraft, and product support for the Engineering, Manufacturing, and Development effort.</p> <p>This program element may include necessary civilian pay expenses required to manage, execute, and deliver Combat Rescue Helicopter weapon system capability. The use of such program funds will be in addition to the civilian pay expenses budgeted in program elements 0605826F, 0605827F, 0605828F, 0605829F, 0605830F, 0605831F, 0605832F, 0605898F and 0605833F.</p> <p>This program is in Budget Activity 5, System Development and Demonstration (SDD) because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production.</p>												

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This program is expected to receive approval to enter Milestone C Production and Deployment phase and to initiate Low Rate Initial Production of aircraft in FY19.						
B. Program Change Summary (\$ in Millions)		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget		319.331	354.485	461.096	0.000	461.096
Current President's Budget		263.327	354.485	457.652	0.000	457.652
Total Adjustments		-56.004	0.000	-3.444	0.000	-3.444
• Congressional General Reductions		0.000	0.000			
• Congressional Directed Reductions		-46.000	0.000			
• Congressional Rescissions		0.000	0.000			
• Congressional Adds		0.000	0.000			
• Congressional Directed Transfers		0.000	0.000			
• Reprogrammings		0.000	0.000			
• SBIR/STTR Transfer		-10.004	0.000			
• Other Adjustments		0.000	0.000	-3.444	0.000	-3.444
Change Summary Explanation						
The FY17 funding was reduced by (\$46M) due to a Congressional Mark and (\$10M) for SBIR transfer. FY19 funding was reduced by (\$3.44M) to account for inflation adjustments.						
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2017	FY 2018	FY 2019
Title: Combat Rescue Helicopter (CRH)				258.158	345.485	439.752
Description: Develop a new helicopter, associated training system and support elements that leverage fielded, non-developmental technologies to recapitalize the HH-60G fleet.						
FY 2018 Plans: Conduct development work on Combat Rescue Helicopter aircraft, training systems and associated product support. Continue to develop the EMD and SDTA Aircrafts and conduct required testing. Initiate pre-operational support, aircrew training, and maintenance support for integration and support facilities. Initiate facilities design and equipment purchase for Electronic Warfare Integrated Reprogramming (EWIR) capability. Management services including studies and analyses, miscellaneous program office support, travel, office supplies, training courses and service contracts. Plan to award Training Systems Acquisition (TSA) III Delta Training Device task order in August 2018.						
FY 2019 Plans: Continue development work on Combat Rescue Helicopter aircraft, training systems and associated product support. Continue to develop the EMD and SDTA Aircrafts and conduct required testing. Continue pre-operational support, aircrew training, and						

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C. Accomplishments/Planned Programs (\$ in Millions)										FY 2017	FY 2018	FY 2019
maintenance support for support and integration facilities. Stabilize facilities expansion and equipment purchase for Electronic Warfare Integrated Reprogramming (EWIR) capability. Management services including studies and analyses, miscellaneous program office support, travel, office supplies, training courses and service contracts. This program is expected to receive approval to enter Milestone C Production and Deployment phase and to initiate Low Rate Initial Production of aircraft in FY19.												
FY 2018 to FY 2019 Increase/Decrease Statement: Increase in funding due to additional activities to complete development of EMD and SDTA aircraft.												
Title: Combat Rescue Helicopter Government Test and Evaluation										5.169	9.000	17.900
Description: Conduct test and evaluation on the Combat Rescue Helicopter and associated training systems to support Developmental Test and Evaluation planning, Operational Test and Evaluation planning, Live Fire Test and Evaluation, and other test planning and organizational support.												
FY 2018 Plans: Continue Developmental Test and Evaluation planning, Operational Test and Evaluation planning, Live Fire Test and Evaluation, and other test planning and organizational support. Continue to witness contractor qualification testing on subcomponents. Support contractor's Test Readiness Review and First Flight Readiness Reviews in preparation for test conduct.												
FY 2019 Plans: Continue to witness contractor qualification testing on subcomponents. Continue Operational Test and Evaluation Planning. Conduct Developmental Test and Evaluation and Life Fire Test and Evaluation.												
FY 2018 to FY 2019 Increase/Decrease Statement: Increase in funding due to end EMD phase activities to include a surge in testing activities in preparation for approval and planned entrance into Milestone C Production and Deployment Phase in FY19.												
Accomplishments/Planned Programs Subtotals										263.327	354.485	457.652
D. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost	
• APAF 04 Line Item H060WH: Combat Rescue Helicopter	-	-	680.201	-	680.201	908.935	1,014.782	876.340	847.399	2,722.200	7,049.857	
• MILCON Line Item 0207229F: Combat Rescue Helicopter	7.300	-	5.900	-	5.900	-	4.050	-	-	26.600	43.850	
Remarks												

