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**Department of Defense
Fiscal Year (FY) 2019 Budget Estimates**

February 2018



Army

*Justification Book of
Aircraft Procurement, Army*

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Army • Budget Estimates FY 2019 • Procurement

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AIRCRAFT PROCUREMENT, ARMY

Appropriation Language

For construction, procurement, and modification of aircraft and equipment, including armor and armament, specialized ground handling equipment, and training devices, spare parts, and accessories therefore; specialized equipment; expansion of public and private plants, Government-owned equipment and installation thereof in such plants, erection of structures, and acquisition of land, for the foregoing purposes, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to approval of title; reserve plant and Government and contractor-owned equipment layaway; and other expenses necessary for the foregoing purposes including rents and transportation of things, \$3,782,558 Base and \$363,363 OCO to remain available for obligations until September 30, 2021.

COST STATEMENT

The following Justification Books were prepared at a cost of \$226,413: 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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 Total Obligational Authority
 (Dollars in Thousands)

18 Jan 2018

Appropriation	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO
Aircraft Procurement, Army	5,340,153	4,522,085	4,522,085	629,955
Total Department of the Army	5,340,153	4,522,085	4,522,085	629,955

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<u>Appropriation</u>	FY 2018 Total PB Requests+ with CR Adj OCO	FY 2018 Emergency Requests** Emergency	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency
Aircraft Procurement, Army	629,955			
Total Department of the Army	629,955			

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<u>Appropriation</u>	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Aircraft Procurement, Army	5,152,040		5,152,040
Total Department of the Army	5,152,040		5,152,040

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18 Jan 2018

<u>Appropriation</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Aircraft Procurement, Army	3,782,558	363,363	4,145,921
Total Department of the Army	3,782,558	363,363	4,145,921

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Department of the Army
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18 Jan 2018

Appropriation: Aircraft Procurement, Army.

Budget Activity	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO
01. Aircraft	3,899,692	2,878,105	2,878,105	126,340
02. Modification of Aircraft	995,632	973,224	973,224	115,164
04. Support Equipment and Facilities	444,829	298,565	298,565	183,182
20. Undistributed		372,191	372,191	205,269
Total Aircraft Procurement, Army	5,340,153	4,522,085	4,522,085	629,955

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Appropriation: Aircraft Procurement, Army

Budget Activity	FY 2018 Total PB Requests+ with CR Adj OCO	FY 2018 Emergency Requests** Emergency	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency
01. Aircraft	126,340			
02. Modification of Aircraft	115,164			
04. Support Equipment and Facilities	183,182			
20. Undistributed	205,269			
Total Aircraft Procurement, Army	629,955			

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Appropriation: Aircraft Procurement, Army

Budget Activity	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
01. Aircraft	3,004,445		3,004,445
02. Modification of Aircraft	1,088,388		1,088,388
04. Support Equipment and Facilities	481,747		481,747
20. Undistributed	577,460		577,460
Total Aircraft Procurement, Army	5,152,040		5,152,040

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Appropriation: Aircraft Procurement, Army

Budget Activity	FY 2019 Base	FY 2019 OCO	FY 2019 Total
01. Aircraft	2,726,182	106,246	2,832,428
02. Modification of Aircraft	810,998	148,670	959,668
04. Support Equipment and Facilities	245,378	108,447	353,825
20. Undistributed			
Total Aircraft Procurement, Army	3,782,558	363,363	4,145,921

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Appropriation: 2031A Aircraft Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2017 (Base + OCO)		FY 2018 PB Request with CR Adj Base		FY 2018 Total PB Requests* with CR Adj Base		FY 2018 PB Request with CR Adj OCO		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 01: Aircraft											
Fixed Wing											
1	Saturn Arch (MIP)	A		23,000							U
2	Utility F/W Aircraft		3	41,342	4	75,115	4	75,115			U
3	MQ-1 UAV	A		403,588	2	30,206	2	30,206	9	87,300	U
4	RQ-11 (RAVEN)	A									U
Rotary											
5	Spectrum Army Video	A		1,822							U
6	Helicopter, Light Utility (LUH)	A	23	187,000	13	108,383	13	108,383			U
7	AH-64 Apache Block IIIA Reman Less: Advance Procurement (PY)	A	52	(1,062,042) (-209,930)	48	(911,136) (-185,160)	48	(911,136) (-185,160)	4	(39,040)	U
				852,112		725,976		725,976		39,040	
8	AH-64 Apache Block IIIA Reman Advance Procurement (CY)			185,160		170,910		170,910			U
	C (FY 2017 for FY 2018) (M)			(185,160)							
	C (FY 2018 for FY 2019) (M)					(170,910)		(170,910)			
	C (FY 2019 for FY 2020) (M)										

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Appropriation: 2031A Aircraft Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2018 Total PB Requests+ with CR Adj OCO		FY 2018 Emergency Requests**		FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs		FY 2018 Remaining Req Emergency		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 01: Aircraft											
Fixed Wing											
1	Saturn Arch (MIP)	A									U
2	Utility F/W Aircraft										U
3	MQ-1 UAV	A	9	87,300							U
4	RQ-11 (RAVEN)	A									U
Rotary											
5	Spectrum Army Video	A									U
6	Helicopter, Light Utility (LUH)	A									U
7	AH-64 Apache Block IIIA Reman Less: Advance Procurement (PY)	A	4	(39,040)							U
				39,040							
8	AH-64 Apache Block IIIA Reman Advance Procurement (CY)										U
	C (FY 2017 for FY 2018) (M)										
	C (FY 2018 for FY 2019) (M)										
	C (FY 2019 for FY 2020) (M)										

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Appropriation: 2031A Aircraft Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2018 Total		FY 2018 Less Enacted		FY 2018 Remaining Req		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 01: Aircraft									
Fixed Wing									
1	Saturn Arch (MIP)	A							U
2	Utility F/W Aircraft		4	75,115			4	75,115	U
3	MQ-1 UAV	A	11	117,506			11	117,506	U
4	RQ-11 (RAVEN)	A							U
Rotary									
5	Spectrum Army Video	A							U
6	Helicopter, Light Utility (LUH)	A	13	108,383			13	108,383	U
7	AH-64 Apache Block IIIA Reman Less: Advance Procurement (PY)	A	52	(950,176) (-185,160)			52	(950,176) (-185,160)	U
				765,016				765,016	
8	AH-64 Apache Block IIIA Reman Advance Procurement (CY)			170,910				170,910	U
	C (FY 2017 for FY 2018) (M)								
	C (FY 2018 for FY 2019) (M)			(170,910)				(170,910)	
	C (FY 2019 for FY 2020) (M)								

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Line No	Item Nomenclature	Ident Code	FY 2019 Base		FY 2019 OCO		FY 2019 Total		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 01: Aircraft									
Fixed Wing									
1	Saturn Arch (MIP)	A							U
2	Utility F/W Aircraft			744				744	U
3	MQ-1 UAV	A		43,326	6	60,000	6	103,326	U
4	RQ-11 (RAVEN)	A	200	46,416			200	46,416	U
Rotary									
5	Spectrum Army Video	A							U
6	Helicopter, Light Utility (LUH)	A							U
7	AH-64 Apache Block IIIA Reman Less: Advance Procurement (PY)	A	48	(924,158) (-170,910)			48	(924,158) (-170,910)	U U
				753,248				753,248	
8	AH-64 Apache Block IIIA Reman Advance Procurement (CY)			174,550				174,550	U
	C (FY 2017 for FY 2018) (M)								
	C (FY 2018 for FY 2019) (M)								
	C (FY 2019 for FY 2020) (M)			(174,550)				(174,550)	

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Line No	Item Nomenclature	Ident Code	FY 2017 (Base + OCO)		FY 2018 PB Request with CR Adj Base		FY 2018 Total PB Requests* with CR Adj Base		FY 2018 PB Request with CR Adj OCO		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
9	AH-64 Apache Block IIIB New Build Less: Advance Procurement (PY)	A	8	(261,900)	13	(374,100)	13	(374,100)			U U
				<u>261,900</u>		<u>374,100</u>		<u>374,100</u>			
10	AH-64 Apache Block IIIB New Build Advance Procurement (CY)			71,800		71,900		71,900			U
	C (FY 2017 for FY 2018) (M)			(71,800)							
	C (FY 2018 for FY 2019) (M)					(71,900)		(71,900)			
	C (FY 2019 for FY 2020) (M)										
11	UH-60 Blackhawk M Model (MYP) Less: Advance Procurement (PY)		61	(1,212,125)	48	(1,110,155)	48	(1,110,155)			U U
				<u>(-127,079)</u>		<u>(-171,847)</u>		<u>(-171,847)</u>			
				1,085,046		938,308		938,308			
12	UH-60 Blackhawk M Model (MYP) Advance Procurement (CY)			174,107		86,295		86,295			U
	C (FY 2017 for FY 2018) (M)			(172,486)							
	C (FY 2017 for FY 2019) (M)			(1,153)							
	C (FY 2017 for FY 2020) (M)			(321)							
	C (FY 2017 for FY 2021) (M)			(147)							
	C (FY 2018 for FY 2019) (M)					(79,434)		(79,434)			
	C (FY 2018 for FY 2020) (M)					(5,092)		(5,092)			
	C (FY 2018 for FY 2021) (M)					(1,769)		(1,769)			
	C (FY 2019 for FY 2020) (M)										
13	UH-60 Black Hawk A and L Models	A	27	46,173	36	76,516	36	76,516			U

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Line No	Item Nomenclature	Ident Code	FY 2018 Total PB Requests+ with CR Adj OCO		FY 2018 Emergency Requests**		FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs		FY 2018 Remaining Req Emergency		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
9	AH-64 Apache Block IIIB New Build Less: Advance Procurement (PY)	A									U U
10	AH-64 Apache Block IIIB New Build Advance Procurement (CY) C (FY 2017 for FY 2018) (M) C (FY 2018 for FY 2019) (M) C (FY 2019 for FY 2020) (M)										U
11	UH-60 Blackhawk M Model (MYP) Less: Advance Procurement (PY)										U U
12	UH-60 Blackhawk M Model (MYP) Advance Procurement (CY) C (FY 2017 for FY 2018) (M) C (FY 2017 for FY 2019) (M) C (FY 2017 for FY 2020) (M) C (FY 2017 for FY 2021) (M) C (FY 2018 for FY 2019) (M) C (FY 2018 for FY 2020) (M) C (FY 2018 for FY 2021) (M) C (FY 2019 for FY 2020) (M)										U
13	UH-60 Black Hawk A and L Models	A									U

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Line No	Item Nomenclature	Ident Code	FY 2018 Total		FY 2018 Less Enacted		FY 2018 Remaining Req		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
9	AH-64 Apache Block IIIB New Build Less: Advance Procurement (PY)	A	13	(374,100)			13	(374,100)	U U
				374,100				374,100	
10	AH-64 Apache Block IIIB New Build Advance Procurement (CY)			71,900				71,900	U
	C (FY 2017 for FY 2018) (M)								
	C (FY 2018 for FY 2019) (M)			(71,900)				(71,900)	
	C (FY 2019 for FY 2020) (M)								
11	UH-60 Blackhawk M Model (MYP) Less: Advance Procurement (PY)		48	(1,110,155) (-171,847)			48	(1,110,155) (-171,847)	U U
				938,308				938,308	
12	UH-60 Blackhawk M Model (MYP) Advance Procurement (CY)			86,295				86,295	U
	C (FY 2017 for FY 2018) (M)								
	C (FY 2017 for FY 2019) (M)								
	C (FY 2017 for FY 2020) (M)								
	C (FY 2017 for FY 2021) (M)								
	C (FY 2018 for FY 2019) (M)			(79,434)				(79,434)	
	C (FY 2018 for FY 2020) (M)			(5,092)				(5,092)	
	C (FY 2018 for FY 2021) (M)			(1,769)				(1,769)	
	C (FY 2019 for FY 2020) (M)								
13	UH-60 Black Hawk A and L Models	A	36	76,516			36	76,516	U

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Line No	Item Nomenclature	Ident Code	FY 2019 Base		FY 2019 OCO		FY 2019 Total		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
9	AH-64 Apache Block IIIB New Build Less: Advance Procurement (PY)	A	12	(356,587) (-71,900)			12	(356,587) (-71,900)	U U
				284,687				284,687	
10	AH-64 Apache Block IIIB New Build Advance Procurement (CY) C (FY 2017 for FY 2018) (M) C (FY 2018 for FY 2019) (M) C (FY 2019 for FY 2020) (M)			58,600 (58,600)				58,600 (58,600)	U U
11	UH-60 Blackhawk M Model (MYP) Less: Advance Procurement (PY)		49	(1,069,397) (-80,587)	1	(21,246)	50	(1,090,643) (-80,587)	U U
				988,810		21,246		1,010,056	
12	UH-60 Blackhawk M Model (MYP) Advance Procurement (CY) C (FY 2017 for FY 2018) (M) C (FY 2017 for FY 2019) (M) C (FY 2017 for FY 2020) (M) C (FY 2017 for FY 2021) (M) C (FY 2018 for FY 2019) (M) C (FY 2018 for FY 2020) (M) C (FY 2018 for FY 2021) (M) C (FY 2019 for FY 2020) (M)			106,150 (106,150)				106,150 (106,150)	U U
13	UH-60 Black Hawk A and L Models	A	18	146,138			18	146,138	U

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Appropriation: 2031A Aircraft Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2017 (Base + OCO)		FY 2018 PB Request with CR Adj Base		FY 2018 Total PB Requests* with CR Adj Base		FY 2018 PB Request with CR Adj OCO		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
14	CH-47 Helicopter	A	22	(652,601)	6	(211,283)	6	(211,283)			U
	Less: Advance Procurement (PY)			(-99,344)		(-8,707)		(-8,707)			U
				553,257		202,576		202,576			
15	CH-47 Helicopter										
	Advance Procurement (CY)			8,707		17,820		17,820			U
	C (FY 2017 for FY 2018) (M)			(8,707)							
	C (FY 2018 for FY 2019) (M)					(17,820)		(17,820)			
	C (FY 2019 for FY 2020) (M)										
16	Spectrum Army SUAS	A		4,678							U
Total Aircraft				3,899,692		2,878,105		2,878,105		126,340	
Budget Activity 02: Modification of Aircraft											
Modification of Aircraft											
17	MQ-1 Payload (MIP)	A		111,535		5,910		5,910		41,400	U
18	Universal Ground Control Equipment (UAS)	A				15,000		15,000			U
19	Gray Eagle Mods2	A				74,291		74,291			U
20	Multi Sensor ABN Recon (MIP)			115,927		68,812		68,812		33,475	U
21	AH-64 Mods	A		187,883		238,141		238,141			U
22	CH-47 Cargo Helicopter Mods (MYP)			102,943		20,166		20,166			U
23	GRCS SEMA Mods (MIP)	A		4,055		5,514		5,514			U
24	ARL SEMA Mods (MIP)	A		6,793		11,650		11,650			U
25	EMARSS SEMA Mods (MIP)	A		77,997		15,279		15,279		36,000	U

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Line No	Item Nomenclature	Ident Code	FY 2018 Total PB Requests+ with CR Adj OCO		FY 2018 Emergency Requests**		FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs		FY 2018 Remaining Req Emergency		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
14	CH-47 Helicopter Less: Advance Procurement (PY)	A									U U
15	CH-47 Helicopter Advance Procurement (CY) C (FY 2017 for FY 2018) (M) C (FY 2018 for FY 2019) (M) C (FY 2019 for FY 2020) (M)										U
16	Spectrum Army SUAS	A									U
Total Aircraft				126,340							
Budget Activity 02: Modification of Aircraft											
Modification of Aircraft											
17	MQ-1 Payload (MIP)	A		41,400							U
18	Universal Ground Control Equipment (UAS)	A									U
19	Gray Eagle Mods2	A									U
20	Multi Sensor ABN Recon (MIP)			33,475							U
21	AH-64 Mods	A									U
22	CH-47 Cargo Helicopter Mods (MYP)										U
23	GRCS SEMA Mods (MIP)	A									U
24	ARL SEMA Mods (MIP)	A									U
25	EMARSS SEMA Mods (MIP)	A		36,000							U

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Appropriation: 2031A Aircraft Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**		FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs		FY 2018 Remaining Req with CR Adj Base + OCO + Emergency		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
14	CH-47 Helicopter	A	6	(211,283)			6	(211,283)	U
	Less: Advance Procurement (PY)			(-8,707)				(-8,707)	U
				202,576				202,576	
15	CH-47 Helicopter Advance Procurement (CY)			17,820				17,820	U
	C (FY 2017 for FY 2018) (M)								
	C (FY 2018 for FY 2019) (M)			(17,820)				(17,820)	
	C (FY 2019 for FY 2020) (M)								
16	Spectrum Army SUAS	A							U
Total Aircraft				3,004,445				3,004,445	
Budget Activity 02: Modification of Aircraft									
Modification of Aircraft									
17	MQ-1 Payload (MIP)	A		47,310				47,310	U
18	Universal Ground Control Equipment (UAS)	A		15,000				15,000	U
19	Gray Eagle Mods2	A		74,291				74,291	U
20	Multi Sensor ABN Recon (MIP)			102,287				102,287	U
21	AH-64 Mods	A		238,141				238,141	U
22	CH-47 Cargo Helicopter Mods (MYP)			20,166				20,166	U
23	GRCS SEMA Mods (MIP)	A		5,514				5,514	U
24	ARL SEMA Mods (MIP)	A		11,650				11,650	U
25	EMARSS SEMA Mods (MIP)	A		51,279				51,279	U

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Appropriation: 2031A Aircraft Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2019 Base		FY 2019 OCO		FY 2019 Total		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
14	CH-47 Helicopter	A	6	(117,098)	2	(25,000)	8	(142,098)	U
	Less: Advance Procurement (PY)			(-17,820)				(-17,820)	U
				99,278		25,000		124,278	
15	CH-47 Helicopter								
	Advance Procurement (CY)			24,235				24,235	U
	C (FY 2017 for FY 2018) (M)								
	C (FY 2018 for FY 2019) (M)								
	C (FY 2019 for FY 2020) (M)			(24,235)				(24,235)	
16	Spectrum Army SUAS	A							U
Total Aircraft				2,726,182		106,246		2,832,428	
Budget Activity 02: Modification of Aircraft									
Modification of Aircraft									
17	MQ-1 Payload (MIP)	A				11,400		11,400	U
18	Universal Ground Control Equipment (UAS)	A		27,114				27,114	U
19	Gray Eagle Mods2	A		97,781		32,000		129,781	U
20	Multi Sensor ABN Recon (MIP)			52,274		51,000		103,274	U
21	AH-64 Mods	A		104,996				104,996	U
22	CH-47 Cargo Helicopter Mods (MYP)			7,807				7,807	U
23	GRCS SEMA Mods (MIP)	A		5,573				5,573	U
24	ARL SEMA Mods (MIP)	A		7,522				7,522	U
25	EMARSS SEMA Mods (MIP)	A		20,448				20,448	U

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 (Dollars in Thousands)

18 Jan 2018

Appropriation: 2031A Aircraft Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2017 (Base + OCO)		FY 2018 PB Request with CR Adj Base		FY 2018 Total PB Requests* with CR Adj Base		FY 2018 PB Request with CR Adj OCO		S e c -
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
26	Utility/Cargo Airplane Mods			17,526		57,737		57,737			U
27	Utility Helicopter Mods			10,807		5,900		5,900			U
28	Network and Mission Plan	A		74,752		142,102		142,102			U
29	Comms, Nav Surveillance	A		76,960		166,050		166,050		4,289	U
30	Degraded Visual Environment	A									U
31	GATM Rollup	A		45,302		37,403		37,403			U
32	RQ-7 UAV MODS	A		135,408		83,160		83,160			U
33	UAS MODS	A		27,744		26,109		26,109			U
Total Modification of Aircraft				995,632		973,224		973,224		115,164	
Budget Activity 04: Support Equipment and Facilities											
Ground Support Avionics											
34	Aircraft Survivability Equipment			89,377		70,913		70,913			U
35	Survivability CM			9,565		5,884		5,884			U
36	CMWS	A		97,741		26,825		26,825		139,742	U
37	Common Infrared Countermeasures (CIRCM)	A		108,721		6,337		6,337		43,440	U
Other Support											
38	Avionics Support Equipment			6,217		7,038		7,038			U
39	Common Ground Equipment			48,234		47,404		47,404			U
40	Aircrew Integrated Systems			30,297		47,066		47,066			U

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 (Dollars in Thousands)

18 Jan 2018

Appropriation: 2031A Aircraft Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2018 Total PB Requests+ with CR Adj OCO		FY 2018 Emergency Requests**		FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs		FY 2018 Remaining Req Emergency		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
26	Utility/Cargo Airplane Mods										U
27	Utility Helicopter Mods										U
28	Network and Mission Plan	A									U
29	Comms, Nav Surveillance	A		4,289							U
30	Degraded Visual Environment	A									U
31	GATM Rollup	A									U
32	RQ-7 UAV MODS	A									U
33	UAS MODS	A									U
Total Modification of Aircraft				115,164							
Budget Activity 04: Support Equipment and Facilities											
Ground Support Avionics											
34	Aircraft Survivability Equipment										U
35	Survivability CM										U
36	CMWS	A		139,742							U
37	Common Infrared Countermeasures (CIRCM)	A		43,440							U
Other Support											
38	Avionics Support Equipment										U
39	Common Ground Equipment										U
40	Aircrew Integrated Systems										U

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Department of the Army
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 (Dollars in Thousands)

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Appropriation: 2031A Aircraft Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**		FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs		FY 2018 Remaining Req with CR Adj Base + OCO + Emergency		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
26	Utility/Cargo Airplane Mods			57,737			57,737		U
27	Utility Helicopter Mods			5,900			5,900		U
28	Network and Mission Plan	A		142,102			142,102		U
29	Comms, Nav Surveillance	A		170,339			170,339		U
30	Degraded Visual Environment	A							U
31	GATM Rollup	A		37,403			37,403		U
32	RQ-7 UAV MODS	A		83,160			83,160		U
33	UAS MODS	A		26,109			26,109		U
Total Modification of Aircraft				1,088,388			1,088,388		
Budget Activity 04: Support Equipment and Facilities									
Ground Support Avionics									
34	Aircraft Survivability Equipment			70,913			70,913		U
35	Survivability CM			5,884			5,884		U
36	CMWS	A		166,567			166,567		U
37	Common Infrared Countermeasures (CIRCM)	A		49,777			49,777		U
Other Support									
38	Avionics Support Equipment			7,038			7,038		U
39	Common Ground Equipment			47,404			47,404		U
40	Aircrew Integrated Systems			47,066			47,066		U

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Appropriation: 2031A Aircraft Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2019 Base		FY 2019 OCO		FY 2019 Total		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
26	Utility/Cargo Airplane Mods			17,719				17,719	U
27	Utility Helicopter Mods			6,443				6,443	U
28	Network and Mission Plan	A		123,614				123,614	U
29	Comms, Nav Surveillance	A		161,969				161,969	U
30	Degraded Visual Environment	A		30,000				30,000	U
31	GATM Rollup	A		26,848				26,848	U
32	RQ-7 UAV MODS	A		103,246		50,868		154,114	U
33	UAS MODS	A		17,644		3,402		21,046	U
Total Modification of Aircraft				810,998		148,670		959,668	
<u>Budget Activity 04: Support Equipment and Facilities</u>									
Ground Support Avionics									
34	Aircraft Survivability Equipment			57,170				57,170	U
35	Survivability CM			5,853				5,853	U
36	CMWS	A		13,496		84,387		97,883	U
37	Common Infrared Countermeasures (CIRCM)	A		36,839		24,060		60,899	U
Other Support									
38	Avionics Support Equipment			1,778				1,778	U
39	Common Ground Equipment			34,818				34,818	U
40	Aircrew Integrated Systems			27,243				27,243	U

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Appropriation: 2031A Aircraft Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2017 (Base + OCO)		FY 2018 PB Request with CR Adj Base		FY 2018 Total PB Requests* with CR Adj Base		FY 2018 PB Request with CR Adj OCO		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
41	Air Traffic Control			50,405		83,790		83,790			U
42	Industrial Facilities			1,217		1,397		1,397			U
43	Launcher, 2.75 Rocket			3,055		1,911		1,911			U
44	Launcher Guided Missile: Longbow Hellfire XM2	A									U
Total Support Equipment and Facilities				444,829		298,565		298,565		183,182	
Budget Activity 20: Undistributed											
Undistributed											
45	Adj to Match Continuing Resolution	A				372,191		372,191		205,269	U
Total Undistributed						372,191		372,191		205,269	
Total Aircraft Procurement, Army				5,340,153		4,522,085		4,522,085		629,955	

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Appropriation: 2031A Aircraft Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2018 Total PB Requests+ with CR Adj OCO		FY 2018 Emergency Requests**		FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs		FY 2018 Remaining Req Emergency		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
41	Air Traffic Control										U
42	Industrial Facilities										U
43	Launcher, 2.75 Rocket										U
44	Launcher Guided Missile: Longbow Hellfire XM2	A									U
Total Support Equipment and Facilities				183,182							
Budget Activity 20: Undistributed											
Undistributed											
45	Adj to Match Continuing Resolution	A		205,269							U
Total Undistributed				205,269							
Total Aircraft Procurement, Army				629,955							

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Appropriation: 2031A Aircraft Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2018 Total		FY 2018 Less Enacted		FY 2018 Remaining Req		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
41	Air Traffic Control			83,790				83,790	U
42	Industrial Facilities			1,397				1,397	U
43	Launcher, 2.75 Rocket			1,911				1,911	U
44	Launcher Guided Missile: Longbow Hellfire XM2	A							U
Total Support Equipment and Facilities				481,747				481,747	
Budget Activity 20: Undistributed									
Undistributed									
45	Adj to Match Continuing Resolution	A		577,460				577,460	U
Total Undistributed				577,460				577,460	
Total Aircraft Procurement, Army				5,152,040				5,152,040	

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Appropriation: 2031A Aircraft Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2019 Base		FY 2019 OCO		FY 2019 Total		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
41	Air Traffic Control			63,872				63,872	U
42	Industrial Facilities			1,417				1,417	U
43	Launcher, 2.75 Rocket			1,901				1,901	U
44	Launcher Guided Missile: Longbow Hellfire XM2	A		991				991	U
Total Support Equipment and Facilities				245,378		108,447		353,825	
Budget Activity 20: Undistributed									
Undistributed									
45	Adj to Match Continuing Resolution	A							U
Total Undistributed									
Total Aircraft Procurement, Army				3,782,558		363,363		4,145,921	

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2	01	10	9440A11300	Utility F/W Aircraft.....	2
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5	01	20	3167A09999	Spectrum Army Video.....	24
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11	01	20	6771AA0005	UH-60 Blackhawk M Model (MYP).....	54
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19	02	10	0756AA6601	Gray Eagle Mods2.....	108
20	02	10	1036AZ2001	Multi Sensor ABN Recon (MIP).....	116
21	02	10	2706AA6605	AH-64 MODS.....	128
22	02	10	3264AA0252	CH-47 Cargo Helicopter Mods (MYP).....	141
23	02	10	3403A02111	GRCS SEMA Mods (MIP).....	159
24	02	10	3404A02110	ARL SEMA Mods (MIP).....	164
25	02	10	3405A02112	EMARSS SEMA Mods (MIP).....	170
26	02	10	4194AA0270	Utility/Cargo Airplane Mods.....	176
27	02	10	6949AA0480	Utility Helicopter Mods.....	181
28	02	10	8658AA0712	Network And Mission Plan.....	196
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30	02	10	8859AA0711	GATM Rollup.....	229
31	02	10	8660A00713	Degraded Visual Environment.....	244
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36	04	10	5397AZ3517	CMWS.....	291
37	04	10	5399AZ3537	Common Infrared Countermeasures (CIRCM).....	303
38	04	30	0832AZ3000	Avionics Support Equipment.....	313
39	04	30	5212AZ3100	Common Ground Equipment.....	314
40	04	30	6380AZ3110	Aircrew Integrated Systems.....	318
41	04	30	6818AA0050	Air Traffic Control.....	327
42	04	30	8132AZ3300	Industrial Facilities.....	332
43	04	30	9154A50100	Launcher, 2.75 Rocket.....	333
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AH-64 Apache Block IIIB New Build	5840A05133	9	01	20.....	39
AH-64 Apache Block IIIB New Build, Advance Procurement	5840A05133	10	01	20.....	50
AH-64 MODS	2706AA6605	21	02	10.....	128
ARL SEMA Mods (MIP)	3404A02110	24	02	10.....	164
Air Traffic Control	6818AA0050	41	04	30.....	327
Aircraft Survivability Equipment	3632AZ3504	34	04	10.....	270
Aircrew Integrated Systems	6380AZ3110	40	04	30.....	318
Avionics Support Equipment	0832AZ3000	38	04	30.....	313
CH-47 Cargo Helicopter Mods (MYP)	3264AA0252	22	02	10.....	141
CH-47 Helicopter	6775A05101	14	01	20.....	73
CH-47 Helicopter, Advance Procurement	6775A05101	15	01	20.....	85
CMWS	5397AZ3517	36	04	10.....	291
Common Ground Equipment	5212AZ3100	39	04	30.....	314
Common Infrared Countermeasures (CIRCM)	5399AZ3537	37	04	10.....	303
Comms, Nav Surveillance	8659AA0723	29	02	10.....	208

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Line Item Title	Line Item Number	Line #	BA	BSA	Page
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EMARSS SEMA Mods (MIP)	3405A02112	25	02	10.....	170
GATM Rollup	8859AA0711	30	02	10.....	229
GRCS SEMA Mods (MIP)	3403A02111	23	02	10.....	159
Gray Eagle Mods2	0756AA6601	19	02	10.....	108
Helicopter, Light Utility (LUH)	4742A05001	6	01	20.....	25
Industrial Facilities	8132AZ3300	42	04	30.....	332
Launcher Guided Missile: Longbow Hellfire XM299	9157J01200	44	04	30.....	335
Launcher, 2.75 Rocket	9154A50100	43	04	30.....	333
MQ-1 Payload (MIP)	0023A01001	17	02	10.....	90
MQ-1 UAV	9670A00005	3	01	10.....	3
Multi Sensor ABN Recon (MIP)	1036AZ2001	20	02	10.....	116
Network And Mission Plan	8658AA0712	28	02	10.....	196
RQ-11 (RAVEN)	9675A00010	4	01	10.....	17
RQ-7 UAV MODS	9555A00018	32	02	10.....	249
SATURN ARCH (MIP)	1301A11301	1	01	10.....	1
Spectrum Army SUAS	9990A19900	16	01	20.....	89
Spectrum Army Video	3167A09999	5	01	20.....	24
Survivability CM	5044AZ3507	35	04	10.....	286
UAS MODS	9556A01002	33	02	10.....	265

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Line Item Title	Line Item Number	Line #	BA	BSA	Page
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UH-60 Blackhawk M Model (MYP)	6771AA0005	11	01	20.....	54
UH-60 Blackhawk M Model (MYP), Advance Procurement	6771AA0005	12	01	20.....	63
Universal Ground Control Equipment (UAS)	0028A02706	18	02	10.....	105
Utility F/W Aircraft	9440A11300	2	01	10.....	2
Utility Helicopter Mods	6949AA0480	27	02	10.....	181
Utility/Cargo Airplane Mods	4194AA0270	26	02	10.....	176

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 10: Fixed Wing **P-1 Line Item Number / Title:** 1301A11301 / SATURN ARCH (MIP)

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	129.699	23.000	-	-	-	-	-	-	-	-	-	152.699
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	129.699	23.000	-	-	-	-	-	-	-	-	-	152.699
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	129.699	23.000	-	-	-	-	-	-	-	-	-	152.699

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Saturn Arch aircraft are Airborne Intelligence, Surveillance and Reconnaissance (AISR) aircraft that support a suite of imaging sensors designed to provide persistent surveillance to accomplish day and night image collection and exploitation of Improvised Explosive Devices (IEDs) in designated Named Areas of Interest (NAIs).

The Saturn Arch systems are under the control of operational commanders within USCENTCOM.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	23.000	-	-	-	-	-	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	23.000	-	-	-	-	-	-	-	-

Justification:

FY 17 OCO procurement dollars of \$23.000 million supports the procurement of one (1) De Havilland -8 315 series commercial aircraft, Mission Equipment Package (MEP) and the MEP to aircraft integration in support of JUONS CC-0541.
All COMPO 1 Active

"In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities."

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 10: Fixed Wing **P-1 Line Item Number / Title:** 9440A11300 / Utility F/W Aircraft

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	34	3	4	-	-	-	2	2	2	1	-	48
Gross/Weapon System Cost (<i>\$ in Millions</i>)	310.855	41.342	75.115	0.744	-	0.744	34.269	42.431	41.731	31.257	-	577.744
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	310.855	41.342	75.115	0.744	-	0.744	34.269	42.431	41.731	31.257	-	577.744
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	310.855	41.342	75.115	0.744	-	0.744	34.269	42.431	41.731	31.257	-	577.744

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The budget line funds the acquisition of Army fixed wing aircraft to include the procurement of fixed wing aircraft to support Transport and Operational Support Airlift (OSA) requirements, training, and other fixed wing support aircraft. Fixed Wing Aircraft will be capable of self-deploying over extended ranges; provide CONUS/OCONUS time sensitive movement of key personnel and equipment; support to homeland defense/security operations; support to civil and military authorities. This budget line also provides for the acquisition of new commercial-off-the-shelf (COTS), modified COTS, and non-developmental fixed wing aircraft systems including used aircraft systems.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	3	3	0	-	0	2	2	2	1
	Total Obligation Authority	41.342	56.336	0.744	-	0.744	34.269	42.431	41.731	31.257
ANG	Quantity	-	1	-	-	-	-	-	-	-
	Total Obligation Authority	-	18.779	-	-	-	-	-	-	-
Total:	Quantity	3	4	-	-	-	2	2	2	1
Secondary Distribution	Total Obligation Authority	41.342	75.115	0.744	-	0.744	34.269	42.431	41.731	31.257

Justification:

FY 2019 Base procurement dollars in the amount of \$.744 million will support the PM cost for Fixed Wing Aircraft such as associated civil and military modifications, Engineering Change Proposals (ECP), and spares procurement.

Army Acquisition Objective is 92.

In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 10: Fixed Wing **P-1 Line Item Number / Title:** 9670A00005 / MQ-1 UAV

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0305204A, 0305219A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	38	26	11	4	6	10	-	-	-	-	-	85
Gross/Weapon System Cost (<i>\$ in Millions</i>)	2,876.057	403.588	117.506	43.326	60.000	103.326	-	-	-	-	-	3,500.477
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	2,876.057	403.588	117.506	43.326	60.000	103.326	-	-	-	-	-	3,500.477
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	2,876.057	403.588	117.506	43.326	60.000	103.326	-	-	-	-	-	3,500.477

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	75,685.711	15,522.615	10,682.364	10,831.500	10,000.000	10,332.600	-	-	-	-	-	41,182.082

Description:

The MQ-1C Gray Eagle provides reconnaissance, surveillance, intelligence, security, attack, and command and control missions providing dedicated mission configured Unmanned Aircraft System (UAS) support to assigned and other Army/Joint Force units based upon commander's priorities. The MQ-1C Gray Eagle is a dedicated, multi-mission UAS fielded to the 10 Army Combat Aviation Brigades (CAB), two (2) Army Intelligence and Security Command (INSCOM) units, two (2) Army Special Operations Forces (ARSOF) unit, and one (1) company at the National Training Center (NTC).

The MQ-1C Gray Eagle system consists of 12 Aircraft, 12 Satellite Communication (SATCOM) Air Data Terminals (SADT), six (6) Universal Ground Control Stations (UGCS), seven (7) Universal Ground Data Terminals (UGDT), three (3) Satellite Ground Data Terminals (SGDT), one (1) Mobile Ground Control Station (MGCS), three (3) Automatic Take-Off & Landing System's (ATLS), standard equipment package, Ground Based Sense And Avoid (GBSAA), and payloads to include; Electro-Optical/Infrared Laser Range Finder/Laser Designator (EO/IR/LD HD), Synthetic Aperture Radar/Ground Moving Target Indicator (SAR/GMTI), communication relay, and up to four (4) HELLFIRE missiles.

4 May 2017, the Army approved an Army Acquisition Objective (AAO) adjustment to bring the total requirement to 204 MQ-1C Gray Eagle aircraft.

Prior to FY 2018 this Line Item (A00005) has procured 190 aircraft, which includes 18 of the 32 aircraft lost to mishap or battle damage.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	26	11	4	6	10	-	-	-	-
	Total Obligation Authority	403.588	117.506	43.326	60.000	103.326	-	-	-	-
Total: Secondary Distribution	Quantity	26	11	4	6	10	-	-	-	-
	Total Obligation Authority	403.588	117.506	43.326	60.000	103.326	-	-	-	-

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 10: Fixed Wing **P-1 Line Item Number / Title:** 9670A00005 / MQ-1 UAV

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0305204A, 0305219A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>
P-5	A00005 / MQ-1 UAV	P-5a, P-21	A		38 / 2,876.057	26 / 403.588	11 / 117.506	4 / 43.326	6 / 60.000	10 / 103.326
P-40	Total Gross/Weapon System Cost				38 / 2,876.057	26 / 403.588	11 / 117.506	4 / 43.326	6 / 60.000	10 / 103.326

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 The \$43.326 million FY19 Base funding supports the procurement of four (4) MQ-1C Gray Eagle Extended Range Aircraft. The \$60.0 million FY19 OCO funding supports procurement of six (6) MQ-1C Gray Eagle Extended Range War Replacement Aircraft (WRA).

Note: P-1 base quantity is in error. P-40 base quantity is correct.

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Exhibit P-5, Cost Analysis: PB 2019 Army											Date: February 2018							
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 10					P-1 Line Item Number / Title: 9670A00005 / MQ-1 UAV						Item Number / Title [DODIC]: A00005 / MQ-1 UAV							
ID Code (A=Service Ready, B=Not Service Ready) : A											MDAP/MAIS Code:							
Resource Summary				Prior Years		FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO		FY 2019 Total	
Procurement Quantity (<i>Units in Each</i>)				38		26			11			4			6		10	
Gross/Weapon System Cost (<i>\$ in Millions</i>)				2,876.057		403.588			117.506			43.326			60.000		103.326	
Less PY Advance Procurement (<i>\$ in Millions</i>)				-		-			-			-			-		-	
Net Procurement (P-1) (<i>\$ in Millions</i>)				2,876.057		403.588			117.506			43.326			60.000		103.326	
Plus CY Advance Procurement (<i>\$ in Millions</i>)				-		-			-			-			-		-	
Total Obligation Authority (<i>\$ in Millions</i>)				2,876.057		403.588			117.506			43.326			60.000		103.326	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																		
Initial Spares (<i>\$ in Millions</i>)				-		-			-			-			-		-	
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)				75,685.711		15,522.615			10,682.364			10,831.500			10,000.000		10,332.600	

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
Aircraft ^(†)	4,727.000	173	817.771	6,931.462	26	180.218	7,063.364	11	77.697	7,034.500	4	28.138	7,034.500	6	42.207	7,034.500	10	70.345
SATCOM Airborne Data Terminal (SADT)	774.728	173	134.028	530.192	26	13.785	540.273	11	5.943	540.500	4	2.162	540.500	6	3.243	540.500	10	5.405
Aircraft Container	-	-	-	385.115	26	10.013	392.455	11	4.317	393.250	4	1.573	393.167	6	2.359	393.200	10	3.932
Universal Ground Control Station (UGCS)	3,497.622	45	157.393	5,189.000	9	46.701	-	-	-	-	-	-	-	-	-	-	-	-
Mobile GCS (MGCS)	1,360.000	19	25.840	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Universal Ground Data Terminal (UGDT)	1,440.229	48	69.131	1,266.222	9	11.396	-	-	-	-	-	-	-	-	-	-	-	-
Universal Satellite Ground Data Terminal (USGDT)	1,575.000	3	4.725	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Government Furnished Equipment (GFE)	-	-	50.251	-	-	10.176	-	-	5.518	-	-	1.902	-	-	2.853	-	-	4.755
Ground Base Sense and Avoid (GBSAA)	-	-	67.514	-	-	0.500	-	-	0.500	-	-	-	-	-	-	-	-	-
Ground Control Station (GCS)	3,172.000	10	31.720	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portable Ground Control Station	776.000	10	7.760	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Satellite Ground Data Terminal (SGDT)	1,911.094	32	61.155	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: PB 2019 Army												Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 10						P-1 Line Item Number / Title: 9670A00005 / MQ-1 UAV						Item Number / Title [DODIC]: A00005 / MQ-1 UAV					
ID Code (A=Service Ready, B=Not Service Ready) : A												MDAP/MAIS Code:					

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Ground Data Terminal (GDT)	1,229.071	14	17.207	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portable Ground Data Terminal (PGDT)	379.000	4	1.516	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Automatic Take-Off & Landing Sys (ATLS)	1,024.879	33	33.821	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tower Trailers	200.000	84	16.800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardware-Retrofit Platoon Configuration	-	-	104.316	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	1,600.948	-	-	272.789	-	-	93.975	-	-	33.775	-	-	50.662	-	-	84.437
<i>Subtotal: Flyaway Cost</i>	-	-	1,600.948	-	-	272.789	-	-	93.975	-	-	33.775	-	-	50.662	-	-	84.437
Hardware Cost																		
Recurring Cost																		
Initial Spares	8,937.000	24	214.488	-	-	27.753	-	-	-	-	-	-	-	-	-	-	-	-
Ground Support Equipment (GSE)	2,233.000	21	46.893	-	-	4.305	-	-	-	-	-	-	-	-	-	-	-	-
Data (Fielding Manuals)	-	-	5.272	-	-	0.040	-	-	-	-	-	-	-	-	-	-	-	-
Air Beam Shelter	-	-	6.403	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Modifications	-	-	36.455	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Safety Item	-	-	0.093	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Common Sensor Payload (CSP) HD	-	-	-	-	-	-	-	-	-	1,900.000	4	7.600	-	-	-	1,900.000	4	7.600
<i>Subtotal: Recurring Cost</i>	-	-	309.604	-	-	32.098	-	-	-	-	-	7.600	-	-	-	-	-	7.600
Non Recurring Cost																		
MQ-1C Gray Eagle Extended Range / Non-Recurring	-	-	66.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-Recurring Production	-	-	20.587	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hunter Non Program of Record (PoR) CSD-HD Payloads (NRE)	-	-	-	-	-	15.000	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	86.587	-	-	15.000	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware Cost</i>	-	-	396.191	-	-	47.098	-	-	-	-	-	7.600	-	-	-	-	-	7.600
Software Cost																		
Recurring Cost																		
Software Modifications	-	-	28.934	-	-	4.100	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: PB 2019 Army													Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 10						P-1 Line Item Number / Title: 9670A00005 / MQ-1 UAV						Item Number / Title [DODIC]: A00005 / MQ-1 UAV						
ID Code (A=Service Ready, B=Not Service Ready) : A										MDAP/MAIS Code:								
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Recurring Cost</i>	-	-	28.934	-	-	4.100	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Software Cost</i>	-	-	28.934	-	-	4.100	-	-	-	-	-	-	-	-	-	-	-	-
Package Fielding Cost																		
Recurring Cost																		
First Destination Transportation	-	-	1.561	-	-	2.087	-	-	-	-	-	-	-	-	0.095	-	-	0.095
New Equipment Training (NET)	-	-	90.349	-	-	7.370	-	-	12.475	-	-	1.951	-	-	3.033	-	-	4.984
<i>Subtotal: Recurring Cost</i>	-	-	91.910	-	-	9.457	-	-	12.475	-	-	1.951	-	-	3.128	-	-	5.079
Non Recurring Cost																		
Training Devices	-	-	81.332	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interim Contractor Logistics Support	-	-	30.642	-	-	11.665	-	-	-	-	-	-	-	-	-	-	-	-
Universal Mission Simulators Spares	-	-	7.325	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	119.299	-	-	11.665	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Package Fielding Cost</i>	-	-	211.209	-	-	21.122	-	-	12.475	-	-	1.951	-	-	3.128	-	-	5.079
Support - Engineering Change Proposals Cost																		
Engineering Change Proposals	-	-	221.790	-	-	21.130	-	-	1.238	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Engineering Change Proposals Cost</i>	-	-	221.790	-	-	21.130	-	-	1.238	-	-	-	-	-	-	-	-	-
Support - Peculiar Support Equipment Cost																		
Support and Handling Equipment	-	-	8.556	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Peculiar Support Equipment Cost</i>	-	-	8.556	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - Program Management Cost																		
Contractor Management	-	-	233.574	-	-	20.906	-	-	5.400	-	-	-	-	-	6.210	-	-	6.210
<i>Subtotal: Support - Program Management Cost</i>	-	-	233.574	-	-	20.906	-	-	5.400	-	-	0.000	-	-	6.210	-	-	6.210
Support - System Engineering Cost																		
System Engineering	-	-	58.471	-	-	6.119	-	-	1.857	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - System Engineering Cost</i>	-	-	58.471	-	-	6.119	-	-	1.857	-	-	-	-	-	-	-	-	-
Support - System Technical Support (STS) Cost																		

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Exhibit P-5, Cost Analysis: PB 2019 Army												Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 10						P-1 Line Item Number / Title: 9670A00005 / MQ-1 UAV						Item Number / Title [DODIC]: A00005 / MQ-1 UAV					
ID Code (A=Service Ready, B=Not Service Ready) : A												MDAP/MAIS Code:					

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
System Technical Support (STS)	-	-	75.942	-	-	4.478	-	-	2.561	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - System Technical Support (STS) Cost</i>	-	-	75.942	-	-	4.478	-	-	2.561	-	-	-	-	-	-	-	-	-
Support - System Test and Evaluation Cost																		
Test and Evaluation Support	-	-	40.442	-	-	5.846	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - System Test and Evaluation Cost</i>	-	-	40.442	-	-	5.846	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	75,685.711	38	2,876.057	15,522.615	26	403.588	10,682.364	11	117.506	10,831.500	4	43.326	10,000.000	6	60.000	10,332.600	10	103.326

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Army	Quantity	26	11	4	6	10
	Total Obligation Authority	403.588	117.506	43.326	60.000	103.326
Total:	Quantity	26	11	4	6	10
Secondary Distribution	Total Obligation Authority	403.588	117.506	43.326	60.000	103.326

(t) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 10	P-1 Line Item Number / Title: 9670A00005 / MQ-1 UAV	Item Number / Title [DODIC]: A00005 / MQ-1 UAV
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
Aircraft ^(†)		2011	GENERAL ATOMICS / ASI / SAN DIEGO	SS / FPIF	AMCOM	Apr 2011	Mar 2013	29	4,046.000	Y	Dec 2010	Dec 2010
Aircraft ^(†)		2012	GENERAL ATOMICS / ASI / SAN DIEGO	SS / FPIF	AMCOM	Jul 2012	May 2014	29	4,206.000	Y	Dec 2011	Dec 2011
Aircraft ^(†)		2013	GENERAL ATOMICS / ASI / SAN DIEGO	SS / FFP	AMCOM	Sep 2013	May 2015	19	5,130.733	Y	May 2012	May 2012
Aircraft ^(†)		2014	GENERAL ATOMICS / ASI / SAN DIEGO	SS / FFP	AMCOM	Mar 2015	Nov 2016	23	4,705.870	Y	Nov 2013	Nov 2013
Aircraft ^(†)		2015	GENERAL ATOMICS / ASI / SAN DIEGO	SS / FFP	AMCOM	Jun 2015	Oct 2017	19	6,742.158	Y	Mar 2015	Mar 2015
Aircraft ^(†)		2016	GENERAL ATOMICS / ASI / SAN DIEGO	SS / FFP	AMCOM	Dec 2016	Nov 2018	20	6,796.800	Y	Dec 2015	Dec 2015
Aircraft ^(†)		2017	GENERAL ATOMICS / ASI / SAN DIEGO	SS / FFP	AMCOM	Sep 2017	Jul 2019	26	6,931.460	Y	Mar 2018	Sep 2017
Aircraft ^(†)		2018	GENERAL ATOMICS / ASI / SAN DIEGO	SS / FFP	AMCOM	Jun 2018	Aug 2020	11	7,063.360		Oct 2018	Jun 2018
Aircraft ^(†)		2019	GENERAL ATOMICS / ASI / SAN DIEGO	SS / FFP	AMCOM	Jun 2019	Apr 2021	10	7,034.500		Oct 2019	Jun 2019

^(†) indicates the presence of a P-21

Remarks:

FY2012 LRIP III delivery schedule is for 12 months and one (1) day.
 FY2013 MQ-1C Gray Eagle exercised the option for four (4) aircraft, and four (4) SATCOM Air Data Terminals (SADT) with FY14 APA funds.
 FY2014 FRP II delivery schedule included an option for four (4) aircraft. The option exercised approximately three (3) months after base contract award therefore extending the delivery schedule.
 FY2015 FRP III delivery schedule is for the procurement of 19 aircraft and associated equipment.
 FY2016 FRP IV delivery schedule is for the procurement of 20 aircraft and associated equipment. In addition, deliveries accelerated to four (4) per month beginning the third quarter 2019.

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Exhibit P-21, Production Schedule: PB 2019 Army Date: February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 10	P-1 Line Item Number / Title: 9670A00005 / MQ-1 UAV	Item Number / Title [DODIC]: A00005 / MQ-1 UAV
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Cost Elements (Units in Each)						Fiscal Year 2011													Fiscal Year 2012													B A L A N C E	
O C C #	M F R #	F Y	S E R V I C E	P R O C Q T Y	A C C E P T P R I O R T O 1 O C T 2 0 1 0	B A L D U E A S O F 1 O C T	Calendar Year 2011													Calendar Year 2012													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
Aircraft																																	
Prior Years Deliveries: 34																																	
1		2011	ARMY	29	0	29							A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29			
1		2012	ARMY	29	0	29																A	-	-	-	29							
1		2013	ARMY	19	0	19																						19					
1		2014	ARMY	23	0	23																						23					
1		2015	ARMY	19	0	19																						19					
1		2016	ARMY	20	0	20																						20					
1		2017	ARMY	26	0	26																						26					
1		2018	ARMY	11	0	11																						11					
1		2019	ARMY	10	0	10																						10					
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 10 **P-1 Line Item Number / Title:** 9670A00005 / MQ-1 UAV **Item Number / Title [DODIC]:** A00005 / MQ-1 UAV

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2013													Fiscal Year 2014													BALANCE		
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2012	BAL DUE AS OF 1 OCT	Calendar Year 2013													Calendar Year 2014													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
Aircraft																																	
Prior Years Deliveries: 34																																	
1		2011	ARMY	29	0	29	-	-	-	-	-	1	4	-	2	2	3	2	6	1	2	2	-	2	2				0				
1		2012	ARMY	29	0	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	2	2	22			
1		2013	ARMY	19	0	19												A	-	-	-	-	-	-	-	-	-	-	19				
1		2014	ARMY	23	0	23																							23				
1		2015	ARMY	19	0	19																							19				
1		2016	ARMY	20	0	20																							20				
1		2017	ARMY	26	0	26																							26				
1		2018	ARMY	11	0	11																							11				
1		2019	ARMY	10	0	10																							10				
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 10 **P-1 Line Item Number / Title:** 9670A00005 / MQ-1 UAV **Item Number / Title [DODIC]:** A00005 / MQ-1 UAV

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2015													Fiscal Year 2016													BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	Calendar Year 2015													Calendar Year 2016													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
Aircraft																																	
Prior Years Deliveries: 34																																	
1		2011	ARMY	29	29	0																							0				
1		2012	ARMY	29	7	22	7	4	2	1	2	2	3	1															0				
1		2013	ARMY	19	0	19	-	-	-	-	-	-	-	1	3	1	-	2	1	-	-	1	3	-	-	2	3	-	1	1	0		
1		2014	ARMY	23	0	23						A	-	-	-														23				
1		2015	ARMY	19	0	19									A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19			
1		2016	ARMY	20	0	20																								20			
1		2017	ARMY	26	0	26																								26			
1		2018	ARMY	11	0	11																								11			
1		2019	ARMY	10	0	10																								10			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 10	P-1 Line Item Number / Title: 9670A00005 / MQ-1 UAV	Item Number / Title [DODIC]: A00005 / MQ-1 UAV
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2017													Fiscal Year 2018													BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017													Calendar Year 2018													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
Aircraft																																	
Prior Years Deliveries: 34																																	
1		2011	ARMY	29	29	0																							0				
1		2012	ARMY	29	29	0																							0				
1		2013	ARMY	19	19	0																							0				
1		2014	ARMY	23	0	23	-	3	1	1	1	2	3	-	3	-	1	1	3	1	1	1	1						0				
1		2015	ARMY	19	0	19	-	-	-	-	-	-	-	-	-	-	-	1	-	2	2	1	3	2	2	1	2	1	1	1			
1		2016	ARMY	20	0	20			A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20				
1		2017	ARMY	26	0	26											A	-	-	-	-	-	-	-	-	-	-	-	26				
1		2018	ARMY	11	0	11																				A	-	-	-	11			
1		2019	ARMY	10	0	10																							10				
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 10 **P-1 Line Item Number / Title:** 9670A00005 / MQ-1 UAV **Item Number / Title [DODIC]:** A00005 / MQ-1 UAV

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2019													Fiscal Year 2020													BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019													Calendar Year 2020													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
Aircraft																																	
Prior Years Deliveries: 34																																	
1		2011	ARMY	29	29	0																							0				
1		2012	ARMY	29	29	0																							0				
1		2013	ARMY	19	19	0																							0				
1		2014	ARMY	23	23	0																							0				
1		2015	ARMY	19	18	1		1																					0				
1		2016	ARMY	20	0	20	-		2	1	1	2	2	4	4	4													0				
1		2017	ARMY	26	0	26	-	-	-	-	-	-	-	-	-	2	2	2	2	2	2	2	2	2	2	2	2	2	0				
1		2018	ARMY	11	0	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	7			
1		2019	ARMY	10	0	10										A	-	-	-	-	-	-	-	-	-	-	-	-	10				
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 10 **P-1 Line Item Number / Title:** 9670A00005 / MQ-1 UAV **Item Number / Title [DODIC]:** A00005 / MQ-1 UAV

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2021												Fiscal Year 2022												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021												Calendar Year 2022												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
Aircraft																															
Prior Years Deliveries: 34																															
1		2011	ARMY	29	29	0																						0			
1		2012	ARMY	29	29	0																						0			
1		2013	ARMY	19	19	0																						0			
1		2014	ARMY	23	23	0																						0			
1		2015	ARMY	19	19	0																						0			
1		2016	ARMY	20	20	0																						0			
1		2017	ARMY	26	26	0																						0			
1		2018	ARMY	11	4	7	2	1	1	1	1	1																0			
1		2019	ARMY	10	0	10	-	-	-	-	-	-	2	2	2	2	2											0			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2019 Army	Date: February 2018
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Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 10	P-1 Line Item Number / Title: 9670A00005 / MQ-1 UAV	Item Number / Title [DODIC]: A00005 / MQ-1 UAV
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2019	1-8-5 For 2019	MAX For 2019	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	GENERAL ATOMICS / ASI - SAN DIEGO	6	24	60	8	7	23	30	8	8	24	32

Remarks:
 FY2012 LRIP III delivery schedule is for 12 months and one (1) day.
 FY2013 MQ-1C Gray Eagle exercised the option for four (4) aircraft, and four (4) SATCOM Air Data Terminals (SADT) with FY14 APA funds.
 FY2014 FRP II delivery schedule included an option for four (4) aircraft. The option exercised approximately three (3) months after base contract award therefore extending the delivery schedule.
 FY2015 FRP III delivery schedule is for the procurement of 19 aircraft and associated equipment.
 FY2016 FRP IV delivery schedule is for the procurement of 20 aircraft and associated equipment. In addition, deliveries accelerated to four (4) per month beginning the third quarter 2019.

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 10: Fixed Wing **P-1 Line Item Number / Title:** 9675A00010 / RQ-11 (RAVEN)

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0305204A, 0305232A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	253.122	-	-	46.416	-	46.416	25.000	32.500	35.400	10.500	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	253.122	-	-	46.416	-	46.416	25.000	32.500	35.400	10.500	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	253.122	-	-	46.416	-	46.416	25.000	32.500	35.400	10.500	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	232.080	-	232.080	50.000	50.000	50.000	50.000	Continuing	Continuing

Description:

The Rucksack Portable Unmanned Aircraft System (RPUAS) Family of Small Unmanned Aircraft Systems (FoSUAS) provides the battalion and below ground maneuver elements with an organic, on-demand, asset to develop situational awareness, enhance force protection, and secure routes, points, and areas. The system provides the small unit commander an organic and responsive tactical Reconnaissance, Surveillance, and Target Acquisition capability through the ability to view real-time Full Motion Video and sensor data via the system ground control stations. The RPUAS FoSUAS includes a combination of three separate hand-launched mission specific configurable aircraft that do not require an improved launch/ recovery location. The ground control equipment includes a hand controller interoperable with each of the system's aircraft. The RPUAS FoSUAS will be modular to meet the specific needs of the small unit commander. This modular system will be customizable for the specific mission whether the mission requires a truly manpackable electric micro Unmanned Aircraft (UA) with a weight trade off for short range and endurance for over the hill around the next corner reconnaissance, or a slightly larger UA, or a more capable yet even larger and longer range UA if the mission requires better optics or longer endurance. The three separate mission specific configurable UA are the Short Range Reconnaissance (SRR) (formerly the Short Range Micro (SRM)), the Medium Range Mobile (MRM), and the Long Range Reconnaissance and Surveillance (LRRS). Funding in FY19 is for 200 Raven Systems, Initial Spares Packages, training, fielding, and Program Support for the Security Force Assistance Brigades (SFAB). Funding from FY20-23 is for procurement of SRM/SRR, Initial Spares Packages, training, fielding, and Program Support. Approved Army Acquisition Objective (AAO) for the SRM/SRR is 2589.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	46.416	-	46.416	25.000	32.500	35.400	10.500
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	46.416	-	46.416	25.000	32.500	35.400	10.500

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 10: Fixed Wing **P-1 Line Item Number / Title:** 9675A00010 / RQ-11 (RAVEN)

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0305204A, 0305232A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	A00010 / RQ-11 (RAVEN)	P-5a, P-21			- / 253.122	- / -	- / -	- / 46.416	- / -	- / 46.416
P-40	Total Gross/Weapon System Cost				- / 253.122	- / -	- / -	- / 46.416	- / -	- / 46.416

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

Justification: FY19 Base procurement dollars in the amount of \$46.416 million supports procurement of 200 Raven Systems for Security Force Assistance Brigades (SFAB). Remaining funding is for initial spares packages, training, fielding, and Program Support.

In accordance with 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses and providing military support to civil authorities.

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Exhibit P-5, Cost Analysis: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 10	P-1 Line Item Number / Title: 9675A00010 / RQ-11 (RAVEN)	Item Number / Title [DODIC]: A00010 / RQ-11 (RAVEN)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	253.122	-	-	46.416	-	46.416
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	253.122	-	-	46.416	-	46.416
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	253.122	-	-	46.416	-	46.416

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	232.080	-	232.080

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
RQ-11 B Raven Air Vehicle, GCS/RVT, EO	9.856	6,525	64.309	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Initial Spares Package (ISP)	2.525	6,525	16.477	-	-	-	-	-	-	-	-	8.316	-	-	-	-	-	8.316
Other System Hardware	-	-	22.271	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Digital Data Link Retrofit	41.665	1,318	54.914	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gimbal Payload Retrofit	33.690	1,128	38.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Operator Training	-	-	17.051	-	-	-	-	-	-	-	-	0.970	-	-	-	-	-	0.970
Government Furnished Equipment (GFE)	-	-	6.825	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Government Agencies/Core	-	-	12.457	-	-	-	-	-	-	-	-	0.200	-	-	-	-	-	0.200
Technical	-	-	10.836	-	-	-	-	-	-	-	-	0.300	-	-	-	-	-	0.300
Logistics	-	-	9.980	-	-	-	-	-	-	-	-	0.550	-	-	-	-	-	0.550
<i>Subtotal: Recurring Cost</i>	-	-	253.123	-	-	-	-	-	-	-	-	10.336	-	-	-	-	-	10.336
<i>Subtotal: Flyaway Cost</i>	-	-	253.123	-	-	-	-	-	-	-	-	10.336	-	-	-	-	-	10.336

Hardware Cost																		
Recurring Cost																		

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Exhibit P-5, Cost Analysis: PB 2019 Army												Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 10						P-1 Line Item Number / Title: 9675A00010 / RQ-11 (RAVEN)						Item Number / Title [DODIC]: A00010 / RQ-11 (RAVEN)					
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:					

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
RQ-11B Raven Systems ^(t)	-	-	-	-	-	-	-	-	-	180.400	200	36.080	-	-	-	180.400	200	36.080
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	36.080	-	-	-	-	-	36.080
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	-	-	-	-	-	-	36.080	-	-	-	-	-	36.080
Gross/Weapon System Cost	-	-	253.122	-	-	-	-	-	-	232.080	-	46.416	-	-	-	232.080	-	46.416

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	-	-	46.416	-	46.416
Total:	Quantity	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	-	-	46.416	-	46.416

^(t) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 10	P-1 Line Item Number / Title: 9675A00010 / RQ-11 (RAVEN)	Item Number / Title [DODIC]: A00010 / RQ-11 (RAVEN)
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
RQ-11B Raven Systems ^(†)		2019	AeroVironment, INC / Simi Valley, CA	SS / IDIQ	Natick - Orlando, FL	Feb 2019	Jul 2019	200	180.400	Y		Jan 2019

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 10 **P-1 Line Item Number / Title:** 9675A00010 / RQ-11 (RAVEN) **Item Number / Title [DODIC]:** A00010 / RQ-11 (RAVEN)

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2019												Fiscal Year 2020												BALANCE		
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEP T O 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019												Calendar Year 2020												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L		A U G	S E P
RQ-11B Raven Systems																															
1		2019	ARMY		200	0	200					A	-	-	-	-	-	20	20	20	20	20	20	20	20	20	20	20	0		
								O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P

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Exhibit P-21, Production Schedule: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 10	P-1 Line Item Number / Title: 9675A00010 / RQ-11 (RAVEN)	Item Number / Title [DODIC]: A00010 / RQ-11 (RAVEN)
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)								
		MSR For 2019	1-8-5 For 2019	MAX For 2019	Initial				Reorder				
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	
1	AeroVironment, INC - Simi Valley, CA	10	15	20	0	0	0	0	0	0	2	5	7

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 3167A09999 / Spectrum Army Video

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	2.300	1.822	-	-	-	-	-	-	-	-	-	4.122
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	2.300	1.822	-	-	-	-	-	-	-	-	-	4.122
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	2.300	1.822	-	-	-	-	-	-	-	-	-	4.122

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Tactical-Video (TAC-V) Downlink system is an integral component of the Security and Support (S&S) mission set of capabilities. The system consists of the video transmitter and antenna suite which are mounted on the UH-72 Lakota aircraft, the ground-based receiver antenna array, and a ground operator handheld receiver/display device for dismounted operations.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	1.822	-	-	-	-	-	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	1.822	-	-	-	-	-	-	-	-

Justification:

The systems allows the platform to transmit streaming video to the operator on the ground that receives, records, displays, and can play back real-time full motion video imagery and moving map metadata. This system is utilized in the support of state and federal law enforcement agencies, emergency first responders, and border patrol and customs agencies and as such, it is vital that this capability remain available to those agencies.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 4742A05001 / Helicopter, Light Utility (LUH)

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	425	23	13	-	-	-	-	-	-	-	-	461
Gross/Weapon System Cost (<i>\$ in Millions</i>)	2,731.477	187.000	108.383	-	-	-	-	-	-	-	-	3,026.860
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	2,731.477	187.000	108.383	-	-	-	-	-	-	-	-	3,026.860
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	2,731.477	187.000	108.383	-	-	-	-	-	-	-	-	3,026.860

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	6,427.005	8,130.435	8,337.154	-	-	-	-	-	-	-	-	6,565.857

Description:

The UH-72A platform will provide the flexibility to respond to Homeland Security (HLS) requirements, conduct civil search and rescue operations, support damage assessment, support test and training centers, perform generating force missions, augment the HH-60 Medical Evacuation (MEDEVAC) aircraft, and provide support to CONUS counterdrug operations. The UH-72A will conduct general support utility helicopter missions and execute tasks as part of an integrated effort with other joint services, government agencies, and non-governmental organizations. The UH-72A provides time-sensitive transport of supplies or key personnel, air mobility to assist civil authorities through the execution of search and rescue or disaster relief operations, advanced warning/detection of external threats to include threats to our borders, augmentation of air ambulance capabilities, and limited command and control operations in the conduct of HLS. As part of the Aviation Restructure Initiative (ARI) the UH-72A will become the primary training aircraft at the US Army Aviation Center of Excellence (USAACE) in Ft Rucker. The UH-72A program is currently in full rate production.

Justification:

- FY18 base procurement dollars in the amount of \$108.383 Million will support the procurement of 12 UH-72A Lakota aircraft, fielding, and program management for one year.
- FY17 National Defense Authorization Act (NDAA) base procurement dollars in the amount of \$187 Million will support the procurement of 23 UH-72A Lakota aircraft, fielding, and program management for one year instead of the 28 aircraft as noted by the Conference.
- Only 12 of 28 aircraft have been procured in FY16. Army temporarily enjoined from procuring the remaining 16 aircraft.
- The remaining 16 aircraft deliveries beyond February 2018 reflect the enjoined aircraft as reflected on the P-21.

Current Army Acquisition Objective is 462 aircraft.
 Total procurement quantity of 461 includes PR attrited aircraft. Two HAATs aircraft procured with NGB funding is not included in total quantity.
 Prior year quantity should be 426 to account for the replacement aircraft that was attrited. FY18 should read 12.

In accordance with section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses and providing military support to civil authorities.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 5757A05111 / AH-64 Apache Block IIIA Reman

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	240	52	50	48	-	48	48	51	43	35	Continuing	Continuing
Gross/Weapon System Cost (<i>\$ in Millions</i>)	4,961.933	1,062.042	950.176	924.158	-	924.158	983.064	980.571	877.237	701.717	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	832.096	209.930	185.160	170.910	-	170.910	174.550	190.870	169.460	192.230	Continuing	Continuing
Net Procurement (P-1) (<i>\$ in Millions</i>)	4,129.837	852.112	765.016	753.248	-	753.248	808.514	789.701	707.777	509.487	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	1,042.026	185.160	170.910	174.550	-	174.550	190.870	169.460	192.230	169.218	Continuing	Continuing
Total Obligation Authority (<i>\$ in Millions</i>)	5,171.863	1,037.272	935.926	927.798	-	927.798	999.384	959.161	900.007	678.705	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	20,674.721	20,423.885	19,003.520	19,253.292	-	19,253.292	20,480.500	19,226.882	20,400.860	20,049.057	Continuing	Continuing

Description:

AH-64E Reman is a complete remanufacture using a new airframe and meets all the requirements for Army and Joint interoperability goals for the future and adds significant combat capability while addressing obsolescence issues, ensuring the aircraft remains a viable combat multiplier beyond its lifecycle. The Army's only heavy attack helicopter, the AH-64E is fully digital with the latest technologies, adding significant combat capability to the aircraft. The AH-64E Apache is implementing an incremental design and fielding strategy as noted in the approved Capability Production Document (CPD). AH-64E Capability Version 1 includes Improved Drive and Propulsion System, Composite Main Rotor Blades (CMRB), Unmanned Aircraft System (UAS) Level III-IV Control, Improved Communications Suite, Improved Electronics / Modular Open Systems Approach, and Radar Electronics Unit (REU). Capability Version 4 includes Link 16, Air to Air to Ground (AAG) Video Relay, System Level Embedded Diagnostics (SLED), and provisions for Removable Crashworthy External Fuel Systems (RCEFS). Capability Version 6 includes Fire Control Radar (FCR) enhancements, Maritime Targeting Mode, Link-16 and Soldier Radio Waveform (SRW), Image Blending, Multi-Mode Laser (MML), and Interactive Electronic Technical Manual (IETM) Upgrade. Production Lots 1-4 are Version 1 capable, Production Lots 5-7 are Version 4 capable, and Version 6 is planned for inclusion into the remaining Production Lots beginning with Production Lot 9. Upgrades are integrated as incremental block modifications. Other associated Government Furnished Equipment (GFE) such as the, Modernized Radar Frequency Interferometer (M-RFI), Radar Electronics Unit (REU), and Manned/Unmanned Teaming Extended Capability (MUMT-X) will be procured and provided in accordance with the basis of issue plan. The program addresses operational shortfalls identified during real-world combat missions, meets Apache Capability Production Document (CPD) requirements for modernization, and necessary training, initial spares, and Peculiar Ground Support Equipment (PGSE). AH-64E aircraft entered the fleet in 2012.

"In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities."

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	52	50	48	-	48	48	51	43	35
	Total Obligation Authority	1,037.272	935.926	927.798	-	927.798	999.384	959.161	900.007	678.705
Total: Secondary Distribution	Quantity	52	50	48	-	48	48	51	43	35
	Total Obligation Authority	1,037.272	935.926	927.798	-	927.798	999.384	959.161	900.007	678.705

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 5757A05111 / AH-64 Apache Block IIIA Reman

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	A05111 / AH-64 Apache Block IIIA Reman	P-5a, P-21			240 / 4,961.933	52 / 1,062.042	50 / 950.176	48 / 924.158	- / -	48 / 924.158
P-40	Total Gross/Weapon System Cost				240 / 4,961.933	52 / 1,062.042	50 / 950.176	48 / 924.158	- / -	48 / 924.158

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY19 Base procurement dollars in the amount of \$927.798 millions supports Advance Procurement (AP), Full Rate Production (FRP) of AH-64E Apache Reman aircraft and associated support. This program was restructured in 2010 from the single AH-64E Apache (A05111) into two separate programs, AH-64E Apache Reman (A05111) and AH-64E Apache New Build (A05133).
 The Apache Reman Program assumes a cost sharing with the New Build Program in accordance with the New Build Army Program Baseline (APB).
 Funding goes to the Active component.
 The current AH-64E Apache Remanufacture Acquisition Program Baseline (APB) procurement objective and Army Acquisition Objective (AAO) is 634 a/c. The total AH-64E (Remanufacture and New Build) AAO is 690 a/c.
 The Apache Reman Program quantities and associated funding include a Multi-year contract starting in FY17- FY21 and assumes approval for a subsequent Multi-year contract in FY22 through the end of the program. The Apache Reman Program is planning continued production of aircraft through FY2026 to meet the Army Acquisition Objective (AAO).
 Currently the total lead time (time from when first materials must be committed to aircraft delivery) is in excess of 24 months. The Apache Project Management Office (PMO) and Boeing are working to reduce all lead times to within the 24 month timeframe. The Cost Assessment and Program Evaluation (CAPE) Independent Cost Estimate (ICE) utilized 18% to 22% for Advance Procurement (AP). Each year's AP can be divided into 2 segments: 1) Government Furnished Equipment (GFE) such as engines, sensors and avionics and 2) Contractor Furnished Equipment (CFE). Material includes production components to support deliveries, provisioning material, pre-modification effort, and any potential termination liability costs. Long lead items include, but not limited to, such items as the Main Rotor Drive Shaft, Composite Main Rotor Blade, Improved Drive System, and Composite Stabilator IAW Financial Management Regulation (FMR) 7000.14-R.
 The Economical Production Rate of 98 aircraft per year is the maximum capacity at Full Rate Production assuming a 1-8-5 shift. This requirement is driven primarily by the production rate associated with current fuselage tooling capabilities. In order to increase the 1-8-5 (single shift) production rate, additional tooling must be procured. The minimum rate of 48 aircraft per year (min-sustainment rate) is based upon combined Remanufacture and New Build quantities.
 Note:
 FY2015: The gap in the delivery schedule for 13 aircraft is due to being procured with funds received on the FY2015 Omnibus reprogramming, received for execution in October 2015.
 Comments:
 "In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities."

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Exhibit P-5, Cost Analysis: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20		P-1 Line Item Number / Title: 5757A05111 / AH-64 Apache Block IIIA Reman
		Item Number / Title [DODIC]: A05111 / AH-64 Apache Block IIIA Reman

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Procurement Quantity (Units in Each)	240	52	50	48	-	48
Gross/Weapon System Cost (\$ in Millions)	4,961.933	1,062.042	950.176	924.158	-	924.158
Less PY Advance Procurement (\$ in Millions)	832.096	209.930	185.160	170.910	-	170.910
Net Procurement (P-1) (\$ in Millions)	4,129.837	852.112	765.016	753.248	-	753.248
Plus CY Advance Procurement (\$ in Millions)	1,042.026	185.160	170.910	174.550	-	174.550
Total Obligation Authority (\$ in Millions)	5,171.863	1,037.272	935.926	927.798	-	927.798

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	20,674.721	20,423.885	19,003.520	19,253.292	-	19,253.292

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
CFE ^(t)	16,652.588	240	3,996.621	13,565.808	52	705.422	13,392.600	50	669.630	13,728.354	48	658.961	-	-	-	13,728.354	48	658.961
GFE	2,060.133	240	494.432	4,930.500	52	256.386	3,697.520	50	184.876	3,664.271	48	175.885	-	-	-	3,664.271	48	175.885
Non-Recurring Costs	-	-	229.085	-	-	3.664	-	-	6.029	-	-	3.588	-	-	-	-	-	3.588
Support Equipment	-	-	38.509	-	-	32.006	-	-	30.839	-	-	27.575	-	-	-	-	-	27.575
Other Costs	-	-	155.371	-	-	52.706	-	-	45.540	-	-	42.674	-	-	-	-	-	42.674
Initial Spares	-	-	47.915	-	-	11.858	-	-	13.262	-	-	15.474	-	-	-	-	-	15.474
<i>Subtotal: Recurring Cost</i>	-	-	4,961.933	-	-	1,062.042	-	-	950.176	-	-	924.157	-	-	-	-	-	924.157
<i>Subtotal: Flyaway Cost</i>	-	-	4,961.933	-	-	1,062.042	-	-	950.176	-	-	924.157	-	-	-	-	-	924.157
Gross/Weapon System Cost	20,674.721	240	4,961.933	20,423.885	52	1,062.042	19,003.520	50	950.176	19,253.292	48	924.158	-	-	-	19,253.292	48	924.158

Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Army	52	50	48	-	48
Total Obligation Authority	1,037.272	935.926	927.798	-	927.798
Total: Secondary Distribution	52	50	48	-	48
Total Obligation Authority	1,037.272	935.926	927.798	-	927.798

(t) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2019 Army							Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20			P-1 Line Item Number / Title: 5757A05111 / AH-64 Apache Block IIIA Reman				Item Number / Title [DODIC]: A05111 / AH-64 Apache Block IIIA Reman					

Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
CFE ^(†)		2014	The Boeing Company / Mesa, AZ	SS / FPIF	AMCOM	Mar 2014	Feb 2015	35	15,570.229	Y		Jul 2012
CFE ^(†)		2015	The Boeing Company / Mesa, AZ	SS / FPIF	AMCOM	Mar 2015	Feb 2016	53	14,679.510	Y		Aug 2014
CFE ^(†)		2016	The Boeing Company / Mesa, AZ	SS / FPIF	AMCOM	Mar 2016	Jan 2017	64	13,759.470	Y		Aug 2014
CFE ^(†)		2017	The Boeing Company / Mesa, AZ	SS / FFP	AMCOM	Mar 2017	May 2018	52	13,565.810	Y		Aug 2015
CFE ^(†)		2018	The Boeing Company / Mesa, AZ	SS / FFP	AMCOM	Mar 2017	Mar 2019	50	13,392.600	Y		Aug 2015
CFE ^(†)		2019	The Boeing Company / Mesa, AZ	SS / FFP	AMCOM	Mar 2017	Mar 2020	48	13,728.350	Y		Aug 2015

^(†) indicates the presence of a P-21

Remarks:
Major Contractor Furnished Equipment (CFE) cost drivers include, but not limited to, the Fuselage, Transmission, and Composite Main Rotor Blades. Major Government Furnished Equipment (GFE) includes engines, Embedded Global Positioning System Inertial Navigation Systems (EGIs), Radar Electronics Unit (REU), Modernized Target Acquisition Designation System (MTADS)/Pilot Night Vision System (PNVS) and Manned/Unmanned Teaming Extended Capability (MUMT-X). Other Cost includes Support Equipment, Peculiar Ground Support Equipment (PGSE), and Government Program Management Support.

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Exhibit P-21, Production Schedule: PB 2019 Army										Date: February 2018														
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20					P-1 Line Item Number / Title: 5757A05111 / AH-64 Apache Block IIIA Reman															Item Number / Title [DODIC]: A05111 / AH-64 Apache Block IIIA Reman				

Cost Elements (Units in Each)						Fiscal Year 2014													Fiscal Year 2015													B A L A N C E	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2013	BAL DUE AS OF 1 OCT	Calendar Year 2014													Calendar Year 2015													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
CFE																																	
Prior Years Deliveries: 88																																	
1	2014	ARMY	35	0	35																											9	
1	2015	ARMY	53	0	53																											53	
1	2016	ARMY	64	0	64																											64	
1	2017	ARMY	52	0	52																											52	
1	2018	ARMY	50	0	50																											50	
1	2019	ARMY	48	0	48																											48	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2019 Army															Date: February 2018														
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20										P-1 Line Item Number / Title: 5757A05111 / AH-64 Apache Block IIIA Reman										Item Number / Title [DODIC]: A05111 / AH-64 Apache Block IIIA Reman									

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2016														Fiscal Year 2017														BALANCE		
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016														Calendar Year 2017														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
CFE																																			
Prior Years Deliveries: 88																																			
1	2014	ARMY	35	26	9	3	3	3																				0							
1	2015	ARMY	53	0	53	-	-	-	-	3	4	4	3	2	3	2	2	2	3	4	3	-	-	-	-	-	-	18							
1	2016	ARMY	64	0	64						A -	-	-	-	-	-	-	-	-	1	4	4	4	5	5	5	5	26							
1	2017	ARMY	52	0	52																	A -	-	-	-	-	-	52							
1	2018	ARMY	50	0	50																	A -	-	-	-	-	-	50							
1	2019	ARMY	48	0	48																	A -	-	-	-	-	-	48							
											O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2019 Army															Date: February 2018														
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20										P-1 Line Item Number / Title: 5757A05111 / AH-64 Apache Block IIIA Reman										Item Number / Title [DODIC]: A05111 / AH-64 Apache Block IIIA Reman									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2018												Fiscal Year 2019												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018												Calendar Year 2019												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P

CFE																													
Prior Years Deliveries: 88																													
1	2014	ARMY	35	35	0																								0
1	2015	ARMY	53	35	18	-	-	-	-	1	6	6	5																0
1	2016	ARMY	64	38	26	5	5	5	6	5																		0	
1	2017	ARMY	52	0	52	-	-	-	-	-	-	-	1	7	6	7	6	5	6	6	4	4							0
1	2018	ARMY	50	0	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	4	3	3	4	4	26
1	2019	ARMY	48	0	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48	
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P

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Exhibit P-21, Production Schedule: PB 2019 Army															Date: February 2018														
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20										P-1 Line Item Number / Title: 5757A05111 / AH-64 Apache Block IIIA Reman										Item Number / Title [DODIC]: A05111 / AH-64 Apache Block IIIA Reman									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2020												Fiscal Year 2021												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020												Calendar Year 2021												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
CFE																															
Prior Years Deliveries: 88																															
1		2014	ARMY	35	35	0																						0			
1		2015	ARMY	53	53	0																						0			
1		2016	ARMY	64	64	0																						0			
1		2017	ARMY	52	52	0																						0			
1		2018	ARMY	50	24	26	4	5	4	5	6	2																0			
1		2019	ARMY	48	0	48	-	-	-	-	-	3	3	4	4	4	4	4	4	4	4	4	4	4	4	2		0			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20		P-1 Line Item Number / Title: 5757A05111 / AH-64 Apache Block IIIA Reman
		Item Number / Title [DODIC]: A05111 / AH-64 Apache Block IIIA Reman

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2019	1-8-5 For 2019	MAX For 2019	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	The Boeing Company - Mesa, AZ	48	98	144	0	11	13	24	0	6	12	18

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Advance Procurement Budget Line Item Justification: PB 2019 Army							Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary							P-1 Line Item Number / Title: 5757A05111 / AH-64 Apache Block IIIA Reman					
Program Elements for Code B Items: N/A							Other Related Program Elements: N/A					
Line Item MDAP/MAIS Code: N/A												

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,042.026	185.160	170.910	174.550	-	174.550	190.870	169.460	192.230	169.218	Continuing	Continuing
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,042.026	185.160	170.910	174.550	-	174.550	190.870	169.460	192.230	169.218	Continuing	Continuing
Total Obligation Authority (<i>\$ in Millions</i>)	1,042.026	185.160	170.910	174.550	-	174.550	190.870	169.460	192.230	169.218	Continuing	Continuing

Description:

AH-64E Reman is a complete remanufacture using a new airframe and meets all the requirements for Army and Joint interoperability goals for the future and adds significant combat capability while addressing obsolescence issues, ensuring the aircraft remains a viable combat multiplier beyond its lifecycle. The Army's only heavy attack helicopter, the AH-64E is fully digital with the latest technologies, adding significant combat capability to the aircraft. The AH-64E Apache is implementing an incremental design and fielding strategy as noted in the approved Capability Production Document (CPD). AH-64E Capability Version 1 includes Improved Drive and Propulsion System, Composite Main Rotor Blades (CMRB), Unmanned Aircraft System (UAS) Level III-IV Control, Improved Communications Suite, Improved Electronics / Modular Open Systems Approach, and Radar Electronics Unit (REU). Capability Version 4 includes Link 16, Air to Air to Ground (AAG) Video Relay, System Level Embedded Diagnostics (SLED), and provisions for Removable Crashworthy External Fuel Systems (RCEFS). Capability Version 6 includes Fire Control Radar (FCR) enhancements, Maritime Targeting Mode, Link-16 and Soldier Radio Waveform (SRW), Image Blending, Multi-Mode Laser (MML), and Interactive Electronic Technical Manual (IETM) Upgrade. Production Lots 1-4 are Version 1 capable, Production Lots 5-7 are Version 4 capable, and Version 6 is planned for inclusion into the remaining Production Lots beginning with Production Lot 9. Upgrades are integrated as incremental block modifications. Other associated Government Furnished Equipment (GFE) such as the, Modernized Radar Frequency Interferometer (M-RFI), Radar Electronics Unit (REU), and Manned/Unmanned Teaming Extended Capability (MUMT-X) will be procured and provided in accordance with the basis of issue plan. The program addresses operational shortfalls identified during real-world combat missions, meets Apache Capability Production Document (CPD) requirements for modernization, and necessary training, initial spares, and Peculiar Ground Support Equipment (PGSE). AH-64E aircraft entered the fleet in 2012.

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Exhibit P-40, Advance Procurement Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary	P-1 Line Item Number / Title: 5757A05111 / AH-64 Apache Block IIIA Reman
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Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-10	A05111 / AH-64 Apache Block IIIA Reman			240 / 1,042.026	52 / 185.160	50 / 170.910	48 / 174.550	- / -	48 / 174.550
P-40	Total Gross/Weapon System Cost			240 / 1,042.026	52 / 185.160	50 / 170.910	48 / 174.550	- / -	48 / 174.550

*Title represents the P-10 Title for Advance Procurement.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY19 Base procurement dollars in the amount of \$927.798 million supports Advance Procurement (AP), Full Rate Production (FRP) of AH-64E Apache Reman aircraft and associated support. This program was restructured in 2010 from the single AH-64E Apache (A05111) into two separate programs, AH-64E Apache Reman (A05111) and AH-64E Apache New Build (A05133).

 The Apache Reman Program assumes a cost sharing with the New Build Program in accordance with the New Build APB.

 Funding goes to the Active component.

 The current AH-64E Apache Remanufacture Acquisition Program Baseline (APB) procurement objective and Army Acquisition Objective (AAO) is 634 a/c. The total AH-64E (Remanufacture and New Build) AAO is 690 a/c.

 The Apache Reman Program quantities and associated funding include a Multi-year contract starting in FY17- FY21 and assumes approval for a subsequent Multi-year contract in FY22 through the end of the program. The Apache Reman Program is planning continued production of aircraft through FY2026 to meet the Army Acquisition Objective (AAO).

 Currently the total lead time (time from when first materials must be committed to aircraft delivery) is in excess of 24 months. The Apache Project Management Office (PMO) and Boeing are working to reduce all lead times to within the 24 month timeframe. The Cost Assessment and Program Evaluation (CAPE) Independent Cost Estimate (ICE) utilized 18% to 22% for Advance Procurement (AP). Each year's AP can be divided into 2 segments: 1) Government Furnished Equipment (GFE) such as engines, sensors and avionics and 2) Contractor Furnished Equipment (CFE). Material includes production components to support deliveries, provisioning material, pre-modification effort, and any potential termination liability costs. Long lead items include, but not limited to, such items as the Main Rotor Drive Shaft, Composite Main Rotor Blade, Improved Drive System, and Composite Stabilator IAW Financial Management Regulation (FMR) 7000.14-R.

 The Economical Production Rate of 98 aircraft per year is the maximum capacity at Full Rate Production assuming a 1-8-5 shift. This requirement is driven primarily by the production rate associated with current fuselage tooling capabilities. In order to increase the 1-8-5 (single shift) production rate, additional tooling must be procured. The minimum rate of 48 aircraft per year (min-sustainment rate) is based upon combined Remanufacture and New Build quantities.

Comments:
 "In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities."

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Exhibit P-10, Advance Procurement Requirements Analysis (page 1 - Budget Funding Justification): PB 2019 Army					Date: February 2018	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20		P-1 Line Item Number / Title: 5757A05111 / AH-64 Apache Block IIIA Reman			P-5 Number / Title: A05111 / AH-64 Apache Block IIIA Reman	
First System (2019) Award Date: July 2009		First System (2019) Completion Date: November 2011		Interval Between Systems: 1 Months		
AH-64 Apache Block IIIA Reman		Production Leadtime <i>(Months)</i>	Prior Years <i>(Each)</i>	FY 2017 <i>(Each)</i>	FY 2018 <i>(Each)</i>	FY 2019 <i>(Each)</i>
Quantity			240	52	50	48
Cost Elements		When Required <i>(Months)</i>	Prior Years <i>(\$ M)</i>	FY 2017 <i>(\$ M)</i>	FY 2018 <i>(\$ M)</i>	FY 2019 <i>(\$ M)</i>
Other						
Other		0	-	-	-	0.000
CFE		6	684.106	122.206	112.801	115.203
GFE		6	357.920	62.954	58.109	59.347
<i>Total: Other</i>			<i>1,042.026</i>	<i>185.160</i>	<i>170.910</i>	<i>174.550</i>
Total Advance Procurement/Obligation Authority			1,042.026	185.160	170.910	174.550

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Exhibit P-10, Advance Procurement Requirements Analysis (page 2 - Budget Funding Justification): PB 2019 Army						Date: February 2018	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20		P-1 Line Item Number / Title: 5757A05111 / AH-64 Apache Block IIIA Reman				P-5 Number / Title: A05111 / AH-64 Apache Block IIIA Reman	
		FY 2019					
Cost Elements	QPA (Each)	Production Leadtime (Months)	Unit Cost (\$ K)	Contract Forecast Date	2019 Qty (Each)	For FY	Total Cost Request (\$ M)
Other							
Other	-						0.000
CFE	26						115.203
GFE	26						59.347
<i>Total: Other</i>							174.550
Total Advance Procurement/Obligation Authority							174.550

Description:
 Currently the total lead time (time from when first materials must be committed to aircraft delivery) is in excess of 24 months. The Apache Project Management Office (PMO) and Boeing are working to reduce all lead times to within the 24 month timeframe. The Cost Assessment and Program Evaluation (CAPE) Independent Cost Estimate (ICE) utilized 18% to 22% for Advance Procurement (AP) for single year contracts. Each year's AP can be divided into 2 segments: 1) Government Furnished Equipment (GFE) such as engines, sensors and avionics and 2) Contractor Furnished Equipment (CFE). Material includes production components to support deliveries, provisioning material, pre-modification effort, and any potential termination liability costs. Long lead items include the Main Rotor Drive Shaft, Composite Main Rotor Blade, Improved Drive System, and Composite Stabilator.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 5840A05133 / AH-64 Apache Block IIIB New Build

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	17	8	13	12	-	12	5	5	-	-	Continuing	Continuing
Gross/Weapon System Cost (<i>\$ in Millions</i>)	551.707	261.900	445.900	356.587	-	356.587	159.240	202.258	-	-	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	84.507	0.000	71.800	71.900	-	71.900	58.600	18.000	-	-	Continuing	Continuing
Net Procurement (P-1) (<i>\$ in Millions</i>)	467.200	261.900	374.100	284.687	-	284.687	100.640	184.258	-	-	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	84.507	71.800	71.900	58.600	-	58.600	18.000	0.000	-	-	Continuing	Continuing
Total Obligation Authority (<i>\$ in Millions</i>)	551.707	333.700	446.000	343.287	-	343.287	118.640	184.258	-	-	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	0.000	33.600	32.310	27.810	-	27.810	21.990	34.120	-	-	Continuing	Continuing
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	32,453.353	32,737.500	34,300.000	29,715.583	-	29,715.583	31,848.000	40,451.600	-	-	Continuing	Continuing

Description:

The AH-64E Apache New Build aircraft is the same configuration as the AH-64E Remanufacture aircraft and procured using the same contracts. While the AH-64E Remanufacture program inducts aging AH-64D aircraft into a remanufacture production line, the AH-64E New Build program assembles all new components resulting in completely new aircraft at the end of the production process. These aircraft are procured at a significantly higher cost because they include all new components. A new build Modernized Target Acquisition Designation Sight / Pilot Night Vision Sensor (MTADS/PNVS) system will be procured and provided with each aircraft. Other associated Government Furnished Equipment (GFE) such as the Fire Control Radar (FCR), Modernized Radar Frequency Interferometer (M-RFI), Radar Electronics Unit (REU), and Manned/Unmanned Teaming Extended Capability (MUMT-X) will be procured and provided in accordance with the basis of issue plan.

Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army									
Quantity	8	13	12	-	12	5	5	-	-
Total Obligation Authority	333.700	446.000	343.287	-	343.287	118.640	184.258	-	-
Total:									
Secondary Distribution									
Quantity	8	13	12	-	12	5	5	-	-
Total Obligation Authority	333.700	446.000	343.287	-	343.287	118.640	184.258	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 5840A05133 / AH-64 Apache Block IIIB New Build

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	A05133 / AH-64 Apache Block IIIB New Build	P-5a, P-21			17 / 551.707	8 / 261.900	13 / 445.900	12 / 356.587	- / -	12 / 356.587
P-40	Total Gross/Weapon System Cost				17 / 551.707	8 / 261.900	13 / 445.900	12 / 356.587	- / -	12 / 356.587

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY19 Base procurement dollars in the amount of \$343.287 million supports Advance Procurement (AP), Full Rate Production (FRP) of AH-64E Apache New Build aircraft and associated support. This program was restructured in 2010 from the single AH-64E Apache (A05111) into two separate programs, AH-64E Apache Reman (A05111) and AH-64E Apache New Build (A05133).
 The current AH-64E Apache New Build Acquisition Program Baseline (APB) procurement objective and Army Acquisition Objective (AAO) is 56. The total AH-64E (Remanufacture and New Build) AAO is 690.
 The Apache New Build Program is planning continued production of aircraft through FY2021 to meet the Army Acquisition Objective (AAO).
 Additionally, the New Build program prior year funding includes Congressionally appropriated Overseas Contingency Operations (OCO) funding to procure New Build aircraft to fill aircraft shortages due to combat attrition and training loss. OCO funding does not provide advance procurement for long lead items for these aircraft.
 All COMPO 1 Active.

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Exhibit P-5, Cost Analysis: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20		P-1 Line Item Number / Title: 5840A05133 / AH-64 Apache Block IIIB New Build
		Item Number / Title [DODIC]: A05133 / AH-64 Apache Block IIIB New Build

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Procurement Quantity (Units in Each)	17	8	13	12	-	12
Gross/Weapon System Cost (\$ in Millions)	551.707	261.900	445.900	356.587	-	356.587
Less PY Advance Procurement (\$ in Millions)	84.507	0.000	71.800	71.900	-	71.900
Net Procurement (P-1) (\$ in Millions)	467.200	261.900	374.100	284.687	-	284.687
Plus CY Advance Procurement (\$ in Millions)	84.507	71.800	71.900	58.600	-	58.600
Total Obligation Authority (\$ in Millions)	551.707	333.700	446.000	343.287	-	343.287

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	32,453.353	32,737.500	34,300.000	29,715.583	-	29,715.583

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
CFE ^(†)	24,570.353	17	417.696	17,850.375	8	142.803	18,542.714	14	259.598	16,688.333	12	200.260	-	-	-	16,688.333	12	200.260
GFE	5,020.294	17	85.345	11,200.875	8	89.607	11,424.643	14	159.945	11,378.833	12	136.546	-	-	-	11,378.833	12	136.546
Other Costs	-	-	48.666	-	-	16.861	-	-	21.701	-	-	15.789	-	-	-	-	-	15.789
Initial Spares	-	-	-	-	-	2.629	-	-	4.656	-	-	3.991	-	-	-	-	-	3.991
Subtotal: Recurring Cost	-	-	551.707	-	-	251.900	-	-	445.900	-	-	356.586	-	-	-	-	-	356.586
Non Recurring Cost																		
Non-Recurring Cost	-	-	-	-	-	10.000	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Non Recurring Cost	-	-	-	-	-	10.000	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Flyaway Cost	-	-	551.707	-	-	261.900	-	-	445.900	-	-	356.586	-	-	-	-	-	356.586
Gross/Weapon System Cost	32,453.353	17	551.707	32,737.500	8	261.900	34,300.000	13	445.900	29,715.583	12	356.587	-	-	-	29,715.583	12	356.587

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Army	Quantity	8	13	12	-	12
	Total Obligation Authority	333.700	446.000	343.287	-	343.287
Total:	Quantity	8	13	12	-	12

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Exhibit P-5, Cost Analysis: PB 2019 Army			Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20		P-1 Line Item Number / Title: 5840A05133 / AH-64 Apache Block IIIB New Build		Item Number / Title [DODIC]: A05133 / AH-64 Apache Block IIIB New Build		
ID Code (A=Service Ready, B=Not Service Ready) :			MDAP/MAIS Code:			
Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Secondary Distribution	Total Obligation Authority	333.700	446.000	343.287	-	343.287

(t) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2019 Army							Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20			P-1 Line Item Number / Title: 5840A05133 / AH-64 Apache Block IIIB New Build				Item Number / Title [DODIC]: A05133 / AH-64 Apache Block IIIB New Build					

Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
CFE ^(†)		2013	The Boeing Company / Mesa	SS / FPIF	AMCOM	Mar 2014	Sep 2014	13	16,375.300	Y		Jul 2012
CFE ^(†)		2014	The Boeing Company / Mesa	SS / FPIF	AMCOM	Sep 2014	Nov 2016	4	16,873.700	Y		Jul 2014
CFE ^(†)		2017	The Boeing Company / Mesa	SS / FFP	AMCOM	Sep 2017	Dec 2019	8	17,850.380	Y		Apr 2015
CFE ^(†)		2018	The Boeing Company / Mesa	SS / FFP	AMCOM	Jan 2018	Aug 2020	14	18,542.710	Y		Apr 2015
CFE ^(†)		2019	The Boeing Company / Mesa	SS / FFP	AMCOM	Jan 2019	Jan 2022	12	16,688.330	Y		Apr 2015

^(†) indicates the presence of a P-21

Remarks:

Major Contractor Furnished Equipment (CFE) cost drivers include the Fuselage, Transmission, and Composite Main Rotor Blades. Government Furnished Equipment (GFE) includes engines, Embedded Global Positioning System Inertial Navigation Systems (EGIs), Radar Electronics Unit (REU), Modernized Target Acquisition Designation System (MTADS)/Pilot Night Vision System (PNVS) and Manned/Unmanned Teaming Extended Capability (MUMT-X). Other Cost includes Support Equipment, Peculiar Ground Support (PGSE), and Government Program Management Support.