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<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force I BA 5: System Development &amp; Demonstration (SDD)</i>		<b>R-1 Program Element (Number/Name)</b> PE 0605229F <i>I Combat Rescue Helicopter</i>
<b>E. Acquisition Strategy</b> <p>Procure a new helicopter and associated training systems, and support elements that leverage fielded non-developmental technologies to recapitalize the HH-60G fleet. The CRH development effort will procure four Engineering, Manufacturing, and Development (EMD) aircraft &amp; five System Demonstration Test Article (SDTA) aircraft for a total of nine developmental test aircraft and other necessary ground and flight assets, to be utilized for both DT and IOT&amp;E.</p> <p>The exercised portion of the CRH contract also includes development of the complete CRH training system to include CRH Weapon System Trainer (WST), Operational Flight Trainer (OFT), Avionics Desktop Trainer (AVDTT), Airframe Systems Trainer (AST), other maintenance Part Task Trainers, as well as Type 1 training and courseware required to perform aircrew and maintenance training. There is a single prime contractor delivering the aircraft, associated training systems and support elements under a single contract. Other efforts include, but are not limited to, development of a systems integration laboratory and an avionics integration support facility, as well as procurement of data rights and licenses, spares, SDTA, and product support for the EMD effort.</p> <p>The contract type for this effort is Fixed Price Incentive Firm through Low Rate Initial Production.</p> <p>As originally planned following source selection, a formal HH-60W Training System Requirements Analysis (TSRA) was conducted in Sep 2015. This analysis identified some additional training requirements not accounted for in the original contract. Current approach is to acquire two additional training devices and initial contractor support via the AFLCMC Simulator Program Office's Multiple Award Indefinite Delivery Indefinite Quantity contract called Training Systems Acquisition III.</p>		
<b>F. Performance Metrics</b> <p>Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Air Force												Date: February 2018			
Appropriation/Budget Activity 3600 / 5						R-1 Program Element (Number/Name) PE 0605229F / Combat Rescue Helicopter				Project (Number/Name) 654364 / Combat Rescue Helicopter					
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
CRH aircraft development, integration, test articles, trainers, support and contractor test	C/FPIF	Sikorsky Aircraft Corporation : Stratford, CT	590.129	251.367	Aug 2017	333.739	Dec 2017	420.425	Dec 2018	-		420.425	283.242	1,878.902	1,878.902
Acquisition of additional CRH training devices	C/FFP	TBD : TBD	-	-		3.600	Aug 2018	10.800	Aug 2018	-		10.800	3.600	18.000	18.000
Subtotal			590.129	251.367		337.339		431.225		-		431.225	286.842	1,896.902	N/A
Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
CRH product support related to the aircraft development, integration, test articles, trainers, and contractor test.	Various	Various : TBD	4.673	0.273	Jun 2017	0.745	Jun 2018	0.569	Jun 2019	-		0.569	0.689	6.949	6.949
Subtotal			4.673	0.273		0.745		0.569		-		0.569	0.689	6.949	N/A
Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
CRH planning and testing to support developmental and operational test, live fire test and other weapon system testing and support	PO	413th Test Squadron : Eglin AFB, FL	5.892	5.469	Jan 2017	9.000	Dec 2017	17.900	Dec 2018	-		17.900	16.200	54.461	54.461
Subtotal			5.892	5.469		9.000		17.900		-		17.900	16.200	54.461	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Air Force												Date: February 2018			
Appropriation/Budget Activity 3600 / 5						R-1 Program Element (Number/Name) PE 0605229F / Combat Rescue Helicopter				Project (Number/Name) 654364 / Combat Rescue Helicopter					
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
CRH A&AS Support	C/CPFF	EPASS : Dayton, OH	18.381	5.291	Mar 2017	5.396	Mar 2018	5.558	Mar 2019	-		5.558	4.881	39.507	39.507
CRH Other PMA	Various	Various : Various	3.800	0.927	Dec 2016	2.005	Dec 2017	2.400	Dec 2018	-		2.400	4.513	13.645	13.645
Subtotal			22.181	6.218		7.401		7.958		-		7.958	9.394	53.152	N/A
			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			622.875	263.327		354.485		457.652		-		457.652	313.125	2,011.464	N/A
Remarks															
FINANCIAL PERFORMANCE: CRH is evaluated against traditional Research and Development (R&D) program expenditure benchmarks. Unlike many traditional R&D programs, however, the CRH EMD contract is a FPIF contract with progress payments. Twenty percent of incurred costs are withheld until the end of the contract, when they are liquidated. Mandatory funding obligations, progress payment restrictions and DFAS withholds will cause the program to lag traditional expenditure benchmarks, painting an inaccurate portrait of overall program health.															

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2019 Air Force	<b>Date:</b> February 2018
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<b>Appropriation/Budget Activity</b> 3600 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605229F / <i>Combat Rescue Helicopter</i>	<b>Project (Number/Name)</b> 654364 / <i>Combat Rescue Helicopter</i>
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	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	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
<b><i>Combat Rescue Helicopter EMD Schedule</i></b>																												
CRH EMD Development																												
Air Vehicle Critical Design Review																												
CRH Training System EMD Development																												
Training Systems Critical Design Review																												
CRH Test and Evaluation																												
Developmental Test and Evaluation																												
Milestone C																												
Required Assets Available for Initial Operational Capability																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2019 Air Force			<b>Date:</b> February 2018
<b>Appropriation/Budget Activity</b> 3600 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605229F / <i>Combat Rescue Helicopter</i>	<b>Project (Number/Name)</b> 654364 / <i>Combat Rescue Helicopter</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>Combat Rescue Helicopter EMD Schedule</i></b>				
CRH EMD Development	1	2017	4	2020
Air Vehicle Critical Design Review	3	2017	3	2017
CRH Training System EMD Development	1	2017	4	2020
Training Systems Critical Design Review	4	2017	4	2017
CRH Test and Evaluation	1	2017	4	2020
Developmental Test and Evaluation	4	2018	1	2020
Milestone C	3	2019	3	2019
Required Assets Available for Initial Operational Capability	2	2020	2	2020