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Exhibit P-21, Production Schedule: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20		P-1 Line Item Number / Title: 5840A05133 / AH-64 Apache Block IIIB New Build
		Item Number / Title [DODIC]: A05133 / AH-64 Apache Block IIIB New Build

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2014												Fiscal Year 2015												BALANCE									
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2013	BAL DUE AS OF 1 OCT	Calendar Year 2014												Calendar Year 2015																				
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P								
CFE																																							
	1	2013	ARMY	13	0	13																																	3
	1	2014	ARMY	4	0	4																																4	
	1	2017	ARMY	8	0	8																																8	
	1	2018	ARMY	14	0	14																																14	
	1	2019	ARMY	12	0	12																																12	

O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2013	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P
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Exhibit P-21, Production Schedule: PB 2019 Army			Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20		P-1 Line Item Number / Title: 5840A05133 / AH-64 Apache Block IIIB New Build			Item Number / Title [DODIC]: A05133 / AH-64 Apache Block IIIB New Build		

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2016												Fiscal Year 2017												BALANCE				
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016												Calendar Year 2017															
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P			
CFE																																		
1		2013	ARMY	13	10	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1											0	
1		2014	ARMY	4	0	4	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1										0	
1		2017	ARMY	8	0	8																										A -	8	
1		2018	ARMY	14	0	14																												14
1		2019	ARMY	12	0	12																												12

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Exhibit P-21, Production Schedule: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20		P-1 Line Item Number / Title: 5840A05133 / AH-64 Apache Block IIIB New Build
		Item Number / Title [DODIC]: A05133 / AH-64 Apache Block IIIB New Build

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2018														Fiscal Year 2019														B A L A N C E	
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018														Calendar Year 2019														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
CFE																																			
1		2013	ARMY	13	13	0																								0					
1		2014	ARMY	4	4	0																								0					
1		2017	ARMY	8	0	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8					
1		2018	ARMY	14	0	14				A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14						
1		2019	ARMY	12	0	12															A	-	-	-	-	-	-	-	12						
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2019 Army															Date: February 2018														
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20										P-1 Line Item Number / Title: 5840A05133 / AH-64 Apache Block IIIB New Build										Item Number / Title [DODIC]: A05133 / AH-64 Apache Block IIIB New Build									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2020												Fiscal Year 2021												BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020												Calendar Year 2021												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
CFE																															
1		2013	ARMY	13	13	0																							0		
1		2014	ARMY	4	4	0																							0		
1		2017	ARMY	8	0	8	-	-	1	1	-	1	2	-	1	2													0		
1		2018	ARMY	14	0	14	-	-	-	-	-	-	-	-	-	2	2	2	2	2	1	1	1	1					0		
1		2019	ARMY	12	0	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2019 Army															Date: February 2018														
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20										P-1 Line Item Number / Title: 5840A05133 / AH-64 Apache Block IIIB New Build										Item Number / Title [DODIC]: A05133 / AH-64 Apache Block IIIB New Build									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2022														Fiscal Year 2023														B A L A N C E	
O C C O	M F R #	F Y	S E R V I C E	P R O C Q T Y	A C C E P T P R I O R T O 1 O C T 2 0 2 1	B A L D U E A S O F 1 O C T	Calendar Year 2022														Calendar Year 2023														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
CFE																																			
1	1	2013	ARMY	13	13	0																							0						
1	1	2014	ARMY	4	4	0																							0						
1	1	2017	ARMY	8	8	0																							0						
1	1	2018	ARMY	14	14	0																							0						
1	1	2019	ARMY	12	0	12	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0						
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20		P-1 Line Item Number / Title: 5840A05133 / AH-64 Apache Block IIIB New Build
		Item Number / Title [DODIC]: A05133 / AH-64 Apache Block IIIB New Build

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2019	1-8-5 For 2019	MAX For 2019	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	The Boeing Company - Mesa	48	98	144	1	11	32	43	1	6	32	38

Remarks:
 The Economical Production Rate of 98 aircraft per year is the maximum capacity at Full Rate Production assuming a 1-8-5 shift. This requirement is driven primarily by the production rate associated with current fuselage tooling capabilities. In order to increase the 1-8-5 (single shift) production rate, additional tooling must be procured. The minimum rate of 48 aircraft per year is based upon Combined Remanufacture and New Build quantities.

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Advance Procurement Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary	P-1 Line Item Number / Title: 5840A05133 / AH-64 Apache Block IIIB New Build
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Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Gross/Weapon System Cost (<i>\$ in Millions</i>)	84.507	71.800	71.900	58.600	-	58.600	18.000	0.000	-	-	Continuing	Continuing
Net Procurement (P-1) (<i>\$ in Millions</i>)	84.507	71.800	71.900	58.600	-	58.600	18.000	0.000	-	-	Continuing	Continuing
Total Obligation Authority (<i>\$ in Millions</i>)	84.507	71.800	71.900	58.600	-	58.600	18.000	0.000	-	-	Continuing	Continuing

Description:

The AH-64E Apache New Build aircraft is the same configuration as the AH-64E Remanufacture aircraft and procured using the same contracts. While the AH-64E Remanufacture program inducts aging AH-64D aircraft into a remanufacture production line, the AH-64E New Build program assembles all new components resulting in completely new aircraft at the end of the production process. These aircraft are procured at a significantly higher cost because they include all new components. A new build Modernized Target Acquisition Designation Sight / Pilot Night Vision Sensor (MTADS/PNVS) system will be procured and provided with each aircraft. Other associated Government Furnished Equipment (GFE) such as the Fire Control Radar (FCR), Modernized Radar Frequency Interferometer (M-RFI), Radar Electronics Unit (REU), and Manned/Unmanned Teaming Extended Capability (MUMT-X) will be procured and provided in accordance with the basis of issue plan.

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Exhibit P-40, Advance Procurement Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 5840A05133 / AH-64 Apache Block IIIB New Build

Program Elements for Code B Items: N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-10	A05133 / AH-64 Apache Block IIIB New Build			17 / 84.507	8 / 71.800	13 / 71.900	12 / 58.600	- / -	12 / 58.600
P-40	Total Gross/Weapon System Cost			17 / 84.507	8 / 71.800	13 / 71.900	12 / 58.600	- / -	12 / 58.600

*Title represents the P-10 Title for Advance Procurement.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 The New Build program prior year funding includes Congressionally appropriated Overseas Contingency Operations (OCO) funding to procure New Build aircraft to fill aircraft shortages due to combat attrition and training loss. OCO funding does not provide advance procurement for long lead items for these aircraft.

All COMPO 1 Active.

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Exhibit P-10, Advance Procurement Requirements Analysis (page 1 - Budget Funding Justification): PB 2019 Army					Date: February 2018	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20		P-1 Line Item Number / Title: 5840A05133 / AH-64 Apache Block IIIB New Build			P-5 Number / Title: A05133 / AH-64 Apache Block IIIB New Build	
First System (2019) Award Date: July 2009		First System (2019) Completion Date: November 2011			Interval Between Systems: 1 Months	
AH-64 Apache Block IIIB New Build		Production Leadtime <i>(Months)</i>	Prior Years <i>(Each)</i>	FY 2017 <i>(Each)</i>	FY 2018 <i>(Each)</i>	FY 2019 <i>(Each)</i>
Quantity			17	8	13	12
Cost Elements		When Required <i>(Months)</i>	Prior Years <i>(\$ M)</i>	FY 2017 <i>(\$ M)</i>	FY 2018 <i>(\$ M)</i>	FY 2019 <i>(\$ M)</i>
Other						
AH-64E Apache New Build		12	84.507	71.800	71.900	58.600
<i>Total: Other</i>			<i>84.507</i>	<i>71.800</i>	<i>71.900</i>	<i>58.600</i>
Total Advance Procurement/Obligation Authority			84.507	71.800	71.900	58.600

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Exhibit P-10, Advance Procurement Requirements Analysis (page 2 - Budget Funding Justification): PB 2019 Army						Date: February 2018	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20		P-1 Line Item Number / Title: 5840A05133 / AH-64 Apache Block IIIB New Build			P-5 Number / Title: A05133 / AH-64 Apache Block IIIB New Build		
		FY 2019					
Cost Elements	QPA <i>(Each)</i>	Production Leadtime <i>(Months)</i>	Unit Cost <i>(\$ K)</i>	Contract Forecast Date	2019 Qty <i>(Each)</i>	For FY	Total Cost Request <i>(\$ M)</i>
Other							
AH-64E Apache New Build		-					58.600
<i>Total: Other</i>							58.600
Total Advance Procurement/Obligation Authority							58.600

Description:
FY19 Funding of \$58.6 million to support procurement of 5 AH-64E New Build aircraft in FY20.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 6771AA0005 / UH-60 Blackhawk M Model (MYP)

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	873	61	48	49	1	50	48	54	28	35	Continuing	Continuing
Gross/Weapon System Cost (<i>\$ in Millions</i>)	14,908.555	1,212.125	1,110.794	1,069.397	21.246	1,090.643	1,026.199	1,125.121	753.814	886.902	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	3,798.026	127.079	172.486	80.587	-	80.587	111.563	121.274	78.967	155.057	Continuing	Continuing
Net Procurement (P-1) (<i>\$ in Millions</i>)	11,110.529	1,085.046	938.308	988.810	21.246	1,010.056	914.636	1,003.847	674.847	731.845	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	3,925.105	174.107	86.295	106.150	-	106.150	119.358	78.967	155.057	85.384	Continuing	Continuing
Total Obligation Authority (<i>\$ in Millions</i>)	15,035.634	1,259.153	1,024.603	1,094.960	21.246	1,116.206	1,033.994	1,082.814	829.904	817.229	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	17,077.383	19,870.902	23,141.542	21,824.429	21,246.000	21,812.860	21,379.146	20,835.574	26,921.929	25,340.057	Continuing	Continuing

Description:

The UH-60M Black Hawk Helicopter serves as the Army's utility helicopter for the near and midterm force and is in line with the Army's Modernization Strategy, the National Military Strategy, and the National Defense Strategy. The UH-60M Black Hawk is a digital networked platform with greater range and lift to support maneuver Commanders through air assault, general support command and control, and aeromedical evacuation. Full rate production for this new build helicopter began in 2007. The current UH-60 Army Acquisition Objective (AAO) is 2,135 which will be obtained by procuring a combination 1375 UH-60M and 760 UH-60L to UH-60V conversion models. The UH-60M Black Hawk, with the integrated Medical Evacuation (MEDEVAC) Mission Equipment Package (MEP) kit, provides day/night and adverse weather emergency evacuation of casualties. The integration of the MEDEVAC MEP into the UH-60M changes the nomenclature to HH-60M.

Note: FY 2018 procurement dollars in the amount of \$1024.603 million supports purchase of 50 H-60M aircraft. The P-40 states FY 2018 quantity of 48. The increase in quantity is due to cost avoidance with award of the Multi-Year IX Contract on June 30, 2017.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	33	24	40	1	41	36	29	3	19
	Total Obligation Authority	793.363	532.015	955.196	21.246	976.442	709.874	516.229	80.556	449.436
ANG	Quantity	28	24	9	-	9	12	25	10	16
	Total Obligation Authority	465.790	492.588	139.764	-	139.764	324.120	566.585	274.808	367.793
AR	Quantity	-	-	-	-	-	-	-	-	15
	Total Obligation Authority	-	-	-	-	-	-	-	-	474.540
Total:	Quantity	61	48	49	1	50	48	54	28	35
Secondary Distribution	Total Obligation Authority	1,259.153	1,024.603	1,094.960	21.246	1,116.206	1,033.994	1,082.814	829.904	817.229

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 6771AA0005 / UH-60 Blackhawk M Model (MYP)

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	A05002 / UH-60 BLACK HAWK (MYP)	P-5a, P-21			873 / 14,908.555	61 / 1,212.125	48 / 1,110.794	49 / 1,069.397	1 / 21.246	50 / 1,090.643
P-40	Total Gross/Weapon System Cost				873 / 14,908.555	61 / 1,212.125	48 / 1,110.794	49 / 1,069.397	1 / 21.246	50 / 1,090.643

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY 2019 Base procurement dollars in the amount of \$1094.960 million supports procurement of 49 aircraft.
 FY 2019 OCO procurement dollars in the amount of \$21.246 million supports purchase of 1 H-60M War Replacement Aircraft (WRA) for United States Special Operations Command.
 Note: Core Civilian Manpower was moved to a separate Acquisition O&M in FY 2019 reducing the Support - Program Management Cost requirement for A05002 UH-60 Black Hawk (MYP) funding line.
 Note: FY 2018 procurement dollars in the amount of \$1024.603 million supports purchase of 50 H-60M aircraft. The P-40 states FY 2018 quantity of 48. The increase in quantity is due to cost avoidance with award of the Multi-Year IX Contract on June 30, 2017.
 Note: The multi-year 9 contract versus 5 single year contracts for FY 2017 through FY 2021 is projected to yield a 15.5% cost avoidance (\$587.261 million).
 In accordance with section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses and providing military support to civil authorities.
 Two additional aircraft in FY15 and three additional aircraft in FY16 were procured as a result of the Black Hawk Exchange and Sales Team (BEST) program. This program avoids demilitarization and divestment cost and applies proceeds from the divestiture of non-excess obsolete H-60 aircraft towards the procurement of replacement H-60M aircraft in accordance with 40 U.S.C. 503 and AR725-1 as approved by the Army Acquisition Executive (AAE).

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Exhibit P-5, Cost Analysis: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 6771AA0005 / UH-60 Blackhawk M Model (MYP)	Item Number / Title [DODIC]: A05002 / UH-60 BLACK HAWK (MYP)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Procurement Quantity (<i>Units in Each</i>)	873	61	48	49	1	50
Gross/Weapon System Cost (<i>\$ in Millions</i>)	14,908.555	1,212.125	1,110.794	1,069.397	21.246	1,090.643
Less PY Advance Procurement (<i>\$ in Millions</i>)	3,798.026	127.079	172.486	80.587	-	80.587
Net Procurement (P-1) (<i>\$ in Millions</i>)	11,110.529	1,085.046	938.308	988.810	21.246	1,010.056
Plus CY Advance Procurement (<i>\$ in Millions</i>)	3,925.105	174.107	86.295	106.150	-	106.150
Total Obligation Authority (<i>\$ in Millions</i>)	15,035.634	1,259.153	1,024.603	1,094.960	21.246	1,116.206

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	17,077.383	19,870.902	23,141.542	21,824.429	21,246.000	21,812.860

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
Airframes/CFE ^(†)	11,652.305	873	10,172.462	14,150.705	61	863.193	15,400.700	50	770.035	15,853.380	49	776.816	15,853.380	1	15.853	15,853.380	50	792.669
Engines/Accessories	701.341	1,746	1,224.541	757.746	122	92.445	777.470	100	77.747	793.020	98	77.716	793.020	2	1.586	793.020	100	79.302
Avionics (GFE)	-	-	582.177	-	-	44.224	-	-	33.064	-	-	34.484	-	-	0.704	-	-	35.188
Other GFE	-	-	348.036	-	-	18.217	-	-	16.227	-	-	16.234	-	-	0.331	-	-	16.565
Subtotal: Recurring Cost	-	-	12,327.217	-	-	1,018.079	-	-	897.073	-	-	905.250	-	-	18.474	-	-	923.724
Non Recurring Cost																		
ECO (All FLYAWAY Components)	-	-	350.348	-	-	35.852	-	-	27.065	-	-	30.531	-	-	0.623	-	-	31.154
Other Costs (Mission Equipment)	-	-	682.970	-	-	22.767	-	-	33.910	-	-	33.631	-	-	0.258	-	-	33.889
Tooling Equipment	-	-	95.973	-	-	3.283	-	-	0.230	-	-	0.026	-	-	0.001	-	-	0.027
Other Nonrecurring Cost	-	-	84.059	-	-	1.041	-	-	0.871	-	-	0.871	-	-	0.017	-	-	0.888
Subtotal: Non Recurring Cost	-	-	1,213.350	-	-	62.943	-	-	62.076	-	-	65.059	-	-	0.899	-	-	65.958
Subtotal: Flyaway Cost	-	-	13,540.567	-	-	1,081.022	-	-	959.149	-	-	970.309	-	-	19.373	-	-	989.682
Space Vehicle Cost																		
Recurring Cost																		
***** FIX ME *****	-	-	-44.044	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	-44.044	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 6771AA0005 / UH-60 Blackhawk M Model (MYP)	Item Number / Title [DODIC]: A05002 / UH-60 BLACK HAWK (MYP)
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Space Vehicle Cost</i>	-	-	-44.044	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - Data Cost																		
Technical Publications	-	-	28.070	-	-	3.570	-	-	3.644	-	-	3.642	-	-	0.074	-	-	3.716
<i>Subtotal: Support - Data Cost</i>	-	-	28.070	-	-	3.570	-	-	3.644	-	-	3.642	-	-	0.074	-	-	3.716
Support - Fielding Cost																		
Fielding	-	-	604.418	-	-	76.925	-	-	60.488	-	-	55.898	-	-	0.992	-	-	56.890
<i>Subtotal: Support - Fielding Cost</i>	-	-	604.418	-	-	76.925	-	-	60.488	-	-	55.898	-	-	0.992	-	-	56.890
Support - Program Management Cost																		
Government Management	-	-	379.855	-	-	43.108	-	-	43.994	-	-	25.234	-	-	0.515	-	-	25.749
<i>Subtotal: Support - Program Management Cost</i>	-	-	379.855	-	-	43.108	-	-	43.994	-	-	25.234	-	-	0.515	-	-	25.749
Support - Training Cost																		
Equipment	-	-	399.690	-	-	7.500	-	-	43.519	-	-	14.314	-	-	0.292	-	-	14.606
<i>Subtotal: Support - Training Cost</i>	-	-	399.690	-	-	7.500	-	-	43.519	-	-	14.314	-	-	0.292	-	-	14.606
Gross/Weapon System Cost	17,077.383	873	14,908.555	19,870.902	61	1,212.125	23,141.542	48	1,110.794	21,824.429	49	1,069.397	21,246.000	1	21.246	21,812.860	50	1,090.643

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Army	Quantity	33	24	40	1	41
	Total Obligation Authority	793.363	532.015	955.196	21.246	976.442
ANG	Quantity	28	24	9	-	9
	Total Obligation Authority	465.790	492.588	139.764	-	139.764
Total: Secondary Distribution	Quantity	61	48	49	1	50
	Total Obligation Authority	1,259.153	1,024.603	1,094.960	21.246	1,116.206

(t) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 6771AA0005 / UH-60 Blackhawk M Model (MYP)	Item Number / Title [DODIC]: A05002 / UH-60 BLACK HAWK (MYP)
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
Airframes/CFE ^(†)		2015	Sikorsky Aircraft / Stratford CT	SS / FFP	AMCOM	Dec 2014	Jun 2015	87	11,792.023	Y		Jan 2010
Airframes/CFE ^(†)		2016	Sikorsky Aircraft / Stratford CT	SS / FFP	AMCOM	Dec 2015	Aug 2016	107	11,136.047	Y		Jan 2010
Airframes/CFE ^(†)		2017	Sikorsky Aircraft / Stratford CT	SS / FFP	AMCOM	Jun 2017	Oct 2017	61	14,150.710	Y		Apr 2014
Airframes/CFE ^(†)		2018	Sikorsky Aircraft / Stratford CT	SS / FFP	AMCOM	Dec 2017	Jul 2018	50	15,400.700	Y		Apr 2014
Airframes/CFE ^(†)		2019	Sikorsky Aircraft / Stratford CT	SS / FFP	AMCOM	Dec 2018	Jul 2019	50	15,853.380	Y		Apr 2014

^(†) indicates the presence of a P-21

Remarks:

FY 2017 began the current five (5) year multi-year (MY9) contract for the H-60Ms.

Delivery schedules appear to extend beyond the 12 month period for the following reasons:

Yearly procurements consist of UH-60M, HH-60M and supplemental aircraft. Each of the three are awarded on different contract line items. While each of these efforts deliver all of their aircraft within a 12 month span, they do not deliver within the same 12 month time period.

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Exhibit P-21, Production Schedule: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20 **P-1 Line Item Number / Title:** 6771AA0005 / UH-60 Blackhawk M Model (MYP) **Item Number / Title [DODIC]:** A05002 / UH-60 BLACK HAWK (MYP)

Cost Elements <i>(Units in Each)</i>				Fiscal Year 2015														Fiscal Year 2016												BALANCE			
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	Calendar Year 2015														Calendar Year 2016												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P		
Airframes/CFE																																	
Prior Years Deliveries: 679																																	
1	2015	ARMY	87	0	87			A	-	-	-	-	-	-	1	1	7	2	6	10		6	12	6	5	6	6	6	3	2	2	6	
1	2016	ARMY	107	0	107																		A	-	-	-	-	-	-	-	12	6	89
1	2016	FMS (‡)	57	0	57																		A	-	-	-	-	-	-	3	3	2	49
1	2016	NAVY (‡)	29	0	29																		A	-	-	-	-	-	-	-	-	-	29
1	2016	Total	193	0	193																		-	-	-	-	-	-	-	3	15	8	167
1	2017	ARMY	61	0	61																												61
1	2017	FMS (‡)	6	0	6																												6
1	2017	Total	67	0	67																												67
1	2018	ARMY	50	0	50																												50
1	2018	FMS (‡)	19	0	19																												19
1	2018	Total	69	0	69																												69
1	2019	ARMY	50	0	50																												50
1	2019	FMS (‡)	12	0	12																												12
1	2019	Total	62	0	62																												62
								O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S		
								C	O	E	A	E	A	P	A	U	U	U	E	C	O	V	E	A	E	A	P	A	U	U	U	E	
								T	V	C	N	B	R	R	Y	N	L	G	P	T	V	C	N	B	R	R	Y	N	L	G	P		

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Exhibit P-21, Production Schedule: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20 **P-1 Line Item Number / Title:** 6771AA0005 / UH-60 Blackhawk M Model (MYP) **Item Number / Title [DODIC]:** A05002 / UH-60 BLACK HAWK (MYP)

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2017														Fiscal Year 2018												BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017														Calendar Year 2018												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
Airframes/CFE																																	
Prior Years Deliveries: 679																																	
1	2015	ARMY	87	81	6	-	3	3																				0					
1	2016	ARMY	107	18	89	5	6	4	7	2	7	9	11	8	7	10	6	2	2	3								0					
1	2016	FMS (‡)	57	8	49	2	2	2	3	4	2	1	1	2	2	6	7	4	2	9								0					
1	2016	NAVY (‡)	29	0	29	-	-	-	2	2	4	3	4	2	2	2	2	2	2	2								0					
1	2016	Total	193	26	167	7	8	6	12	8	13	13	16	12	11	18	15	8	6	14	-	-	-	-	-	-	-	0					
1	2017	ARMY	61	0	61									A -	-	-	-	2	3	3	4	9	10	10	7	9	2	2	-	0			
1	2017	FMS (‡)	6	0	6									A -	-	-	-	-	-	-	-	-	-	-	-	-	2	4	0				
1	2017	Total	67	0	67									-	-	-	-	2	3	3	4	9	10	10	7	9	2	4	4	0			
1	2018	ARMY	50	0	50																A -	-	-	-	-	-	4	4	5	37			
1	2018	FMS (‡)	19	0	19																A -	-	-	-	-	-	-	1	18				
1	2018	Total	69	0	69																-	-	-	-	-	-	4	4	6	55			
1	2019	ARMY	50	0	50																								50				
1	2019	FMS (‡)	12	0	12																								12				
1	2019	Total	62	0	62																								62				

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Exhibit P-21, Production Schedule: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20 **P-1 Line Item Number / Title:** 6771AA0005 / UH-60 Blackhawk M Model (MYP) **Item Number / Title [DODIC]:** A05002 / UH-60 BLACK HAWK (MYP)

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2019													Fiscal Year 2020													BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019													Calendar Year 2020													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
Airframes/CFE																																	
Prior Years Deliveries: 679																																	
1	2015	ARMY	87	87	0																											0	
1	2016	ARMY	107	107	0																											0	
1	2016	FMS (‡)	57	57	0																											0	
1	2016	NAVY (‡)	29	29	0																											0	
1	2016	Total	193	193	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
1	2017	ARMY	61	61	0																											0	
1	2017	FMS (‡)	6	6	0																											0	
1	2017	Total	67	67	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
1	2018	ARMY	50	13	37	4	4	4	5	4	4	3	4	5																		0	
1	2018	FMS (‡)	19	1	18	4	2	2	2	1	1	2	2	2																		0	
1	2018	Total	69	14	55	8	6	6	7	5	5	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
1	2019	ARMY	50	0	50			A -	-	-	-	-	-	-	4	4	5	4	4	4	4	4	4	4	4	4	5					0	
1	2019	FMS (‡)	12	0	12			A -	-	-	-	-	-	-	-	-	-	-	2	2	1	1	2	2	1	1					0		
1	2019	Total	62	0	62			-	-	-	-	-	-	-	4	4	5	4	6	6	5	5	6	6	5	6	-	-	-		0		
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				

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Exhibit P-21, Production Schedule: PB 2019 Army	Date: February 2018
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Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 6771AA0005 / UH-60 Blackhawk M Model (MYP)	Item Number / Title [DODIC]: A05002 / UH-60 BLACK HAWK (MYP)
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2019	1-8-5 For 2019	MAX For 2019	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Sikorsky Aircraft - Stratford CT	18	96	120	8	3	6	9	0	3	6	9

Remarks:
Please refer to President's Budget 2017 Exhibit MYP-1, Multiyear Procurement Criteria, UH-60M/HH-60M BLACK HAWK Helicopter Multiyear IX (ARMY) for minimum and maximum procurement quantities under the Multi-Year IX Contract.

(‡) Delivery rows marked with this symbol indicate that they are funded through a separate Line Item. See the respective components' exhibits for details, including the full delivery schedule.

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Advance Procurement Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary	P-1 Line Item Number / Title: 6771AA0005 / UH-60 Blackhawk M Model (MYP)
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Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Gross/Weapon System Cost (<i>\$ in Millions</i>)	3,925.105	174.107	86.295	106.150	-	106.150	119.358	78.967	155.057	85.384	Continuing	Continuing
Net Procurement (P-1) (<i>\$ in Millions</i>)	3,925.105	174.107	86.295	106.150	-	106.150	119.358	78.967	155.057	85.384	Continuing	Continuing
Total Obligation Authority (<i>\$ in Millions</i>)	3,925.105	174.107	86.295	106.150	-	106.150	119.358	78.967	155.057	85.384	Continuing	Continuing

Description:

The Advance Procurement for the UH-60 Black Hawk contains funding for the airframe and engine contracts as well as funding for Government Furnished Equipment (GFE) to support the UH-60 aircraft and mission kit production. GFE (in addition to the engine) currently requiring advance procurement includes numerous communication, navigation, and Aircraft Survivability Equipment items procured by the Communications and Electronics Command (CECOM).

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Exhibit P-40, Advance Procurement Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 6771AA0005 / UH-60 Blackhawk M Model (MYP)

Program Elements for Code B Items: N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-10	A05002 / UH-60 BLACK HAWK (MYP)			873 / 3,925.105	61 / 174.107	48 / 86.295	49 / 106.150	1 / -	50 / 106.150
P-40	Total Gross/Weapon System Cost			873 / 3,925.105	61 / 174.107	48 / 86.295	49 / 106.150	1 / -	50 / 106.150

*Title represents the P-10 Title for Advance Procurement.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY 2017 procures long lead items such as T700-GE-701D engines and avionics components for the multi-year 9 contract.

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Exhibit P-10, Advance Procurement Requirements Analysis (page 1 - Budget Funding Justification): PB 2019 Army					Date: February 2018	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20		P-1 Line Item Number / Title: 6771AA0005 / UH-60 Blackhawk M Model (MYP)			P-5 Number / Title: A05002 / UH-60 BLACK HAWK (MYP)	
First System (2019) Award Date: May 2005		First System (2019) Completion Date: June 2006			Interval Between Systems: 18 Months	
UH-60 BLACK HAWK (MYP)		Production Leadtime <i>(Months)</i>	Prior Years <i>(Each)</i>	FY 2017 <i>(Each)</i>	FY 2018 <i>(Each)</i>	FY 2019 <i>(Each)</i>
Quantity			873	61	48	50
Cost Elements		When Required <i>(Months)</i>	Prior Years <i>(\$ M)</i>	FY 2017 <i>(\$ M)</i>	FY 2018 <i>(\$ M)</i>	FY 2019 <i>(\$ M)</i>
Other						
Prior Year		0	2,531.426	-	-	-
CFE Airframe		6	664.634	113.308	28.576	35.500
Auxiliary Power Unit		3	34.758	3.098	2.941	3.600
Engines		3	539.086	47.684	45.269	55.410
EGI		3	83.633	7.691	7.301	8.937
Heads Up Display AVS-7		3	26.958	2.326	2.208	2.703
Hover Infrared Suppressor		1	28.959	-	-	-
Miscellaneous		1	15.651	-	-	-
<i>Total: Other</i>			3,925.105	174.107	86.295	106.150
Total Advance Procurement/Obligation Authority			3,925.105	174.107	86.295	106.150

UNCLASSIFIED

Exhibit P-10, Advance Procurement Requirements Analysis (page 2 - Budget Funding Justification): PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 6771AA0005 / UH-60 Blackhawk M Model (MYP)	P-5 Number / Title: A05002 / UH-60 BLACK HAWK (MYP)
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Cost Elements	QPA <i>(Each)</i>	FY 2019					Total Cost Request <i>(\$ M)</i>
		Production Leadtime <i>(Months)</i>	Unit Cost <i>(\$ K)</i>	Contract Forecast Date	2019 Qty <i>(Each)</i>	For FY	
Other							
Prior Year	-						-
CFE Airframe	1						35.500
Auxiliary Power Unit	1						3.600
Engines	2						55.410
EGI	2						8.937
Heads Up Display AVS-7	1						2.703
Hover Infrared Suppressor	-						-
Miscellaneous	-						-
<i>Total: Other</i>							106.150
Total Advance Procurement/Obligation Authority							106.150

Description:
N/A

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 6773A05009 / UH-60 BLACK HAWK A AND L MODELS

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	1,056	27	36	18	-	18	34	34	48	48	-	1,301
Gross/Weapon System Cost (<i>\$ in Millions</i>)	10,173.511	46.173	76.516	146.138	-	146.138	173.690	166.969	171.634	174.656	-	11,129.287
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	10,173.511	46.173	76.516	146.138	-	146.138	173.690	166.969	171.634	174.656	-	11,129.287
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	10,173.511	46.173	76.516	146.138	-	146.138	173.690	166.969	171.634	174.656	-	11,129.287

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	9,634.007	1,710.111	2,125.444	8,118.778	-	8,118.778	5,108.529	4,910.853	3,575.708	3,638.667	-	8,554.410

Description:

UH-60 A and L Models include UH-60 A to L conversions in FY16 through FY18 and UH-60L Digital, now designated as UH-60V, production starting in FY18. The UH-60 BLACKHAWK helicopter is the Army's utility helicopter in the future force. It is a twin engine, single rotor, four bladed utility helicopter used for air assault, general support, command & control, and aero-medical evacuations (MEDEVAC). The UH-60 is joint force capable, providing 24 hour/day support including operations at night and in adverse weather conditions. The UH-60 is designed to carry a crew of four plus eleven combat equipped troops or an external load up to 9,000 pounds. The UH-60 BLACK HAWK was fielded in 1978 as a replacement for the UH-1. From 1978 to 1988, UH-60As were produced. In 1989 production of UH-60Ls with improved engines and drive train began. In 2007, full rate production of UH-60Ms began which provided a digital cockpit, digital Flight Management System (FMS), improved engine, and wide-cord main rotor blades. The UH-60V provides an integrated digital map, integrated performance planning, common functionality and commonality of training with UH-60M.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	3	-	8	-	8	14	9	-	-
	Total Obligation Authority	5.130	-	64.950	-	64.950	71.519	44.198	-	-
ANG	Quantity	24	36	10	-	10	20	25	41	41
	Total Obligation Authority	41.043	76.516	81.188	-	81.188	102.171	122.771	146.604	149.185
AR	Quantity	-	-	-	-	-	-	-	7	7
	Total Obligation Authority	-	-	-	-	-	-	-	25.030	25.471
Total:	Quantity	27	36	18	-	18	34	34	48	48
Secondary Distribution	Total Obligation Authority	46.173	76.516	146.138	-	146.138	173.690	166.969	171.634	174.656

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 6773A05009 / UH-60 BLACK HAWK A AND L MODELS

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	A05009 / UH-60 A and L Models (A05009) (Operational)				1,056 / 10,173.511	27 / 46.173	36 / 76.516	18 / 146.138	- / -	18 / 146.138
P-40	Total Gross/Weapon System Cost				1,056 / 10,173.511	27 / 46.173	36 / 76.516	18 / 146.138	- / -	18 / 146.138

Exhibits Schedule					FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	A05009 / UH-60 A and L Models (A05009) (Operational)				34 / 173.690	34 / 166.969	48 / 171.634	48 / 174.656	- / -	1,301 / 11,129.287
P-40	Total Gross/Weapon System Cost				34 / 173.690	34 / 166.969	48 / 171.634	48 / 174.656	- / -	1,301 / 11,129.287

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY19 base procurement dollars in the amount of \$146.138 million will procure 18 UH-60Vs. The UH-60 A to L conversion program expands the current UH-60 A to A recapitalization/rebuild program to a UH-60 A to L recapitalization/rebuild program. Effective in FY16, all A to L conversions and UH-60V conversions will be procured under this line, A05009. Prior to FY16 the funding for UH-60 A to L conversions was utilized under Black Hawk Modifications line AA0492.

The current H-60 Black Hawk Army Acquisition Objective (AAO) is 2135 which is obtained by procuring a combination of new 60M and Recapitalized aircraft (A/LV).

In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

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Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 6773A05009 / UH-60 BLACK HAWK A AND L MODELS	Modification Number / Title: A05009 / UH-60 A and L Models (A05009)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	1,056	27	36	18	-	18	34	34	48	48	-	1,301
Gross/Weapon System Cost (<i>\$ in Millions</i>)	10,173.511	46.173	76.516	146.138	-	146.138	173.690	166.969	171.634	174.656	-	11,129.287
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	10,173.511	46.173	76.516	146.138	-	146.138	173.690	166.969	171.634	174.656	-	11,129.287
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	10,173.511	46.173	76.516	146.138	-	146.138	173.690	166.969	171.634	174.656	-	11,129.287

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	9,634.007	1,710.111	2,125.444	8,118.778	-	8,118.778	5,108.529	4,910.853	3,575.708	3,638.667	-	8,554.410

Description:

UH-60 A and L Models includes UH-60 A to L conversions and the UH-60L Digital conversions, now designated as UH-60V.

UH-60V aircraft cost includes all digital components and their associated cost, as well as Engineering Changes, Systems Engineering and Program Management, Trainers, Data and Fielding.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	3	-	8	-	8	14	9	-	-
	Total Obligation Authority	5.130	-	64.950	-	64.950	71.519	44.198	-	-
ANG	Quantity	24	36	10	-	10	20	25	41	41
	Total Obligation Authority	41.043	76.516	81.188	-	81.188	102.171	122.771	146.604	149.185
AR	Quantity	-	-	-	-	-	-	-	7	7
	Total Obligation Authority	-	-	-	-	-	-	-	25.030	25.471
Total: Secondary Distribution	Quantity	27	36	18	-	18	34	34	48	48
	Total Obligation Authority	46.173	76.516	146.138	-	146.138	173.690	166.969	171.634	174.656

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Exhibit P-3a, Individual Modification: PB 2019 Army											Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20				P-1 Line Item Number / Title: 6773A05009 / UH-60 BLACK HAWK A AND L MODELS						Modification Number / Title: A05009 / UH-60 A and L Models (A05009)			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: UH-60 A and L				Modification Type: Operational				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Procurement													
<i>Modification Item 1 of 2:</i> UH-60A to UH-60L Conversions													
A Kits													
Recurring													
Other	1,056 / 10,173.511	27 / 46.173	29 / 37.763	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	1,112 / 10,257.447	
<i>Subtotal: Recurring</i>	1,056 / 10,173.511	27 / 46.173	29 / 37.763	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1,112 / 10,257.447	
<i>Subtotal: UH-60A to UH-60L Conversions</i>	1,056 / 10,173.511	27 / 46.173	29 / 37.763	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	1,112 / 10,257.447	
<i>Modification Item 2 of 2:</i> UH-60V													
A Kits													
Recurring													
Other	- / -	- / -	7 / 33.673	18 / 132.813	- / -	18 / 132.813	34 / 148.017	34 / 140.783	48 / 133.926	48 / 136.194	- / 0.000	189 / 725.406	
<i>Subtotal: Recurring</i>	- / -	- / -	7 / 33.673	18 / 132.813	- / -	18 / 132.813	34 / 148.017	34 / 140.783	48 / 133.926	48 / 136.194	- / -	189 / 725.406	
<i>Subtotal: UH-60V</i>	- / -	- / -	7 / 33.673	18 / 132.813	- / -	18 / 132.813	34 / 148.017	34 / 140.783	48 / 133.926	48 / 136.194	- / -	189 / 725.406	
<i>Subtotal: Procurement, All Modification Items</i>	1,056 / 10,173.511	27 / 46.173	36 / 71.436	18 / 132.813	- / -	18 / 132.813	34 / 148.017	34 / 140.783	48 / 133.926	48 / 136.194	- / -	1,301 / 10,982.853	
Installation													
<i>Modification Item 1 of 2:</i> UH-60A to UH-60L Conversions													
	1,056 / 0.000	27 / 0.000	29 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1,112 / 0.000	
<i>Modification Item 2 of 2:</i> UH-60V													
	- / -	- / -	7 / 5.080	18 / 13.325	- / -	18 / 13.325	34 / 25.673	34 / 26.186	48 / 37.708	48 / 38.462	- / -	189 / 146.434	
<i>Subtotal: Installation</i>	1,056 / 0.000	27 / 0.000	36 / 5.080	18 / 13.325	0 / 0.000	18 / 13.325	34 / 25.673	34 / 26.186	48 / 37.708	48 / 38.462	- / -	1,301 / 146.434	
Total													
Total Cost (Procurement + Support + Installation)	10,173.511	46.173	76.516	146.138	-	146.138	173.690	166.969	171.634	174.656	-	11,129.287	

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Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20		P-1 Line Item Number / Title: 6773A05009 / UH-60 BLACK HAWK A AND L MODELS
		Modification Number / Title: A05009 / UH-60 A and L Models (A05009)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 2: UH-60A to UH-60L Conversions

Manufacturer Information

Manufacturer Name: Corpus Christi Army Depot	Manufacturer Location: Corpus Christi Army Depot
Administrative Leadtime (in Months):	Production Leadtime (in Months): 12

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Depot

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	1,056 / 0.000	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	1,056 / 0.000
FY 2017	- / -	27 / 0.000	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	27 / 0.000
FY 2018	- / -	- / -	29 / 0.000	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	29 / 0.000
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	1,056 / 0.000	27 / 0.000	29 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	1,112 / 0.000

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	36	6	7	7	7	8	8	8	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	92
Out	-	9	9	9	9	6	7	7	7	8	8	8	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	92

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Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 6773A05009 / UH-60 BLACK HAWK A AND L MODELS	Modification Number / Title: A05009 / UH-60 A and L Models (A05009)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 2 of 2: UH-60V

Manufacturer Information

Manufacturer Name: Prototype Integration Facility/Northrop Grumman/CCAD	Manufacturer Location: Huntsville AL/ Woodland Hills CA/Corpus Christi TX
Administrative Leadtime (in Months): 1	Production Leadtime (in Months): 12

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates				Oct 2017	Oct 2018	Oct 2019	Oct 2020
Delivery Dates				Oct 2018	Oct 2019	Oct 2020	Oct 2021

Installation Information

Method of Implementation: Various

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	7 / 5.080	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 5.080
FY 2020	- / -	- / -	- / -	18 / 13.325	- / -	18 / 13.325	- / -	- / -	- / -	- / -	- / -	18 / 13.325
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	34 / 25.673	- / -	- / -	- / -	- / -	34 / 25.673
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 26.186	- / -	- / -	- / -	34 / 26.186
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	48 / 37.708	- / -	- / -	48 / 37.708
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	48 / 38.462	- / -	48 / 38.462
Total	0 / 0.000	0 / 0.000	7 / 5.080	18 / 13.325	0 / 0.000	18 / 13.325	34 / 25.673	34 / 26.186	48 / 37.708	48 / 38.462	- / -	189 / 146.434

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	3	4	4	4	4	6	8	8	9	9	8	8	9	9	12	12	12	12	12	12	12	12	568	757
Out	-	-	-	-	-	-	-	-	-	-	-	3	4	4	4	4	6	8	8	9	9	8	8	9	9	12	12	12	12	616	757

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 6775A05101 / CH-47 Helicopter

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	321	22	6	6	1	7	8	13	13	17	Continuing	Continuing
Gross/Weapon System Cost (<i>\$ in Millions</i>)	8,993.976	652.601	211.283	117.098	25.000	142.098	152.879	378.813	347.407	482.757	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	540.361	99.344	8.707	17.820	-	17.820	24.235	46.392	47.083	65.187	Continuing	Continuing
Net Procurement (P-1) (<i>\$ in Millions</i>)	8,453.615	553.257	202.576	99.278	25.000	124.278	128.644	332.421	300.324	417.570	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	639.705	8.707	17.820	24.235	-	24.235	46.392	47.083	65.187	83.625	Continuing	Continuing
Total Obligation Authority (<i>\$ in Millions</i>)	9,093.320	561.964	220.396	123.513	25.000	148.513	175.036	379.504	365.511	501.195	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	28,018.617	29,663.682	35,213.833	19,516.333	25,000.000	20,299.714	19,109.875	29,139.462	26,723.615	28,397.471	Continuing	Continuing

Description:

The CH-47F Chinook is a twin-turbine, tandem-rotor, heavy-lift transport helicopter with a useful load of up to 25,000 pounds. As the Army's only heavy lift helicopter, the CH-47F Improved Cargo helicopter is an essential component of the Army's Multi-Domain Battle framework. The mission of the CH-47F is to transport troops (including air assault), supplies, weapons, and other cargo in general support operations. The CH-47F is vital to Overseas Contingency Operations and Homeland Security needs of our nation. Secondary missions include medical evacuation, aircraft recovery, parachute drops, disaster relief, and search and rescue. These aircraft are fielded to heavy lift companies contained within Combat Aviation Brigades and Special Operations Aviation. The CH-47F is expected to remain the Army's heavy lift helicopter for the next several decades. To maintain the Chinook the Army's only heavy-lift cargo helicopter, the CH-47F Block II program will insert critical and affordable technologies into the Chinook fleet to affordably maintain the platform's operational capabilities while continuing to meet the Warfighter requirements. Key improvements include the Advanced Chinook Rotor Blade, upgraded transmissions and rotor heads, and strengthened airframes to increase payload across the full spectrum of operational environments. Other improvements include an upgraded electrical system and higher capacity fuel tanks along with aircraft software updates. The first Block II aircraft will be procured in 2021.

The CH-47F Block I ReNew and New Build programs rebuild or replace the CH-47D aircraft for the conventional Army fleet and 69 Special Operations Aircraft to the Block I configurations. The CH-47F PM is fielding and training Combat Aviation Brigades (CABs), NG/USAR units using a New Equipment Training team.

PM Cargo procurement lines provide the common portion of funding for the Special Operations Aircraft, MH-47G. CH-47F Block II, in conjunction with the Technology Applications Project Office (TAPO), is replacing the aging fleet of MH-47G aircraft that has airframe components dating back more than 45 years. The MH-47G program, while complementary to the Block II program, is a separately managed Technology Applications Project Office (TAPO) ARSOAC program with a stand-alone Acquisition Strategy. The current Army Acquisition Objective (AAO) is 542 aircraft.

Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	22	4	6	1	7	8	13	13	17
Total Obligation Authority	561.964	88.560	123.513	25.000	148.513	175.036	379.504	365.511	501.195
AR	-	2	-	-	-	-	-	-	-
Total Obligation Authority	-	131.836	-	-	-	-	-	-	-
Total:	22	6	6	1	7	8	13	13	17

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army							Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary					P-1 Line Item Number / Title: 6775A05101 / CH-47 Helicopter					
ID Code (A=Service Ready, B=Not Service Ready):			Program Elements for Code B Items: N/A			Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A										

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Secondary Distribution	Total Obligation Authority	561.964	220.396	123.513	25.000	148.513	175.036	379.504	365.511	501.195

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UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 6775A05101 / CH-47 Helicopter

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	A05008 / CH-47 NEW BUILD	P-5a			189 / 5,202.541	0 / -	2 / 131.836	- / -	- / -	- / -
P-3a	A05105 / CH-47 SLEP (.)				132 / 3,791.435	22 / 652.601	4 / 79.447	6 / 117.098	1 / 25.000	7 / 142.098
P-40	Total Gross/Weapon System Cost				321 / 8,993.976	22 / 652.601	6 / 211.283	6 / 117.098	1 / 25.000	7 / 142.098

Exhibits Schedule					FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	A05008 / CH-47 NEW BUILD	P-5a			- / -	- / -	- / -	- / -	- / -	- / -
P-3a	A05105 / CH-47 SLEP (.)				8 / 152.879	13 / 378.813	13 / 347.407	17 / 482.757	Continuing	Continuing
P-40	Total Gross/Weapon System Cost				8 / 152.879	13 / 378.813	13 / 347.407	17 / 482.757	Continuing	Continuing

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY 2019 Base procurement dollars in the amount of \$123.513 million supports Army common material funding for 6 MH-47G variant ReNew aircraft and FY 2019 OCO procurement dollars in the amount of \$25.000 million supports the Army common material funding for 1 MH-47G variant New Build replacement OCO aircraft.

Note: P-1 OCO quantity is in error. P-40 OCO quantity is correct.

In accordance with section 1815 of the FY 2008 National Defense Authorization Act (P.L.110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses and providing military support to civil authorities.

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Exhibit P-5, Cost Analysis: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20		P-1 Line Item Number / Title: 6775A05101 / CH-47 Helicopter
		Item Number / Title [DODIC]: A05008 / CH-47 NEW BUILD

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Procurement Quantity (Units in Each)	189	0	2	-	-	-
Gross/Weapon System Cost (\$ in Millions)	5,202.541	-	131.836	-	-	-
Less PY Advance Procurement (\$ in Millions)	32.759	-	0.000	-	-	-
Net Procurement (P-1) (\$ in Millions)	5,169.782	-	131.836	-	-	-
Plus CY Advance Procurement (\$ in Millions)	32.759	-	0.000	-	-	-
Total Obligation Authority (\$ in Millions)	5,202.541	-	131.836	-	-	-

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	27,526.672	-	65,918.000	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
Airframes/CFE ^(†)	20,917.565	183	3,827.914	-	-	-	35,901.000	2	71.802	-	-	-	-	-	-	-	-	-
Engine/Accessories	1,448.217	350	506.876	-	-	-	1,726.500	4	6.906	-	-	-	-	-	-	-	-	-
CFE Avionics	-	-	184.201	-	-	-	-	-	4.492	-	-	-	-	-	-	-	-	-
GFE	-	-	351.103	-	-	-	-	-	7.200	-	-	-	-	-	-	-	-	-
ECO (Flyaway)	-	-	79.613	-	-	-	-	-	2.904	-	-	-	-	-	-	-	-	-
Nonrecurring/SEPM/FDT	-	-	141.410	-	-	-	-	-	23.500	-	-	-	-	-	-	-	-	-
PSE	-	-	21.119	-	-	-	-	-	0.900	-	-	-	-	-	-	-	-	-
Publications/Tech Data	-	-	8.325	-	-	-	-	-	0.398	-	-	-	-	-	-	-	-	-
ECO (Support Items)	-	-	3.653	-	-	-	-	-	0.585	-	-	-	-	-	-	-	-	-
Other support costs	-	-	75.762	-	-	-	-	-	12.136	-	-	-	-	-	-	-	-	-
Initial Spares	-	-	2.565	-	-	-	-	-	1.013	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	<i>-</i>	<i>-</i>	<i>5,202.541</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>131.836</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
<i>Subtotal: Flyaway Cost</i>	<i>-</i>	<i>-</i>	<i>5,202.541</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>131.836</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
Gross/Weapon System Cost	27,526.672	189	5,202.541	-	0	-	65,918.000	2	131.836	-	-	-	-	-	-	-	-	-

Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
AR Quantity	-	2	-	-	-

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Exhibit P-5, Cost Analysis: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 6775A05101 / CH-47 Helicopter	Item Number / Title [DODIC]: A05008 / CH-47 NEW BUILD
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Total Obligation Authority	-	131.836	-	-	-
Total:					
Secondary Distribution					
Quantity	0	2	-	-	-
Total Obligation Authority	-	131.836	-	-	-

(t) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 6775A05101 / CH-47 Helicopter	Item Number / Title [DODIC]: A05008 / CH-47 NEW BUILD
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
Airframes/CFE		2012	The Boeing Company / Ridley Park, PA	SS / FFP	AMCOM	Jan 2012	Oct 2014	25	16,080.000	N		Apr 2007
Airframes/CFE		2013	The Boeing Company / Ridley Park, PA	SS / FFP	AMCOM	Jun 2013	Mar 2015	17	9,133.710	N		Jul 2011
Airframes/CFE		2014	The Boeing Company / Ridley Park, PA	SS / FFP	AMCOM	Dec 2013	Mar 2016	17	9,133.710	N		Jul 2011
Airframes/CFE		2015	The Boeing Company / Ridley Park, PA	SS / FFP	AMCOM	Mar 2015	Mar 2017	6	22,098.333	N		Jul 2011
Airframes/CFE		2016	The Boeing Company / Ridley Park, PA	SS / FFP	AMCOM	Mar 2016	Mar 2018	12	21,982.583	N		Jul 2011
Airframes/CFE		2018	The Boeing Company / Ridley Park, PA	SS / FFP	AMCOM	Dec 2017	Mar 2020	2	35,901.000	N		Jul 2011

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Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 6775A05101 / CH-47 Helicopter	Modification Number / Title: A05105 / CH-47 SLEP

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	132	22	4	6	1	7	8	13	13	17	Continuing	Continuing
Gross/Weapon System Cost (<i>\$ in Millions</i>)	3,791.435	652.601	79.447	117.098	25.000	142.098	152.879	378.813	347.407	482.757	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	507.602	99.344	8.707	17.820	-	17.820	24.235	46.392	47.083	65.187	Continuing	Continuing
Net Procurement (P-1) (<i>\$ in Millions</i>)	3,283.833	553.257	70.740	99.278	25.000	124.278	128.644	332.421	300.324	417.570	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	606.946	8.707	17.820	24.235	-	24.235	46.392	47.083	65.187	83.625	Continuing	Continuing
Total Obligation Authority (<i>\$ in Millions</i>)	3,890.779	561.964	88.560	123.513	25.000	148.513	175.036	379.504	365.511	501.195	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	28,722.992	29,663.682	19,861.750	19,516.333	25,000.000	20,299.714	19,109.875	29,139.462	26,723.615	28,397.471	Continuing	Continuing

Description:

The CH-47F Chinook is a twin-turbine, tandem-rotor, heavy lift transport helicopter with a useful load of up to 25,000 pounds.

To maintain the Chinook the Army's only heavy-lift cargo helicopter, the CH-47F Block II program will insert critical and affordable technologies into the Chinook fleet to affordably maintain the platform's operational capabilities while continuing to meet the Warfighter requirements. Key improvements include the Advanced Chinook Rotor Blade, upgraded transmissions and rotor heads, and strengthened airframes to increase payload across the full spectrum of operational environments. Other improvements include an upgraded electrical system and higher capacity fuel tanks along with aircraft software updates. The first Block II aircraft will be procured in 2021.

PM Cargo procurement line provides the common material funding for the Special Operations Aircraft, MH-47G variant. CH-47F Block II, in conjunction with the Technology Applications Project Office (TAPO), is replacing the aging fleet of MH-47G aircraft that has airframe components dating back more than 45 years. The MH-47G program, while complementary to the Block II program, is a separately managed Technology Applications Project Office (TAPO) ARSOAC program with a stand-alone Acquisition Strategy.

Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army									
Quantity	22	4	6	1	7	8	13	13	17
Total Obligation Authority	561.964	88.560	123.513	25.000	148.513	175.036	379.504	365.511	501.195
Total:									
Secondary Distribution									
Quantity	22	4	6	1	7	8	13	13	17
Total Obligation Authority	561.964	88.560	123.513	25.000	148.513	175.036	379.504	365.511	501.195

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Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20					P-1 Line Item Number / Title: 6775A05101 / CH-47 Helicopter					Modification Number / Title: A05105 / CH-47 SLEP			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: CH-47				Modification Type: .				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Procurement													
Modification Item 1 of 3: CH-47 Block I to Block II													
A Kits													
Recurring													
Block II Recurring Production (Mods)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 151.792	5 / 153.368	9 / 277.356	Continuing	Continuing	
Other Flyaway (NRE, ECOs, SE/PM, ST&E, FDT)	- / -	- / -	- 17.447	- 16.938	- / -	- 16.938	- 13.061	- 173.648	- 137.605	- 125.899	Continuing	Continuing	
Other Spt (Data, CSE, ISE, NET, ICS)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- 10.559	- 10.564	- 13.357	Continuing	Continuing	
Training	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- 14.828	Continuing	Continuing	
Support Equipment	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- 10.415	Continuing	Continuing	
Subtotal: Recurring	- / -	- / -	- 17.447	- 16.938	- / -	- 16.938	- 13.061	5 / 225.999	5 / 191.537	9 / 311.855	Continuing	Continuing	
Subtotal: CH-47 Block I to Block II	- / -	- / -	- 17.447	- 16.938	- / -	- 16.938	- 13.061	5 / 225.999	5 / 191.537	9 / 311.855	Continuing	Continuing	
Modification Item 2 of 3: MH-47G Block I to Block II Common Funding (SOA)													
A Kits													
Recurring													
MH-47G Blk I to Blk II Cmn Funding (SOA)	- / -	- / -	4 / 72.000	6 / 110.160	1 / 25.000	7 / 135.160	8 / 149.818	8 / 152.814	8 / 155.870	8 / 170.902	Continuing	Continuing	
Subtotal: Recurring	- / -	- / -	4 / 72.000	6 / 110.160	1 / 25.000	7 / 135.160	8 / 149.818	8 / 152.814	8 / 155.870	8 / 170.902	Continuing	Continuing	
Subtotal: MH-47G Block I to Block II Common Funding (SOA)	- / -	- / -	4 / 72.000	6 / 110.160	1 / 25.000	7 / 135.160	8 / 149.818	8 / 152.814	8 / 155.870	8 / 170.902	Continuing	Continuing	
Modification Item 3 of 3: CH-47 D to F Conversion													
A Kits													
Recurring													
Recurring Production (Mods)	132 / 3,155.135	22 / 602.601	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	154 / 3,757.736	
Other Flyaway	- 1338.846	- 131.631	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	
Other Support	- 168.899	- 110.389	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	
Training	- 172.370	- 17.980	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	
Support Equipment	- 126.385	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- 10.000	- 126.385	
Post Production (Mods)	- 129.800	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- 10.000	- 129.800	
Subtotal: Recurring	132 / 3,791.435	22 / 652.601	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	
Subtotal: CH-47 D to F Conversion	132 / 3,791.435	22 / 652.601	- / -	- 10.000	- / -	- 10.000	- / -	- / -	- / -	- / -	Continuing	Continuing	
Subtotal: Procurement, All Modification Items	132 / 3,791.435	22 / 652.601	4 / 79.447	6 / 117.098	1 / 25.000	7 / 142.098	8 / 152.879	13 / 378.813	13 / 347.407	17 / 482.757	Continuing	Continuing	
Installation													

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Exhibit P-3a, Individual Modification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 6775A05101 / CH-47 Helicopter	Modification Number / Title: A05105 / CH-47 SLEP
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Models of Systems Affected: CH-47 **Modification Type:** . **Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Modification Item 3 of 3: CH-47 D to F Conversion	132 / 0.000	22 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	154 / 0.000
<i>Subtotal: Installation</i>	132 / 0.000	22 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	154 / 0.000
Total												
Total Cost (Procurement + Support + Installation)	3,791.435	652.601	79.447	117.098	25.000	142.098	152.879	378.813	347.407	482.757	Continuing	Continuing

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army						Date: February 2018	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20			P-1 Line Item Number / Title: 6775A05101 / CH-47 Helicopter			Modification Number / Title: A05105 / CH-47 SLEP	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 1 of 3: CH-47 Block I to Block II							
Manufacturer Information							
Manufacturer Name: Boeing				Manufacturer Location: Ridley Park, PA			
Administrative Leadtime (in Months): 5				Production Leadtime (in Months): 12			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates					Jul 2021	Jan 2022	Jan 2023
Delivery Dates					Jan 2023	Jul 2023	Jul 2024
Installation Information							
Method of Implementation (Organic): Contractor					Installation Quantity: 0		

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Exhibit P-3a, Individual Modification: PB 2019 Army						Date: February 2018	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20			P-1 Line Item Number / Title: 6775A05101 / CH-47 Helicopter			Modification Number / Title: A05105 / CH-47 SLEP	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 2 of 3: MH-47G Block I to Block II Common Funding (SOA)							
Manufacturer Information							
Manufacturer Name: Boeing				Manufacturer Location: Ridley Park, PA			
Administrative Leadtime (in Months): 5				Production Leadtime (in Months): 12			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates		Jan 2018	Jan 2019	Jan 2020	Jan 2021	Jan 2022	Jan 2023
Delivery Dates		Jan 2019	Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024
Installation Information							
Method of Implementation (Organic): Contractor					Installation Quantity: 0		

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Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 6775A05101 / CH-47 Helicopter	Modification Number / Title: A05105 / CH-47 SLEP

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 3 of 3: CH-47 D to F Conversion

Manufacturer Information

Manufacturer Name: Boeing	Manufacturer Location: Ripley, PA
Administrative Leadtime (in Months): 5	Production Leadtime (in Months): 12

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates	Jan 2016	Jan 2017					
Delivery Dates	Jan 2017	Jan 2018					

Installation Information

Method of Implementation: Contractor

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	132 / 0.000	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	132 / 0.000
FY 2017	- / -	22 / 0.000	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	22 / 0.000
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	132 / 0.000	22 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	154 / 0.000

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	132	6	7	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	98	7	6	7	7	7	6	7	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-40, Advance Procurement Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary	P-1 Line Item Number / Title: 6775A05101 / CH-47 Helicopter
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Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Gross/Weapon System Cost (<i>\$ in Millions</i>)	639.705	8.707	17.820	24.235	-	24.235	46.392	47.083	65.187	83.625	Continuing	Continuing
Net Procurement (P-1) (<i>\$ in Millions</i>)	639.705	8.707	17.820	24.235	-	24.235	46.392	47.083	65.187	83.625	Continuing	Continuing
Total Obligation Authority (<i>\$ in Millions</i>)	639.705	8.707	17.820	24.235	-	24.235	46.392	47.083	65.187	83.625	Continuing	Continuing

Description:

The CH-47F Chinook is a twin-turbine, tandem-rotor, heavy lift transport helicopter with a useful load of up to 25,000 pounds.

To maintain the Chinook the Army's only heavy-lift cargo helicopter, the CH-47F Block II program will insert critical and affordable technologies into the Chinook fleet to affordably maintain the platform's operational capabilities while continuing to meet the Warfighter requirements. Key improvements include the Advanced Chinook Rotor Blade, upgraded transmissions and rotor heads, and strengthened airframes to increase payload across the full spectrum of operational environments. Other improvements include an upgraded electrical system and higher capacity fuel tanks along with aircraft software updates. The 11 September 2015 Program Delegation Acquisition Decision Memorandum (ADM) designated the CH-47F Block II as an Acquisition Category (ACAT) 1C program with the Milestone Decision Authority (MDA) delegated to the Secretary of the Army. The EMD Phase began in 2017 following the Milestone (MS) B decision in July 2017. The first Block II aircraft will be procured in 2021.

PM Cargo procurement lines provide the common portion of funding for the Special Operations Aircraft, MH-47G. CH-47F Block II in conjunction with Technology Applications Project Office (TAPO) is replacing the aging fleet of MH-47G aircraft that has airframe components dating back more than 45 years. The MH-47G program, while complementary to the Block II program, is a separately managed Technology Applications Project Office (TAPO) ARSOAC program with a stand-alone Acquisition Strategy. The current Army Acquisition Objective (AAO) is 542 aircraft.

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Exhibit P-40, Advance Procurement Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 6775A05101 / CH-47 Helicopter

Program Elements for Code B Items: N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-10	A05105 / CH-47 SLEP			132 / 606.946	22 / 8.707	4 / 17.820	6 / 24.235	1 / -	7 / 24.235
P-40	Total Gross/Weapon System Cost			321 / 639.705	22 / 8.707	6 / 17.820	6 / 24.235	1 / -	7 / 24.235

Exhibits Schedule				FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Exhibit Type	Title*	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-10	A05105 / CH-47 SLEP			8 / 46.392	13 / 47.083	13 / 65.187	17 / 83.625	Continuing	Continuing
P-40	Total Gross/Weapon System Cost			8 / 46.392	13 / 47.083	13 / 65.187	17 / 83.625	Continuing	Continuing

*Title represents the P-10 Title for Advance Procurement.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

FY 19 Advanced procurement dollars in the amount of \$24.235 million will procure the MH-47G common portion of the airframe advance procurement requirement.

In accordance with section 1815 of the FY 2008 National Defense Authorization Act (P.L.110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses and providing military support to civil authorities.

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Exhibit P-10, Advance Procurement Requirements Analysis (page 1 - Budget Funding Justification): PB 2019 Army									Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20			P-1 Line Item Number / Title: 6775A05101 / CH-47 Helicopter						P-3a Number / Title: A05105 / CH-47 SLEP			
First System (2019) Award Date: December 2003		First System (2019) Completion Date: December 2006				Interval Between Systems: 2 Months						
CH-47 SLEP		Production Leadtime <i>(Months)</i>	Prior Years <i>(Each)</i>	FY 2017 <i>(Each)</i>	FY 2018 <i>(Each)</i>	FY 2019 <i>(Each)</i>	FY 2020 <i>(Each)</i>	FY 2021 <i>(Each)</i>	FY 2022 <i>(Each)</i>	FY 2023 <i>(Each)</i>	To Complete <i>(Each)</i>	Total <i>(Each)</i>
Quantity			132	22	4	7	8	13	13	17	-	-
Cost Elements		When Required <i>(Months)</i>	Prior Years <i>(\$ M)</i>	FY 2017 <i>(\$ M)</i>	FY 2018 <i>(\$ M)</i>	FY 2019 <i>(\$ M)</i>	FY 2020 <i>(\$ M)</i>	FY 2021 <i>(\$ M)</i>	FY 2022 <i>(\$ M)</i>	FY 2023 <i>(\$ M)</i>	To Complete <i>(\$ M)</i>	Total <i>(\$ M)</i>
Other												
Avionics		16	266.464	3.483	7.128	9.694	18.557	18.833	26.075	33.450	Continuing	Continuing
Airframe		14	340.482	5.224	10.692	14.541	27.835	28.250	39.112	50.175	Continuing	Continuing
<i>Total: Other</i>			<i>606.946</i>	<i>8.707</i>	<i>17.820</i>	<i>24.235</i>	<i>46.392</i>	<i>47.083</i>	<i>65.187</i>	<i>83.625</i>	<i>Continuing</i>	<i>Continuing</i>
Total Advance Procurement/Obligation Authority			606.946	8.707	17.820	24.235	46.392	47.083	65.187	83.625	Continuing	Continuing

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Exhibit P-10, Advance Procurement Requirements Analysis (page 2 - Budget Funding Justification): PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 6775A05101 / CH-47 Helicopter	P-3a Number / Title: A05105 / CH-47 SLEP
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Cost Elements	QPA <i>(Each)</i>	FY 2019					Total Cost Request <i>(\$ M)</i>
		Production Leadtime <i>(Months)</i>	Unit Cost <i>(\$ K)</i>	Contract Forecast Date	2019 Qty <i>(Each)</i>	For FY	
Other							
Avionics	1						9.694
Airframe	1						14.541
<i>Total: Other</i>							24.235
Total Advance Procurement/Obligation Authority							24.235

Description:
N/A

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 9990A19900 / Spectrum Army SUAS

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	11.130	4.678	-	-	-	-	-	-	-	-	-	15.808
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	11.130	4.678	-	-	-	-	-	-	-	-	-	15.808
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	11.130	4.678	-	-	-	-	-	-	-	-	-	15.808

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Manned Unmanned Teaming provides Apache Block AH-64 attack helicopters the ability to display real time sensor video from UAS sensors, battlefield sensors or onboard sensor video to the Apache Aircrews. The use of the onboard or off-board sensor video by the warfighter dramatically reduces engagement timelines and increases situational awareness.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	4.678	-	-	-	-	-	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	4.678	-	-	-	-	-	-	-	-

Justification:

The Fiscal Year (FY) 2016 budget request for Spectrum Army Small Unmanned Aerial Systems (SUAS) will fund the Manned/Unmanned teaming with the change in Small UAS frequency which encompasses a wide range of activity including modification, integration, testing, and production of MUMT-X, MUMT-2 and ROVER 6 radars.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 0023A01001 / MQ-1 Payload (MIP)
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	38	97	33	-	6	6	-	-	-	-	-	174
Gross/Weapon System Cost (<i>\$ in Millions</i>)	173.666	111.535	47.310	-	11.400	11.400	-	-	-	-	-	343.911
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	173.666	111.535	47.310	-	11.400	11.400	-	-	-	-	-	343.911
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	173.666	111.535	47.310	-	11.400	11.400	-	-	-	-	-	343.911

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	4,570.158	1,149.845	1,433.636	-	1,900.000	1,900.000	-	-	-	-	-	1,976.500

Description:

Funds in this program were realigned beginning in FY2015 from the shared MQ-1 Payload-UAS funding line (SSN A00020) for more efficient, effective program management. The funds were realigned into a new shared parent SSN, MQ-1 Payloads (MIP) (SSN A01001), which includes the MQ-1 sensor payloads: Synthetic Aperture Radar/Moving Target Indicator (SAR/MTI) (SSN A01003), Signal Intelligence (SIGINT) (SSN A01004), and Common Sensor Payload Full Motion Video (CSP FMV) (SSN A01005).

MQ-1 Payload (MIP) (A01001) budget line is shared between multiple Payload programs and two Program Managers. These Payload programs support the Army's transformation by procuring Reconnaissance, Surveillance and Target Acquisition (RSTA) and Intelligence, Surveillance and Reconnaissance (ISR) payload systems for Brigade Combat Teams, Divisions, and Corps Unmanned Aircraft Systems (UAS). This is in accordance with Headquarters Department of the Army (HQDA) and Training and Doctrine Command (TRADOC) UAS priorities. Common Sensor Payload (CSP), Small Tactical Radar - Lightweight (STARLite), and Tactical Signals Intelligence (SIGINT) Payload (TSP) are principal payloads for the Gray Eagle UAS. The Army Acquisition Objective (AAO) for STARLite and CSP is equivalent to aircraft/platform quantities, one system per Gray Eagle UAS - AAO is commensurate with aircraft quantity (one STARLite and one CSP payload per aircraft). The AAO for TSP is 112 systems.

Common Sensor Payload (CSP) Electro Optical / Infra Red / Laser Designator (EO/IR/LD) provides Full Motion Video (FMV) in both the Electro Optical and Mid Wave IR spectrums with day/night capability to collect and display continuous imagery with the ability to designate targets of interest for attack by laser guided precision weapons in Standard Definition (SD) as well as High Definition (HD) for a select subset of Gray Eagle platforms. CSP is the EO/IR/LD sensor for Gray Eagle UAS which supports intelligence gathering, force applications, battlespace awareness, force protection, and net-centric operations across the battlefield to provide wide area, near real time RSTA capabilities. Additional initiatives will continue to focus on the transition of technologies directly supporting emerging requirements and the Army's Current and Future Force. CSP is a Key Performance Parameter (KPP) for the Gray Eagle UAS to include the Combat Aviation Brigade (CAB), US Army Special Operations Aviation Command (ARSOAC) and Aerial Exploitation Battalion (AEB) companies.

Small Tactical Radar - Lightweight (STARLite) SAR/MTI is a lightweight, high performance, all weather, multi-functional radar system for the Gray Eagle Unmanned Aircraft System (UAS). The STARLite system provides wide area, near real time RSTA capabilities. It operates throughout the UAS flight mission profile in adverse weather and through battlefield obscurants. The SAR mode generates quality images for the battlefield commander for detection, classification and location of stationary commercial wheeled vehicle-size targets. The MTI mode detects moving ground targets, to include man-sized detection, and provides location information and performs cross-cue with the Electro-Optic/Infrared (EO/IR) sensors.

The Tactical Signals Intelligence (SIGINT) Payload (TSP) is a SIGINT sensor system for the Gray Eagle Unmanned Aircraft System (UAS) that detects radio frequency (RF) emitters. The TSP system provides a SIGINT capability to the tactical commander. The TSP system is a modular, scalable payload using an architecture that is software reconfigurable to allow for growth and flexibility as technology, and as the

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 0023A01001 / MQ-1 Payload (MIP)
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

adversaries use of technology changes. This flexible architecture allows for third party software applications to be integrated into the TSP system. The TSP system processing, control and data dissemination is integrated into the Distributed Common Ground System - Army (DCGS-A) via the Operational Ground Station. It supports Manned/Unmanned (MUM) teaming with Brigade Combat Team ground SIGINT Terminal Guidance (STG) teams and manned airborne assets. The TSP system improves situational awareness and shortens the targeting cycle by detecting and identifying emitters associated with high value targets (HVTs). The TSP system is capable of processing conventional signals, standard military signals, and modern signals of interest. This includes detection, recognition, identification, direction finding, and high confidence geo-location.

MQ-1C Gray Eagle Extended Range (GE-ER) - Program Manager Unmanned Aircraft Systems(PM UAS) received a Congressional plus up of \$49M President's Budget15 (PB15) to procure Extended Range UAS which increases the CPD objective endurance requirements for the current GE configuration. To meet the PM UAS GE-ER test schedule 1st QTR FY18 and first unit equipped date, TSP must be integrated and tested on the IGE and the A-Kit must be modified.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	97	33	0	6	6	-	-	-	-
	Total Obligation Authority	111.535	47.310	0.000	11.400	11.400	-	-	-	-
Total: Secondary Distribution	Quantity	97	33	0	6	6	-	-	-	-
	Total Obligation Authority	111.535	47.310	-	11.400	11.400	-	-	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 0031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 0023A01001 / MQ-1 Payload (MIP)
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	A01003 / SAR/MTI (MIP)	P-5a			18 / 33.906	14 / 15.724	9 / 19.000	- / -	- / -	- / -
P-5	A01004 / SIGINT (MIP)	P-5a			2 / 62.879	17 / 37.682	- / 1.500	- / -	- / -	- / -
P-5	A01005 / CSP FMV (MIP)	P-5a, P-21			18 / 76.881	66 / 58.129	24 / 26.810	- / -	6 / 11.400	6 / 11.400
P-40	Total Gross/Weapon System Cost				38 / 173.666	97 / 111.535	33 / 47.310	- / -	6 / 11.400	6 / 11.400

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 CSP: FY 2019 OCO procurement dollars in the amount of \$11.400 million supports the procurement of six (6) CSP HD payloads to replace Battle Damage losses and program management support.

 STARLite: FY 2019 No Base Procurement dollars.

 TSP: Fiscal Year (FY) 2019 Army ceased investment (FY19-FY23) for TSP POR in support of acquisition strategy of QRCs towards a Family of Systems to meet the critical SIGINT capability need with the desired Signals of Interest on the UAS Grey Eagle Platform and the MQ-1C (ER).

 All Quantities are for the Active component.

Comments:
 In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for the homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

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Exhibit P-5, Cost Analysis: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 0023A01001 / MQ-1 Payload (MIP)	Item Number / Title [DODIC]: A01003 / SAR/MTI (MIP)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Procurement Quantity (<i>Units in Each</i>)	18	14	9	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	33.906	15.724	19.000	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	33.906	15.724	19.000	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	33.906	15.724	19.000	-	-	-

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	1,883.667	1,123.143	2,111.111	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
STARLite System ^(t)	1,269.333	18	22.848	1,028.571	14	14.400	2,111.111	9	19.000	-	-	-	-	-	-	-	-	-
Spares	-	-	2.686	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STARLite PMO Support	-	-	1.000	-	-	1.324	-	-	-	-	-	-	-	-	-	-	-	-
Engineering	-	-	3.782	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ICS/Fielding Support	-	-	3.590	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	33.906	-	-	15.724	-	-	19.000	-	-	-	-	-	-	-	-	-
<i>Subtotal: Flyaway Cost</i>	-	-	33.906	-	-	15.724	-	-	19.000	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	1,883.667	18	33.906	1,123.143	14	15.724	2,111.111	9	19.000	-	-	-	-	-	-	-	-	-

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Army	Quantity	14	9	-	-	-
	Total Obligation Authority	15.724	19.000	-	-	-
Total:	Quantity	14	9	-	-	-
Secondary Distribution	Total Obligation Authority	15.724	19.000	-	-	-

^(t) indicates the presence of a P-5a

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 0023A01001 / MQ-1 Payload (MIP)	Item Number / Title [DODIC]: A01003 / SAR/MTI (MIP)
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
STARLite System		2017	Northrop Grumman / Linthicum	SS / FFP	Linthicum, MD	Sep 2017	Feb 2019	14	1,028.570	Y		
STARLite System		2018	Northrop Grumman / Linthicum	SS / FFP	Linthicum, MD	Apr 2018	Aug 2019	9	2,111.110	Y		

UNCLASSIFIED

Exhibit P-5, Cost Analysis: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 0023A01001 / MQ-1 Payload (MIP)	Item Number / Title [DODIC]: A01004 / SIGINT (MIP)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Procurement Quantity (Units in Each)	2	17	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	62.879	37.682	1.500	-	-	-
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	62.879	37.682	1.500	-	-	-
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	62.879	37.682	1.500	-	-	-

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	31,439.500	2,216.588	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
TSP Systems ^(†)	2,000.000	30	60.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TSP LRIP Conversions	-	-	0.390	1,566.000	17	26.622	-	-	-	-	-	-	-	-	-	-	-	-
TSP Contractor PMO/ System Engineering	-	-	0.250	-	-	1.349	-	-	0.250	-	-	-	-	-	-	-	-	-
TSP Government PMO/System Engineering	-	-	0.900	-	-	3.109	-	-	0.250	-	-	-	-	-	-	-	-	-
TSP System Test and Evaluation	-	-	0.250	-	-	0.436	-	-	0.500	-	-	-	-	-	-	-	-	-
TSP Data/Technical Data Package	-	-	0.589	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TSP Improved Gray Eagle Integration	-	-	-	-	-	0.833	-	-	-	-	-	-	-	-	-	-	-	-
IA COA Effort	-	-	0.500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	62.879	-	-	32.349	-	-	1.000	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware Cost</i>	-	-	62.879	-	-	32.349	-	-	1.000	-	-	-	-	-	-	-	-	-
Logistics Cost																		
Recurring Cost																		
TSP Initial Spares	-	-	-	-	-	2.000	-	-	-	-	-	-	-	-	-	-	-	-
Interim Contrator Logistic Support	-	-	-	-	-	3.333	-	-	0.500	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-5, Cost Analysis: PB 2019 Army												Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10						P-1 Line Item Number / Title: 0023A01001 / MQ-1 Payload (MIP)						Item Number / Title [DODIC]: A01004 / SIGINT (MIP)					
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:					

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	5.333	-	-	0.500	-	-	-	-	-	-	-	-	-
<i>Subtotal: Logistics Cost</i>	-	-	-	-	-	5.333	-	-	0.500	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	31,439.500	2	62.879	2,216.588	17	37.682	-	-	1.500	-	-	-	-	-	-	-	-	-

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Army	Quantity	17	0	-	-	-
	Total Obligation Authority	37.682	1.500	-	-	-
Total: Secondary Distribution	Quantity	17	-	-	-	-
	Total Obligation Authority	37.682	1.500	-	-	-

(t) indicates the presence of a P-5a

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 0023A01001 / MQ-1 Payload (MIP)	Item Number / Title [DODIC]: A01004 / SIGINT (MIP)
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
TSP Systems		2015	BAE Systems / Nashua	SS / IDIQ	ACC APG	Apr 2015	Feb 2017	6	1,566.000	Y		

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Exhibit P-5, Cost Analysis: PB 2019 Army											Date: February 2018								
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10					P-1 Line Item Number / Title: 0023A01001 / MQ-1 Payload (MIP)						Item Number / Title [DODIC]: A01005 / CSP FMV (MIP)								
ID Code (A=Service Ready, B=Not Service Ready) :											MDAP/MAIS Code:								
Resource Summary				Prior Years		FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total	
Procurement Quantity (Units in Each)				18		66			24			-			6			6	
Gross/Weapon System Cost (\$ in Millions)				76.881		58.129			26.810			-			11.400			11.400	
Less PY Advance Procurement (\$ in Millions)				-		-			-			-			-			-	
Net Procurement (P-1) (\$ in Millions)				76.881		58.129			26.810			-			11.400			11.400	
Plus CY Advance Procurement (\$ in Millions)				-		-			-			-			-			-	
Total Obligation Authority (\$ in Millions)				76.881		58.129			26.810			-			11.400			11.400	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																			
Initial Spares (\$ in Millions)				-		-			-			-			-			-	
Gross/Weapon System Unit Cost (\$ in Thousands)				4,271.167		880.742			1,117.083			-			1,900.000			1,900.000	

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
CSP HD Procurement ^(t)	1,098.000	15	16.470	1,488.000	20	29.760	1,488.000	9	13.392	-	-	-	1,800.000	6	10.800	1,800.000	6	10.800
CSP HD Initial Spares ^(t)	1,098.000	3	3.294	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSP Diode Pump Laser	165.000	57	9.405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSP SD to HD Platform Retrofit/Upgrades	500.830	60	30.050	454.000	45	20.430	468.000	15	7.020	-	-	-	-	-	-	-	-	-
CSP DMV-184 Processor Cards	21.000	135	2.835	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSP Diode Pump Laser Integration	-	-	2.490	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSP PMO Support	-	-	0.833	-	-	3.104	-	-	2.297	-	-	-	-	-	0.600	-	-	0.600
CSP Interim Contractor Support (SD)	-	-	6.295	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSP Interim Contractor Support (HD)	-	-	1.559	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSP Initial Fielding Support	-	-	3.650	-	-	4.835	-	-	4.101	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	76.881	-	-	58.129	-	-	26.810	-	-	0.000	-	-	11.400	-	-	11.400
<i>Subtotal: Flyaway Cost</i>	-	-	76.881	-	-	58.129	-	-	26.810	-	-	0.000	-	-	11.400	-	-	11.400

UNCLASSIFIED

Exhibit P-5, Cost Analysis: PB 2019 Army												Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10						P-1 Line Item Number / Title: 0023A01001 / MQ-1 Payload (MIP)						Item Number / Title [DODIC]: A01005 / CSP FMV (MIP)					
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:					

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Gross/Weapon System Cost	4,271.167	18	76.881	880.742	66	58.129	1,117.083	24	26.810	-	-	-	1,900.000	6	11.400	1,900.000	6	11.400

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Army	Quantity	66	24	0	6	6
	Total Obligation Authority	58.129	26.810	0.000	11.400	11.400
Total:	Quantity	66	24	-	6	6
Secondary Distribution	Total Obligation Authority	58.129	26.810	-	11.400	11.400

(t) indicates the presence of a P-5a

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 0023A01001 / MQ-1 Payload (MIP)	Item Number / Title [DODIC]: A01005 / CSP FMV (MIP)
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
CSP HD Procurement ^(†)		2016	Raytheon / McKinney	C / FFP	ACC, APG	Mar 2016	Mar 2017	15	1,098.000	N		
CSP HD Procurement ^(†)		2017	Raytheon / McKinney	SS / FFP	ACC, APG	Sep 2017	Oct 2018	20	1,488.000	N		
CSP HD Procurement ^(†)		2018	Raytheon / McKinney	SS / FFP	ACC, APG	Mar 2018	Jul 2019	9	1,488.000	N		
CSP HD Initial Spares		2016	Raytheon / McKinney	C / FFP	ACC, APG	Mar 2016	Jun 2017	3	1,098.000	N		

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10 **P-1 Line Item Number / Title:** 0023A01001 / MQ-1 Payload (MIP) **Item Number / Title [DODIC]:** A01005 / CSP FMV (MIP)

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2018												Fiscal Year 2019												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018												Calendar Year 2019												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
CSP HD Procurement																															
1		2016	ARMY	15	15	0																							0		
1		2017	ARMY	20	0	20	-	-	-	-	-	-	-	-	-	-	-	3	3	1	1	1	-	3	3	3	2	0			
1		2018	ARMY	9	0	9																					1	3	3	2	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 0023A01001 / MQ-1 Payload (MIP)	Item Number / Title [DODIC]: A01005 / CSP FMV (MIP)
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2020														Fiscal Year 2021														B A L A N C E	
O C C O	M F R #	F Y	S E R V I C E	P R O C Q T Y	A C C E P T P R I O R T O 1 O C T 2 0 1 9	B A L D U E A S O F 1 O C T	Calendar Year 2020														Calendar Year 2021														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
CSP HD Procurement																																			
	1	2016	ARMY	15	15	0																							0						
	1	2017	ARMY	20	20	0																							0						
	1	2018	ARMY	9	7	2		2																					0						
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2019 Army								Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 0023A01001 / MQ-1 Payload (MIP)				Item Number / Title [DODIC]: A01005 / CSP FMV (MIP)					
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)								
		MSR For 2019	1-8-5 For 2019	MAX For 2019	Initial				Reorder				
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	
1	Raytheon - McKinney	1	24	125	0	0	0	0	0	0	5	12	17

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 0028A02706 / Universal Ground Control Equipment (UAS)
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	-	15.000	27.114	-	27.114	2.107	1.982	4.925	5.216	-	56.344
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	-	15.000	27.114	-	27.114	2.107	1.982	4.925	5.216	-	56.344
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	-	15.000	27.114	-	27.114	2.107	1.982	4.925	5.216	-	56.344

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	150.000	-	-	-	-	-	-	-	-	563.440

Description:

The Universal Products consist of the Universal Ground Control Station (UGCS), the Universal Ground Data Terminal (UGDT) and the Universal Mission Simulator (UMS), to support the Gray Eagle (MQ-1C) and Shadow (RQ-7) Programs of Record. The Universal Products will be capable of flight and payload control of multiple types of Unmanned Aircraft Systems (UAS). Protected in a climate-controlled, standard S-280 or S-788 U.S. Army shelter and mounted on either a standard Army FMTV or HMMWV, the UGCS receives and disseminates battlefield video and situational awareness data through state-of-the-art operator consoles. Consoles can be used to provide aircraft command and control, payload control and weapons launch.

The UGDT provides a Line of Sight (LOS) capability for transmit and receipt of UAS command and control, and UAS payload product. The UGDT is the common datalink system for U. S. Army UAS.

The Universal Mission Simulator (UMS) consists of the hardware and software required to fully train UAS operators to full Readiness Level (RL) 1. The UMS will be capable of training and simulating flight and payload control of multiple unmanned aircraft systems and features Directorate of Simulation (DOS) accredited Shadow software and Gray Eagle software.

Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	-	15.000	27.114	-	27.114	2.107	1.982	4.925	5.216
Total:									
Secondary Distribution									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	-	15.000	27.114	-	27.114	2.107	1.982	4.925	5.216

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity:
 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft

P-1 Line Item Number / Title:
 0028A02706 / Universal Ground Control Equipment (UAS)

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-40a	A02707 / Universal Products				- / -	- / -	- / 15.000	- / 27.114	- / -	- / 27.114
P-40	Total Gross/Weapon System Cost				- / -	- / -	- / 15.000	- / 27.114	- / -	- / 27.114

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY19 Base Procurement funds in the amount of \$27.114 Million will be utilized by Universal Products (UGCS and UGDT) efforts in support of the Gray Eagle (MQ-1C) and Shadow (RQ-7) Programs of Record. Procurement funding continues the procurement and implementation of hardware to address obsolescence while enforcing commonality across the U-Product fleet. Current planning allocates \$27.114 Million for procurement of common UGCS computing/communications hardware and associated integration/qualification, and associated systems engineering, program management, and logistics support.

UNCLASSIFIED

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10 **P-1 Line Item Number / Title:** 0028A02706 / Universal Ground Control Equipment (UAS) **Aggregated Items Title:** Various

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Universal Products																				
A02707 / Universal Products			-	-	-	-	-	-	-	-	15.000	-	-	27.114	-	-	-	-	-	27.114
<i>Secondary Distribution</i>																				
Army				-	-		-	-		-	15.000		-	27.114		-	-		-	27.114
Subtotal: Universal Products			-	-	-	-	-	-	-	-	15.000	-	-	27.114	-	-	-	-	-	27.114
Total			-	-	-	-	-	-	-	-	15.000	-	-	27.114	-	-	-	-	-	27.114

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 0756AA6601 / Gray Eagle Mods2
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0305204A, 0305219A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	-	74.291	97.781	32.000	129.781	33.728	15.829	-	2.243	-	255.872
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	-	74.291	97.781	32.000	129.781	33.728	15.829	-	2.243	-	255.872
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	-	74.291	97.781	32.000	129.781	33.728	15.829	-	2.243	-	255.872

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	1,238.183	1,286.592	3,200.000	1,509.081	1,204.571	633.160	-	2,243.000	-	1,279.360

Description:

The MQ-1C Gray Eagle provides the Army with an extended range, multi-purpose (ERMP) unmanned aircraft system (UAS); capable of executing reconnaissance, security, attack, and intelligence collection missions in the range of military operations (ROMO). Sensors/payloads include an Electro-Optical/Infrared/Laser Designator (EO/IR/LD), Synthetic Aperture Radar/Moving Target Indicator (SAR/MTI), Signals Intelligence (SIGINT), and HELLFIRE missiles; providing a near all-weather mission capability. MQ-1C Gray Eagle is a dedicated, assured, multi-mission Unmanned Aircraft System (UAS) fielded to all Army Divisions, Intelligence and Security Command and Army Special Operations Command in support of the commander's warfighting priorities.

The Warrior Alpha Modification funding is required to bring the Warrior Alpha fleet to the latest configuration to and include modernization to High Definition EO/IR/LD payloads, BLOS classified payloads and the Vortex payload system. These modernizations includes integration, new hardware, and software changes. The FY19 OCO funding procures ten (10) payloads and associated integration cost. The Warrior Alpha UAS provides 24 hour a day operations. The systems are capable of executing reconnaissance, security and intelligence collection. The system is non weapons capable. All systems are Government Owned Contractor Operated Systems currently located at Dugway Proving Ground. Sensors/payloads include are Electro-Optical/Infrared/Laser Designator (EO/IR/LD), Beyond Line of Sight (BLOS) classified payloads and Vortex payloads. Providing a near all-weather mission capability the system is a dedicated, assured, multi-mission Unmanned Aircraft System (UAS) providing GOCO operation to Army Special Operations Command in support of the commander's warfighting priorities.

The MQ-1C Gray Eagle Modification/Product Improvement Program (PIP) funding is required for the modernization of the SATCOM datalink to enable multi-band communication. SATCOM modernization includes integration, new hardware, software changes, and fielding costs. PIP funding is also required for hardware and software procurement to survive in a Global Positioning System (GPS) Denied environment.

Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	-	74.291	97.781	32.000	129.781	33.728	15.829	-	2.243
Total:									
Secondary Distribution									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	-	74.291	97.781	32.000	129.781	33.728	15.829	-	2.243

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 0756AA6601 / Gray Eagle Mods2
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0305204A, 0305219A
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Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	A00002 / MQ-1C Gray Eagle Modifications (UNCLASSIFIED)				- / -	- / -	- / 74.291	- / 97.781	- / 32.000	- / 129.781
P-40	Total Gross/Weapon System Cost				- / -	- / -	- / 74.291	- / 97.781	- / 32.000	- / 129.781

Exhibits Schedule					FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	A00002 / MQ-1C Gray Eagle Modifications (UNCLASSIFIED)				- / 33.728	- / 15.829	- / -	- / 2.243	- / -	- / 255.872
P-40	Total Gross/Weapon System Cost				- / 33.728	- / 15.829	- / -	- / 2.243	- / -	- / 255.872

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 The Fiscal Year (FY) 2019 Aircraft Modification/Product Improvement base funding of \$97.781 million supports the procurement of the Global Positioning System (GPS) Denied equipment and migrates the SATCOM datalink to a multi-band frequency. The \$32.0 million FY19 OCO funding converts ten (10) Warrior Alpha aircraft to the MQ-1C Gray Eagle Block 0 configuration to include High Definition EO/IR/LD payloads, BLOS classified payloads, and the Vortex payload system.

The base funding supports integration of a multi-phased approach for GPS out navigation to include use of Anti-Jam antennas, navigation with the Electro-Optical (EO) / Infrared (IR) camera, and Pseudo-lite systems (coordination with PM PNT). Integration includes software upgrades, hardware fielding, spares, training updates and materiel release documentation to support fielding.

The modernization of the SATCOM datalink will include multi-band frequency which will improve the security of the datalink, increase bandwidth capability, and yield long-term cost savings. Data link protection is critical to the survivability of the aircraft and for information assurance. The modernization requires the procurement of new SATCOM ground and aircraft equipment including the Universal SATCOM Ground Data Terminal, SATCOM Air Data Terminal, new modems, software updates, and fielding.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 0756AA6601 / Gray Eagle Mods2	Modification Number / Title: A00002 / MQ-1C Gray Eagle Modifications

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	-	-	74.291	97.781	32.000	129.781	33.728	15.829	-	2.243	-	255.872
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	-	74.291	97.781	32.000	129.781	33.728	15.829	-	2.243	-	255.872
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	-	-	74.291	97.781	32.000	129.781	33.728	15.829	-	2.243	-	255.872

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	1,238.183	1,286.592	3,200.000	1,509.081	1,204.571	633.160	-	2,243.000	-	1,279.360

Description:

The MQ-1C Gray Eagle provides the Army with an extended range, multi-purpose (ERMP) unmanned aircraft system (UAS); capable of executing reconnaissance, security, attack, and intelligence collection missions in the range of military operations (ROMO). Sensors/payloads include an Electro-Optical/Infrared/Laser Designator (EO/IR/LD), Synthetic Aperture Radar/Moving Target Indicator (SAR/MTI), Signals Intelligence (SIGINT), and HELLFIRE missiles; providing a near all-weather mission capability. MQ-1C Gray Eagle is a dedicated, assured, multi-mission Unmanned Aircraft System (UAS) fielded to all Army Divisions, Intelligence and Security Command and Army Special Operations Command in support of the commander's warfighting priorities.

The Warrior Alpha Modification funding is required to bring the Warrior Alpha fleet to the MQ-1C Block 0 configuration to include modernizing to High Definition EO/IR/LD payloads, BLOS classified payloads and the Vortex payload system. These modernizations includes integration, new hardware, and software changes. The FY19 OCO funding procures ten (10) payloads and associated integration cost. The Warrior Alpha UAS provides 24 hour a day operations. The systems are capable of executing reconnaissance, security and intelligence collection. The system is non weapons capable. All systems are Government Owned Contractor Operated Systems currently located at Dugway Proving Ground. Sensors/payloads include are Electro-Optical/Infrared/Laser Designator (EO/IR/LD), Beyond Line of Sight (BLOS) classified payloads and Vortex payloads. Providing a near all-weather mission capability the system is a dedicated, assured, multi-mission Unmanned Aircraft System (UAS) providing GOCO operation to Army Special Operations Command in support of the commander's warfighting priorities.

The MQ-1C Gray Eagle Modification/Product Improvement Program (PIP) funding is required for the modernization of the SATCOM datalink to enable multi-band communication SATCOM modernization includes integration, new hardware, software changes, and fielding costs. PIP funding is also required for hardware and software procurement to survive in a Global Positioning System (GPS) Denied environment.

Note: Each A-kit and B-kit modifies one (1) aircraft.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10					P-1 Line Item Number / Title: 0756AA6601 / Gray Eagle Mods2					Modification Number / Title: A00002 / MQ-1C Gray Eagle Modifications			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: N/A				Modification Type: UNCLASSIFIED				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Procurement													
Modification Item 1 of 3: Warrior Alpha Modification													
A Kits													
Non-Recurring													
Non-recurring engineering	- / -	- / -	- / -	- / 0.000	- / 15.000	- / 15.000	- / -	- / -	- / -	- / -	- / 0.000	- / 15.000	
Subtotal: Non-Recurring	- / -	- / -	- / -	- / -	- / 15.000	- / 15.000	- / -	- / -	- / -	- / -	- / -	- / 15.000	
B Kits													
Recurring													
High Definition & BLOS Payload	- / -	- / -	- / -	0 / 0.000	10 / 27.000	10 / 27.000	- / -	- / -	- / -	- / -	- / 0.000	10 / 27.000	
Subtotal: Recurring	- / -	- / -	- / -	- / -	10 / 27.000	10 / 27.000	- / -	- / -	- / -	- / -	- / -	10 / 27.000	
Subtotal: Warrior Alpha Modification	- / -	- / -	- / -	- / 0.000	10 / 32.000	10 / 32.000	- / -	- / -	- / -	- / -	- / -	10 / 32.000	
Modification Item 2 of 3: Global Positioning System (GPS) Denied													
B Kits													
Recurring													
Global Positioning System (GPS) Denied	- / -	- / -	60 / 16.807	21 / 10.141	- / -	21 / 10.141	18 / 18.341	25 / 11.095	- / -	- / -	- / 0.000	124 / 56.384	
Program Management	- / -	- / -	- / 1.662	- / 0.684	- / -	- / 0.684	- / 1.992	- / 2.234	- / -	- / -	- / 0.000	- / 16.572	
Subtotal: Recurring	- / -	- / -	60 / 18.469	21 / 10.825	- / -	21 / 10.825	18 / 20.333	25 / 13.329	- / -	- / -	- / -	124 / 62.956	
Subtotal: Global Positioning System (GPS) Denied	- / -	- / -	60 / 18.469	21 / 10.825	- / -	21 / 10.825	18 / 20.333	25 / 13.329	- / -	- / -	- / -	124 / 62.956	
Modification Item 3 of 3: Satellite Communications (SATCOM) Modernization													
A Kits													
Recurring													
SATCOM Modernization / Multi-Band	- / -	- / -	- / -	55 / 62.888	- / -	55 / 62.888	10 / 5.951	- / -	- / -	1 / 1.993	- / 0.000	66 / 70.832	
SATCOM Modernization/Multi-Band Mgmt	- / -	- / -	- / -	- / 18.168	- / -	- / 18.168	- / 13.144	- / -	- / -	- / -	- / 0.000	- / 11.312	
Subtotal: Recurring	- / -	- / -	- / -	55 / 71.056	- / -	55 / 71.056	10 / 9.095	- / -	- / -	1 / 1.993	- / -	66 / 82.144	
Non-Recurring													
SATCOM Modernization / Multi-Band	- / -	- / -	- / 50.240	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 50.240	
SATCOM Modernization/Multi-Band Mgmt	- / -	- / -	- / 15.582	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 15.582	
Subtotal: Non-Recurring	- / -	- / -	- / 55.822	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 55.822	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 0756AA6601 / Gray Eagle Mods2	Modification Number / Title: A00002 / MQ-1C Gray Eagle Modifications

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Models of Systems Affected: N/A	Modification Type: UNCLASSIFIED	Related RDT&E PEs:
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Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
<i>Subtotal: Satellite Communications (SATCOM) Modernization</i>	- / -	- / -	- / 55.822	55 / 71.056	- / -	55 / 71.056	10 / 9.095	- / -	- / -	1 / 1.993	- / -	66 / 137.966
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / -	60 / 74.291	76 / 81.881	10 / 32.000	86 / 113.881	28 / 29.428	25 / 13.329	- / -	1 / 1.993	- / -	200 / 232.922
Installation												
<i>Modification Item 2 of 3: Global Positioning System (GPS) Denied</i>	- / -	- / -	- / -	21 / 2.100	- / -	21 / 2.100	18 / 1.800	25 / 2.500	- / -	- / -	- / -	64 / 6.400
<i>Modification Item 3 of 3: Satellite Communications (SATCOM) Modernization</i>	- / -	- / -	- / -	55 / 13.800	- / -	55 / 13.800	10 / 2.500	- / -	- / -	1 / 0.250	- / -	66 / 16.550
<i>Subtotal: Installation</i>	0 / 0.000	0 / 0.000	0 / 0.000	76 / 15.900	0 / 0.000	76 / 15.900	28 / 4.300	25 / 2.500	- / -	1 / 0.250	- / -	130 / 22.950
Total												
Total Cost (Procurement + Support + Installation)	-	-	74.291	97.781	32.000	129.781	33.728	15.829	-	2.243	-	255.872

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army						Date: February 2018	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 0756AA6601 / Gray Eagle Mods2			Modification Number / Title: A00002 / MQ-1C Gray Eagle Modifications	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 1 of 3: Warrior Alpha Modification							
Manufacturer Information							
Manufacturer Name: General Atomics				Manufacturer Location: Poway, CA			
Administrative Leadtime (in Months): 4				Production Leadtime (in Months): 15			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates			Jan 2019				
Delivery Dates			Apr 2020				
Installation Information							
Method of Implementation (Organic): Replacement aircraft build					Installation Quantity: 10		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 0756AA6601 / Gray Eagle Mods2	Modification Number / Title: A00002 / MQ-1C Gray Eagle Modifications

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 2 of 3: Global Positioning System (GPS) Denied

Manufacturer Information

Manufacturer Name: General Atomics (GA-ASI)	Manufacturer Location: Poway, CA
Administrative Leadtime (in Months): 4	Production Leadtime (in Months): 24

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates		Jan 2018	Jan 2019	Jan 2020	Jan 2021		
Delivery Dates		Jan 2020	Jan 2021	Jan 2022	Jan 2023		

Installation Information

Method of Implementation: FSR Fielded Retrofits

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	21 / 2.100	- / -	21 / 2.100	- / -	- / -	- / -	- / -	- / -	21 / 2.100
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	18 / 1.800	- / -	- / -	- / -	- / -	18 / 1.800
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	25 / 2.500	- / -	- / -	- / -	25 / 2.500
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 0.000	0 / 0.000	0 / 0.000	21 / 2.100	0 / 0.000	21 / 2.100	18 / 1.800	25 / 2.500	- / -	- / -	- / -	64 / 6.400

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	20	20	5	5	5	6	6	4	4	4	7	6	6	6	-	124
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	20	20	5	5	5	6	6	4	4	4	7	6	6	6	124

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 0756AA6601 / Gray Eagle Mods2	Modification Number / Title: A00002 / MQ-1C Gray Eagle Modifications

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 3 of 3: Satellite Communications (SATCOM) Modernization

Manufacturer Information

Manufacturer Name: General Atomics (GA-ASI)	Manufacturer Location: Poway, CA
Administrative Leadtime (in Months): 4	Production Leadtime (in Months): 12

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates		Jan 2018	Jan 2019	Jan 2020			Jan 2023
Delivery Dates			Jan 2020	Jan 2021			Jan 2024

Installation Information

Method of Implementation: FSR Fielded Retrofits

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	55 / 13.800	- / -	55 / 13.800	- / -	- / -	- / -	- / -	- / -	55 / 13.800
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	10 / 2.500	- / -	- / -	- / -	- / -	10 / 2.500
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.250	- / -	1 / 0.250
Total	0 / 0.000	0 / 0.000	0 / 0.000	55 / 13.800	0 / 0.000	55 / 13.800	10 / 2.500	- / -	- / -	1 / 0.250	- / -	66 / 16.550

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	20	15	10	-	-	-	-	-	-	-	-	-	-	-	1	66
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	20	15	10	-	-	-	-	-	-	-	-	-	-	1	66

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 1036AZ2001 / Multi Sensor ABN Recon (MIP)
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,011.721	115.927	102.287	52.274	51.000	103.274	35.501	28.171	85.069	63.376	-	1,545.326
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,011.721	115.927	102.287	52.274	51.000	103.274	35.501	28.171	85.069	63.376	-	1,545.326
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,011.721	115.927	102.287	52.274	51.000	103.274	35.501	28.171	85.069	63.376	-	1,545.326

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	144,531.571	28,981.750	7,868.231	1,537.471	51,000.000	2,950.686	11,833.667	9,390.333	21,267.250	15,844.000	-	21,168.849

Description:

AZ2001 Multi Sensor ABN Recon (MIP) is the Parent Line to Airborne Reconnaissance Low - Enhanced (MIP)(ARL-E) (AZ2050),EMARSS Payloads (MIP)(AZ2054) and Guardrail Payloads (MIP) (AZ2052),IAW the Aerial Layer 2020 Strategy.

Airborne Reconnaissance Low - Enhanced (ARL-E) is a worldwide self-deployable airborne Intelligence Surveillance Reconnaissance (ISR) system designed for timely, accurate, assured support to tactical forces over the full spectrum of operations. This system is a De Havilland DHC-8 aircraft replacing the DHC-7 IAW the Aerial ISR (AISR) 2020 Strategy. ARL-E will enhance the ARL-M sensor capability sets through the procurement of new and refurbished sensors to meet the ARL-E Capabilities Production Document (CPD) requirements. It provides a persistent capability to include: Broad-Area Surveillance and/or Focused Stare on Target Areas of Interest (Point or Objective Targets), Electro-Optical/Infrared (EO/IR)/Full-Motion Video (FMV) , Multi-Mode Radar, Robust Communications Intelligence (COMINT), on-Board Collection, Analysis, Sensor Cross Cue and dissemination through Distributed Common Ground System-Army (DCGS-A) Enabled workstations. ARL-E will be assigned to the U.S. Army Intelligence and Security Command's Aerial ISR Brigade providing AISR support to combatant commanders. For the overall system, the Army Acquisition Objective and the Army Procurement Objective, is nine (9). The Mission Equipment Package (MEP) objective is eight (8).

This funding line supports the procurement and modernization of eight (8) complete MEP sets, which includes the following sensors: one (1) COMINT subsystem capable of supporting theater net centric geo-location efforts, two (2) High Definition FMV sensors and one (1) Improved Synthetic Aperture Radar / Ground Moving Target Indicator (SAR/GMTI) radar subsystem or one (1) SAR/Dismounted Moving Target Indicator (DMTI) subsystem. The MEP will also include four (4) DCGS-A workstations, one (1) set of communication equipment (mission radios, Beyond line of Site (BLOS) and Line of Site (LOS) Data links). ARL-E will be capable of rapid installation of sensors in a plug and play, quick connect/disconnect, mounting system to allow various combinations of sensor-types in support of a wide-range of theater operations. All MEPs will include the infrastructure to plug and play a Hyper-spectral imagery (HSI) Payload purchased under a QRC program. Future Growth capabilities include: Wide-Area Aerial Surveillance (WAAS), Light Detection and Ranging (LiDAR) and Foliage Penetration Radar (FOPEN).

The overall Airborne Reconnaissance Low-Enhanced (ARL-E) procurement/modernization efforts are found in the following three (3) lines; AZ2050 ARL Payloads (Project Manager Sensors - Aerial Intelligence), A02109, ARL-E SEMA (MIP) and A02110 ARL-E SEMA Mods (MIP) (Fixed Wing Project Office). Separate funding lines support the Army Acquisition Executive's directive, codified in the October 28, 2011 memorandum, to assign overall acquisition lead for manned airborne Intelligence systems to Program Executive Officer for Aviation; and overall sensor, processing, exploitation, and dissemination responsibilities to Program Executive Officer for Intelligence, Electronic Warfare, and Sensors.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 1036AZ2001 / Multi Sensor ABN Recon (MIP)
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

The Guardrail Common Sensor (GRCS) is a RC-12X fixed-wing aircraft, which hosts Communications Intelligence (COMINT) and Electronic Intelligence (ELINT) sensors. It provides a persistent capability to detect, locate and classify/identify critical targets with a relevant degree of timeliness and accuracy. GRCS is assigned to two (2) U.S. Army Intelligence and Security Command's Aerial Exploitation Battalions, providing Aerial Intelligence, Surveillance and Reconnaissance (AISR) support to combatant commanders. In accordance with the Army's AISR 2020 strategy, the Army's Acquisition Objective/Army's Procurement Objective (AAO/APO) is 19 RC-12X; seven (7) fielded to 3rd MI BN; seven (7) fielded to the 204th MI BN, and five (5) pilot trainers to support Force Generation. The five (5) trainers are not equipped with Primary Mission Equipment (PME).

This funding line supports the procurement and upgrade of the following sensor capabilities: Communications High Accuracy Location Subsystem-Compact (CHALS-C), Communications Intelligence (COMINT) and Electronic Intelligence (ELINT) and Cyber (LS).

The overall GRCS procurement/modernization efforts are found in the following two lines: AZ2052 Guardrail Payloads (MIP) and A02111 GRCS SEMA MODS (MIP). Separate funding lines support the Army Acquisition Executive's directive, codified in the October 28, 2011 memorandum, to assign overall acquisition lead for manned airborne Intelligence systems to Program Executive Office for Aviation; and overall sensor, processing, exploitation, and dissemination responsibilities to Program Executive Officer for Intelligence, Electronic Warfare, and Sensors.

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. It provides a persistent capability to detect, locate, classify/identify, and track surface targets with a high degree of timeliness and accuracy. EMARSS is assigned to the U.S. Army Intelligence and Security Command's Aerial Exploitation Battalions, providing Aerial Intelligence, Surveillance and Reconnaissance support to combatant commanders. The Army Acquisition Objective for EMARSS is 36 systems, with an Army Procurement Objective of 24, which include the following variants: eight (8) EMARSS-G (Geo-INT); four (4) EMARSS-V (Vehicle and Dismount Exploitation Radar, VaDER); eight (8) EMARSS-M (Multi-INT); and four (4) EMARSS-S (SIGINT).

Each EMARSS variant has a distinct Mission Equipment Package (MEP). This funding line supports the pre-planned product improvements of the following sensor capabilities: SIGINT; Electro-optical/Infrared (EO/IR)/Full Motion Video (FMV); Communications Intelligence (COMINT) to include Big Iron; Wide Area Aerial Surveillance (WAAS); Light Imaging Detection and Ranging (LiDAR) and improved Synthetic Aperture RADAR / Moving Target Indicator (SAR/MTI) RADAR; line-of-site (LOS) and beyond line-of-site (BLOS) communications; and Processing Exploitation and Dissemination (PED) supporting two Distributed Common Ground System - Army (DCGS-A) enabled operator workstations.

The overall EMARSS procurement/modernization efforts are found in the following two lines; AZ2054 EMARSS Payloads (Project Manager Sensors - Aerial Intelligence) and A02112 EMARSS SEMA Mods (Fixed Wing Project Office). Separate funding lines support the Army Acquisition Executive's directive, codified in the October 28, 2011 memorandum, to assign overall acquisition lead for manned airborne Intelligence systems to Program Executive Officer for Aviation; and overall sensor, processing, exploitation, and dissemination responsibilities to Program Executive Officer for Intelligence, Electronic Warfare, and Sensors.

EMARSS transitioned from A02005.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	115.927	102.287	52.274	51.000	103.274	35.501	28.171	85.069	63.376
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	115.927	102.287	52.274	51.000	103.274	35.501	28.171	85.069	63.376

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity:
2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft

P-1 Line Item Number / Title:
1036AZ2001 / Multi Sensor ABN Recon (MIP)

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	AZ2050 / ARL Mod-In-Service (Operational)				- / 975.909	- / 74.380	- / 59.938	- / 29.119	- / 51.000	- / 80.119
P-40a	AZ2052 / Guardrail Payloads (MIP) (U)				- / 13.516	- / 24.450	- / 35.070	- / 4.346	- / -	- / 4.346
P-3a	AZ2054 / EMARSS Payloads (x)				- / 22.296	- / 17.097	- / 7.279	- / 18.809	- / -	- / 18.809
P-40	Total Gross/Weapon System Cost				- / 1,011.721	- / 115.927	- / 102.287	- / 52.274	- / 51.000	- / 103.274

Exhibits Schedule					FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	AZ2050 / ARL Mod-In-Service (Operational)				- / 33.177	- / 25.845	- / 77.142	- / 55.315	- / -	- / 1,381.825
P-40a	AZ2052 / Guardrail Payloads (MIP) (U)				- / 0.129	- / 0.112	- / 0.093	- / 0.074	- / -	- / 77.790
P-3a	AZ2054 / EMARSS Payloads (x)				- / 2.195	- / 2.214	- / 7.834	- / 7.987	- / -	- / 85.711
P-40	Total Gross/Weapon System Cost				- / 35.501	- / 28.171	- / 85.069	- / 63.376	- / -	- / 1,545.326

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
FY 2019 base funding to support the overall ARL-E effort are found in the following two lines: AZ2050 ARL Payloads and A02110 ARL SEMA Mods (Project Manager Fixed Wing (PM FW) (separate form).

The purpose of ARL-E AZ2050 is to procure, upgrade, test and integrate sensors; communications architecture for sensor information exploitation and dissemination; test, nonrecurring engineering, and integration in support of the ARL-E Payload program ensuring ARL-E is rapidly deployable world-wide against current, new, and emerging threats.

ARL-E FY 2019 Base procurement dollars in the amount of \$29.119 million supports the procurement of two (2) Long Range Radar systems and System Integration Lab (SIL) testing of one system - aircraft 5.

ARL-E FY 2019 OCO procurement dollars in the amount of \$51.000 million supports the procurement of Mission Equipment Payload (MEP) for aircraft 5. The systems procured will consist of one (1) set of Distributed Common Ground Station-Army (DCGS-A) workstations, one (1) set of communication equipment (mission radios, Beyond line of Site (BLOS) and Line of Site (LOS) Data links), two (2) sets of Full Motion Video (FMV) MX-20 sensors, and one (1) COMINT subsystem The funding will also support aircraft integration and test of one (1) system - aircraft 4, Integrated Contractor Logistics Support, New Equipment Training, and Limited User Test.

The schedule (in/out) reflects the start of MEP SIL testing and completion of aircraft integration efforts.

Beginning in FY 2016 forward, the overall GRCS efforts are found in the following two lines; AZ2052 GRCS Payloads (Project Manager Sensors - Aerial Intelligence (PM SAI)) and A02111 GRCS SEMA (Project Manager Fixed Wing (PM FW)) (separate form).

The purpose of GRCS AZ2052 is to procure, upgrade, and integrate SIGINT sensors as well as the communications suite and processing, exploitation and dissemination equipment on Guardrail. This will ensure Guardrail is rapidly-deployable, world-wide, against current, new, and emerging threats.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft		P-1 Line Item Number / Title: 1036AZ2001 / Multi Sensor ABN Recon (MIP)
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>GRCS FY 2019 Base procurement dollars in the amount of \$4.346 million supports procurements in support of Operational Needs Statement (ONS) 22419, ONS 22438 and ONS 22527 and also the procurement of spare components for the Communications High Accuracy Location Subsystem-Compact (CHALS-C).</p> <p>FY 2019 base funding to support the overall EMARSS efforts are found in the following two lines: AZ2054 EMARSS Payloads (per this form) and A02112 EMARSS SEMA (separate form).</p> <p>The purpose of EMARSS AZ2054 is to support the pre-planned product improvements of EMARSS sensor payload capabilities including: SIGINT; Electro-optical/Infrared (EO/IR)/Full Motion Video (FMV); Communications Intelligence (COMINT) to include Big Iron; Wide Area Aerial Surveillance (WAAS); Light Imaging Detection and Ranging (LiDAR) and improved Synthetic Aperture RADAR / Moving Target Indicator (SAR/MTI) RADAR; Line-Of-Site (LOS) and Beyond Line-Of-Site (BLOS) communications; and Processing Exploitation and Dissemination (PED) supporting two Distributed Common Ground System - Army (DCGS-A) enabled operator workstations.</p> <p>FY 2019 Base procurement dollars in the amount of \$18.809 million supports EMARSS SIGINT Enhancements, Target Signature Array (TSA) procurement, Operator Procedural Trainer (OPT) integration, and engineering support.</p> <p>In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.</p> <p>All funding is in Active Component.</p>		

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Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 1036AZ2001 / Multi Sensor ABN Recon (MIP)	Modification Number / Title: AZ2050 / ARL Mod-In-Service

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	975.909	74.380	59.938	29.119	51.000	80.119	33.177	25.845	77.142	55.315	-	1,381.825
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	975.909	74.380	59.938	29.119	51.000	80.119	33.177	25.845	77.142	55.315	-	1,381.825
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	975.909	74.380	59.938	29.119	51.000	80.119	33.177	25.845	77.142	55.315	-	1,381.825

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	325,303.000	37,190.000	59,938.000	14,559.500	51,000.000	26,706.333	33,177.000	25,845.000	77,142.000	55,315.000	-	106,294.231

Description:

ARL-E FY 2019 Base procurement dollars in the amount of \$29.119 million supports the procurement of two (2) Long Range Radar systems and System Integration Lab (SIL) testing of one system - aircraft 5.

ARL-E FY 2019 OCO procurement dollars in the amount of \$51.000 million supports the procurement of Mission Equipment Payload (MEP) for aircraft 5. The systems procured will consist of one (1) set of Distributed Common Ground Station-Army (DCGS-A) workstations, one (1) set of communication equipment (mission radios, Beyond line of Site (BLOS) and Line of Site (LOS) Data links), two (2) sets of Full Motion Video (FMV) MX-20 sensors, and one (1) COMINT subsystem The funding will also support aircraft integration and test of one (1) system - aircraft 4, Integrated Contractor Logistics Support, New Equipment Training, and Limited User Test.

The schedule (in/out) reflects the start of MEP SIL testing and the completion of aircraft integration/required test events.

Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	74.380	59.938	29.119	51.000	80.119	33.177	25.845	77.142	55.315
Total:									
Secondary Distribution									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	74.380	59.938	29.119	51.000	80.119	33.177	25.845	77.142	55.315

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Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 1036AZ2001 / Multi Sensor ABN Recon (MIP)						Modification Number / Title: AZ2050 / ARL Mod-In-Service			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: ARL				Modification Type: Operational				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Procurement													
Modification Item 1 of 1: ARL Enhanced (ARL-E)													
A Kits													
Recurring													
System Test & Eval support	- / 23.568	- / -	- / 2.267	- / 0.000	- / 1.837	- / 1.837	- / -	- / 2.500	- / 7.500	- / -	- / 0.000	- / 37.672	
Program Mgt	- / 18.005	- / 4.365	- / 5.994	- / 2.367	- / 5.100	- / 7.467	- / 3.051	- / 2.377	- / 7.097	- / 5.078	- / 0.000	- / 53.434	
Spares	- / -	- / -	- / 1.152	- / -	- / -	- / -	- / -	- / -	- / 8.700	- / 4.747	- / 0.000	- / 14.599	
Training and Documentation	- / 6.054	- / -	- / 1.518	- / 0.000	- / 2.038	- / 2.038	- / -	- / -	- / 2.500	- / -	- / 0.000	- / 12.110	
Field Support	- / 1.167	- / -	- / 2.184	- / 0.000	- / 14.925	- / 14.925	- / 14.965	- / 2.325	- / -	- / -	- / 0.000	- / 35.566	
Aircraft Standardization	- / 13.791	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 16.000	- / 0.000	- / 29.791	
Aircraft Modification	- / -	- / 2.485	- / 5.134	- / -	- / -	- / -	- / 5.114	- / 1.350	- / 10.000	- / -	- / 0.000	- / 24.083	
Subtotal: Recurring	- / 62.585	- / 6.850	- / 18.249	- / 2.367	- / 23.900	- / 26.267	- / 23.130	- / 8.552	- / 35.797	- / 25.825	- / -	- / 207.255	
Non-Recurring													
Non Recurring Engineering	- / 22.302	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 22.302	
Subtotal: Non-Recurring	- / 22.302	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 22.302	
B Kits													
Recurring													
Upgrade MX-20D SWIR sensors	- / 4.100	- / -	- / 2.242	- / 0.000	- / 2.400	- / 2.400	- / -	- / -	- / -	- / -	- / 0.000	- / 8.742	
SAR/DMTI sensor	- / 25.250	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 25.250	
Communications procurement	- / 9.200	- / 2.710	- / 2.770	- / 0.000	- / 2.800	- / 2.800	- / -	- / -	- / 8.645	- / -	- / 0.000	- / 26.125	
LRR/Integration	- / 10.711	- / -	- / -	- / 15.952	- / -	- / 15.952	- / -	- / -	- / -	- / -	- / 0.000	- / 26.663	
COMINT	- / 18.996	- / 11.020	- / 2.767	- / -	- / -	- / -	- / 14.472	- / 1.000	- / 6.800	- / -	- / 0.000	- / 45.055	
HSI upgrade	- / 1.701	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1.701	
DCGS-A Workstations	- / 17.242	- / 21.220	- / 5.405	- / 0.000	- / 5.500	- / 5.500	- / 5.575	- / 5.600	- / 5.700	- / 11.490	- / 0.000	- / 77.732	
Upgrade MX-20HD Sensors	- / 2.500	- / -	- / 1.305	- / 0.000	- / 1.400	- / 1.400	- / -	- / -	- / -	- / -	- / 0.000	- / 5.205	
MEP/PED System Integration Lab (SIL)	- / 20.689	- / 6.700	- / 9.200	- / 10.800	- / -	- / 10.800	- / -	- / 2.243	- / 11.200	- / -	- / 0.000	- / 60.832	
Subtotal: Recurring	- / 110.389	- / 41.650	- / 23.689	- / 26.752	- / 12.100	- / 38.852	- / 10.047	- / 8.843	- / 32.345	- / 11.490	- / -	- / 277.305	
Subtotal: ARL Enhanced (ARL-E)	- / 195.276	- / 48.500	- / 41.938	- / 29.119	- / 36.000	- / 65.119	- / 33.177	- / 17.395	- / 68.142	- / 37.315	- / -	- / 506.862	
Subtotal: Procurement, All Modification Items	- / 195.276	- / 48.500	- / 41.938	- / 29.119	- / 36.000	- / 65.119	- / 33.177	- / 17.395	- / 68.142	- / 37.315	- / -	- / 506.862	
Installation													
Modification Item 1 of 1: ARL Enhanced (ARL-E)	1 / 780.633	2 / 25.880	1 / 18.000	- / -	- / 15.000	- / 15.000	- / -	1 / 8.450	- / 9.000	1 / 18.000	2 / 0.000	8 / 874.963	
Subtotal: Installation	1 / 780.633	2 / 25.880	1 / 18.000	0 / 0.000	0 / 15.000	0 / 15.000	- / -	1 / 8.450	0 / 9.000	1 / 18.000	2 / 0.000	8 / 874.963	

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Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 1036AZ2001 / Multi Sensor ABN Recon (MIP)						Modification Number / Title: AZ2050 / ARL Mod-In-Service		
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:					
Models of Systems Affected: ARL				Modification Type: Operational				Related RDT&E PEs:				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Total												
Total Cost (Procurement + Support + Installation)	975.909	74.380	59.938	29.119	51.000	80.119	33.177	25.845	77.142	55.315	-	1,381.825

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Exhibit P-3a, Individual Modification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 1036AZ2001 / Multi Sensor ABN Recon (MIP)	Modification Number / Title: AZ2050 / ARL Mod-In-Service
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 1: ARL Enhanced (ARL-E)

Manufacturer Information

Manufacturer Name: Leidos	Manufacturer Location: Maryland
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Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 24
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Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates	Nov 2015					Nov 2021	
Delivery Dates			Aug 2019	Nov 2019		Jun 2022	Jun 2023

Installation Information

Method of Implementation: Contractor

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	1 / 780.633	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 780.633
FY 2017	- / -	2 / 25.880	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 25.880
FY 2018	- / -	- / -	1 / 18.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 18.000
FY 2019	- / -	- / -	- / -	0 / 0.000	0 / 15.000	0 / 15.000	- / -	- / -	- / -	- / -	- / -	0 / 15.000
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 8.450	- / -	- / -	- / -	1 / 8.450
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 9.000	- / -	- / -	0 / 9.000
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 18.000	- / -	1 / 18.000
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	2 / 0.000	2 / 0.000
Total	1 / 780.633	2 / 25.880	1 / 18.000	0 / 0.000	0 / 15.000	0 / 15.000	- / -	1 / 8.450	0 / 9.000	1 / 18.000	2 / 0.000	8 / 874.963

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	3	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	2	8
Out	-	-	-	-	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	2	8

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Exhibit P-40a, Budget Item Justification For Aggregated Modification Items: PB 2019 Army															Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10						P-1 Line Item Number / Title: 1036AZ2001 / Multi Sensor ABN Recon (MIP)						Aggregated Modification Items Title: Various							

Item Number / Title	ID CD	MDAP/MAIS Code	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
			Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Guardrail Payloads (MIP)																				
AZ2052 / Guardrail Payloads (MIP)			-	-	13.516	-	-	24.450	-	-	35.070	-	-	4.346	-	-	-	-	-	4.346
<i>Secondary Distribution</i>																				
Army			-	-	-	-	-	24.450	-	-	35.070	-	-	4.346	-	-	-	-	-	4.346
Subtotal: Guardrail Payloads (MIP)			-	-	13.516	-	-	24.450	-	-	35.070	-	-	4.346	-	-	-	-	-	4.346
Total			-	-	13.516	-	-	24.450	-	-	35.070	-	-	4.346	-	-	-	-	-	4.346
Item Number / Title	ID CD	MDAP/MAIS Code	FY 2020			FY 2021			FY 2022			FY 2023			To Complete			Total Cost		
			Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Guardrail Payloads (MIP)																				
AZ2052 / Guardrail Payloads (MIP)			-	-	0.129	-	-	0.112	-	-	0.093	-	-	0.074	-	-	-	-	-	77.790
<i>Secondary Distribution</i>																				
Army			-	-	0.129	-	-	0.112	-	-	0.093	-	-	0.074	-	-	-	-	-	-
Subtotal: Guardrail Payloads (MIP)			-	-	0.129	-	-	0.112	-	-	0.093	-	-	0.074	-	-	-	-	-	77.790
Total			-	-	0.129	-	-	0.112	-	-	0.093	-	-	0.074	-	-	-	-	-	77.790

Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.

Modification Information:

Item Number / Title	Models of Systems Affected	Modification Type
Guardrail Payloads (MIP)		
AZ2052 / Guardrail Payloads (MIP)	See individual Mods	U

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Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 1036AZ2001 / Multi Sensor ABN Recon (MIP)	Modification Number / Title: AZ2054 / EMARSS Payloads

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	22.296	17.097	7.279	18.809	-	18.809	2.195	2.214	7.834	7.987	-	85.711
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	22.296	17.097	7.279	18.809	-	18.809	2.195	2.214	7.834	7.987	-	85.711
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	22.296	17.097	7.279	18.809	-	18.809	2.195	2.214	7.834	7.987	-	85.711

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	11,148.000	8,548.500	2,426.333	6,269.667	-	6,269.667	2,195.000	2,214.000	3,917.000	3,993.500	-	5,356.938

Description:

This funding line supports the procurement and upgrade of the following sensor payload capabilities: Signals Intelligence (SIGINT); Electro-optical/Infrared (EO/IR)/Full Motion Video (FMV); a Communications Intelligence (COMINT) to include Big Iron; Wide Area Aerial Surveillance (WAAS); Light Imaging Detection and Ranging (LiDAR) and improved Synthetic Aperture Radar / Moving Target Indicator (SAR/MTI) radar; line-of-site (LOS) and beyond line-of-site (BLOS) communications; Processing Exploitation and Dissemination (PED) supporting two Distributed Common Ground System - Army (DCGS-A) enabled operator workstations; and pre-planned product improvements.

The APO quantity of 24 are funded by multiple funding lines as follows: Aerial Common Sensor (ACS) (MIP) (A02005) FY14-FY16 procured 16. The below input/output schedule reflects a combined effort between the EMARSS SEMA Mods (MIP) (A02112) and EMARSS Payloads (MIP) (AZ2054) funding lines in FY16 and forward.

FY 2019 Base procurement dollars in the amount of \$18.809 million supports EMARSS SIGINT Enhancements, Target Signature Array (TSA) procurement, Operator Procedural Trainer (OPT) integration, and engineering support.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	17.097	7.279	18.809	-	18.809	2.195	2.214	7.834	7.987
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	17.097	7.279	18.809	-	18.809	2.195	2.214	7.834	7.987

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Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 1036AZ2001 / Multi Sensor ABN Recon (MIP)						Modification Number / Title: AZ2054 / EMARSS Payloads			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: EMARSS				Modification Type: x				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Procurement													
<i>Modification Item 1 of 1:</i> EMARSS Payloads													
A Kits													
Recurring													
MEP Contractor Testing	- / 1.000	- / 2.800	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 3.800	
GFE/Initial Spares	2 / 1.201	2 / 5.515	2 / 3.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	6 / 10.216	
PMO and SETA Support	- / 1.000	- / 1.332	- / 1.229	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 3.561	
Engineering Support	- / 0.970	- / 0.650	- / 2.550	- / 1.765	- / -	- / 1.765	- / -	- / -	- / -	- / -	- / 0.000	- / 5.935	
Mods in Service; SIGINT Upgrades	- / -	- / -	- / -	- / 9.344	- / -	- / 9.344	- / 1.895	- / 1.914	- / 7.234	- / 7.387	- / 0.000	- / 27.774	
TSA OPT Integration	- / -	- / -	- / -	- / 6.000	- / -	- / 6.000	- / -	- / -	- / -	- / -	- / 0.000	- / 6.000	
Subtotal: Recurring	2 / 4.171	2 / 10.297	2 / 7.279	- / 17.109	- / -	- / 17.109	- / 1.895	- / 1.914	- / 7.234	- / 7.387	- / -	6 / 57.286	
B Kits													
Non-Recurring													
RESET WAAS for EMARSS-G	- / 8.625	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 8.625	
Subtotal: Non-Recurring	- / 8.625	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.625	
Subtotal: EMARSS Payloads	2 / 12.796	2 / 10.297	2 / 7.279	- / 17.109	- / -	- / 17.109	- / 1.895	- / 1.914	- / 7.234	- / 7.387	- / -	6 / 65.911	
Subtotal: Procurement, All Modification Items	2 / 12.796	2 / 10.297	2 / 7.279	- / 17.109	- / -	- / 17.109	- / 1.895	- / 1.914	- / 7.234	- / 7.387	- / -	6 / 65.911	
Installation													
<i>Modification Item 1 of 1:</i> EMARSS Payloads	2 / 9.500	2 / 6.800	- / -	6 / 1.700	- / -	6 / 1.700	1 / 0.300	1 / 0.300	2 / 0.600	2 / 0.600	- / -	16 / 19.800	
Subtotal: Installation	2 / 9.500	2 / 6.800	0 / 0.000	6 / 1.700	0 / 0.000	6 / 1.700	1 / 0.300	1 / 0.300	2 / 0.600	2 / 0.600	- / -	16 / 19.800	
Total													
Total Cost (Procurement + Support + Installation)	22.296	17.097	7.279	18.809	-	18.809	2.195	2.214	7.834	7.987	-	85.711	

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Exhibit P-3a, Individual Modification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 1036AZ2001 / Multi Sensor ABN Recon (MIP)	Modification Number / Title: AZ2054 / EMARSS Payloads
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 1: EMARSS Payloads

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
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Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 12
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Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates			May 2019				
Delivery Dates				May 2020			

Installation Information

Method of Implementation: EMARSS Modifications

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	2 / 9.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 9.500
FY 2019	- / -	2 / 6.800	- / -	6 / 1.700	- / -	6 / 1.700	- / -	- / -	- / -	- / -	- / -	8 / 8.500
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.300	- / -	- / -	- / -	- / -	1 / 0.300
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.300	- / -	- / -	- / -	1 / 0.300
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.600	- / -	- / -	2 / 0.600
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.600	- / -	2 / 0.600
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	2 / 9.500	2 / 6.800	0 / 0.000	6 / 1.700	0 / 0.000	6 / 1.700	1 / 0.300	1 / 0.300	2 / 0.600	2 / 0.600	- / -	16 / 19.800

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	2	-	2	-	-	-	-	-	-	-	-	6	-	-	-	1	-	-	-	1	-	-	-	2	-	-	2	-	-	-	-
Out	-	-	-	-	2	-	2	-	-	-	-	-	-	-	-	-	6	-	-	-	1	-	-	-	1	-	-	-	2	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 2706AA6605 / AH-64 MODS
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	8,465.259	187.883	238.141	104.996	-	104.996	95.027	85.546	112.579	89.240	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	180.439	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Net Procurement (P-1) (<i>\$ in Millions</i>)	8,284.820	187.883	238.141	104.996	-	104.996	95.027	85.546	112.579	89.240	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	180.439	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Total Obligation Authority (<i>\$ in Millions</i>)	8,465.259	187.883	238.141	104.996	-	104.996	95.027	85.546	112.579	89.240	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The AH-64 MODS (AA6606) program provides for modernization of the fielded AH-64D/AH-64E Apache fleet. AH-64D/AH-64E is a tandem cockpit, twin engine, single main rotor attack helicopter. The Apache aircraft incorporates the Longbow weapon system and provides the U.S. Army with significant target acquisition and firepower effectiveness, survivability, lethality, and fighting capabilities even during adverse weather conditions. The Apache is equipped with the Fire Control Radar/Radar Frequency Interferometer (FCR/RFI) mission kit and Fire and Forget Longbow HELLFIRE missiles. The Modernized Target Acquisition Designator Sight (MTADS) assembly is an Electro-Optical system that consists of a Day television (DTV), sensor, a Forward Looking Infrared (FLIR) sensor for day and night visibility as well as limited adverse weather operations, a Laser Spot Tracker (LST), and Laser Rangefinder/Designator (LRFD). The Modernized Pilot Night Vision Sensor (M-PNVS) is a FLIR system which allows Nap-of-Earth flight operations at night by the pilot independent of the co-pilot/gunner's FLIR. The Apache is armed with the HELLFIRE Antitank Missile, 2.75 inch rockets and a 30mm gun capable of defeating armor.

The AH-64 Mods Program allows for near-term operationally driven improvements to the Apache fleet, focusing on deployment lessons learned, reliability improvements, and solving obsolescence issues. Improvements will occur to the Airframe, Armament, Communications, Manned / Unmanned Teaming, Navigation, Sensors, Survivability, Support Elements, and Training Systems. Examples of modifications include Selected Component Recapitalization, Airframe and Sensor Obsolescence upgrades, procurement of Modernized Day Sensor Assembly components, initial procurement of Modernized Radio-Frequency Interferometer (M-RFI), Software upgrades, Condition Based Maintenance (CBM), Trainer upgrades, and Computer/Processing and Data Display and Control upgrades. The AH-64D/AH-64E inventory crossover point (approx.400 AH-64D / 400 AH-64E) will occur in 2021. These modernization efforts are required to ensure the Longbow Apache remains a ready and relevant Soldier asset.

Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	187.883	238.141	104.996	-	104.996	95.027	85.546	112.579	89.240
Total:									
Secondary Distribution									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	187.883	238.141	104.996	-	104.996	95.027	85.546	112.579	89.240

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army	Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 2706AA6605 / AH-64 MODS

ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	AA6606 / AH-64 Modifications (Operational & Reliability Improvements and Resolve Obsolescence Issues)				- / 8,465.259	- / 187.883	- / 238.141	- / 104.996	- / -	- / 104.996
P-40	Total Gross/Weapon System Cost				- / 8,465.259	- / 187.883	- / 238.141	- / 104.996	- / -	- / 104.996
Exhibits Schedule					FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	AA6606 / AH-64 Modifications (Operational & Reliability Improvements and Resolve Obsolescence Issues)				- / 95.027	- / 85.546	- / 112.579	- / 89.240	Continuing	Continuing
P-40	Total Gross/Weapon System Cost				- / 95.027	- / 85.546	- / 112.579	- / 89.240	Continuing	Continuing

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.
 Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY19 Base procurement dollars in the amount of \$104.996 million supports modification and service life extension efforts for the Airframe, Armament, Mission Command, Sensors, Survivability, Support Elements, Training Systems, and Manned/Unmanned Teaming.

All COMPO 1 Active

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Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 2706AA6605 / AH-64 MODS	Modification Number / Title: AA6606 / AH-64 Modifications

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	8,465.259	187.883	238.141	104.996	-	104.996	95.027	85.546	112.579	89.240	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	180.439	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Net Procurement (P-1) (<i>\$ in Millions</i>)	8,284.820	187.883	238.141	104.996	-	104.996	95.027	85.546	112.579	89.240	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	180.439	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Total Obligation Authority (<i>\$ in Millions</i>)	8,465.259	187.883	238.141	104.996	-	104.996	95.027	85.546	112.579	89.240	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Airframe includes modifications to the Structural Subsystems, Propulsion/Drive/Rotor Systems, Health Monitoring System, and Recap Support/Kits. Structural Subsystems modifications include improvements to the assembled structural and aerodynamic components of the air vehicle to include the fuselage and associated manual flight control systems, rotor equipment, landing gear and associated equipment, environmental controls, racks, mounts, intersystem cables and distribution boxes. Propulsion/Drive/Rotor Systems together with Engine Electronic Digital Engine Control Unit (EDECUCU) and Common Hydro-Mechanical Unit (CHMU) provides the capability to carry a heavier combat payload and allow for enhanced performance in high-altitude, hot climates. Landing Gear improvements (High Performance Shock Struts (HPSS)) will improve the aircraft crash survivability and allows for a heavier aircraft with greater combat loads. Provides sustainment, support and maintenance for the Apache test aircraft.

Mission Command includes modifications and/or upgrades to the various Apache processors and displays. Mission Computer / Processing modifications and/or upgrades include improvements to the master data processing unit(s) responsible for coordinating and directing the major avionics mission systems. System Simulation & Development Directorate (SSDD) Crew Station Working Group (CSWG) provides support for an AH-64E Engineering Analysis Cockpit as part of the Advance Prototyping and Engineering Experimentation (APBEX2) Lab to support continuous Operational Flight Program (OFFP) software sustainment and product improvement. Battlefield Operations and Support System (BOSS) supports developmental / formal test to ensure interoperability and assists in certification testing of the Apache data link implementation. Data Link Test Tools (DLTT) supports developmental / formal test to ensure interoperability and assists in certification testing of the Apache data link implementation.

Sensors include modifications, operational improvements, and/or mitigation of obsolescence issues to the Apache Sensor suite, which includes the MTADS/PNVS, the Modernized Day Sensor Assembly (MDSA). MDSA is the Modernized Laser Rangefinder/Designator (M-LFRD) which provides enhanced laser ranging, improved target designation, and target tracking capability by holding a stabilized laser beam on a distant stationary or moving point target for highly precise handoff to precision guided weapons. M-LFRD replaces the obsolete Laser Transceiver Unit, which mitigates ongoing obsolescence risks, improves reliability and maintainability, and reduces operations and support costs. MDSA replaces the remaining legacy DSA components, adding a laser pointer, eye safe laser, and high definition color-camera capability. MDSA funding enables software integration, tooling, and test equipment procurement and system production.

Support Elements include the modification and production of those items, which are not part of the aircraft system but are required to maintain, service, or calibrate the aircraft systems or portions of the aircraft system while not directly engaged in the performance of its mission and will not be in the inventory for support of other weapon systems. Post Production Organic support establishes Depot Pilot Programs at Corpus Christi Army Depot (CCAD) and Tobyhanna Army Depot (TYAD) for selected Depot Level Repairables (DLR) as part of the Original Equipment Manufacturer (OEM) to Depot Transition. Post Production Organic Support (PPOS) provides Depot Maintenance Plant Equipment, Special Tools and Test Equipment, labor training and associated technical data for future repairs once the DLR has transitioned to the depot. PPOS improves Repair Turn Around Time and retain depot maintenance capabilities.

Training Systems include deliverable training services, devices, accessories, aids, equipment, and parts used to facilitate instruction through which personnel will learn to operate and maintain the system with maximum efficiency. Examples include Operator / Maintainer Training (aircraft/classroom) devices, obsolescence mitigation and new systems integration/concurrency to the suite of training devices/systems, and updates to allow individual/team training tasks and collective training. Efforts include the production and upgrade of deliverable and fielded training equipment and associated software in the form of 3D

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Exhibit P-3a, Individual Modification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 2706AA6605 / AH-64 MODS	Modification Number / Title: AA6606 / AH-64 Modifications
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**
 hardware and software models, Host Computer upgrades, Requirements Management Framework Cyber compliance, Modernized Dayside Assembly, High Reliability Turret, upgraded visual systems and Virtual Immersive Training Content.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	187.883	238.141	104.996	-	104.996	95.027	85.546	112.579	89.240
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	187.883	238.141	104.996	-	104.996	95.027	85.546	112.579	89.240

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Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10					P-1 Line Item Number / Title: 2706AA6605 / AH-64 MODS					Modification Number / Title: AA6606 / AH-64 Modifications			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: Longbow Apache				Modification Type: Operational & Reliability Improvements and Resolve Obsolescence Issues				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Procurement													
Modification Item 1 of 6: Airframe													
A Kits													
Recurring													
Structural Subsystems	- / 12.535	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
Health Monitoring System	- / 13.752	- / 7.080	- / 17.332	- / 17.462	- / -	- / 17.462	- / 17.595	- / 17.729	- / 17.867	- / 18.007	- / 18.007	Continuing	Continuing
RESET / MEP Kits	- / 60.452	- / 32.978	- / 28.173	- / 15.866	- / -	- / 15.866	- / 13.498	- / 13.879	- / 13.306	- / 14.084	- / 14.084	Continuing	Continuing
Other Support	- / 1.710	- / 1.830	- / 1.816	- / 1.125	- / -	- / 1.125	- / 1.182	- / 1.217	- / 1.470	- / 1.27	- / 1.27	Continuing	Continuing
Subtotal: Recurring	- / 88.449	- / 41.888	- / 37.321	- / 24.453	- / -	- / 24.453	- / 22.275	- / 22.825	- / 22.643	- / 24.218	- / 24.218	Continuing	Continuing
Subtotal: Airframe	- / 88.449	- / 41.888	- / 37.321	- / 24.453	- / -	- / 24.453	- / 22.275	- / 22.825	- / 22.643	- / 24.218	- / 24.218	Continuing	Continuing
Modification Item 2 of 6: Mission Command													
A Kits													
Recurring													
Processors	- / 39.979	- / 6.837	- / 5.907	- / 1.296	- / -	- / 1.296	- / 1.321	- / 1.468	- / 1.318	- / 1.343	- / 1.000	- / 1.000	- / 59.469
Displays	- / 17.186	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 17.186
Other Support	- / 3.422	- / 0.312	- / 0.302	- / 0.062	- / -	- / 0.062	- / 0.074	- / 0.083	- / 0.092	- / 0.130	- / 0.000	- / 0.000	- / 14.477
Subtotal: Recurring	- / 50.587	- / 7.149	- / 6.209	- / 1.358	- / -	- / 1.358	- / 1.395	- / 1.551	- / 1.410	- / 1.473	- / -	- / -	- / 71.132
Subtotal: Mission Command	- / 50.587	- / 7.149	- / 6.209	- / 1.358	- / -	- / 1.358	- / 1.395	- / 1.551	- / 1.410	- / 1.473	- / -	- / -	- / 71.132
Modification Item 3 of 6: Sensors													
A Kits													
Recurring													
MTADS/PNVS	- / 19.968	- / 17.928	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 37.896
M-RFI	27 / 43.338	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	27 / 43.338
Other Support	- / 10.409	- / 3.597	- / 6.635	- / 3.055	- / -	- / 3.055	- / 2.965	- / 3.007	- / 5.494	- / 5.292	- / 0.000	- / 0.000	- / 40.454
Subtotal: Recurring	27 / 73.715	- / 21.525	- / 6.635	- / 3.055	- / -	- / 3.055	- / 2.965	- / 3.007	- / 5.494	- / 5.292	- / -	- / -	27 / 121.688
B Kits													
Recurring													
M-LRFD	150 / 49.834	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	150 / 49.834
M-DSA	50 / 121.666	49 / 60.794	105 / 129.713	38 / 63.360	- / -	38 / 63.360	26 / 52.914	26 / 53.401	54 / 79.069	25 / 54.958	- / 0.000	- / 0.000	373 / 615.875
Subtotal: Recurring	200 / 171.500	49 / 60.794	105 / 129.713	38 / 63.360	- / -	38 / 63.360	26 / 52.914	26 / 53.401	54 / 79.069	25 / 54.958	- / -	- / -	523 / 665.709
Subtotal: Sensors	227 / 245.215	49 / 82.319	105 / 136.348	38 / 66.415	- / -	38 / 66.415	26 / 55.879	26 / 56.408	54 / 84.563	25 / 60.250	- / -	- / -	550 / 787.397

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Exhibit P-3a, Individual Modification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 2706AA6605 / AH-64 MODS	Modification Number / Title: AA6606 / AH-64 Modifications
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Models of Systems Affected: Longbow Apache **Modification Type:** Operational & Reliability Improvements and Resolve Obsolescence Issues **Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Modification Item 4 of 6: Training Systems												
A Kits												
Recurring												
Operator Devices	- / 121.455	- / 3.710	- / 51.502	- / 9.253	- / -	- / 9.253	- / 8.883	- / 0.670	- / 0.680	- / 0.690	- / 0.000	- / 96.843
Maintainer Devices	- / 111.186	- / 2.532	- / 3.926	- / 2.929	- / -	- / 2.929	- / 5.773	- / 3.838	- / 3.026	- / 2.319	- / 0.000	- / 35.529
Other Support	- / 6.018	- / 0.285	- / 2.835	- / 0.588	- / -	- / 0.588	- / 0.822	- / 0.254	- / 0.257	- / 0.290	- / 0.000	- / 11.349
Subtotal: Recurring	- / 38.659	- / 6.527	- / 58.263	- / 12.770	- / -	- / 12.770	- / 15.478	- / 4.762	- / 3.963	- / 3.299	- / -	- / 143.721
Subtotal: Training Systems	- / 38.659	- / 6.527	- / 58.263	- / 12.770	- / -	- / 12.770	- / 15.478	- / 4.762	- / 3.963	- / 3.299	- / -	- / 143.721
Modification Item 5 of 6: Hellfire Missile Launchers												
A Kits												
Recurring												
Hellfire Missile Launchers	- / -	- / 50.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 50.000
Subtotal: Recurring	- / -	- / 50.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 50.000
Subtotal: Hellfire Missile Launchers	- / -	- / 50.000	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 50.000
Modification Item 6 of 6: AH-64 Mods Prior Year Cost												
A Kits												
Recurring												
AH-64 Mods Prior Year Cost	- / 8,042.349	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 8,042.349
Subtotal: Recurring	- / 8,042.349	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8,042.349
Subtotal: AH-64 Mods Prior Year Cost	- / 8,042.349	- / -	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 8,042.349
Subtotal: Procurement, All Modification Items	227 / 8,465.259	49 / 187.883	105 / 238.141	38 / 104.996	- / -	38 / 104.996	26 / 95.027	26 / 85.546	54 / 112.579	25 / 89.240	<i>Continuing</i>	<i>Continuing</i>

Installation												
Modification Item 1 of 6: Airframe	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000
Modification Item 2 of 6: Mission Command	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000
Modification Item 3 of 6: Sensors	158 / 0.000	49 / 0.000	86 / 0.000	38 / 0.000	- / -	38 / 0.000	26 / 0.000	26 / 0.000	54 / 0.000	25 / 0.000	- / -	462 / 0.000
Modification Item 4 of 6: Training Systems	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000
Modification Item 5 of 6: Hellfire Missile Launchers	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000
Modification Item 6 of 6: AH-64 Mods Prior Year Cost	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000
Subtotal: Installation	163 / 0.000	49 / 0.000	86 / 0.000	38 / 0.000	0 / 0.000	38 / 0.000	26 / 0.000	26 / 0.000	54 / 0.000	25 / 0.000	- / -	467 / 0.000
Total												

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 2706AA6605 / AH-64 MODS	Modification Number / Title: AA6606 / AH-64 Modifications
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Models of Systems Affected: Longbow Apache	Modification Type: Operational & Reliability Improvements and Resolve Obsolescence Issues	Related RDT&E PEs:
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Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>
Total Cost (Procurement + Support + Installation)	8,465.259	187.883	238.141	104.996	-	104.996	95.027	85.546	112.579	89.240	Continuing	Continuing

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 2706AA6605 / AH-64 MODS	Modification Number / Title: AA6606 / AH-64 Modifications

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 6: Airframe

Manufacturer Information

Manufacturer Name: Various	Manufacturer Location: Various
Administrative Leadtime (in Months):	Production Leadtime (in Months):

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Modifications

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	1 / 0.000	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Out	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 2706AA6605 / AH-64 MODS	Modification Number / Title: AA6606 / AH-64 Modifications

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 2 of 6: Mission Command

Manufacturer Information

Manufacturer Name: Various	Manufacturer Location: Various
Administrative Leadtime (in Months):	Production Leadtime (in Months):

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: .

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	1 / 0.000	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 2706AA6605 / AH-64 MODS	Modification Number / Title: AA6606 / AH-64 Modifications

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 3 of 6: Sensors

Manufacturer Information

Manufacturer Name: Various	Manufacturer Location: Various
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 24

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates	Jul 2016	Nov 2017	Nov 2018	Nov 2019	Nov 2020	Nov 2021	Nov 2022
Delivery Dates	Jul 2017	Apr 2020	Oct 2020	Oct 2021	Oct 2022	Oct 2023	Oct 2024

Installation Information

Method of Implementation: Modifications

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	150 / 0.000	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	150 / 0.000
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	8 / 0.000	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	8 / 0.000
FY 2019	- / -	49 / 0.000	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	49 / 0.000
FY 2020	- / -	- / -	86 / 0.000	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	86 / 0.000
FY 2021	- / -	- / -	- / -	38 / 0.000	- / -	38 / 0.000	- / -	- / -	- / -	- / -	- / -	38 / 0.000
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	26 / 0.000	- / -	- / -	- / -	- / -	26 / 0.000
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	26 / 0.000	- / -	- / -	- / -	26 / 0.000
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	54 / 0.000	25 / 0.000	- / -	79 / 0.000
Total	158 / 0.000	49 / 0.000	86 / 0.000	38 / 0.000	0 / 0.000	38 / 0.000	26 / 0.000	26 / 0.000	54 / 0.000	25 / 0.000	- / -	462 / 0.000

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	59	12	13	12	12	21	27	27	30	9	10	9	10	8	6	6	6	5	7	8	6	12	14	14	14	6	7	6	6	-	382
Out	-	-	-	-	-	-	-	-	6	12	13	12	12	21	27	27	30	9	10	9	10	8	6	6	6	5	7	8	6	132	382

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 2706AA6605 / AH-64 MODS	Modification Number / Title: AA6606 / AH-64 Modifications

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 4 of 6: Training Systems

Manufacturer Information

Manufacturer Name: Boeing / LSI Inc	Manufacturer Location: St. Louis, MO / Jacksonville, FL
Administrative Leadtime (in Months):	Production Leadtime (in Months):

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Field Retrofits

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	1 / 0.000	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 2706AA6605 / AH-64 MODS	Modification Number / Title: AA6606 / AH-64 Modifications
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 5 of 6: Hellfire Missile Launchers

Manufacturer Information

Manufacturer Name: Lockheed Martin Missiles and Fire Control	Manufacturer Location: Orlando, Florida
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Administrative Leadtime (in Months):	Production Leadtime (in Months):
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Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Armament

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	1 / 0.000	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000

Installation Schedule

PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
In	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Out	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 2706AA6605 / AH-64 MODS	Modification Number / Title: AA6606 / AH-64 Modifications
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 6 of 6: AH-64 Mods Prior Year Cost

Manufacturer Information

Manufacturer Name: Various Manufacturer Location: Various

Administrative Leadtime (in Months): Production Leadtime (in Months):

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Modifications

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	1 / 0.000	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0607137A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
<i>Procurement Quantity (Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<i>Gross/Weapon System Cost (\$ in Millions)</i>	10,917.120	102.943	20.166	7.807	-	7.807	11.785	23.957	15.092	15.697	Continuing	Continuing
<i>Less PY Advance Procurement (\$ in Millions)</i>	1,168.857	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
<i>Net Procurement (P-1) (\$ in Millions)</i>	9,748.263	102.943	20.166	7.807	-	7.807	11.785	23.957	15.092	15.697	Continuing	Continuing
<i>Plus CY Advance Procurement (\$ in Millions)</i>	1,168.857	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Total Obligation Authority (\$ in Millions)	10,917.120	102.943	20.166	7.807	-	7.807	11.785	23.957	15.092	15.697	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

<i>Initial Spares (\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<i>Flyaway Unit Cost (\$ in Thousands)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<i>Gross/Weapon System Unit Cost (\$ in Thousands)</i>	-	-	90.838	205.447	-	205.447	199.746	199.642	201.227	198.696	Continuing	Continuing

Description:

The CH-47F Chinook is a twin-turbine, tandem-rotor, heavy-lift transport helicopter with a useful load of up to 25,000 pounds. As the Army's only heavy lift helicopter, the CH-47F Improved Cargo helicopter is an essential component of the Army's Multi-Domain Battle framework. The mission of the CH-47F is to transport troops (including air assault), supplies, weapons, and other cargo in general support operations. The CH-47F is vital to Overseas Contingency Operations and Homeland Security needs of our nation. Secondary missions include medical evacuation, aircraft recovery, parachute drops, disaster relief, and search and rescue. These aircraft are fielded to heavy lift companies contained within Combat Aviation Brigades and Special Operations Aviation.

Block I

The major modifications to the CH-47F include the Cargo On/Off Loading System (COOLS) with Ballistic Protection System (BPS), Cargo Platform Health Environment (CPHE), Engine Improvement, Aircraft Component Parts-Marking, Safety Mods \$5M or Less, Improved Vibration Control System (IVCS), fielding of the Common Avionics Architecture System CAAS version 9.4, Training Aids Devices Simulators and Simulations (TADSS) equipment Obsolescence and the Enduring Requirement for Software, Safety and Obsolescence.

CH-47 Safety Mods \$5 million or less includes the Full Authority Digital Electronic Control (FADEC) Continuity Test Set (FCTS) to reduce the maintenance burden - while troubleshooting wire/electrical harnesses. This effort improves operational availability of aircraft and reduces O&S costs.

Enduring requirements for Software, Safety and Obsolescence is required to maintain the H-47F Avionics and Software system Common Avionics Architecture System (CAAS), the Digital Automatic Flight Control System (DAFCS), and the Cargo Platform Health Environment (CPHE) systems. CAAS provides the primary interface to the pilots for all aircraft systems. It monitors aircraft health, provides sophisticated navigation and communication capabilities, and provides tactical situational awareness and interoperability. The DAFCS provides fleet-leading aircraft stability and handling qualities that have saved countless lives since its deployment on the F model in 2007. The CPHE system provides the mechanism to record and evaluate the data necessary to have a Condition Based Maintenance and a Health and Usage Monitoring program which enables the Army to make better informed decisions about the service life and maintenance programs for the aircraft. These three systems run on specialized computers that primarily consist of commercial electronic components. The commercial electronics market is rapidly evolving and, because the government products are such a small part of the demand, obsolescence makes it impossible to continue production of the same design for an extended duration. Additionally, due to continuously evolving requirements driven by changes in commercial airspace navigation, interoperability, and cyber security threats, these software systems require continuous updates, testing, integration, training and logistics support. The current funding priorities for Software, Safety and Obsolescence are the fielding of CAAS V9.4 and the associated updates to the Training Aids Devices Simulators and Simulations (TADSS) equipment. The CAAS V9.4 fielding completes the efforts to provide enhancements to the CH-47F including updates to Blue Force Tracker (BFT), Aircraft Survivability Equipment (ASE), Automatic Dependent Surveillance Broadcast (ADS-B) Out as well as significant pilot-vehicle interface improvements aimed

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0607137A
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Line Item MDAP/MAIS Code: N/A

at improvements in Degraded Visual Environment (DVE) performance. The BFT update provides encryption and improvements in data timeliness. ASE driven software updates include the addition of the AVR-2B laser detection system and improved threat situational awareness to pilots. ADS-B Out capability is mandated by the FAA. Finally, the TADSS system computers and projectors are currently obsolete. If any of these systems fail, all TADSS devices (TFPS, CHMT, VIE) will not function, negatively impacting aircrew training at the unit level.

The Cargo On/Off Loading System (COOLS) with an under floor Ballistic Protection System (BPS) replaces the legacy system, Helicopter Internal Cargo Handling (HICHS) that takes eight hours to install. In comparison, an aircraft equipped with COOLS requires only 15 minutes of installation time on ground or in flight, allowing for immediate mission changes and emergency resupply missions.

The Cargo Platform Health Environment (CPHE) is the CH-47F's system that collects the data necessary to enable a Condition Based Maintenance program and the Health and Usage Monitoring System (HUMS). CPHE processes this parametric data and is the Graphic User Interface (GUI) that allows the warfighter the capability to view and analyze the aircraft's parametric data. In addition, the CPHE system is designed to continuously collect vibration data from both the rotor blades and the aircraft drive train. This vibration data is combined with the parametric data to provide the information necessary for successful CBM/HUMS programs which create the potential to make more informed decisions and reduce unscheduled maintenance work. CPHE provides the tools necessary to complete required maintenance actions such as Rotor Track and Balance (RTB) and Drivetrain vibration checks. This is a paradigm shift from the legacy Aviation Vibration Analyzer (AVA) system and saves operation & support (O&S) costs. The required updates of the CPHE system include modifications for Advanced Chinook Rotor Blade (ACRB) and Improved Drive Train (IDT), which the legacy system AVA does not support.

Engine improvements for the T55-GA-714A focus on optimizing operational capability and reliability while decreasing O&S costs. The engine program for Reliability Improvements thru Failure Investigation and Reporting (RIMFIRE) includes the investigation and reporting of engine failure data at the depot. This data provides key information that drives reliability, maintainability and O&S improvements. In totality, this effort covers the inspections, data collection, data retention, and data analysis for all T55 engines returned to Corpus Christy Army Depot (CCAD) for overhaul.

The Improved Vibration Control System (IVCS) provides an active vibration suppression system to minimize CH-47 aircraft vibrations and replaces the Self Tuned Vibration Absorbers (STVAs). The IVCS reduces aircraft weight by 140 lbs., provides vibration dampening equal to/or better than the STVA, and reduces O&S costs over the lifespan of the airframe.

Block II

Post Deployment Software Support (PDSS) necessary to maintain the operational capability of the CH-47F Block II Common Avionics Architecture System (CAAS), Digital Flight Control Systems (DAFCS), and Cargo Platform Health Environment (CPHE) software during the production and fielding phase of the program. This includes safety updates, correcting defects, ensuring compliance with cybersecurity and other information assurance requirements, and maintaining interoperability with Commercial Off The Shelf (COTS) software updates.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	102.943	20.166	6.063	-	6.063	7.582	21.923	13.025	15.697
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	1.744	-	1.744	4.203	2.034	2.067	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	102.943	20.166	7.807	-	7.807	11.785	23.957	15.092	15.697

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0607137A
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Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	AA0252 / CH-47 Cargo Helicopter Mods (Unclassified)				- / 10,917.120	- / 102.943	- / 20.166	- / 7.807	- / -	- / 7.807
P-40	Total Gross/Weapon System Cost				- / 10,917.120	- / 102.943	- / 20.166	- / 7.807	- / -	- / 7.807

Exhibits Schedule					FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	AA0252 / CH-47 Cargo Helicopter Mods (Unclassified)				- / 11.785	- / 23.957	- / 15.092	- / 15.697	Continuing	Continuing
P-40	Total Gross/Weapon System Cost				- / 11.785	- / 23.957	- / 15.092	- / 15.697	Continuing	Continuing

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY2019 Base procurement dollars in the amount of \$7.807 million supports avionics and software upgrades. Funding addresses the interoperability of Key Performance Parameters (KPPs): improves the availability of the Flight Line Critical Line Replacement Units (LRUs), corrects software related safety issues, maintains software lab infrastructure, etc.

In accordance with Section 1815 of the 2008 National Defense Authorization Act (P.L 110-181), this item is necessary for use by the Active and Reserve Components of Armed Forces for homeland and defense missions, domestic emergency responses and providing military support to civil authorities.

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Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)	Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods

ID Code (A=Service Ready, B=Not Service Ready) : _____ **MDAP/MAIS Code:** _____

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	10,917.120	102.943	20.166	7.807	-	7.807	11.785	23.957	15.092	15.697	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	1,168.857	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Net Procurement (P-1) (<i>\$ in Millions</i>)	9,748.263	102.943	20.166	7.807	-	7.807	11.785	23.957	15.092	15.697	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	1,168.857	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Total Obligation Authority (<i>\$ in Millions</i>)	10,917.120	102.943	20.166	7.807	-	7.807	11.785	23.957	15.092	15.697	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	90.838	205.447	-	205.447	199.746	199.642	201.227	198.696	Continuing	Continuing

Description:

Block I

The major modifications to the H-47F include the Cargo On/Off Loading System (COOLS) with Ballistic Protections System (BPS), Cargo Platform Health Environment (CPHE), Engine Improvement, Aircraft Component Parts-Marking, Safety Mods \$5M or less, Improved Vibration Control System (IVCS) the fielding of Common Avionics Architecture System (CAAS) version 9.4, Training Aids Devices Simulators and Simulations (TADSS) equipment Obsolescence, and Enduring Requirement for Software, Safety and Obsolescence.

Block II modifications include but not limited to: Avionics and Software, Aircraft Survivability Equipment, Safety, Maintainability and Air Vehicle changes.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	102.943	20.166	6.063	-	6.063	7.582	21.923	13.025	15.697
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	1.744	-	1.744	4.203	2.034	2.067	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	102.943	20.166	7.807	-	7.807	11.785	23.957	15.092	15.697

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Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)						Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: CH-47				Modification Type: Unclassified				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Procurement													
Modification Item 1 of 10: Block I CH-47 Safety Mods \$5M or Less													
A Kits													
Recurring													
Voltage Standing Wave Ratio (VSWR)	- / 2.239	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	
FCTS (FADEC Continuity Test Set)	- / 4.109	- / 2.321	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	
Misc Mods	- / 15.592	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	
Swashplate Assembly	- / 0.575	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	
Hook Load Measuring System	- / 10.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	
Engine Air Particle Separator (EAPS)	- / 17.657	- / 3.538	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	
PM Support	- / 11.209	- / 0.293	- / 0.274	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	
Frangible Fuel Fitting	- / 10.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	
Subtotal: Recurring	- / 71.381	- / 6.152	- / 0.274	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	
Non-Recurring													
Critical Safety Issues	- / -	- / -	- / 5.214	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	
Subtotal: Non-Recurring	- / -	- / -	- / 5.214	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	
Subtotal: Block I CH-47 Safety Mods \$5M or Less	- / 71.381	- / 6.152	- / 5.488	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	Continuing	Continuing	
Modification Item 2 of 10: Block I Software Safety & Avionics Upgrades													
A Kits													
Non-Recurring													
Software Safety & Avionics Upgrades	- / -	- / -	- / -	- / 7.512	- / -	- / 7.512	- / 11.339	- / 23.051	- / 14.521	- / 15.103	Continuing	Continuing	
Subtotal: Non-Recurring	- / -	- / -	- / -	- / 7.512	- / -	- / 7.512	- / 11.339	- / 23.051	- / 14.521	- / 15.103	Continuing	Continuing	
B Kits													
Recurring													
SEPM	- / -	- / -	- / -	- / 0.295	- / -	- / 0.295	- / 0.446	- / 0.906	- / 0.571	- / 0.594	Continuing	Continuing	
Subtotal: Recurring	- / -	- / -	- / -	- / 0.295	- / -	- / 0.295	- / 0.446	- / 0.906	- / 0.571	- / 0.594	Continuing	Continuing	
Subtotal: Block I Software Safety & Avionics Upgrades	- / -	- / -	- / -	- / 7.807	- / -	- / 7.807	- / 11.785	- / 23.957	- / 15.092	- / 15.697	Continuing	Continuing	
Modification Item 3 of 10: Block I Improved Vibration Control System (IVCS)													
A Kits													
Recurring													

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Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)						Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods		
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:					
Models of Systems Affected: CH-47				Modification Type: Unclassified				Related RDT&E PEs:				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Kits	- / 99.549	- / 14.979	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
PM Support	- / 0.378	- / 0.755	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
<i>Subtotal: Recurring</i>	- / 99.927	- / 15.734	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
<i>Subtotal: Block I Improved Vibration Control System (IVCS)</i>	- / 99.927	- / 15.734	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	Continuing	Continuing
Modification Item 4 of 10: Block I Cargo Platform Health Environment (CPHE)												
A Kits												
Recurring												
Kits Type 1	- / 2,515.579	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
Kits Type 2	- / 553.509	- / 0.872	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
CPHE Software Upgrade	- / 595.636	- / 0.160	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
Services	- / 55.675	- / 1.874	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
PM Support	- / 1.068	- / 0.102	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
<i>Subtotal: Recurring</i>	- / 3,721.467	- / 3.008	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
Non-Recurring												
NRE	- / 6.750	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
<i>Subtotal: Non-Recurring</i>	- / 6.750	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
<i>Subtotal: Block I Cargo Platform Health Environment (CPHE)</i>	- / 3,728.217	- / 3.008	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	Continuing	Continuing
Modification Item 5 of 10: Improved Troop Seats (ITS)												
A Kits												
Recurring												
Installation Kits	- / -	- / -	222 / 14.678	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	222 / 14.678
<i>Subtotal: Recurring</i>	- / -	- / -	222 / 14.678	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	222 / 14.678
<i>Subtotal: Improved Troop Seats (ITS)</i>	- / -	- / -	222 / 14.678	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	222 / 14.678
Modification Item 6 of 10: Block I Adjustable Pitch Change Link												
A Kits												
Recurring												
Pitch Change Links	- / -	- / 2.311	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 2.311
PM Support	- / 0.042	- / 0.116	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.158
<i>Subtotal: Recurring</i>	- / 0.042	- / 2.427	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.469

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)						Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods		
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:					
Models of Systems Affected: CH-47				Modification Type: Unclassified				Related RDT&E PEs:				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Non-Recurring												
NRE	- / 15.582	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 15.582
<i>Subtotal: Non-Recurring</i>	- / 15.582	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 15.582
<i>Subtotal: Block I Adjustable Pitch Change Link</i>	- / 15.624	- / 2.427	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 18.051
Modification Item 7 of 10: Block I COOLS & COOLS BPS												
A Kits												
Recurring												
Cargo Handling Floor System	- / 1,854.411	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1,854.411
Ballistic Protection System (BPS)	- / 333.768	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 333.768
PM Support	- / 4.408	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 4.408
Cargo Handling Floor System (OCO)	- / 29.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 29.300
PM Support (OCO)	- / 8.010	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 8.010
<i>Subtotal: Recurring</i>	- / 2,229.897	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2,229.897
<i>Subtotal: Block I COOLS & COOLS BPS</i>	- / 2,229.897	- / -	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 2,229.897
Modification Item 8 of 10: Block I Engine Improvements												
A Kits												
Recurring												
T55 Engine Control Unit Prog (ECU)	667 / 45.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	667 / 45.000
New Engines	1,250 / 4,495.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	1,250 / 4,495.000
P3 Check Valve	373 / 4.900	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	373 / 4.900
Next Generation Torque System	404 / 14.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	404 / 14.500
Logistics	- / 39.953	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 39.953
ECU Upgrade	- / 4.696	- / 1.064	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 5.760
RIMFIRE	- / 1.719	- / 0.440	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 2.159
PM Admin Support	- / 4.538	- / 0.075	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 4.613
<i>Subtotal: Recurring</i>	2,694 / 4,610.306	- / 1.579	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2,694 / 4,611.885
Non-Recurring												
ECP NRE/Incorporation	- / 1.062	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1.062
<i>Subtotal: Non-Recurring</i>	- / 1.062	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.062

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)						Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: CH-47				Modification Type: Unclassified				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
<i>Subtotal: Block I Engine Improvements</i>	2,694 / 4,611.368	- / 1.579	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	2,694 / 4,612.947	
Modification Item 9 of 10: Block I Aircraft Component Parts-Marking (UID)													
A Kits													
Non-Recurring													
Component Markings	- / 33.456	- / 4.050	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 37.506	
<i>Subtotal: Non-Recurring</i>	- / 33.456	- / 4.050	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 37.506	
<i>Subtotal: Block I Aircraft Component Parts-Marking (UID)</i>	- / 33.456	- / 4.050	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 37.506	
Modification Item 10 of 10: Block I Systems Optimization & Payload Restoration													
A Kits													
Recurring													
PM Support	- / 4.939	- / 2.914	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 7.853	
<i>Subtotal: Recurring</i>	- / 4.939	- / 2.914	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 7.853	
Non-Recurring													
NRE	- / 98.788	- / 58.277	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 157.065	
<i>Subtotal: Non-Recurring</i>	- / 98.788	- / 58.277	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 157.065	
<i>Subtotal: Block I Systems Optimization & Payload Restoration</i>	- / 103.727	- / 61.191	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 164.918	
<i>Subtotal: Procurement, All Modification Items</i>	2,694 / 10,893.597	- / 94.141	222 / 20.166	- / 7.807	- / -	- / 7.807	- / 11.785	- / 23.957	- / 15.092	- / 15.697	Continuing	Continuing	
Installation													
Modification Item 3 of 10: Block I Improved Vibration Control System (IVCS)	35 / 0.063	70 / 0.126	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	890 / 1.702	995 / 1.891	
Modification Item 4 of 10: Block I Cargo Platform Health Environment (CPHE)	148 / 7.638	68 / 4.931	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	
Modification Item 7 of 10: Block I COOLS & COOLS BPS	214 / 15.822	50 / 3.745	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	264 / 19.567	
<i>Subtotal: Installation</i>	397 / 23.523	188 / 8.802	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	Continuing	Continuing	
Total													
Total Cost (Procurement + Support + Installation)	10,917.120	102.943	20.166	7.807	-	7.807	11.785	23.957	15.092	15.697	Continuing	Continuing	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army						Date: February 2018	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)			Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 1 of 10: Block I CH-47 Safety Mods \$5M or Less							
Manufacturer Information							
Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime (in Months):				Production Leadtime (in Months):			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							
Installation Information							
Method of Implementation (Organic): Various						Installation Quantity: 0	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army						Date: February 2018	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)			Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 2 of 10: Block I Software Safety & Avionics Upgrades							
Manufacturer Information							
Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime (in Months):				Production Leadtime (in Months):			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							
Installation Information							
Method of Implementation (Organic): TBD					Installation Quantity: 0		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)	Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 3 of 10: Block I Improved Vibration Control System (IVCS)

Manufacturer Information

Manufacturer Name: Boeing	Manufacturer Location: Ridley Park PA
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 6

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates	Dec 2016						
Delivery Dates	Jun 2017						

Installation Information

Method of Implementation: Various

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	35 / 0.063	70 / 0.126	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	105 / 0.189
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	445 / 0.851	445 / 0.851
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	445 / 0.851	445 / 0.851
Total	35 / 0.063	70 / 0.126	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	890 / 1.702	995 / 1.891

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	35	35	35	35	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	175
Out	35	-	-	35	35	35	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	175

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)	Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 4 of 10: Block I Cargo Platform Health Environment (CPHE)

Manufacturer Information

Manufacturer Name: Boeing	Manufacturer Location: Ridley Park, PA
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 6

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates	Mar 2017						
Delivery Dates	Sep 2017						

Installation Information

Method of Implementation: Various

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	148 / 7.638	44 / 4.093	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
FY 2017	- / -	24 / 0.838	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	Continuing	Continuing
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	Continuing	Continuing
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	Continuing	Continuing
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	Continuing	Continuing
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	Continuing	Continuing
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	Continuing	Continuing
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	Continuing	Continuing
Total	148 / 7.638	68 / 4.931	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	Continuing	Continuing

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot		
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
In	148	13	13	20	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	111	18	19	13	13	20	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-3a, Individual Modification: PB 2019 Army					Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)			Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 5 of 10: Improved Troop Seats (ITS)							
Manufacturer Information							
Manufacturer Name: Boeing				Manufacturer Location: Ridley Park, PA			
Administrative Leadtime (in Months): 4				Production Leadtime (in Months): 12			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates				Oct 2019	Oct 2020	Oct 2021	
Delivery Dates				Oct 2020	Oct 2021	Oct 2022	
Installation Information							
Method of Implementation (Organic): Various					Installation Quantity: 0		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army						Date: February 2018	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)			Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 6 of 10: Block I Adjustable Pitch Change Link							
Manufacturer Information							
Manufacturer Name: Boeing				Manufacturer Location: Ridley Park, PA			
Administrative Leadtime (in Months):				Production Leadtime (in Months):			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							
Installation Information							
Method of Implementation (Organic): User Installed					Installation Quantity: 0		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)	Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 7 of 10: Block I COOLS & COOLS BPS

Manufacturer Information

Manufacturer Name: Boeing				Manufacturer Location: Ridley Park, PA			
Administrative Leadtime (in Months): 1				Production Leadtime (in Months): 1			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates	Apr 2017						
Delivery Dates	Jun 2017						

Installation Information

Method of Implementation: Various

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	214 / 15.822	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	214 / 15.822
FY 2017	- / -	50 / 3.745	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	50 / 3.745
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	214 / 15.822	50 / 3.745	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	264 / 19.567

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	214	12	12	13	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	214	12	12	13	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army						Date: February 2018	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)			Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 8 of 10: Block I Engine Improvements							
Manufacturer Information							
Manufacturer Name: Honeywell Inc				Manufacturer Location: Phoenix, AZ			
Administrative Leadtime (in Months):				Production Leadtime (in Months):			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							
Installation Information							
Method of Implementation (Organic): Various					Installation Quantity: 0		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army						Date: February 2018	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)			Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 9 of 10: Block I Aircraft Component Parts-Marking (UID)							
Manufacturer Information							
Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime (in Months):				Production Leadtime (in Months):			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							
Installation Information							
Method of Implementation (Organic): Various						Installation Quantity: 0	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army					Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)			Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 10 of 10: Block I Systems Optimization & Payload Restoration							
Manufacturer Information							
Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime (in Months):				Production Leadtime (in Months):			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							
Installation Information							
Method of Implementation (Organic): Various					Installation Quantity: 0		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 3403A02111 / GRCS SEMA Mods (MIP)
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	4.019	4.055	5.514	5.573	-	5.573	5.677	2.950	3.029	3.089	-	33.906
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	4.019	4.055	5.514	5.573	-	5.573	5.677	2.950	3.029	3.089	-	33.906
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	4.019	4.055	5.514	5.573	-	5.573	5.677	2.950	3.029	3.089	-	33.906

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Description:
The RC-12X Guardrail Common Sensor (GRCS) is a fixed-wing, airborne Communications Intelligence (COMINT) and Electronic Intelligence (ELINT) collection and precision targeting location system. GRCS provides a persistent capability to detect, locate and classify/identify high value targets with a relevant degree of timeliness and accuracy. GRCS is assigned to two (2) U.S. Army Intelligence and Security Command (INSCOM) Aerial Exploitation Battalions providing Aerial Intelligence, Surveillance and Reconnaissance (AISR) support to combatant commanders. In accordance with the Army's AISR 2020 strategy, the Army's Acquisition Objective/Army's Procurement Objective is 14 RC-12X; seven (7) fielded to 3rd MI; and seven (7) fielded to the 204th MI. There are also five (5) RC-12X GRCS trainers within TRADOC and INSCOM.

This funding line supports Army RC-12X aircraft performing the AISR mission. It provides for the following: procurement and associated testing of civil and military aircraft equipment, future integration efforts, and procurement of replacement and spare engines and props. These modifications address all Department of Defense (DoD) mandated safety equipment to current and evolving international and Army Standards. These modifications ensure continued worldwide deployment capability and safe operations. Lastly, this line supports future mods in service.

The overall GRCS procurement/modernization efforts are found in the following two lines: AZ2052 Guardrail Payloads (MIP) and A02111 GRCS SEMA MODS (MIP). Separate funding lines support the Army Acquisition Executive's directive, codified in the October 28, 2011 memorandum, to assign overall acquisition lead for manned airborne intelligence systems to Program Executive Office for Aviation; and overall sensor, processing, exploitation, and dissemination responsibilities to Program Executive Officer for Intelligence, Electronic Warfare, and Sensors.

Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	4.055	5.514	5.573	-	5.573	5.677	2.950	3.029	3.089
Total:									
Secondary Distribution									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	4.055	5.514	5.573	-	5.573	5.677	2.950	3.029	3.089

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 3403A02111 / GRCS SEMA Mods (MIP)
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	A02111 / Guardrail Common Sensor SEMA Modifications (Unclassified)				- / 4.019	- / 4.055	- / 5.514	- / 5.573	- / -	- / 5.573
P-40	Total Gross/Weapon System Cost				- / 4.019	- / 4.055	- / 5.514	- / 5.573	- / -	- / 5.573

Exhibits Schedule					FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	A02111 / Guardrail Common Sensor SEMA Modifications (Unclassified)				- / 5.677	- / 2.950	- / 3.029	- / 3.089	- / -	- / 33.906
P-40	Total Gross/Weapon System Cost				- / 5.677	- / 2.950	- / 3.029	- / 3.089	- / -	- / 33.906

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY19 base procurement funding in the amount of \$5.573 million will support RC-12X Global Air Traffic Management (GATM) and military modifications to include: Automatic Dependent Surveillance- Broadcast, (ADS-B) to provide digital interfacing for aircraft positioning; APX-119 Mode 5 to establish the ability to Identify Friend or Foe (IFF) and any associated sparing; aircraft modifications to allow for upgraded GPS solutions; Information Assurance support for aircraft systems including the Pilot Situational Awareness Monitor System; and RC-12X Weight Reduction/CG improvements. This line also funds the procurement and integration of ARC 201 Single Channel Ground Air Radio Systems (SINCGARS) to address obsolescence issues.

All COMPO 1. In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 3403A02111 / GRCS SEMA Mods (MIP)	Modification Number / Title: A02111 / Guardrail Common Sensor SEMA Modifications

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	4.019	4.055	5.514	5.573	-	5.573	5.677	2.950	3.029	3.089	-	33.906
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	4.019	4.055	5.514	5.573	-	5.573	5.677	2.950	3.029	3.089	-	33.906
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	4.019	4.055	5.514	5.573	-	5.573	5.677	2.950	3.029	3.089	-	33.906

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The RC-12X Guardrail Common Sensor (GRCS) is a fixed-wing, airborne Communications Intelligence (COMINT) and Electronic Intelligence (ELINT) collection and precision targeting location system. GRCS provides a persistent capability to detect, locate and classify/identify high value targets with a relevant degree of timeliness and accuracy. GRCS is assigned to two (2) U.S. Army Intelligence and Security Command (INSCOM) Aerial Exploitation Battalions providing Aerial Intelligence, Surveillance and Reconnaissance (AISR) support to combatant commanders. In accordance with the Army's AISR 2020 strategy, the Army's Acquisition Objective/Army's Procurement Objective is 14 RC-12X; seven (7) fielded to 3rd MI; and seven (7) fielded to the 204th MI. There are also five (5) RC-12X GRCS trainers within TRADOC and INSCOM.

This funding line supports Army RC-12X aircraft performing the AISR mission. It provides for the following: procurement and associated testing of civil and military aircraft equipment, future integration efforts, and procurement of replacement and spare engines and props. These modifications address all Department of Defense (DoD) mandated safety equipment to current and evolving international and Army Standards. These modifications ensure continued worldwide deployment capability and safe operations. Lastly, this line supports future mods in service.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	4.055	5.514	5.573	-	5.573	5.677	2.950	3.029	3.089
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	4.055	5.514	5.573	-	5.573	5.677	2.950	3.029	3.089

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10					P-1 Line Item Number / Title: 3403A02111 / GRCS SEMA Mods (MIP)					Modification Number / Title: A02111 / Guardrail Common Sensor SEMA Modifications				
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:							
Models of Systems Affected: RC-12				Modification Type: Unclassified				Related RDT&E PEs:						
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total		
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)		
Procurement														
<i>Modification Item 1 of 1: Guardrail Common Sensor SEMA Modifications</i>														
A Kits														
Recurring														
PM Costs	- / 1.748	- / 0.243	- / 0.551	- / 0.478	- / -	- / 0.478	- / 0.483	- / 0.251	- / 0.257	- / 0.263	- / 0.000	- / 4.274		
Fielding/Training	- / 0.104	- / 0.011	- / 0.138	- / 0.051	- / -	- / 0.051	- / 0.037	- / 0.018	- / 0.031	- / 0.034	- / 0.000	- / 0.424		
Spares	- / -	- / -	- / 0.144	- / 0.161	- / -	- / 0.161	- / 0.171	- / 0.027	- / 0.311	- / 0.090	- / 0.000	- / 0.904		
<i>Subtotal: Recurring</i>	- / 1.852	- / 0.254	- / 0.833	- / 0.690	- / -	- / 0.690	- / 0.691	- / 0.296	- / 0.599	- / 0.387	- / -	- / 5.602		
<i>Subtotal: Guardrail Common Sensor SEMA Modifications</i>	- / 1.852	- / 0.254	- / 0.833	- / 0.690	- / -	- / 0.690	- / 0.691	- / 0.296	- / 0.599	- / 0.387	- / -	- / 5.602		
<i>Subtotal: Procurement, All Modification Items</i>	- / 1.852	- / 0.254	- / 0.833	- / 0.690	- / -	- / 0.690	- / 0.691	- / 0.296	- / 0.599	- / 0.387	- / -	- / 5.602		
Installation														
<i>Modification Item 1 of 1: Guardrail Common Sensor SEMA Modifications</i>														
<i>Subtotal: Installation</i>	0 / 2.167	1 / 3.801	6 / 4.681	12 / 4.883	0 / 0.000	12 / 4.883	0 / 4.986	0 / 2.654	0 / 2.430	0 / 2.702	- / -	19 / 28.304		
Total														
Total Cost (Procurement + Support + Installation)	4.019	4.055	5.514	5.573	-	5.573	5.677	2.950	3.029	3.089	-	33.906		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 3403A02111 / GRCS SEMA Mods (MIP)	Modification Number / Title: A02111 / Guardrail Common Sensor SEMA Modifications

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 1: Guardrail Common Sensor SEMA Modifications

Manufacturer Information

Manufacturer Name: Various	Manufacturer Location: Various
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 3

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates	Feb 2017						
Delivery Dates	Jun 2017	Jun 2018	Jun 2019				

Installation Information

Method of Implementation: Guardrail Common Sensor SEMA Modifications

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	0 / 2.167	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 2.167
FY 2017	- / -	1 / 3.801	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 3.801
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	6 / 4.681	12 / 4.883	- / -	12 / 4.883	- / -	- / -	- / -	- / -	- / -	18 / 9.564
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	0 / 4.986	- / -	- / -	- / -	- / -	0 / 4.986
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 2.654	- / -	- / -	- / -	0 / 2.654
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 2.430	- / -	- / -	0 / 2.430
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 2.702	- / -	0 / 2.702
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 2.167	1 / 3.801	6 / 4.681	12 / 4.883	0 / 0.000	12 / 4.883	0 / 4.986	0 / 2.654	0 / 2.430	0 / 2.702	- / -	19 / 28.304

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4					
In	-	-	1	-	-	-	6	-	-	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19
Out	-	-	-	1	-	-	-	6	-	-	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 3404A02110 / ARL SEMA Mods (MIP)
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	48.302	6.793	11.650	7.522	-	7.522	6.566	8.076	10.532	5.773	-	105.214
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	48.302	6.793	11.650	7.522	-	7.522	6.566	8.076	10.532	5.773	-	105.214
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	48.302	6.793	11.650	7.522	-	7.522	6.566	8.076	10.532	5.773	-	105.214

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Airborne Reconnaissance Low - Enhanced (ARL-E) is a worldwide self-deployable airborne Intelligence Surveillance Reconnaissance (ISR) system designed for timely, accurate, assured support to tactical forces over the full spectrum of operations. This system is a De Havilland DHC-8 aircraft replacing the DHC-7 IAW the Aerial ISR (AISR) 2020 Strategy. ARL-E will enhance the ARL-M sensor capability sets through the procurement of new and refurbished sensors to meet the ARL-E Capabilities Production Document (CPD) requirements. It provides a persistent capability to include: Broad-Area Surveillance and/or Focused Stare on Target Areas of Interest (Point or Objective Targets), Electro-Optical/Infrared (EO/IR)/Full-Motion Video (FMV) , Multi-Mode Radar, Robust Communications Intelligence (COMINT), on-Board Collection, Analysis, Sensor Cross Cue and dissemination through Distributed Common Ground System-Army (DCGS-A) enabled workstations. ARL-E will be assigned to the U.S. Army Intelligence and Security Command's Aerial ISR Brigade providing AISR support to combatant commanders. For the overall system, the Army Acquisition Objective and the Army Procurement Objective, is nine (9). The Mission Equipment Package (MEP) objective is eight (8).

The funding line supports the conversion of Government Owned Contractor Operated (GOCO) Quick Reaction Capability (QRC) DeHavilland (DHC) 8-315 Aerial Intelligence Surveillance & Reconnaissance (AISR) aircraft systems, leveraging seven (7) Saturn Arch (SA) and two (2) Desert Owls (DO). It provides for the following: the procurement of replacement and spare engines; procurement and associated testing of civil and military aircraft equipment, and future integration efforts. These modifications address all Department of Defense (DoD) mandated safety equipment to current and evolving international and Army Standards. These modifications ensure continued worldwide deployment capability and safe operations. Lastly, this line supports future mods in service.

Separate funding lines support the Army Acquisition Executive's directive, codified in the October 28, 2011 memorandum, to assign overall acquisition lead for manned airborne Intelligence systems to Program Executive Officer for Aviation; and overall sensor, processing, exploitation, and dissemination responsibilities to Program Executive Officer for Intelligence, Electronic Warfare, and Sensors. This budget line provides for aircraft modification and AZ2050 provides for sensors.

Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	6.793	11.650	7.522	-	7.522	6.566	8.076	10.532	5.773
Total:									
Quantity	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 3404A02110 / ARL SEMA Mods (MIP)
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Secondary Distribution	Total Obligation Authority	6.793	11.650	7.522	-	7.522	6.566	8.076	10.532	5.773

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UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 3404A02110 / ARL SEMA Mods (MIP)
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	A02110 / ARL SEMA Modifications (Unclassified)				- / 48.302	- / 6.793	- / 11.650	- / 7.522	- / -	- / 7.522
P-40	Total Gross/Weapon System Cost				- / 48.302	- / 6.793	- / 11.650	- / 7.522	- / -	- / 7.522

Exhibits Schedule					FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	A02110 / ARL SEMA Modifications (Unclassified)				- / 6.566	- / 8.076	- / 10.532	- / 5.773	- / -	- / 105.214
P-40	Total Gross/Weapon System Cost				- / 6.566	- / 8.076	- / 10.532	- / 5.773	- / -	- / 105.214

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 The FY 2019 base procurement funding in the amount of \$7.522 million will be utilized to fund the cockpit and Aircraft Survivability Equipment (ASE) integration of one aircraft and continued system verification and fielding.

All COMPO 1 Active. In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 3404A02110 / ARL SEMA Mods (MIP)	Modification Number / Title: A02110 / ARL SEMA Modifications

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	48.302	6.793	11.650	7.522	-	7.522	6.566	8.076	10.532	5.773	-	105.214
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	48.302	6.793	11.650	7.522	-	7.522	6.566	8.076	10.532	5.773	-	105.214
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	48.302	6.793	11.650	7.522	-	7.522	6.566	8.076	10.532	5.773	-	105.214

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Airborne Reconnaissance Low - Enhanced (ARL-E) is a worldwide self-deployable airborne Intelligence Surveillance Reconnaissance (ISR) system designed for timely, accurate, assured support to tactical forces over the full spectrum of operations. This system is a De Havilland DHC-8 aircraft replacing the DHC-7 IAW the Aerial ISR (AISR) 2020 Strategy. ARL-E will enhance the ARL-M sensor capability sets through the procurement of new and refurbished sensors to meet the ARL-E Capabilities Production Document (CPD) requirements. It provides a persistent capability to include: Broad-Area Surveillance and/or Focused Stare on Target Areas of Interest (Point or Objective Targets), Electro-Optical/Infrared (EO/IR)/Full-Motion Video (FMV), Multi-Mode Radar, Robust Communications Intelligence (COMINT), on-Board Collection, Analysis, Sensor Cross Cue and dissemination through Distributed Common Ground System-Army (DCGS-A) enabled workstations. ARL-E will be assigned to the U.S. Army Intelligence and Security Command's Aerial ISR Brigade providing AISR support to combatant commanders. For the overall system, the Army Acquisition Objective and the Army Procurement Objective, is nine (9). The Mission Equipment Package (MEP) objective is eight (8).

The funding line supports the conversion of Government Owned Contractor Operated (GOCO) Quick Reaction Capability (QRC) DeHavilland (DHC) 8-315 Aerial Intelligence Surveillance & Reconnaissance (AISR) aircraft systems, leveraging seven (7) Saturn Arch (SA) and two (2) Desert Owls (DO). It provides for the following: the procurement of replacement and spare engines; procurement and associated testing of civil and military aircraft equipment, and future integration efforts. These modifications address all Department of Defense (DoD) mandated safety equipment to current and evolving international and Army Standards. These modifications ensure continued worldwide deployment capability and safe operations. Lastly, this line supports future mods in service.

Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	6.793	11.650	7.522	-	7.522	6.566	8.076	10.532	5.773
Total:									
Secondary Distribution									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	6.793	11.650	7.522	-	7.522	6.566	8.076	10.532	5.773

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 3404A02110 / ARL SEMA Mods (MIP)						Modification Number / Title: A02110 / ARL SEMA Modifications			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: ARL SEMA Modifications				Modification Type: Unclassified					Related RDT&E PEs:				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Procurement													
<i>Modification Item 1 of 1: ASE and Cockpit Mods</i>													
A Kits													
Recurring													
PMO	- / 8.799	- / 2.186	- / 1.165	- / 0.639	- / -	- / 0.639	- / 0.558	- / 0.686	- / 0.895	- / 0.491	- / 0.000	- / 15.419	
Spares	- / 7.042	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.160	- / 9.398	- / 5.242	- / 0.000	- / 22.842	
System T&E Support	- / 2.399	- / 4.584	- / 10.449	- / 1.046	- / -	- / 1.046	- / -	- / -	- / -	- / -	- / 0.000	- / 18.478	
Training and Documentation	- / -	- / 0.023	- / 0.036	- / 0.037	- / -	- / 0.037	- / 0.037	- / 0.038	- / 0.239	- / 0.040	- / 0.000	- / 0.450	
<i>Subtotal: Recurring</i>	- / 18.240	- / 6.793	- / 11.650	- / 1.722	- / -	- / 1.722	- / 0.595	- / 1.884	- / 10.532	- / 5.773	- / -	- / 57.189	
<i>Subtotal: ASE and Cockpit Mods</i>	- / 18.240	- / 6.793	- / 11.650	- / 1.722	- / -	- / 1.722	- / 0.595	- / 1.884	- / 10.532	- / 5.773	- / -	- / 57.189	
<i>Subtotal: Procurement, All Modification Items</i>	- / 18.240	- / 6.793	- / 11.650	- / 1.722	- / -	- / 1.722	- / 0.595	- / 1.884	- / 10.532	- / 5.773	- / -	- / 57.189	
Installation													
<i>Modification Item 1 of 1: ASE and Cockpit Mods</i>	6 / 30.062	- / -	- / -	1 / 5.800	- / -	1 / 5.800	1 / 5.971	1 / 6.192	- / -	- / -	- / -	9 / 48.025	
<i>Subtotal: Installation</i>	6 / 30.062	0 / 0.000	0 / 0.000	1 / 5.800	0 / 0.000	1 / 5.800	1 / 5.971	1 / 6.192	- / -	- / -	- / -	9 / 48.025	
Total													
Total Cost (Procurement + Support + Installation)	48.302	6.793	11.650	7.522	-	7.522	6.566	8.076	10.532	5.773	-	105.214	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army												Date: February 2018																			
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10						P-1 Line Item Number / Title: 3404A02110 / ARL SEMA Mods (MIP)						Modification Number / Title: A02110 / ARL SEMA Modifications																			
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:																			
Modification Item 1 of 1: ASE and Cockpit Mods																															
Manufacturer Information																															
Manufacturer Name: Northrop Grumman												Manufacturer Location: Herndon, VA																			
Administrative Leadtime (in Months): 3												Production Leadtime (in Months): 9																			
Dates		FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023					
Contract Dates																															
Delivery Dates		Jul 2017				Jul 2018								Mar 2020				Dec 2020													
Installation Information																															
Method of Implementation: ARL-E ASE & Cockpit Modifications																															
Installation Cost		Prior Years		FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total		FY 2020		FY 2021		FY 2022		FY 2023		To Complete		Total							
		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)							
Prior Years		6 / 30.062		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		- / -		6 / 30.062							
FY 2017		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2018		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2019		- / -		- / -		- / -		1 / 5.800		- / -		1 / 5.800		- / -		- / -		- / -		- / -		- / -		1 / 5.800							
FY 2020		- / -		- / -		- / -		- / -		- / -		- / -		1 / 5.971		- / -		- / -		- / -		- / -		1 / 5.971							
FY 2021		- / -		- / -		- / -		- / -		- / -		- / -		- / -		1 / 6.192		- / -		- / -		- / -		1 / 6.192							
FY 2022		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -							
FY 2023		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -							
To Complete		- / -		- / -		- / -		0 / 0.000		- / -		0 / 0.000		- / -		- / -		- / -		- / -		- / -		- / -							
Total		6 / 30.062		0 / 0.000		0 / 0.000		1 / 5.800		0 / 0.000		1 / 5.800		1 / 5.971		1 / 6.192		- / -		- / -		- / -		9 / 48.025							
Installation Schedule																															
	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	6	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	9
Out	2	-	-	-	2	-	-	-	2	-	-	-	-	-	1	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	9

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 3405A02112 / EMARSS SEMA Mods (MIP)
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	13.669	77.997	51.279	20.448	-	20.448	3.859	2.632	1.903	1.940	-	173.727
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	13.669	77.997	51.279	20.448	-	20.448	3.859	2.632	1.903	1.940	-	173.727
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	13.669	77.997	51.279	20.448	-	20.448	3.859	2.632	1.903	1.940	-	173.727

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

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. It provides a persistent capability to detect, locate, classify/identify, and track surface targets with a high degree of timeliness and accuracy. EMARSS will be assigned to the U.S. Army Intelligence and Security Command's Aerial Exploitation Battalions, providing Aerial Intelligence, Surveillance and Reconnaissance support to combatant commanders. The Army Acquisition Objective for EMARSS is 36 systems, with an Army Procurement Objective of 24, to include the following variants: eight (8) EMARSS-G (Geo-INT); four (4) EMARSS-V (Vehicle and Dismount Exploitation Radar, VaDER); eight (8) EMARSS-M (Multi-INT); and four (4) EMARSS-S (SIGINT).

The budget line supports the conversion of Special Electronic Mission Aircraft (SEMA) Government-owned Quick Reaction Capability (QRC) Aerial Intelligence Surveillance & Reconnaissance (AISR) systems: Liberty Project Aircraft (LPA), Constant Hawk (CH) and Tactical Operations (TACOP), VaDER (Vehicle and Dismount exploitation Radar) into Enhanced Medium Altitude Reconnaissance and Surveillance Systems (EMARSS) Capabilities Production Document (CPD) compliant systems. It provides for the following: the procurement of replacement and spare engines; procurement and associated testing of civil and military aircraft equipment; and integration/installation of ISR Mission Equipment Package (MEP). These modifications address all Department of Defense (DoD) mandated safety equipment to current and evolving international and Army Standards. These modifications ensure continued worldwide deployment capability and safe operations. Lastly, this line supports future mods in service.

The overall EMARSS procurement/modernization efforts are found in the following two lines; AZ2054 EMARSS Payloads (Project Manager Sensors - Aerial Intelligence) and A02112 EMARSS SEMA Mods (Fixed Wing Project Office). Separate funding lines support the Army Acquisition Executive's directive, codified in the October 28, 2011 memorandum, to assign overall acquisition lead for manned airborne intelligence systems to Program Executive Officer for Aviation; and overall sensor, processing, exploitation, and dissemination responsibilities to Program Executive Officer for Intelligence, Electronic Warfare, and Sensors.

Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	77.997	51.279	20.448	-	20.448	3.859	2.632	1.903	1.940
Total:									
Quantity	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 3405A02112 / EMARSS SEMA Mods (MIP)
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Secondary Distribution	Total Obligation Authority	77.997	51.279	20.448	-	20.448	3.859	2.632	1.903	1.940

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UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 3405A02112 / EMARSS SEMA Mods (MIP)
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	A02112 / EMARSS SEMA Modifications (Unclassified)				- / 13.669	- / 77.997	- / 51.279	- / 20.448	- / -	- / 20.448
P-40	Total Gross/Weapon System Cost				- / 13.669	- / 77.997	- / 51.279	- / 20.448	- / -	- / 20.448

Exhibits Schedule					FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	A02112 / EMARSS SEMA Modifications (Unclassified)				- / 3.859	- / 2.632	- / 1.903	- / 1.940	- / -	- / 173.727
P-40	Total Gross/Weapon System Cost				- / 3.859	- / 2.632	- / 1.903	- / 1.940	- / -	- / 173.727

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY19 Base Procurement dollars in the amount of \$20.448 million supports the procurement of high/hot kits and mods in service. High hot kits include PT6A-67A engines, light weight composite propellers, light weight lithium ion batteries and anti-lock braking system which are designed to increase endurance, increase safety, and reduce risk in the extreme environmental conditions of high altitude combined with hot temperature conditions. High/hot kits will increase operational capability by allowing the aircraft to carry more fuel, which equates to more time on station. Mods in service includes Blue Force Tracking-Aviation (BFT-AVN) to BFT-2 conversion, APX-123 Transponder to APX-119 Transponder and Aviation Survivability Equipment (ASE) integration.

All COMPO 1 Active. In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 3405A02112 / EMARSS SEMA Mods (MIP)	Modification Number / Title: A02112 / EMARSS SEMA Modifications

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	13.669	77.997	51.279	20.448	-	20.448	3.859	2.632	1.903	1.940	-	173.727
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	13.669	77.997	51.279	20.448	-	20.448	3.859	2.632	1.903	1.940	-	173.727
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	13.669	77.997	51.279	20.448	-	20.448	3.859	2.632	1.903	1.940	-	173.727

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

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. It provides a persistent capability to detect, locate, classify/identify, and track surface targets with a high degree of timeliness and accuracy. EMARSS will be assigned to the U.S. Army Intelligence and Security Command's Aerial Exploitation Battalions, providing Aerial Intelligence, Surveillance and Reconnaissance support to combatant commanders. The Army Acquisition Objective for EMARSS is 36 systems, with an Army Procurement Objective (APO) of 24, to include the following variants: eight (8) EMARSS-G (Geo-INT); four (4) EMARSS-V (Vehicle and Dismount Exploitation Radar, VaDER); eight (8) EMARSS-M (Multi-INT); and four (4) EMARSS-S (SIGINT).

The budget line supports the conversion of Special Electronic Mission Aircraft (SEMA) Government-owned Quick Reaction Capability (QRC) Aerial Intelligence Surveillance & Reconnaissance (AISR) systems: Liberty Project Aircraft (LPA), Constant Hawk (CH) and Tactical Operations (TACOP), VaDER (Vehicle and Dismount exploitation Radar) into Enhanced Medium Altitude Reconnaissance and Surveillance Systems (EMARSS) Capabilities Production Document (CPD) compliant systems. It provides for the following: the procurement of replacement and spare engines; procurement and associated testing of civil and military aircraft equipment; and integration/installation of ISR Mission Equipment Package (MEP). These modifications address all Department of Defense (DoD) mandated safety equipment to current and evolving international and Army Standards. These modifications ensure continued worldwide deployment capability and safe operations. Lastly, this line supports future mods in service.

The APO quantity of 24 is funded as follows: Aerial Common Sensor (ACS) (MIP) (A02005) FY14-FY16 modified 16. EMARSS SEMA Mods (MIP) (A02112) and EMARSS Payloads (MIP) (AZ2054) FY17 forward, will modify the remaining 8.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	77.997	51.279	20.448	-	20.448	3.859	2.632	1.903	1.940
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	77.997	51.279	20.448	-	20.448	3.859	2.632	1.903	1.940

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 3405A02112 / EMARSS SEMA Mods (MIP)						Modification Number / Title: A02112 / EMARSS SEMA Modifications			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: EMARSS				Modification Type: Unclassified				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Procurement													
<i>Modification Item 1 of 1:</i> EMARSS SEMA Modifications													
A Kits													
Recurring													
EMARSS Performance Enhancements	- / -	- / 23.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 23.100	
PMO and SETA Support	- / 4.676	- / 1.182	- / 1.528	- / 1.738	- / -	- / 1.738	- / 0.328	- / 0.224	- / 0.162	- / 0.165	- / 0.000	- / 10.003	
Initial Spares	- / 0.330	- / 1.575	- / 0.528	- / 0.974	- / -	- / 0.974	- / -	- / -	- / -	- / -	- / 0.000	- / 3.407	
Testing	- / 0.255	- / 1.325	- / 0.608	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 2.188	
<i>Subtotal: Recurring</i>	- / 5.261	- / 27.182	- / 2.664	- / 2.712	- / -	- / 2.712	- / 0.328	- / 0.224	- / 0.162	- / 0.165	- / -	- / 38.698	
<i>Subtotal: EMARSS SEMA Modifications</i>	- / 5.261	- / 27.182	- / 2.664	- / 2.712	- / -	- / 2.712	- / 0.328	- / 0.224	- / 0.162	- / 0.165	- / -	- / 38.698	
<i>Subtotal: Procurement, All Modification Items</i>	- / 5.261	- / 27.182	- / 2.664	- / 2.712	- / -	- / 2.712	- / 0.328	- / 0.224	- / 0.162	- / 0.165	- / -	- / 38.698	
Installation													
<i>Modification Item 1 of 1:</i> EMARSS SEMA Modifications	2 / 8.408	5 / 50.815	3 / 48.615	- / 17.736	- / -	- / 17.736	- / 3.531	- / 2.408	- / 1.741	- / 1.775	- / -	10 / 135.029	
<i>Subtotal: Installation</i>	2 / 8.408	5 / 50.815	3 / 48.615	0 / 17.736	0 / 0.000	0 / 17.736	0 / 3.531	0 / 2.408	0 / 1.741	0 / 1.775	- / -	10 / 135.029	
Total													
Total Cost (Procurement + Support + Installation)	13.669	77.997	51.279	20.448	-	20.448	3.859	2.632	1.903	1.940	-	173.727	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 3405A02112 / EMARSS SEMA Mods (MIP)	Modification Number / Title: A02112 / EMARSS SEMA Modifications

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 1: EMARSS SEMA Modifications

Manufacturer Information

Manufacturer Name: L3 MID	Manufacturer Location: Greenville, TX
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 12

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates	May 2017	Jun 2018	Mar 2019				

Installation Information

Method of Implementation: EMARSS Modifications

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	2 / 8.408	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 8.408
FY 2017	- / -	5 / 50.815	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 50.815
FY 2018	- / -	- / -	3 / 48.615	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 48.615
FY 2019	- / -	- / -	- / -	0 / 17.736	- / -	0 / 17.736	- / -	- / -	- / -	- / -	- / -	0 / 17.736
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	0 / 3.531	- / -	- / -	- / -	- / -	0 / 3.531
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 2.408	- / -	- / -	- / -	0 / 2.408
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.741	- / -	- / -	0 / 1.741
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.775	- / -	0 / 1.775
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	2 / 8.408	5 / 50.815	3 / 48.615	0 / 17.736	0 / 0.000	0 / 17.736	0 / 3.531	0 / 2.408	0 / 1.741	0 / 1.775	- / -	10 / 135.029

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot								
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4										
In	2	-	1	2	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Out	-	-	2	-	-	-	1	2	2	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 4194AA0270 / Utility/Cargo Airplane Mods
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	289.425	17.526	57.737	17.719	-	17.719	14.676	13.882	16.042	10.781	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	289.425	17.526	57.737	17.719	-	17.719	14.676	13.882	16.042	10.781	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	289.425	17.526	57.737	17.719	-	17.719	14.676	13.882	16.042	10.781	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The budget line supports the updates and modernization of Army fixed wing aircraft communication, navigation, surveillance, survivability equipment, and Department of Defense (DoD) mandated safety equipment to current and evolving international and Army standards. The budget line provides for the procurement of replacement and spare engines for fixed wing aircraft. In addition, it provides for the procurement and associated testing of civil and military aircraft modification equipment. This budget line will also be used to modify fixed wing aircraft to include Engineer, Furnish and Install (EF&I) of modifications as a complete contractual effort. It also leverages Federal Aviation Administration (FAA) supplemental type certificates (STC) that are already in existence and applies STCs to aircraft modifications. These modifications ensure continued worldwide deployment capability and safe operations.

Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	7.758	44.413	9.665	-	9.665	10.762	5.949	10.695
ANG	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	5.399	-	-	-	-	-	-	-
AR	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	4.369	13.324	8.054	-	8.054	3.914	7.933	5.347
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	17.526	57.737	17.719	-	17.719	14.676	13.882	16.042

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity:
2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft

P-1 Line Item Number / Title:
4194AA0270 / Utility/Cargo Airplane Mods

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	AA0270 / Fixed Wing Aircraft Modifications (Rationalization, Standardization, Interoperability, Compatibility, Simplification)				- / 289.425	- / 17.526	- / 57.737	- / 17.719	- / -	- / 17.719
P-40	Total Gross/Weapon System Cost				- / 289.425	- / 17.526	- / 57.737	- / 17.719	- / -	- / 17.719
Exhibits Schedule					FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	AA0270 / Fixed Wing Aircraft Modifications (Rationalization, Standardization, Interoperability, Compatibility, Simplification)				- / 14.676	- / 13.882	- / 16.042	- / 10.781	Continuing	Continuing
P-40	Total Gross/Weapon System Cost				- / 14.676	- / 13.882	- / 16.042	- / 10.781	Continuing	Continuing

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
FY 2019 Base procurement dollars in the amount of \$17.719 million supports required Communications, Navigation, and Surveillance modifications mandated by the Federal Aviation Administration mandated to be complete prior to the end of calendar year 2019 in order to be Global Airspace Traffic Management (GATM) compliant.

In addition, equipment included in the modifications will enhance the safety of passengers and crew. The upgrades will also permit the Army fixed wing aircraft to operate in compliance with other existing and emerging regulations. As requirement for new avionics equipment continue, aircraft delays and airspace exclusions are likely for aircraft not properly equipped. Upgrade of communication and navigation systems will enhance reliability and maintainability, thereby improving aircraft availability for mission requirements. The associated aircraft modifications will assure worldwide deployability for those required to deploy.

Comments:
In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

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Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 4194AA0270 / Utility/Cargo Airplane Mods	Modification Number / Title: AA0270 / Fixed Wing Aircraft Modifications

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	289.425	17.526	57.737	17.719	-	17.719	14.676	13.882	16.042	10.781	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	289.425	17.526	57.737	17.719	-	17.719	14.676	13.882	16.042	10.781	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	289.425	17.526	57.737	17.719	-	17.719	14.676	13.882	16.042	10.781	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The budget line supports the updates and modernization of Army fixed wing aircraft communication, navigation, surveillance, survivability equipment, and Department of Defense (DoD) mandated safety equipment to current and evolving international and Army standards. The budget line provides for the procurement of replacement and spare engines for fixed wing aircraft. In addition, it provides for the procurement and associated testing of civil and military aircraft modification equipment including integration of Intelligence, Surveillance and Reconnaissance (ISR) Mission Equipment Packages (MEP). This budget line will also be used to modify fixed wing aircraft to include Engineer, Furnish and Install (EF&I) of modifications as a complete contractual effort. It also leverages Federal Aviation Administration (FAA) supplemental type certificates (STC) that are already in existence and applies STCs to aircraft modifications. These modifications ensure continued worldwide deployment capability and safe operations.

FY 2019 Base procurement dollars in the amount of \$17.719 million support aircraft modifications to Communications, Navigation, and Surveillance (CNS) and Aircraft Survivability Equipment (ASE) that meets current and future air traffic management requirements.

In addition, equipment included in the modifications will enhance the safety of passengers and crew. The upgrades will also permit the Army fixed wing aircraft to operate in compliance with other existing and emerging regulations. As requirement for new avionics equipment continue, aircraft delays and airspace exclusions are likely for aircraft not properly equipped. Upgrade of communication and navigation systems will enhance reliability and maintainability, thereby improving aircraft availability for mission requirements. The associated aircraft modifications will assure worldwide deploy ability for those required to deploy.

Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	7.758	44.413	9.665	-	9.665	10.762	5.949	10.695	2.396
ANG									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	5.399	-	-	-	-	-	-	-	-
AR									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	4.369	13.324	8.054	-	8.054	3.914	7.933	5.347	8.385
Total:									
Secondary Distribution									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	17.526	57.737	17.719	-	17.719	14.676	13.882	16.042	10.781

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Exhibit P-3a, Individual Modification: PB 2019 Army											Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 4194AA0270 / Utility/Cargo Airplane Mods						Modification Number / Title: AA0270 / Fixed Wing Aircraft Modifications			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: All series Army fixed wing aircraft				Modification Type: Rationalization, Standardization, Interoperability, Compatibility, Simplification					Related RDT&E PEs:				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Procurement													
<i>Modification Item 1 of 1: Fixed Wing Aircraft Modifications</i>													
A Kits													
Recurring													
Installation Kits	264 / 173.574	7 / 10.428	47 / 34.642	11 / 10.631	- / -	11 / 10.631	15 / 7.478	14 / 7.073	15 / 8.174	18 / 5.493	Continuing	Continuing	
Data	- / 1.448	- / 0.088	- / 0.289	- / 0.089	- / -	- / 0.089	- / 0.074	- / 0.070	- / 0.080	- / 0.054	Continuing	Continuing	
Program Management	- / -	- / -	- / 3.464	- / 1.063	- / -	- / 1.063	- / 1.254	- / 1.186	- / 1.370	- / 0.921	Continuing	Continuing	
<i>Subtotal: Recurring</i>	<i>264 / 175.022</i>	<i>7 / 10.516</i>	<i>47 / 38.395</i>	<i>11 / 11.783</i>	<i>- / -</i>	<i>11 / 11.783</i>	<i>15 / 8.806</i>	<i>14 / 8.329</i>	<i>15 / 9.624</i>	<i>18 / 6.468</i>	<i>Continuing</i>	<i>Continuing</i>	
<i>Subtotal: Fixed Wing Aircraft Modifications</i>	<i>264 / 175.022</i>	<i>7 / 10.516</i>	<i>47 / 38.395</i>	<i>11 / 11.783</i>	<i>- / -</i>	<i>11 / 11.783</i>	<i>15 / 8.806</i>	<i>14 / 8.329</i>	<i>15 / 9.624</i>	<i>18 / 6.468</i>	<i>Continuing</i>	<i>Continuing</i>	
<i>Subtotal: Procurement, All Modification Items</i>	<i>264 / 175.022</i>	<i>7 / 10.516</i>	<i>47 / 38.395</i>	<i>11 / 11.783</i>	<i>- / -</i>	<i>11 / 11.783</i>	<i>15 / 8.806</i>	<i>14 / 8.329</i>	<i>15 / 9.624</i>	<i>18 / 6.468</i>	<i>Continuing</i>	<i>Continuing</i>	
Installation													
<i>Modification Item 1 of 1: Fixed Wing Aircraft Modifications</i>													
	264 / 114.403	7 / 7.010	47 / 19.342	11 / 5.936	- / -	11 / 5.936	15 / 5.870	14 / 5.553	15 / 6.418	18 / 4.313	Continuing	Continuing	
<i>Subtotal: Installation</i>	<i>264 / 114.403</i>	<i>7 / 7.010</i>	<i>47 / 19.342</i>	<i>11 / 5.936</i>	<i>0 / 0.000</i>	<i>11 / 5.936</i>	<i>15 / 5.870</i>	<i>14 / 5.553</i>	<i>15 / 6.418</i>	<i>18 / 4.313</i>	<i>Continuing</i>	<i>Continuing</i>	
Total													
Total Cost (Procurement + Support + Installation)	289.425	17.526	57.737	17.719	-	17.719	14.676	13.882	16.042	10.781	Continuing	Continuing	

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Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 4194AA0270 / Utility/Cargo Airplane Mods	Modification Number / Title: AA0270 / Fixed Wing Aircraft Modifications

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 1: Fixed Wing Aircraft Modifications

Manufacturer Information

Manufacturer Name: Multiple Commercial Vendors	Manufacturer Location: TBD
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 6

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates	Dec 2016	Dec 2017	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022
Delivery Dates	Jun 2017	Jun 2018	Jun 2019	Jun 2020	Jun 2021	Jun 2022	Jun 2023

Installation Information

Method of Implementation: Contractor

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	264 / 114.403	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	264 / 114.403
FY 2017	- / -	7 / 7.010	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 7.010
FY 2018	- / -	- / -	47 / 19.342	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	47 / 19.342
FY 2019	- / -	- / -	- / -	11 / 5.936	- / -	11 / 5.936	- / -	- / -	- / -	- / -	- / -	11 / 5.936
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	15 / 5.870	- / -	- / -	- / -	- / -	15 / 5.870
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 5.553	- / -	- / -	- / -	14 / 5.553
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 6.418	- / -	- / -	15 / 6.418
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 4.313	Continuing	Continuing
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	264 / 114.403	7 / 7.010	47 / 19.342	11 / 5.936	0 / 0.000	11 / 5.936	15 / 5.870	14 / 5.553	15 / 6.418	18 / 4.313	Continuing	Continuing

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	264	1	2	2	2	11	12	12	12	2	3	3	3	3	4	4	4	2	4	4	4	3	4	4	4	5	5	4	4	-	391
Out	259	5	1	2	2	2	11	12	12	12	2	3	3	3	3	4	4	4	2	4	4	4	3	4	4	4	5	5	4	4	391

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,581.989	10.807	5.900	6.443	-	6.443	6.744	14.868	37.384	-	-	1,664.135
Less PY Advance Procurement (<i>\$ in Millions</i>)	13.500	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	-	-	13.500
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,568.489	10.807	5.900	6.443	-	6.443	6.744	14.868	37.384	-	-	1,650.635
Plus CY Advance Procurement (<i>\$ in Millions</i>)	13.500	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	-	-	13.500
Total Obligation Authority (<i>\$ in Millions</i>)	1,581.989	10.807	5.900	6.443	-	6.443	6.744	14.868	37.384	-	-	1,664.135

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	28,763.436	-	-	-	-	-	-	-	-	-	-	30,257.000

Description:

Utility Helicopter Mods include modifications to the UH-60 Black Hawk and the UH-72A Lakota helicopters. The UH-60 Black Hawk helicopter is the Army's utility helicopter in the future force. It is a twin engine, single rotor, four bladed utility helicopter used for air assault, general support, command & control, and aero-medical evacuations (MEDEVAC). The UH-60 is joint force capable, providing 24 hour/day support including operations at night and in adverse weather conditions. The UH-60 is designed to carry a crew of four plus eleven combat equipped troops or an external load up to 9,000 pounds. The UH-60 Black Hawk was fielded in 1978 as a replacement for the UH-1. From 1978 to 1988, UH-60As were produced. In 1989 production of UH-60Ls with improved engines and drive train began. In 2007, full rate production of UH-60Ms began which provided a digital cockpit, digital Flight Management System (FMS), improved engine, and wide-cord main rotor blades. The UH-72A Lakota helicopter provides general aviation support for aviation units in the active and reserve components.

Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	5.900	6.443	-	6.443	6.744	14.868	37.384
ANG	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	10.807	-	-	-	-	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	10.807	5.900	6.443	-	6.443	6.744	14.868	37.384

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	AA0492 / Utility Helicopter Modifications (Operational)				- / 1,581.989	- / 10.807	- / 5.900	- / 6.443	- / -	- / 6.443
P-40	Total Gross/Weapon System Cost				- / 1,581.989	- / 10.807	- / 5.900	- / 6.443	- / -	- / 6.443

Exhibits Schedule					FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	AA0492 / Utility Helicopter Modifications (Operational)				- / 6.744	- / 14.868	- / 37.384	- / -	- / -	- / 1,664.135
P-40	Total Gross/Weapon System Cost				- / 6.744	- / 14.868	- / 37.384	- / -	- / -	- / 1,664.135

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY19 Base procurement dollars in the amount of \$6.443 million will procure Enhanced Ballistics Armor Protection Systems (EBAPS). EBAPS provides ballistic protection to the UH-60 fielded fleet through the use of ballistic blankets or other similar protective device. Because of low altitude and low airspeed tactical flight profiles, Black Hawk helicopters, crews, passengers, and cargo are susceptible to damage and injuries from small arms fire. A mission flexible ballistic protection system is needed to protect crews, passengers, cargo, and critical aircraft components from small arms damage. The UH-60 A to L Conversion program expands the current UH-60 A to A recapitalization/rebuild. Effective in FY16 all A to L conversions and UH-60L Digital, now designated as UH-60V, conversions will be procured under line A05009. Prior to FY16 the funding for UH-60 A to L conversions was conducted under this line AA0492.

In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

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Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods	Modification Number / Title: AA0492 / Utility Helicopter Modifications

ID Code (A=Service Ready, B=Not Service Ready) : _____ **MDAP/MAIS Code:** _____

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,581.989	10.807	5.900	6.443	-	6.443	6.744	14.868	37.384	-	-	1,664.135
Less PY Advance Procurement (<i>\$ in Millions</i>)	13.500	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	-	-	13.500
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,568.489	10.807	5.900	6.443	-	6.443	6.744	14.868	37.384	-	-	1,650.635
Plus CY Advance Procurement (<i>\$ in Millions</i>)	13.500	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	-	-	13.500
Total Obligation Authority (<i>\$ in Millions</i>)	1,581.989	10.807	5.900	6.443	-	6.443	6.744	14.868	37.384	-	-	1,664.135

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	28,763.436	-	-	-	-	-	-	-	-	-	-	30,257.000

Description:

Utility Helicopter Mods include modifications to the UH-60 Black Hawk and the UH-72A Lakota helicopter.

FY19 Base procurement dollars in the amount of \$6.443 million will procure Enhanced Ballistics Armor Protection Systems (EBAPS). EBAPS provides ballistic protection to the UH-60 fielded fleet through the use of ballistic blankets or other similar protective device. Because of low altitude and low airspeed tactical flight profiles, Black Hawk helicopters, crews, passengers, and cargo are susceptible to damage and injuries from small arms fire. A mission flexible ballistic protection system is needed to protect crews, passengers, cargo, and critical aircraft components from small arms damage. The UH-60 A to L Conversion program expands the current UH-60 A to A recapitalization/rebuild. Effective in FY16 all A to L conversions and UH-60L Digital, now designated as UH-60V, conversions will be procured under line A05009. Prior to FY16 the funding for UH-60 A to L conversions was conducted under this line AA0492.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	5.900	6.443	-	6.443	6.744	14.868	37.384	-
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	10.807	-	-	-	-	-	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	10.807	5.900	6.443	-	6.443	6.744	14.868	37.384	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods						Modification Number / Title: AA0492 / Utility Helicopter Modifications			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: UH-60L				Modification Type: Operational				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Procurement													
Modification Item 1 of 9: Crashworthy External Fuel System (CEFS)													
A Kits													
Recurring													
A-Kits (A/L)	822 / 45.857	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	822 / 45.857	
A-Kits (GFE to Production)	32 / 2.700	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	32 / 2.700	
A-Kits (GFE to SAR Acft)	10 / 0.600	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	10 / 0.600	
B-kits	431 / 56.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	431 / 56.200	
Support Equipment/Other	- / 32.935	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 32.935	
Subtotal: Recurring	1,295 / 138.292	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1,295 / 138.292	
Subtotal: Crashworthy External Fuel System (CEFS)	1,295 / 138.292	- / -	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	1,295 / 138.292	
Modification Item 2 of 9: UH-60A to UH-60L Conversion													
A Kits													
Recurring													
other	276 / 375.248	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	276 / 375.248	
Subtotal: Recurring	276 / 375.248	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	276 / 375.248	
Non-Recurring													
other	- / 970.656	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 970.656	
Subtotal: Non-Recurring	- / 970.656	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 970.656	
Subtotal: UH-60A to UH-60L Conversion	276 / 1,345.904	- / -	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	276 / 1,345.904	
Modification Item 3 of 9: External High Speed Hoist													
A Kits													
Recurring													
Other	242 / 71.514	43 / 10.807	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	285 / 82.321	
Subtotal: Recurring	242 / 71.514	43 / 10.807	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	285 / 82.321	
Subtotal: External High Speed Hoist	242 / 71.514	43 / 10.807	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	285 / 82.321	
Modification Item 4 of 9: Enhanced Ballistics Armor Protections System													
A Kits													
Recurring													

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Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10					P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods					Modification Number / Title: AA0492 / Utility Helicopter Modifications		
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:					
Models of Systems Affected: UH-60L				Modification Type: Operational				Related RDT&E PEs:				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Other	- / 5.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 5.000
EBAPs Kit	- / -	- / -	53 / 5.900	52 / 6.443	- / -	52 / 6.443	52 / 6.744	- / -	- / -	- / -	- / 0.000	157 / 19.087
<i>Subtotal: Recurring</i>	- / 5.000	- / -	53 / 5.900	52 / 6.443	- / -	52 / 6.443	52 / 6.744	- / -	- / -	- / -	- / -	157 / 24.087
<i>Subtotal: Enhanced Ballistics Armor Protections System</i>	- / 5.000	- / -	53 / 5.900	52 / 6.443	- / -	52 / 6.443	52 / 6.744	- / -	- / -	- / -	- / -	157 / 24.087
Modification Item 5 of 9: Upturned Exhaust System (UES)												
A Kits												
Non-Recurring												
Non Recurring	- / 1.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1.000
<i>Subtotal: Non-Recurring</i>	- / 1.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.000
<i>Subtotal: Upturned Exhaust System (UES)</i>	- / 1.000	- / -	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 1.000
Modification Item 6 of 9: Backup Altitude Indicators												
A Kits												
Recurring												
Kit Quantity	265 / 14.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	265 / 14.000
<i>Subtotal: Recurring</i>	265 / 14.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	265 / 14.000
<i>Subtotal: Backup Altitude Indicators</i>	265 / 14.000	- / -	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	265 / 14.000
Modification Item 7 of 9: Electronic Standby Instrument System (ESIS)												
A Kits												
Recurring												
A Kit Recurring	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 0.667	- / -	- / 0.000	26 / 0.667
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 0.667	- / -	- / -	26 / 0.667
B Kits												
Recurring												
B Kit Recurring	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	33 / 1.941	- / -	- / 0.000	33 / 1.941
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	33 / 1.941	- / -	- / -	33 / 1.941
<i>Subtotal: Electronic Standby Instrument System (ESIS)</i>	- / -	- / -	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	59 / 2.608	- / -	- / -	59 / 2.608
Modification Item 8 of 9: Engine Inlet Barrier Filter (EIBF)												
A Kits												
Recurring												

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods						Modification Number / Title: AA0492 / Utility Helicopter Modifications			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: UH-60L				Modification Type: Operational				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
EIBF A-Kit	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.229	- / -	- / 0.000	4 / 0.229
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.229	- / -	- / -	4 / 0.229
B Kits													
Recurring													
EIBF B-Kit	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.476	- / -	- / 0.000	4 / 0.476
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.476	- / -	- / -	4 / 0.476
<i>Subtotal: Engine Inlet Barrier Filter (EIBF)</i>	- / -	- / -	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	8 / 0.705	- / -	- / -	8 / 0.705
Modification Item 9 of 9: Upturned Exhaust System II (UES II)													
B Kits													
Recurring													
B Kit Recurring	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 13.993	150 / 29.533	- / -	- / 0.000	222 / 43.526	
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 13.993	150 / 29.533	- / -	- / -	222 / 43.526	
<i>Subtotal: Upturned Exhaust System II (UES II)</i>	- / -	- / -	- / -	- / 0.000	- / -	- / 0.000	- / -	72 / 13.993	150 / 29.533	- / -	- / -	222 / 43.526	
<i>Subtotal: Procurement, All Modification Items</i>	2,078 / 1,575.710	43 / 10.807	53 / 5.900	52 / 6.443	- / -	52 / 6.443	52 / 6.744	72 / 13.993	217 / 32.846	- / -	- / -	2,567 / 1,652.443	
Installation													
Modification Item 1 of 9: Crashworthy External Fuel System (CEFS)	431 / 6.279	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	431 / 6.279	
Modification Item 7 of 9: Electronic Standby Instrument System (ESIS)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	59 / 2.567	- / -	- / -	59 / 2.567	
Modification Item 8 of 9: Engine Inlet Barrier Filter (EIBF)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.146	- / -	- / -	4 / 0.146	
Modification Item 9 of 9: Upturned Exhaust System II (UES II)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 0.875	150 / 1.825	- / -	- / -	222 / 2.700	
<i>Subtotal: Installation</i>	431 / 6.279	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	72 / 0.875	213 / 4.538	- / -	- / -	716 / 11.692	
Total													
Total Cost (Procurement + Support + Installation)	1,581.989	10.807	5.900	6.443	-	6.443	6.744	14.868	37.384	-	-	1,664.135	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods	Modification Number / Title: AA0492 / Utility Helicopter Modifications

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 9: Crashworthy External Fuel System (CEFS)

Manufacturer Information

Manufacturer Name: Robertson Fuel Systems, LLC	Manufacturer Location: Tempe, AZ
Administrative Leadtime (in Months):	Production Leadtime (in Months):

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Organic

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	431 / 6.279	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	431 / 6.279
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	431 / 6.279	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	431 / 6.279

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	431	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	431
Out	431	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	431

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods	Modification Number / Title: AA0492 / Utility Helicopter Modifications
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 2 of 9: UH-60A to UH-60L Conversion

Manufacturer Information

Manufacturer Name: Corpus Christi Army Depot	Manufacturer Location: Corpus Christi Army Depot
Administrative Leadtime (in Months):	Production Leadtime (in Months):

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Depot

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	0 / 0.000

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	276	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	276
Out	276	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	276

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods	Modification Number / Title: AA0492 / Utility Helicopter Modifications
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 3 of 9: External High Speed Hoist

Manufacturer Information

Manufacturer Name: Breeze Eastern, Inc	Manufacturer Location: Whippany, NJ
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Administrative Leadtime (in Months):	Production Leadtime (in Months):
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Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Organic

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	0 / 0.000

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	242	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	242
Out	242	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	242

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods	Modification Number / Title: AA0492 / Utility Helicopter Modifications
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 4 of 9: Enhanced Ballistics Armor Protections System

Manufacturer Information

Manufacturer Name: LSF FY18 TPG FY19-20					Manufacturer Location: Miami Lakes, Florida		
Administrative Leadtime (in Months):					Production Leadtime (in Months):		
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Organic

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	0 / 0.000

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods	Modification Number / Title: AA0492 / Utility Helicopter Modifications
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 5 of 9: Upturned Exhaust System (UES)

Manufacturer Information

Manufacturer Name: Undetermined	Manufacturer Location: Undetermined
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Administrative Leadtime (in Months):	Production Leadtime (in Months):
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Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Organic

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	0 / 0.000

Installation Schedule

PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Out	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

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Exhibit P-3a, Individual Modification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods	Modification Number / Title: AA0492 / Utility Helicopter Modifications
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 6 of 9: Backup Altitude Indicators

Manufacturer Information

Manufacturer Name: PIF	Manufacturer Location: Redstone Arsenal Alabama
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Administrative Leadtime (in Months):	Production Leadtime (in Months):
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Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Organic

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	0 / 0.000

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	265	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	265
Out	265	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	265

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Exhibit P-3a, Individual Modification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods	Modification Number / Title: AA0492 / Utility Helicopter Modifications
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 7 of 9: Electronic Standby Instrument System (ESIS)

Manufacturer Information

Manufacturer Name: L-3	Manufacturer Location: Grand Rapids MI
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 12

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates						Mar 2022	
Delivery Dates						Mar 2023	

Installation Information

Method of Implementation: Various

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	44 / 1.914	- / -	- / -	44 / 1.914
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.653	- / -	- / -	15 / 0.653
Total	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	59 / 2.567	- / -	- / -	59 / 2.567

Installation Schedule

PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	15	15	15	59
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	15	15	15	59

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods	Modification Number / Title: AA0492 / Utility Helicopter Modifications
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 8 of 9: Engine Inlet Barrier Filter (EIBF)

Manufacturer Information

Manufacturer Name: Donaldson Aerospace & Defense	Manufacturer Location: St Louis MO
Administrative Leadtime (in Months): 1	Production Leadtime (in Months): 12

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates						Oct 2022	
Delivery Dates						Oct 2023	

Installation Information

Method of Implementation: Various

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.146	- / -	- / -	4 / 0.146
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	4 / 0.146	- / -	- / -	4 / 0.146

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	-	4
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	-	4

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Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods	Modification Number / Title: AA0492 / Utility Helicopter Modifications

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 9 of 9: Upturned Exhaust System II (UES II)

Manufacturer Information

Manufacturer Name: Sikorsky	Manufacturer Location: Stratford CT
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 12

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates					Mar 2021	Mar 2022	
Delivery Dates					Mar 2022	Mar 2023	

Installation Information

Method of Implementation: Various

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	53 / 0.644	- / -	- / -	- / -	53 / 0.644
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 0.231	111 / 1.351	- / -	- / -	130 / 1.582
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	39 / 0.474	- / -	- / -	39 / 0.474
Total	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	72 / 0.875	150 / 1.825	- / -	- / -	222 / 2.700

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	18	18	19	37	37	37	39	222
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	18	18	19	37	113	222

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 8658AA0712 / Network And Mission Plan
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0604201A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	511.205	74.752	142.102	123.614	-	123.614	98.605	96.165	93.961	94.031	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	511.205	74.752	142.102	123.614	-	123.614	98.605	96.165	93.961	94.031	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	511.205	74.752	142.102	123.614	-	123.614	98.605	96.165	93.961	94.031	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	1,180.612	294.299	52.748	57.926	-	57.926	273.903	313.241	348.004	64.671	Continuing	Continuing

Description:

The Network and Mission Plan budget line includes the Aviation Mission Planning System (AMPS), the Improved Data Modem (IDM), the Aviation Data Exploitation Capability (ADEC), and the Aircraft Notebook (ACN).

The AMPS provides automated mission planning, risk assessment and transfer of mission data to Army Aviation platforms in support of Mission Command functions within Aviation units. The AMPS system supports pre-mission planning and rehearsal, including route planning, communications planning, and aircraft configuration. AMPS has the ability to generate mission data in either hard copy or electronic formats. The electronic formats are loaded onto the aircraft platforms utilizing a Data Transfer Device initializing the communication, navigation, and weapons systems on the aircraft. Supported aircraft include the AH-64D/E, CH-47D/F, UH-60A/L/M/Q, HH-60L, and LUH-72. Support for the Enhanced Medium Altitude Reconnaissance Surveillance System (EMARSS), UH-60V, AH-64E V6, and Unmanned Aircraft Systems (UAS) in the U.S. baseline will be provided in a future release. The AMPS program includes management of the Commander's Aviation Risk Tool (CART) and the Centralized Aviation Flight Records System (CAFRS). The AMPS hardware is replaced after five years of use to accommodate rapid commercial technology changes. The AMPS program manages and supports FliteScene Software licenses, maintenance agreements, and related engineering services. FliteScene is a digital map technology application that provides enhanced navigation capabilities to the military flight crew. FliteScene Digital Map is a high performance, combat proven, digital map software product. FliteScene Digital Map software forward-looking capabilities enhance mission effectiveness and include presentation of contour lines, slope shading, dynamic elevation banding, threat depiction, variable scaling, and symbology overlays.

The IDM is the common solution for digitizing Army Aviation and is fielded on every modernized, rotary-wing Army aircraft, including the CH-47 Chinook, AH-64 Apache and UH-60 Black Hawk. The IDM provides the Army rotary-wing fleet with critical communication capabilities, performing as an internet controller and gateway to the Tactical Internet (TI) and Fire Support (FS) internet. The IDM facilitates connectivity to multiple radios used by rotary-wing aircraft and the Blue Force Tracker transceiver, as well as providing the means for rapid data transfer. This hardware/software solution also provides a flexible, software-driven digital messaging system that is interoperable with existing Army and Joint forces battlefield operating systems. The IDM provides Situational Awareness and Joint Variable Message Format messages capability to the cockpit and is critical to the flight operations of the AH-64D/E, CH-47F and UH/HH-60M/V fleets. Therefore both IDM hardware production and software development/integration efforts are critical to the overall readiness of these platforms.

The ADEC is an Army aviation program providing capabilities needed at the aviation unit level to implement and support improvements within aviation operations, safety, and training to increase operational effectiveness and situational awareness at all command echelons. ADEC provides a common and interoperable capability required to implement the DoD mandated Military Flight Operations Quality Assurance processes. ADEC will standardize flight scheduling/management, risk management, mission approval, and flight data analysis and visualization. ADEC provides interfaces to CAFRS to reduce data entry and

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft		P-1 Line Item Number / Title: 8658AA0712 / Network And Mission Plan

ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0604201A
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Line Item MDAP/MAIS Code: N/A

information technology footprint while enabling disconnected and split based operations. ADEC hardware architecture will provide a server infrastructure for residency of multiple critical army aviation programs such as GCSS-Army, ACN and CAFRS. Army Aviation platforms are dependent upon ADEC as a host to enable a centralized architecture to support aviation critical mission operations.

The ACN is an Army Aviation program required to streamline the completion of aviation maintenance activities and the documentation required to maintain airworthiness for all Army aircraft. ACN implements The Army Maintenance Management System - Aviation (TAMMS-A) digital logbook functionality and integrates with CAFRS to reduce manual entries and increase data accuracy. ACN reduces the information technology footprint within an aviation unit by integrating multiple software applications such as platform software applications and condition based maintenance plus tools onto one hardware platform. The ACN will be fielded to units equipped with Utility Helicopter (UH)-72, Fixed Wing and Unmanned Aircraft Systems (UAS) platforms.

This exhibit is for a budget line that procures multiple items and does not have a single Army Acquisition Objective.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	43.356	83.530	71.696	-	71.696	57.191	55.776	54.498	54.538
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	28.406	52.994	46.973	-	46.973	37.470	36.543	35.705	35.732
AR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	2.990	5.578	4.945	-	4.945	3.944	3.846	3.758	3.761
Total:	Quantity	-	-	-	-	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	74.752	142.102	123.614	-	123.614	98.605	96.165	93.961	94.031

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 8658AA0712 / Network And Mission Plan
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0604201A
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Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	AA0712 / Network and Mission Plan (Rationalization, Standardization, Interoperability, Compatibility, Simplification)				- / 511.205	- / 74.752	- / 142.102	- / 123.614	- / -	- / 123.614
P-40	Total Gross/Weapon System Cost				- / 511.205	- / 74.752	- / 142.102	- / 123.614	- / -	- / 123.614

Exhibits Schedule					FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	AA0712 / Network and Mission Plan (Rationalization, Standardization, Interoperability, Compatibility, Simplification)				- / 98.605	- / 96.165	- / 93.961	- / 94.031	Continuing	Continuing
P-40	Total Gross/Weapon System Cost				- / 98.605	- / 96.165	- / 93.961	- / 94.031	Continuing	Continuing

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY 2019 Base procurement dollars in the amount of \$46.441 million supports the procurement of AMPS hardware, AMPS software revisions necessary to support aviation fleet modernization programs and support of CAFRS software revisions for the Individual Aircrew Training Folder (IATF), Individual Flight Records Folder (IFRF), Senior Leaders CAFRS data access and migration of the Air Traffic Services (ATS) records into CAFRS. AMPS hardware (B-Kits) is being replaced on a 5-year cycle to maintain pace with technology. The AMPS program manages Harris FliteScene digital map software, procurement of FliteScene licenses, maintenance agreements, software support, upgrades and releases, engineering services, materials, and travel. FliteScene Digital Map software is the U.S. Army's standard installed on the AH-64D/E, CH-47F, UH-60M/V fleets, Special Operation aircraft, FMS aircraft and Other Government Agencies sales.

FY 2019 Base procurement dollars in the amount of \$67.135 million supports the procurement of IDM-401 kits to upgrade the fleet from the 304 and 304B variants and to provide a technology refresh to the IDM hardware. The funding will also address modifications to the IDM software to maintain compliance with cybersecurity and changes to the functionality of the IDM. These kits support production line and modification work order (MWO) installations for the AH-64D/E, CH-47F and HH/UH-60M/V helicopters. The IDM addresses Army Aviation's interoperability, lethality, and operational tempo by providing a common solution for fast and accurate data-burst communications via the TI and FS internet networks. The IDM provides a capability to communicate across the digital battlefield while also providing the flexibility to adapt to technology change.

FY 2019 Base procurement dollars in the amount of \$1.000 million supports the fielding, training and help desk support of ADEC systems for Army aviation units. ADEC will provide Army commanders and users the necessary operation, safety, and training information to ensure efficient mission management, reduce operations and support costs, and improve operational readiness. Fielding of ADEC is to Headquarters and Battalions of the Combat Aviation Brigades, Expeditionary Combat Aviation Brigades, Theater Aviation Brigades, and the Special Operations Aviation Regiment. ADEC is also fielded to the aviation training installations and flight detachments.

FY 2019 Base procurement dollars in the amount of \$9.038 million supports the procurement of software and software license for fielding and training of ACN systems for Army Aviation units. ACN will replace paper based processes and legacy aviation logistics information systems with the digital aircraft notebook providing necessary maintenance and airworthiness record keeping to ensure efficient and effective aircraft maintenance, integration with Interactive Electronic Technical Manuals and Condition Based Maintenance (CBM) tools, accurate record keeping and safe aircraft operations, reduce operations and support costs, and improve operational readiness.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft		P-1 Line Item Number / Title: 8658AA0712 / Network And Mission Plan
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0604201A
Line Item MDAP/MAIS Code: N/A		
In accordance with section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses and providing military support to civil authorities.		

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Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8658AA0712 / Network And Mission Plan	Modification Number / Title: AA0712 / Network and Mission Plan

ID Code (A=Service Ready, B=Not Service Ready) :						MDAP/MAIS Code:						
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	511.205	74.752	142.102	123.614	-	123.614	98.605	96.165	93.961	94.031	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	511.205	74.752	142.102	123.614	-	123.614	98.605	96.165	93.961	94.031	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	511.205	74.752	142.102	123.614	-	123.614	98.605	96.165	93.961	94.031	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	1,180.612	294.299	52.748	57.926	-	57.926	273.903	313.241	348.004	64.671	Continuing	Continuing

Description:

The Network and Mission Plan budget line includes the Aviation Mission Planning System (AMPS), the Improved Data Modem (IDM), and the Aircraft Notebook (ACN).

The AMPS provides automated mission planning, risk assessment and transfer of mission data to Army Aviation platforms in support of Mission Command functions within Aviation units. The AMPS system supports pre-mission planning and rehearsal, including route planning, communications planning, and aircraft configuration. AMPS has the ability to generate mission data in either hard copy or electronic formats. The electronic formats are loaded onto the aircraft platforms utilizing a Data Transfer Device initializing the communication, navigation, and weapons systems on the aircraft. Supported aircraft include the AH-64D/E, CH-47D/F, UH-60A/L/M/Q, HH-60L, and LUH-72. Support for the Enhanced Medium Altitude Reconnaissance Surveillance System (EMARSS), UH-60V, AH-64E V6, and Unmanned Aircraft Systems (UAS) in the U.S. baseline will be provided in a future release. The AMPS program includes management of the Commander's Aviation Risk Tool (CART) and the Centralized Aviation Flight Records System (CAFRS). The AMPS hardware is replaced after five years of use to accommodate rapid commercial technology changes. The AMPS program manages and supports FliteScene Software licenses, maintenance agreements, and related engineering services. FliteScene is a digital map technology application that provides enhanced navigation capabilities to the military flight crew. FliteScene Digital Map is a high performance, combat proven, digital map software product. FliteScene Digital Map software forward-looking capabilities enhance mission effectiveness and include presentation of contour lines, slope shading, dynamic elevation banding, threat depiction, variable scaling, and symbology overlays.

The IDM is the common solution for digitizing Army Aviation and is fielded on every modernized, rotary-wing Army aircraft, including the CH-47 Chinook, AH-64 Apache and UH-60 Black Hawk. The IDM provides the Army rotary-wing fleet with critical communication capabilities; performing as an internet controller and gateway to the Tactical Internet (TI) and Fire Support (FS) internet. The IDM facilitates connectivity to multiple radios used by rotary-wing aircraft and the Blue Force Tracker transceiver, as well as providing the means for rapid data transfer. This hardware/software solution also provides a flexible, software-driven digital messaging system that is interoperable with existing Army and Joint forces battlefield operating systems. The IDM provides Situational Awareness and Joint Variable Message Format messages capability to the cockpit and is critical to the flight operations of the AH-64D/E, CH-47F and UH/HH-60M/V fleets; therefore both IDM hardware production and software development/integration efforts are critical to the overall readiness of these platforms.

The ADEC is an Army aviation program providing capabilities needed at the aviation unit level to implement and support improvements within aviation operations, safety, and training to increase operational effectiveness and situational awareness at all command echelons. ADEC provides a common and interoperable capability required to implement the DoD mandated Military Flight Operations Quality Assurance processes. ADEC will standardize flight scheduling/management, risk management, mission approval, and flight data analysis and visualization. ADEC provides interfaces to CAFRS to reduce data entry and information technology footprint while enabling disconnected and split based operations. ADEC hardware architecture will provide a server infrastructure for residency of multiple critical army aviation programs, such as, GCSS-Army, ACN and CAFRS. Army Aviation platforms are dependent upon ADEC as a host to enable a centralized architecture to support aviation critical mission operations.

The ACN is an Army Aviation program required to streamline the completion of aviation maintenance activities and the documentation required to maintain airworthiness for all Army aircraft. ACN implements The Army Maintenance Management System - Aviation (TAMMS-A) digital logbook functionality and integrates with CAFRS to reduce manual entries and increase data accuracy. ACN reduces the information

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Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8658AA0712 / Network And Mission Plan	Modification Number / Title: AA0712 / Network and Mission Plan

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technology footprint within an aviation unit by integrating multiple software applications such as platform software applications and condition based maintenance plus tools onto one hardware platform. The ACN will be fielded to units equipped with Utility Helicopter (UH)-72, Fixed Wing and Unmanned Aircraft Systems (UAS) platforms.

FY 2019 Base procurement dollars in the amount of \$46.441 million supports the procurement of AMPS hardware, AMPS software revisions necessary to support aviation fleet modernization programs and support of CAFRS software revisions for the Individual Aircrew Training Folder (IATF), Individual Flight Records Folder (IFRF), Senior Leaders CAFRS data access and migration of the Air Traffic Services (ATS) records into CAFRS. AMPS hardware (B-Kits) is being replaced on a 5-year cycle to maintain pace with technology. Stakeholders within the AMPS program manage Harris FliteScene digital map software, procurement of FliteScene licenses, maintenance agreements, software support, upgrades and releases, engineering services, materials, and travel. FliteScene Digital Map software reads and loads digital maps and image data from an external mass storage device and receives commands from external subsystems. FliteScene Digital Map software is the U.S. Army standard installed on the AH-64D/E, CH-47F, UH-60M/V fleets, Special Operation aircraft, FMS aircraft and Other Government Agencies sales.

FY 2019 Base procurement dollars in the amount of \$67.135 million supports the procurement of IDM-401 kits to upgrade the fleet from the 304 and 304B variants and to provide a technology refresh to the IDM hardware. The funding will also address modifications to the IDM software to maintain compliance with cybersecurity and changes to the functionality of the IDM. These kits support production line and modification work order (MWO) installations for the AH-64D/E, CH-47F and HH/UH-60M/V helicopters. The IDM addresses Army Aviation's interoperability, lethality, and operational tempo by providing a common solution for fast and accurate data-burst communications via the TI and FS internet networks. The IDM provides a capability to communicate across the digital battlefield while also providing the flexibility to adapt to technology change.

FY 2019 Base procurement dollars in the amount of \$1.000 million supports the fielding, training and help desk support of ADEC systems for Army aviation units. ADEC will provide Army commanders and users the necessary operation, safety, and training information to ensure efficient mission management, reduce operations and support costs, and improve operational readiness. Fielding of ADEC is to Headquarters and Battalions of the Combat Aviation Brigades, Expeditionary Combat Aviation Brigades, Theater Aviation Brigades, and the Special Operations Aviation Regiment. ADEC is also fielded to the aviation training installations and flight detachments.

FY 2019 Base procurement dollars in the amount of \$9.038 million supports the procurement of software and software license for fielding and training of ACN systems for Army Aviation units. ACN will replace paper based processes and legacy aviation logistics information systems with the digital aircraft notebook providing necessary maintenance and airworthiness record keeping to ensure efficient and effective aircraft maintenance, integration with Interactive Electronic Technical Manuals and Condition Based Maintenance (CBM) tools, accurate record keeping and safe aircraft operations, reduce operations and support costs, and improve operational readiness.

In accordance with section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses and providing military support to civil authorities.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	43.356	83.530	71.696	-	71.696	57.191	55.776	54.498	54.538
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	28.406	52.994	46.973	-	46.973	37.470	36.543	35.705	35.732
AR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	2.990	5.578	4.945	-	4.945	3.944	3.846	3.758	3.761
Total:	Quantity	-	-	-	-	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	74.752	142.102	123.614	-	123.614	98.605	96.165	93.961	94.031

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Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018				
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ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:							
Models of Systems Affected: AH-64D/E, CH-47D/F, UH-60A/L/M/Q/V, HH-60L/M, EMARSS, UH-72,UAS					Modification Type: Rationalization, Standardization, Interoperability, Compatibility, Simplification					Related RDT&E PEs:				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total		
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)		
Procurement														
Modification Item 1 of 4: Aviation Mission Planning System (AMPS)														
B Kits														
Recurring														
Kit Quantity- (Computer)	5,352 / 16.509	60 / 0.307	1,217 / 17.600	1,214 / 8.533	- / -	1,214 / 8.533	- / -	30 / 0.333	30 / 0.340	1,214 / 9.235	Continuing	Continuing		
ECPs	- / 91.943	- / 20.415	- / 17.916	- / 25.288	- / -	- / 25.288	- / 20.573	- / 20.009	- / 20.204	- / 21.843	Continuing	Continuing		
Systems Engineering	- / 5.721	- / 2.107	- / 1.234	- / 1.641	- / -	- / 1.641	- / 1.674	- / 1.707	- / 1.741	- / 1.776	Continuing	Continuing		
System Test and Eval	- / 8.356	- / 0.901	- / 1.046	- / 1.019	- / -	- / 1.019	- / 1.022	- / 1.607	- / 0.908	- / 0.908	Continuing	Continuing		
Fielding/Training	- / 37.338	- / 4.652	- / 8.497	- / 8.051	- / -	- / 8.051	- / 8.088	- / 8.248	- / 8.413	- / 7.513	Continuing	Continuing		
Other- PM Admin	- / 8.690	- / 2.066	- / 1.679	- / 1.909	- / -	- / 1.909	- / 1.948	- / 1.987	- / 2.026	- / 2.067	Continuing	Continuing		
Subtotal: Recurring	5,352 / 168.557	60 / 30.448	1,217 / 47.972	1,214 / 46.441	- / -	1,214 / 46.441	- / 33.305	30 / 33.891	30 / 33.632	1,214 / 43.342	Continuing	Continuing		
Subtotal: Aviation Mission Planning System (AMPS)	5,352 / 168.557	60 / 30.448	1,217 / 47.972	1,214 / 46.441	- / -	1,214 / 46.441	- / 33.305	30 / 33.891	30 / 33.632	1,214 / 43.342	Continuing	Continuing		
Modification Item 2 of 4: Improved Data Modem (IDM)														
B Kits														
Recurring														
Kit Quantity- IDM	- / 9.776	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 9.776		
Kit Quantity- IDM OSA	3,821 / 39.092	150 / 8.523	371 / 19.489	396 / 27.088	- / -	396 / 27.088	353 / 24.989	250 / 19.038	250 / 19.419	250 / 19.807	Continuing	Continuing		
Aircraft Integration	- / 151.588	- / -	- / 19.293	- / 19.699	- / -	- / 19.699	- / 8.833	- / 13.934	- / 6.240	- / 7.900	Continuing	Continuing		
ECP (SW)	- / 63.181	- / 5.925	- / 6.370	- / 1.558	- / -	- / 1.558	- / 7.078	- / 4.630	- / 9.659	- / 5.000	Continuing	Continuing		
Systems Engineering	- / 8.940	- / 1.466	- / 3.425	- / 1.857	- / -	- / 1.857	- / 1.895	- / 1.936	- / 1.975	- / 2.017	Continuing	Continuing		
System Test & Eval	- / 38.710	- / 6.184	- / 8.762	- / 11.092	- / -	- / 11.092	- / 9.528	- / 9.485	- / 9.934	- / 9.884	Continuing	Continuing		
Fielding/Training	- / 1.144	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1.144		
Other- PM Admin	- / 15.384	- / 2.666	- / 2.797	- / 5.841	- / -	- / 5.841	- / 5.452	- / 5.961	- / 6.382	- / 5.081	Continuing	Continuing		
Subtotal: Recurring	3,821 / 327.815	150 / 24.764	371 / 60.136	396 / 67.135	- / -	396 / 67.135	353 / 57.775	250 / 54.984	250 / 53.609	250 / 49.689	Continuing	Continuing		
Subtotal: Improved Data Modem (IDM)	3,821 / 327.815	150 / 24.764	371 / 60.136	396 / 67.135	- / -	396 / 67.135	353 / 57.775	250 / 54.984	250 / 53.609	250 / 49.689	Continuing	Continuing		
Modification Item 3 of 4: Aviation Data Exploitation Capability (ADEC)														
B Kits														
Recurring														
Kit Quantity- Workstation	340 / 0.491	78 / 0.544	506 / 2.738	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing		
Kit Quantity- Server	20 / 0.763	- / -	133 / 2.564	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing		

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Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018			
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ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: AH-64D/E, CH-47D/F, UH-60A/L/M/Q/V, HH-60L/M, EMARSS, UH-72,UAS					Modification Type: Rationalization, Standardization, Interoperability, Compatibility, Simplification				Related RDT&E PEs:				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
ECP (SW)	- / -	- / 1.186	- / 2.265	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	
Data	- / -	- / 0.486	- / 0.026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	
Systems Engineering	- / 3.155	- / 1.207	- / 1.911	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	
System Test & Eval	- / -	- / 0.304	- / 0.623	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	
Fielding/Training	- / -	- / 4.276	- / 12.944	- / 0.800	- / -	- / 0.800	- / 0.800	- / 0.800	- / 0.800	- / 0.800	Continuing	Continuing	
Other- PM Admin	- / 1.906	- / 2.116	- / 1.444	- / 0.200	- / -	- / 0.200	- / 0.200	- / 0.200	- / 0.200	- / 0.200	Continuing	Continuing	
Subtotal: Recurring	360 / 6.315	78 / 10.119	639 / 24.515	- / 1.000	- / -	- / 1.000	- / 1.000	- / 1.000	- / 1.000	- / 1.000	Continuing	Continuing	
Subtotal: Aviation Data Exploitation Capability (ADEC)	360 / 6.315	78 / 10.119	639 / 24.515	- / 1.000	- / -	- / 1.000	- / 1.000	- / 1.000	- / 1.000	- / 1.000	Continuing	Continuing	
Modification Item 4 of 4: Aircraft Notebook (ACN)													
B Kits													
Recurring													
ECP (SW)	- / 0.792	- / 1.708	- / 2.033	- / 1.425	- / -	- / 1.425	- / 1.215	- / 1.035	- / 0.637	- / -	Continuing	Continuing	
Data	- / 0.049	- / 0.236	- / 0.235	- / 0.201	- / -	- / 0.201	- / 0.211	- / 0.170	- / 0.016	- / -	Continuing	Continuing	
Systems Engineering	- / 0.843	- / 2.003	- / 2.018	- / 2.165	- / -	- / 2.165	- / 2.246	- / 2.231	- / 2.276	- / -	Continuing	Continuing	
System Test	- / -	- / 0.488	- / 0.267	- / 0.351	- / -	- / 0.351	- / 0.518	- / 0.481	- / 0.373	- / -	Continuing	Continuing	
Fielding/Training	- / 5.498	- / 4.145	- / 4.310	- / 4.311	- / -	- / 4.311	- / 1.809	- / 1.845	- / 1.883	- / -	Continuing	Continuing	
Other- PM Admin	- / 1.336	- / 0.841	- / 0.616	- / 0.585	- / -	- / 0.585	- / 0.526	- / 0.528	- / 0.535	- / -	Continuing	Continuing	
Subtotal: Recurring	- / 8.518	- / 9.421	- / 9.479	- / 9.038	- / -	- / 9.038	- / 6.525	- / 6.290	- / 5.720	- / -	Continuing	Continuing	
Subtotal: Aircraft Notebook (ACN)	- / 8.518	- / 9.421	- / 9.479	- / 9.038	- / -	- / 9.038	- / 6.525	- / 6.290	- / 5.720	- / -	Continuing	Continuing	
Subtotal: Procurement, All Modification Items	9,533 / 511.205	288 / 74.752	2,227 / 142.102	1,610 / 123.614	- / -	1,610 / 123.614	353 / 98.605	280 / 96.165	280 / 93.961	1,464 / 94.031	Continuing	Continuing	
Installation													
Modification Item 3 of 4: Aviation Data Exploitation Capability (ADEC)	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000	
Modification Item 4 of 4: Aircraft Notebook (ACN)	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000	
Subtotal: Installation	2 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	2 / 0.000	
Total													
Total Cost (Procurement + Support + Installation)	511.205	74.752	142.102	123.614	-	123.614	98.605	96.165	93.961	94.031	Continuing	Continuing	

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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 4: Aviation Mission Planning System (AMPS)

Manufacturer Information

Manufacturer Name: Getac	Manufacturer Location: Irvine, CA
Administrative Leadtime (in Months):	Production Leadtime (in Months):

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Not applicable

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	0 / 0.000

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8658AA0712 / Network And Mission Plan	Modification Number / Title: AA0712 / Network and Mission Plan

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 2 of 4: Improved Data Modem (IDM)

Manufacturer Information

Manufacturer Name: AMRDEC Software Engineering Directorate Manufacturer Location: Redstone Arsenal, AL

Administrative Leadtime (in Months): Production Leadtime (in Months):

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Not Applicable

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	0 / 0.000

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Out	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8658AA0712 / Network And Mission Plan	Modification Number / Title: AA0712 / Network and Mission Plan

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 3 of 4: Aviation Data Exploitation Capability (ADEC)

Manufacturer Information

Manufacturer Name: AMRDEC Software Engineering Directorate	Manufacturer Location: Redstone Arsenal, AL
Administrative Leadtime (in Months):	Production Leadtime (in Months):

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Not Applicable

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	1 / 0.000	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8658AA0712 / Network And Mission Plan	Modification Number / Title: AA0712 / Network and Mission Plan

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 4 of 4: Aircraft Notebook (ACN)

Manufacturer Information

Manufacturer Name: AMRDEC Software Engineering Directorate Manufacturer Location: Redstone Arsenal, AL

Administrative Leadtime (in Months): Production Leadtime (in Months):

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Not Applicable

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	1 / 0.000	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0604201A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	482.191	76.960	170.339	161.969	-	161.969	136.972	151.556	189.090	185.259	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	482.191	76.960	170.339	161.969	-	161.969	136.972	151.556	189.090	185.259	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	482.191	76.960	170.339	161.969	-	161.969	136.972	151.556	189.090	185.259	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	1,190.595	810.105	203.999	419.609	-	419.609	430.730	371.461	265.576	284.140	Continuing	Continuing

Description:

The current Navigation Systems provide Army Aviation with extremely accurate and secure navigation and timing, assists in situational awareness, and aids in prevention of fratricide. The Global Positioning System (GPS) is installed in two configurations based upon mission profile, operational requirements, and avionics architecture of the aircraft. The Doppler GPS Navigation Set (DGNS) is used for the Non-bussed Utility and Cargo helicopters. The Embedded GPS Inertial Navigation System (EGI) is integrated into the Modernized Cargo, Utility, Attack, and Special Operations fleets of helicopters. The Preplanned Product Improvement (P3I) DGNS is being installed on the Blackhawk (UH-60A/L and HH-60A/L) and Chinook (CH-47D) aircraft. The P3I EGI is being installed on UH/HH-60M, CH-47F, Apache (AH-64E), and Special Operations Aircraft (SOA). GPS based navigation systems are required as the primary means of navigation in civil airspace. The modification program to the DGNS Computer Display Unit (CDU) and software upgrade is being conducted to reduce pilot workload and fatigue through a user friendly interface as well as provide maps and charts to augment tactical and Instrument Flight Rules navigational operations. The GPS Anti-Jam Antenna brings significantly greater levels of Assured - Position, Navigation, and Timing (A-PNT) through GPS jammer nulling technology.

The Aviation Tactical Communication Systems (ATCS) programs are Army Aviation Programs to procure A and B Kits to meet Army Aviation Communications requirements. The ATCS B-Kits include the ARC-201D and the ARC-231 radio sets along with associated power amplifiers and mounts. A-Kit hardware and software is planned to be procured through the prime contractor for each platform. The ATCS program is currently being split into two separate programs, the first is Alt Comms, which includes the ARC-231 utilizing the RT-1808A radio, and the second, Multi-mode Aviation Radio Set (MARS), which consists of the ARC-231 utilizing the RT-1987 radio.

The Aviation Maritime Fixed - Aviation (AMF-A) Radio Integration Program installs and qualifies the Army's Future Airborne Networking Radio hardware and software for production line and fielded Army Aviation Aircraft, SOA, and Unmanned Aircraft Systems (UAS) platforms to enable the operation of PEO C3T software defined networking radios with SINCGARS, Soldier Radio Waveform, mid-tier wideband networking waveforms, or other advanced networking waveforms. This program also provides for the procurement and installation of AMF Radio retrofit A-Kits for use on platforms that were fielded without these capabilities. AMF Radios and ancillaries are procured by PM Tactical Radios and are not part of the AMF Radio Integration effort.

The Blue Force Tracking - Aviation (BFT-A) Program integrates, qualifies, and manages the installation of BFT-2 system installation kits (A-Kit) for Army Rotary Wing Aircraft. The A-Kit utilizes the BFT-2 transceiver and KGV-72 boxes provided by PM Mission Command (MC).

This exhibit is for a budget line that procures multiple items and does not have a single Army Acquisition Objective.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0604201A
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Line Item MDAP/MAIS Code: N/A

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	40.660	95.617	88.442	-	88.442	74.784	82.748	103.244	101.134
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	32.267	66.420	65.357	-	65.357	55.278	61.163	76.308	74.778
AR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	4.033	8.302	8.170	-	8.170	6.910	7.645	9.538	9.347
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	76.960	170.339	161.969	-	161.969	136.972	151.556	189.090	185.259

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity:
2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft

P-1 Line Item Number / Title:
8659AA0723 / Comms, Nav Surveillance

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604201A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	AA0723 / Communications, Navigation, and Surveillance (New or Improved Operational Capability)				- / 482.191	- / 76.960	- / 170.339	- / 161.969	- / -	- / 161.969
P-40	Total Gross/Weapon System Cost				- / 482.191	- / 76.960	- / 170.339	- / 161.969	- / -	- / 161.969

Exhibits Schedule					FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	AA0723 / Communications, Navigation, and Surveillance (New or Improved Operational Capability)				- / 136.972	- / 151.556	- / 189.090	- / 185.259	Continuing	Continuing
P-40	Total Gross/Weapon System Cost				- / 136.972	- / 151.556	- / 189.090	- / 185.259	Continuing	Continuing

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY 2019 Base Procurement dollars in the amount of \$13.711 million supports the procurement and installation of upgraded DGNS CDUs for the UH/HH-60L aircraft.
 FY 2019 Base Procurement dollars in the amount of \$4.849 million supports the procurement of and integration of a GPS anti-jam antenna capability for the UH/HH-60L aircraft which brings increased levels of A-PNT.
 FY 2019 Base Procurement dollars in the amount of \$23.264 million provides aircraft integration for the M-Code capable EGI into four modernized Army aircraft platforms enhancing the A-PNT capabilities on those aircraft.
 FY 2019 Base Procurement dollars in the amount of \$34.958 million provides for procurement of GPS anti-jam antenna A-Kits and platform integration for a GPS anti-jam antenna capability onto nine modernized Army aircraft platforms to bring greater levels of A-PNT to those platforms.
 FY 2019 Base Procurement dollars in the amount of \$43.902 million supports procurement of ARC-231/Alt Comms A and B-Kits and installation of A-Kits for the AH-64D/E, CH-47F, UH/HH-60L/M/V, LUH, UAS and SOA.
 FY 2019 Base Procurement dollars in the amount of \$19.981 million supports system test and evaluation of ARC-231/MARS B Kits as well as the aircraft integration to support crypto-modernization.
 FY 2019 Base Procurement dollars in the amount of \$1.418 million provides personnel support associated with supporting the Shadow Communications Relay Package (CRP) installations and the Army's modernization of the legacy Aviation SINCGARS radio requirements.
 FY 2019 Base Procurement dollars in the amount of \$19.886 million provides for the procurement and installation BFT-2 A-Kits.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft		P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0604201A
Line Item MDAP/MAIS Code: N/A		
In accordance with section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses and providing military support to civil authorities.		

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Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance	Modification Number / Title: AA0723 / Communications, Navigation, and Surveillance

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	482.191	76.960	170.339	161.969	-	161.969	136.972	151.556	189.090	185.259	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	482.191	76.960	170.339	161.969	-	161.969	136.972	151.556	189.090	185.259	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	482.191	76.960	170.339	161.969	-	161.969	136.972	151.556	189.090	185.259	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	1,190.595	810.105	203.999	419.609	-	419.609	430.730	371.461	265.576	284.140	Continuing	Continuing

Description:

The current Navigation Systems provide Army Aviation with extremely accurate and secure navigation and timing, assists in situational awareness, and aids in prevention of fratricide. The Global Positioning System (GPS) is installed in two configurations based upon mission profile, operational requirements, and avionics architecture of the aircraft. The Doppler GPS Navigation Set (DGNS) is used for the Non-bussed Utility and Cargo helicopters. The Embedded GPS Inertial Navigation System (EGI) is integrated into the Modernized Cargo, Utility, Attack, and Special Operations fleets of helicopters. The Preplanned Product Improvement (P3I) DGNS is being installed on the Blackhawk (UH-60A/L and HH-60A/L) and Chinook (CH-47D) aircraft. The P3I EGI is being installed on UH/HH-60M, CH-47F, Apache (AH-64E), and Special Operations Aircraft (SOA). GPS based navigation systems are required as the primary means of navigation in civil airspace. The modification program to the DGNS Computer Display Unit (CDU) and software upgrade is being conducted to reduce pilot workload and fatigue through a user friendly interface as well as provide maps and charts to augment tactical and Instrument Flight Rules navigational operations. The GPS Anti-Jam Antenna brings significantly greater levels of Assured - Position, Navigation, and Timing (A-PNT) through GPS jammer nulling technology.

The Aviation Tactical Communication Systems (ATCS) programs are Army Aviation Programs to procure A and B Kits to meet Army Aviation Communications requirements. The ATCS B-Kits include the ARC-201D and the ARC-231 radio sets along with associated power amplifiers and mounts. A-Kit hardware and software is planned to be procured through the prime contractor for each platform. The ATCS program is currently being split into two separate programs, the first is Alt Comms, which includes the ARC-231 utilizing the RT-1808A radio, and the second, Multi-mode Aviation Radio Set (MARS), which consists of the ARC-231 utilizing the RT-1987 radio.

The Aviation Maritime Fixed - Aviation (AMF-A) Radio Integration Program installs and qualifies the Army's Future Airborne Networking Radio hardware and software for production line and fielded Army Aviation Aircraft, SOA, and Unmanned Aircraft Systems (UAS) platforms to enable the operation of PEO C3T software defined networking radios with SINCGARS, Soldier Radio Waveform, mid-tier wideband networking waveforms, or other advanced networking waveforms. This program also provides for the procurement and installation of AMF Radio retrofit A-Kits for use on platforms that were fielded without these capabilities. AMF Radios and ancillaries are procured by PM Tactical Radios and are not part of the AMF Radio Integration effort.

The Blue Force Tracking - Aviation (BFT-A) Program integrates, qualifies, and manages the installation of BFT-2 system installation kits (A-Kit) for Army Rotary Wing Aircraft. The A-Kit utilizes the BFT-2 transceiver and KGV-72 boxes provided by PM Mission Command (MC).

This exhibit is for a budget line that procures multiple items and does not have a single Army Acquisition Objective.

-- Justification --

FY 2019 Base Procurement dollars in the amount of \$13.711 million supports the procurement and installation of upgraded DGNS CDUs for the UH/HH-60L aircraft.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance	Modification Number / Title: AA0723 / Communications, Navigation, and Surveillance

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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FY 2019 Base Procurement dollars in the amount of \$4.849 million supports the procurement of and integration of a GPS anti-jam antenna capability for the UH/HH-60L aircraft which brings increased levels of A-PNT.

FY 2019 Base Procurement dollars in the amount of \$23.264 million provides aircraft integration for the M-Code capable EGI into four modernized Army aircraft platforms enhancing the A-PNT capabilities on those aircraft.

FY 2019 Base Procurement dollars in the amount of \$34.958 million provides for procurement of GPS anti-jam antenna A-Kits and platform integration for a GPS anti-jam antenna capability onto nine modernized Army aircraft platforms to bring greater levels of A-PNT to those platforms.

FY 2019 Base Procurement dollars in the amount of \$43.902 million supports procurement of ARC-231/Alt Comms A and B-Kits and installation of A-Kits for the AH-64D/E, CH-47F, UH/HH-60L/M/V, LUH, UAS and SOA.

FY 2019 Base Procurement dollars in the amount of \$19.981 million supports system test and evaluation of ARC-231/MARS B Kits as well as the aircraft integration to support crypto-modernization.

FY 2019 Base Procurement dollars in the amount of \$1.418 million provides personnel support associated with supporting the Shadow Communications Relay Package (CRP) installations and the Army's modernization of the legacy Aviation SINCGARS radio requirements.

FY 2019 Base Procurement dollars in the amount of \$19.886 million provides for the procurement and installation BFT-2 A-Kits.

In accordance with section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses and providing military support to civil authorities.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	40.660	95.617	88.442	-	88.442	74.784	82.748	103.244	101.134
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	32.267	66.420	65.357	-	65.357	55.278	61.163	76.308	74.778
AR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	4.033	8.302	8.170	-	8.170	6.910	7.645	9.538	9.347
Total:	Quantity	-	-	-	-	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	76.960	170.339	161.969	-	161.969	136.972	151.556	189.090	185.259

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10					P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance					Modification Number / Title: AA0723 / Communications, Navigation, and Surveillance				
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:							
Models of Systems Affected: UH/HH-60A/L, UH/HH/MH-60M, CH-47D, CH/MH-47F, AH-64D/E, LUH, UAS					Modification Type: New or Improved Operational Capability					Related RDT&E PEs:				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total		
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)		
Procurement														
Modification Item 1 of 9: DGNS (AN/ASN-128D) P3I														
A Kits														
Recurring														
Engineering Change Orders	- / 2.800	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 2.800		
Data	- / 1.712	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1.712		
Training Equipment	46 / 6.800	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	46 / 6.800		
Systems Engineering	- / 8.930	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 8.930		
Other - PM Admin	- / 1.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1.500		
Subtotal: Recurring	46 / 21.742	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 21.742		
Subtotal: DGNS (AN/ASN-128D) P3I	46 / 21.742	- / -	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	46 / 21.742		
Modification Item 2 of 9: DGNS (AN/ASN-128D) CDU/ SW Upgrade ECP B-Kit														
B Kits														
Recurring														
Upgraded CDU	- / -	- / -	50 / 4.742	154 / 10.647	- / -	154 / 10.647	45 / 3.482	62 / 5.011	90 / 7.275	- / -	359 / 0.000	760 / 31.157		
Fielding	- / 0.660	- / 1.226	- / 0.581	- / 2.003	- / -	- / 2.003	- / 0.844	- / 1.161	- / 1.692	- / -	Continuing	Continuing		
Systems Eng / Program Management	- / 3.632	- / 0.790	- / 0.810	- / 0.949	- / -	- / 0.949	- / 0.913	- / 1.199	- / 2.381	- / 1.786	Continuing	Continuing		
Subtotal: Recurring	- / 4.292	- / 2.016	50 / 6.133	154 / 13.599	- / -	154 / 13.599	45 / 5.239	62 / 7.371	90 / 11.348	- / 1.786	Continuing	Continuing		
Non-Recurring														
Data / Training	- / 1.539	- / 0.899	- / 0.934	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 3.372		
Aircraft Integration	- / 2.805	- / 5.225	- / 4.119	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 12.149		
Systems Test & Evaluation	- / 1.328	- / 1.436	- / 1.758	- / -	- / -	- / -	- / 0.519	- / -	- / -	- / -	- / 0.000	- / 5.041		
Subtotal: Non-Recurring	- / 5.672	- / 7.560	- / 6.811	- / -	- / -	- / -	- / 0.519	- / -	- / -	- / -	- / -	- / 20.562		
Subtotal: DGNS (AN/ASN-128D) CDU/SW Upgrade ECP B-Kit	- / 9.964	- / 9.576	50 / 12.944	154 / 13.599	- / -	154 / 13.599	45 / 5.758	62 / 7.371	90 / 11.348	- / 1.786	Continuing	Continuing		
Modification Item 3 of 9: DGNS (AN/ASN-128D) CDU/ SW Upgrade ECP A-Kit														
A Kits														
Recurring														
Systems Engineering / Program Management	- / -	- / 0.796	- / 0.810	- / 0.824	- / -	- / 0.824	- / 0.853	- / 1.110	- / 0.948	- / -	Continuing	Continuing		

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Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance	Modification Number / Title: AA0723 / Communications, Navigation, and Surveillance

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Models of Systems Affected: UH/HH-60A/L, UH/HH/MH-60M, CH-47D, CH/MH-47F, AH-64D/E, LUH, UAS	Modification Type: New or Improved Operational Capability	Related RDT&E PEs:
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Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Systems Test & Evaluation	- / -	- / 0.758	- / 0.772	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1.530
GPS Anti Jam Antenna	- / -	- / -	- / -	50 / 1.725	- / -	50 / 1.725	29 / 0.836	62 / 1.186	340 / 6.701	93 / 1.860	186 / 0.000	760 / 12.308
Subtotal: Recurring	- / -	- / 1.554	- / 1.582	50 / 2.549	- / -	50 / 2.549	29 / 1.689	62 / 2.296	340 / 7.649	93 / 1.860	Continuing	Continuing
Non-Recurring												
Integration & NRE	- / -	- / -	- / 1.250	- / 2.300	- / -	- / 2.300	- / -	- / -	- / -	- / -	- / 0.000	- / 3.550
Subtotal: Non-Recurring	- / -	- / -	- / 1.250	- / 2.300	- / -	- / 2.300	- / -	- / -	- / -	- / -	- / -	- / 3.550
Subtotal: DGNS (AN/ASN-128D) CDU/SW Upgrade ECP A-Kit	- / -	- / 1.554	- / 2.832	50 / 4.849	- / -	50 / 4.849	29 / 1.689	62 / 2.296	340 / 7.649	93 / 1.860	Continuing	Continuing
Modification Item 4 of 9: Embedded GPS Inertial Nav System (EGI) P3I B-Kit												
B Kits												
Recurring												
EGI EAGLE SOA Shipsets	38 / 8.493	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	38 / 8.493
EGI EAGLE-M Shipsets	- / -	- / -	- / -	- / -	- / -	- / -	- / -	50 / 12.846	165 / 34.799	280 / 46.052	3,463 / 0.000	3,958 / 93.697
Fielding	- / 1.365	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.091	- / 3.074	- / 4.619	Continuing	Continuing
Systems Engineering / Program Management	- / 11.095	- / 2.553	- / 0.775	- / 0.938	- / -	- / 0.938	- / 2.024	- / 1.672	- / 4.265	- / 4.454	Continuing	Continuing
Subtotal: Recurring	38 / 20.953	- / 2.553	- / 0.775	- / 0.938	- / -	- / 0.938	- / 2.024	50 / 17.609	165 / 42.138	280 / 55.125	Continuing	Continuing
Non-Recurring												
Aircraft Integration	- / 2.672	- / -	- / -	- / 19.295	- / -	- / 19.295	- / -	- / -	- / 2.370	- / 1.523	Continuing	Continuing
Systems Test & Evaluation	- / 5.600	- / -	- / -	- / 3.031	- / -	- / 3.031	- / 2.116	- / 1.673	- / 2.173	- / 2.199	Continuing	Continuing
Training / Data / Support Equipment	- / 1.493	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1.493
Subtotal: Non-Recurring	- / 9.765	- / -	- / -	- / 22.326	- / -	- / 22.326	- / 2.116	- / 1.673	- / 4.543	- / 3.722	Continuing	Continuing
Subtotal: Embedded GPS Inertial Nav System (EGI) P3I B-Kit	38 / 30.718	- / 2.553	- / 0.775	- / 23.264	- / -	- / 23.264	- / 4.140	50 / 19.282	165 / 46.681	280 / 58.847	Continuing	Continuing
Modification Item 5 of 9: Embedded GPS Inertial Nav System (EGI) P3I A-Kit												
A Kits												
Recurring												
GPS Anti Jam Antenna	- / -	- / -	50 / 1.677	53 / 1.821	- / -	53 / 1.821	98 / 2.868	710 / 13.396	638 / 12.379	558 / 11.126	2,449 / 0.000	4,556 / 43.267
Systems Engineering / Program Management	- / -	- / -	- / 0.865	- / 0.887	- / -	- / 0.887	- / 0.915	- / 0.923	- / 0.942	- / 0.968	Continuing	Continuing
Subtotal: Recurring	- / -	- / -	50 / 2.542	53 / 2.708	- / -	53 / 2.708	98 / 3.783	710 / 14.319	638 / 13.321	558 / 12.094	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10					P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance					Modification Number / Title: AA0723 / Communications, Navigation, and Surveillance			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: UH/HH-60A/L, UH/HH/MH-60M, CH-47D, CH/MH-47F, AH-64D/E, LUH, UAS					Modification Type: New or Improved Operational Capability				Related RDT&E PEs:				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Non-Recurring													
Aircraft Integration	- / -	- / -	- / 8.607	- / 28.238	- / -	- / 28.238	- / 11.895	- / -	- / -	- / -	Continuing	Continuing	
Systems Test & Evaluation	- / -	- / -	- / -	- / 14.012	- / -	- / 14.012	- / 17.306	- / 14.107	- / -	- / -	Continuing	Continuing	
Subtotal: Non-Recurring	- / -	- / -	- / 8.607	- / 32.250	- / -	- / 32.250	- / 19.201	- / 14.107	- / -	- / -	Continuing	Continuing	
<i>Subtotal: Embedded GPS Inertial Nav System (EGI) P31 A-Kit</i>	- / -	- / -	50 / 11.149	53 / 34.958	- / -	53 / 34.958	98 / 22.984	710 / 18.426	638 / 13.321	558 / 12.094	Continuing	Continuing	
Modification Item 6 of 9: Aviation Tactical Comm Systems (ATCS) - Alt Comms													
A Kits													
Recurring													
Kit Quantity-A-Kit	303 / 9.600	100 / 2.990	84 / 2.514	12 / 0.366	- / -	12 / 0.366	- / -	- / -	- / -	- / -	- / 0.000	499 / 15.470	
Systems Engineering / Program Management	- / 31.834	- / 3.164	- / 17.241	- / 17.828	- / -	- / 17.828	- / -	- / -	- / -	- / -	- / 0.000	- / 50.067	
System Test & Evaluation	- / 10.107	- / -	- / 3.609	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 13.716	
Training / Data / Support Equipment	- / 0.230	- / -	- / 0.046	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.276	
Fielding	- / 12.741	- / 0.527	- / 0.550	- / 0.562	- / -	- / 0.562	- / -	- / -	- / -	- / -	- / 0.000	- / 14.380	
Subtotal: Recurring	303 / 64.512	100 / 6.681	84 / 13.960	12 / 8.756	- / -	12 / 8.756	- / -	- / -	- / -	- / -	- / -	499 / 93.909	
Non-Recurring													
Aircraft Integration	- / 94.109	- / 3.262	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 97.371	
Subtotal: Non-Recurring	- / 94.109	- / 3.262	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 97.371	
B Kits													
Recurring													
Kit Quantity-B-Kit (ARC-231)	823 / 116.600	120 / 19.432	309 / 39.634	166 / 27.918	- / -	166 / 27.918	- / -	- / -	- / -	- / -	- / 0.000	1,418 / 203.584	
Kit Quantity-B-Kit (ARC201D)	1,309 / 34.456	- / -	162 / 6.813	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	1,471 / 41.269	
Subtotal: Recurring	2,132 / 151.056	120 / 19.432	471 / 46.447	166 / 27.918	- / -	166 / 27.918	- / -	- / -	- / -	- / -	- / -	2,889 / 244.853	
<i>Subtotal: Aviation Tactical Comm Systems (ATCS) - Alt Comms</i>	<i>2,435 / 309.677</i>	<i>220 / 29.375</i>	<i>555 / 60.407</i>	<i>178 / 36.674</i>	<i>- / -</i>	<i>178 / 36.674</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>3,388 / 436.133</i>	
Modification Item 7 of 9: Aviation Tactical Comm Systems (ATCS) - MARS													
A Kits													
Recurring													
Kit Quantity A-Kit	- / -	- / -	- / -	- / -	- / -	- / -	29 / 1.548	39 / 2.125	39 / 2.172	71 / 0.898	2,186 / 0.000	2,364 / 6.743	

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Exhibit P-3a, Individual Modification: PB 2019 Army											Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance							Modification Number / Title: AA0723 / Communications, Navigation, and Surveillance			
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:						
Models of Systems Affected: UH/HH-60A/L, UH/HH/MH-60M, CH-47D, CH/MH-47F, AH-64D/E, LUH, UAS				Modification Type: New or Improved Operational Capability				Related RDT&E PEs:						
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total		
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)		
Systems Engineering / Program Management	- / -	- / -	- / -	- / 13.667	- / -	- / 13.667	- / 17.194	- / 17.572	- / 18.315	- / 19.160	Continuing	Continuing		
System Test & Evaluation	- / 0.687	- / 1.652	- / -	- / 1.613	- / -	- / 1.613	- / 2.586	- / 3.118	- / 3.180	- / 3.844	Continuing	Continuing		
Subtotal: Recurring	- / 0.687	- / 1.652	- / -	- / 15.280	- / -	- / 15.280	29 / 11.328	39 / 12.815	39 / 13.667	71 / 13.902	Continuing	Continuing		
Non-Recurring														
Aircraft Integration	- / -	- / -	- / 13.412	- / 14.701	- / -	- / 14.701	- / 10.477	- / 25.218	- / 11.961	- / 9.475	Continuing	Continuing		
Subtotal: Non-Recurring	- / -	- / -	- / 13.412	- / 14.701	- / -	- / 14.701	- / 10.477	- / 25.218	- / 11.961	- / 9.475	Continuing	Continuing		
B Kits														
Recurring														
Kit Quantity B-Kit (ARC 231)	- / -	- / -	30 / 6.640	- / -	- / -	- / -	273 / 53.868	170 / 37.901	262 / 55.410	209 / 55.506	Continuing	Continuing		
Fielding	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.655	- / 2.857	- / 4.638	- / 11.098	Continuing	Continuing		
Subtotal: Recurring	- / -	- / -	30 / 6.640	- / -	- / -	- / -	273 / 58.523	170 / 40.758	262 / 60.048	209 / 66.604	Continuing	Continuing		
Non-Recurring														
ECP - Non-Recurring	- / -	- / -	- / 31.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 31.000		
Subtotal: Non-Recurring	- / -	- / -	- / 31.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 31.000		
Subtotal: Aviation Tactical Comm Systems (ATCS) - MARS	- / 0.687	- / 1.652	30 / 51.052	- / 19.981	- / -	- / 19.981	302 / 80.328	209 / 78.791	301 / 85.676	280 / 89.981	Continuing	Continuing		
Modification Item 8 of 9: Airborne Maritime Fixed (AMF-A) Radio Integration														
A Kits														
Recurring														
Kit Quantity - A-Kit - Production Line	48 / 3.996	100 / 9.470	24 / 1.431	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	172 / 14.897		
Kit Quantity - A-Kit - MWO	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2,551 / 0.000	2,551 / 0.000		
Support Equipment	- / 1.293	- / 0.737	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing		
System Test and Evaluation	- / 1.910	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing		
System Eng/Prog Mgmt (SEPM)	- / 6.379	- / 1.446	- / 2.818	- / 1.418	- / -	- / 1.418	- / 2.077	- / 2.059	- / 4.015	- / 3.247	Continuing	Continuing		
Subtotal: Recurring	48 / 13.578	100 / 11.653	24 / 4.249	- / 1.418	- / -	- / 1.418	- / 2.077	- / 2.059	- / 4.015	- / 3.247	Continuing	Continuing		
Non-Recurring														
NRE Aircraft Integration	- / 18.594	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.506	- / 1.331	- / 0.000	- / 20.431		
Subtotal: Non-Recurring	- / 18.594	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.506	- / 1.331	- / -	- / 20.431		
Subtotal: Airborne Maritime Fixed (AMF-A) Radio Integration	48 / 32.172	100 / 11.653	24 / 4.249	- / 1.418	- / -	- / 1.418	- / 2.077	- / 2.059	- / 4.521	- / 4.578	Continuing	Continuing		

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Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance	Modification Number / Title: AA0723 / Communications, Navigation, and Surveillance

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
Models of Systems Affected: UH/HH-60A/L, UH/HH/MH-60M, CH-47D, CH/MH-47F, AH-64D/E, LUH, UAS	Modification Type: New or Improved Operational Capability
Related RDT&E PEs:	

Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Modification Item 9 of 9: Blue Force Tracking-Aviation (BFT-A)												
A Kits												
Recurring												
BFT-A A-Kits (MWO)	1,219 / 16.329	- / -	228 / 5.329	227 / 4.696	- / -	227 / 4.696	280 / 6.237	242 / 5.257	85 / 1.590	72 / 1.374	44 / 0.000	2,397 / 40.812
BFT-A A Kit Spares	- / -	- / -	6 / 0.129	6 / 0.118	- / -	6 / 0.118	3 / 0.064	3 / 0.065	1 / 0.019	1 / 0.019	- / 0.000	20 / 0.414
Test / Engineering	- / 6.985	- / 0.226	- / 0.402	- / -	- / -	- / -	- / 0.125	- / -	- / 0.128	- / -	Continuing	Continuing
Fielding / Training	- / 2.946	- / 1.224	- / 1.153	- / 0.410	- / -	- / 0.410	- / 0.420	- / 0.709	- / 0.503	- / 0.336	Continuing	Continuing
SEPM	- / 13.510	- / 7.764	- / 6.004	- / 5.834	- / -	- / 5.834	- / 5.696	- / 6.041	- / 6.162	- / 3.737	Continuing	Continuing
Other Procurement	- / 5.054	- / 0.223	- / 0.152	- / 1.435	- / -	- / 1.435	- / 0.130	- / 0.187	- / 0.135	- / 0.071	Continuing	Continuing
Subtotal: Recurring	1,219 / 44.824	- / 9.437	234 / 13.169	233 / 12.493	- / -	233 / 12.493	283 / 12.672	245 / 12.259	86 / 8.537	73 / 5.537	Continuing	Continuing
Non-Recurring												
NRE-Test / Engineering	- / 5.749	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
Subtotal: Non-Recurring	- / 5.749	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
Subtotal: Blue Force Tracking-Aviation (BFT-A)	1,219 / 50.573	- / 9.437	234 / 13.169	233 / 12.493	- / -	233 / 12.493	283 / 12.672	245 / 12.259	86 / 8.537	73 / 5.537	Continuing	Continuing
Subtotal: Procurement, All Modification Items	3,786 / 455.533	320 / 65.800	943 / 156.577	668 / 147.236	- / -	668 / 147.236	757 / 129.648	1,338 / 140.484	1,620 / 177.733	1,284 / 174.683	Continuing	Continuing

Installation												
Modification Item 1 of 9: DGNS (AN/ASN-128D) P3I	46 / 0.296	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 0.296
Modification Item 2 of 9: DGNS (AN/ASN-128D) CDU/ SW Upgrade ECP B-Kit	- / -	- / -	- / -	50 / 0.112	- / -	50 / 0.112	154 / 0.354	45 / 0.114	62 / 0.160	90 / 0.237	359 / 0.000	760 / 0.977
Modification Item 3 of 9: DGNS (AN/ASN-128D) CDU/ SW Upgrade ECP A-Kit	- / -	- / -	- / -	- / -	- / -	- / -	50 / 0.258	29 / 0.149	62 / 0.320	340 / 1.791	279 / 0.000	760 / 2.518
Modification Item 4 of 9: Embedded GPS Inertial Nav System (EGI) P3I B-Kit	- / -	38 / 0.447	- / -	- / -	- / -	- / -	- / -	- / -	50 / 0.101	165 / 0.363	3,743 / 0.000	3,996 / 0.911
Modification Item 5 of 9: Embedded GPS Inertial Nav System (EGI) P3I A-Kit	- / -	- / -	- / -	50 / 0.000	- / -	50 / 0.000	53 / 0.272	98 / 0.506	710 / 3.692	638 / 3.323	3,007 / 0.000	4,556 / 7.793
Modification Item 6 of 9: Aviation Tactical Comm Systems (ATCS) - Alt Comms	227 / 9.119	76 / 5.093	76 / 5.701	108 / 7.228	- / -	108 / 7.228	12 / 0.776	- / -	- / -	- / -	- / -	499 / 27.917
Modification Item 7 of 9: Aviation Tactical Comm Systems (ATCS) - MARS	- / -	- / -	- / -	- / -	- / -	- / -	- / -	29 / 2.151	39 / 2.682	39 / 2.820	2,257 / 0.000	2,364 / 7.653
Modification Item 8 of 9: Airborne Maritime Fixed (AMF-A) Radio Integration	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2,551 / 0.000	2,551 / 0.000

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance	Modification Number / Title: AA0723 / Communications, Navigation, and Surveillance

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Models of Systems Affected: UH/HH-60A/L, UH/HH/MH-60M, CH-47D, CH/MH-47F, AH-64D/E, LUH, UAS	Modification Type: New or Improved Operational Capability	Related RDT&E PEs:
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Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Modification Item 9 of 9: Blue Force Tracking-Aviation (BFT-A)	709 / 17.243	225 / 5.620	346 / 8.061	358 / 7.393	- / -	358 / 7.393	267 / 5.664	322 / 8.152	205 / 4.402	85 / 2.042	116 / 0.000	2,633 / 58.577
<i>Subtotal: Installation</i>	<i>982 / 26.658</i>	<i>339 / 11.160</i>	<i>422 / 13.762</i>	<i>566 / 14.733</i>	<i>0 / 0.000</i>	<i>566 / 14.733</i>	<i>536 / 7.324</i>	<i>523 / 11.072</i>	<i>1,128 / 11.357</i>	<i>1,357 / 10.576</i>	<i>12,312 / 0.000</i>	<i>18,165 / 106.642</i>
Total												
Total Cost (Procurement + Support + Installation)	482.191	76.960	170.339	161.969	-	161.969	136.972	151.556	189.090	185.259	Continuing	Continuing

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance	Modification Number / Title: AA0723 / Communications, Navigation, and Surveillance

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 9: DGNS (AN/ASN-128D) P3I

Manufacturer Information

Manufacturer Name: BAE International Incorporated	Manufacturer Location: Wayne, NJ
Administrative Leadtime (in Months):	Production Leadtime (in Months):

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Prototype Assets

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	46 / 0.296	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 0.296
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	46 / 0.296	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	46 / 0.296

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46
Out	46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance	Modification Number / Title: AA0723 / Communications, Navigation, and Surveillance

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 2 of 9: DGNS (AN/ASN-128D) CDU/SW Upgrade ECP B-Kit

Manufacturer Information

Manufacturer Name: BAE International Incorporated	Manufacturer Location: Wayne, NJ
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 12

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates		Dec 2017	Dec 2018	Dec 2019	Dec 2020	Dec 2021	
Delivery Dates		Nov 2018	Nov 2019	Nov 2020	Nov 2021	Nov 2022	

Installation Information

Method of Implementation: Modification Work Order (MWO)

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	50 / 0.112	- / -	50 / 0.112	- / -	- / -	- / -	- / -	- / -	50 / 0.112
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	154 / 0.354	- / -	- / -	- / -	- / -	154 / 0.354
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	45 / 0.114	- / -	- / -	- / -	45 / 0.114
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	62 / 0.160	- / -	- / -	62 / 0.160
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	90 / 0.237	- / -	90 / 0.237
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	359 / 0.000	359 / 0.000
Total	0 / 0.000	0 / 0.000	0 / 0.000	50 / 0.112	0 / 0.000	50 / 0.112	154 / 0.354	45 / 0.114	62 / 0.160	90 / 0.237	359 / 0.000	760 / 0.977

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	15	15	10	10	39	39	38	38	11	11	11	12	16	16	15	15	22	22	23	23	359	760
Out	-	-	-	-	-	-	-	-	-	-	15	15	10	10	39	39	38	38	11	11	11	12	16	16	15	15	22	22	23	382	760

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance	Modification Number / Title: AA0723 / Communications, Navigation, and Surveillance

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 3 of 9: DGNS (AN/ASN-128D) CDU/SW Upgrade ECP A-Kit

Manufacturer Information

Manufacturer Name: Mayflower	Manufacturer Location: Boston, MA
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 12

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates			Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022
Delivery Dates			Nov 2019	Nov 2020	Nov 2021	Nov 2022	Nov 2023

Installation Information

Method of Implementation: MWO

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	50 / 0.258	- / -	- / -	- / -	- / -	50 / 0.258
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	29 / 0.149	- / -	- / -	- / -	29 / 0.149
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	62 / 0.320	- / -	- / -	62 / 0.320
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	340 / 1.791	- / -	340 / 1.791
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	93 / 0.000	93 / 0.000
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	186 / 0.000	186 / 0.000
Total	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	50 / 0.258	29 / 0.149	62 / 0.320	340 / 1.791	279 / 0.000	760 / 2.518

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	13	13	12	12	7	7	7	8	15	15	16	16	85	85	85	85	279	760
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	13	12	12	7	7	7	8	15	15	16	16	85	85	85	364	760

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance	Modification Number / Title: AA0723 / Communications, Navigation, and Surveillance

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 4 of 9: Embedded GPS Inertial Nav System (EGI) P3I B-Kit

Manufacturer Information

Manufacturer Name: Honeywell, Incorporated	Manufacturer Location: Clearwater, FL
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 12

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates					Dec 2020	Dec 2021	Dec 2022
Delivery Dates					Nov 2021	Nov 2022	Nov 2023

Installation Information

Method of Implementation: MWO

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	38 / 0.447	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	38 / 0.447
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	50 / 0.101	- / -	- / -	50 / 0.101
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	165 / 0.363	- / -	165 / 0.363
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	280 / 0.000	280 / 0.000
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	3,463 / 0.000	3,463 / 0.000
Total	0 / 0.000	38 / 0.447	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	50 / 0.101	165 / 0.363	3,743 / 0.000	3,996 / 0.911

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	9	9	10	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	13	12	12	41	41	41	42	3,743	3,996
Out	-	-	9	9	10	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	13	12	12	41	41	41	3,785	3,996

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance	Modification Number / Title: AA0723 / Communications, Navigation, and Surveillance

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 5 of 9: Embedded GPS Inertial Nav System (EGI) P3I A-Kit

Manufacturer Information

Manufacturer Name: Mayflower Communications	Manufacturer Location: Boston, MA
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 12

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates		Dec 2017	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022
Delivery Dates		Nov 2018	Nov 2019	Nov 2020	Nov 2021	Nov 2022	Nov 2023

Installation Information

Method of Implementation: MWO Installation

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	50 / 0.000	- / -	50 / 0.000	- / -	- / -	- / -	- / -	- / -	50 / 0.000
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	53 / 0.272	- / -	- / -	- / -	- / -	53 / 0.272
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	98 / 0.506	- / -	- / -	- / -	98 / 0.506
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	710 / 3.692	- / -	- / -	710 / 3.692
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	638 / 3.323	- / -	638 / 3.323
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	558 / 0.000	558 / 0.000
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	2,449 / 0.000	2,449 / 0.000
Total	0 / 0.000	0 / 0.000	0 / 0.000	50 / 0.000	0 / 0.000	50 / 0.000	53 / 0.272	98 / 0.506	710 / 3.692	638 / 3.323	3,007 / 0.000	4,556 / 7.793

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	12	12	13	13	13	13	13	14	25	25	24	24	177	177	178	178	159	159	160	160	3,007	4,556
Out	-	-	-	-	-	-	-	-	-	-	12	12	13	13	13	13	13	14	25	25	24	24	177	177	178	178	159	159	160	3,167	4,556

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance	Modification Number / Title: AA0723 / Communications, Navigation, and Surveillance

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 6 of 9: Aviation Tactical Comm Systems (ATCS) - Alt Comms

Manufacturer Information

Manufacturer Name: Various	Manufacturer Location: Various
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 10

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates	Dec 2016	Dec 2017	Dec 2018				
Delivery Dates	Sep 2017	Sep 2018	Sep 2019				

Installation Information

Method of Implementation: Modification Work Order (MWO)

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	227 / 9.119	76 / 5.093	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	303 / 14.212
FY 2017	- / -	- / -	76 / 5.701	24 / 1.900	- / -	24 / 1.900	- / -	- / -	- / -	- / -	- / -	100 / 7.601
FY 2018	- / -	- / -	- / -	84 / 5.328	- / -	84 / 5.328	- / -	- / -	- / -	- / -	- / -	84 / 5.328
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.776	- / -	- / -	- / -	- / -	12 / 0.776
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	227 / 9.119	76 / 5.093	76 / 5.701	108 / 7.228	0 / 0.000	108 / 7.228	12 / 0.776	- / -	- / -	- / -	- / -	499 / 27.917

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot				
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4						
In	227	19	19	19	19	19	19	19	19	26	27	27	28	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	217	10	19	19	19	19	19	19	19	19	26	27	27	28	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance	Modification Number / Title: AA0723 / Communications, Navigation, and Surveillance

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 7 of 9: Aviation Tactical Comm Systems (ATCS) - MARS

Manufacturer Information

Manufacturer Name: Raytheon	Manufacturer Location: Ft. Wayne IN
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 12

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates				Dec 2019	Dec 2020	Dec 2021	Dec 2022
Delivery Dates				Nov 2020	Nov 2021	Nov 2022	Nov 2023

Installation Information

Method of Implementation: Production Line / MWO

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	29 / 2.151	- / -	- / -	- / -	29 / 2.151
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	39 / 2.682	- / -	- / -	39 / 2.682
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	39 / 2.820	- / -	39 / 2.820
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	71 / 0.000	71 / 0.000
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	2,186 / 0.000	2,186 / 0.000
Total	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	29 / 2.151	39 / 2.682	39 / 2.820	2,257 / 0.000	2,364 / 7.653

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	7	7	8	9	10	10	10	9	10	10	10	2,257	2,364
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	7	7	8	9	10	10	10	9	10	10	2,267	2,364

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance	Modification Number / Title: AA0723 / Communications, Navigation, and Surveillance

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 8 of 9: Airborne Maritime Fixed (AMF-A) Radio Integration

Manufacturer Information

Manufacturer Name: Textron Systems	Manufacturer Location: Hunt Valley, MD
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 6

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							Dec 2022
Delivery Dates							May 2023

Installation Information

Method of Implementation: Modification Work Order (MWO) - Contractor

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	2,551 / 0.000	2,551 / 0.000
Total	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	2,551 / 0.000	2,551 / 0.000

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,551	2,551
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,551	2,551

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance	Modification Number / Title: AA0723 / Communications, Navigation, and Surveillance

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 9 of 9: Blue Force Tracking-Aviation (BFT-A)

Manufacturer Information

Manufacturer Name: Various	Manufacturer Location: Various
Administrative Leadtime (in Months): 8	Production Leadtime (in Months): 10

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates	Jun 2017	Jun 2018	Jun 2019	Jun 2020	Jun 2021	Jun 2022	Jun 2023
Delivery Dates	Mar 2018	Mar 2019	Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024

Installation Information

Method of Implementation: Modification Work Order (MWO) - Contractor

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	709 / 17.243	225 / 5.620	110 / 2.638	175 / 3.614	- / -	175 / 3.614	- / -	- / -	- / -	- / -	- / -	1,219 / 29.115
FY 2017	- / -	- / -	236 / 5.423	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	236 / 5.423
FY 2018	- / -	- / -	- / -	183 / 3.779	- / -	183 / 3.779	45 / 0.955	- / -	- / -	- / -	- / -	228 / 4.734
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	222 / 4.709	5 / 0.127	- / -	- / -	- / -	227 / 4.836
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	280 / 7.088	- / -	- / -	- / -	280 / 7.088
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	37 / 0.937	205 / 4.402	- / -	- / -	242 / 5.339
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	85 / 2.042	- / -	85 / 2.042
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	72 / 0.000	72 / 0.000
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	44 / 0.000	44 / 0.000
Total	709 / 17.243	225 / 5.620	346 / 8.061	358 / 7.393	0 / 0.000	358 / 7.393	267 / 5.664	322 / 8.152	205 / 4.402	85 / 2.042	116 / 0.000	2,633 / 58.577

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	709	56	56	56	57	87	87	86	86	89	89	90	90	66	67	67	67	80	80	81	81	51	51	51	52	21	21	21	22	116	2,633
Out	653	56	56	56	56	57	87	87	86	86	89	89	90	90	66	67	67	67	80	80	81	81	51	51	51	53	21	21	21	137	2,633

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 8859AA0711 / GATM Rollup
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	625.116	45.302	37.403	26.848	-	26.848	41.433	35.306	16.336	15.795	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	625.116	45.302	37.403	26.848	-	26.848	41.433	35.306	16.336	15.795	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	625.116	45.302	37.403	26.848	-	26.848	41.433	35.306	16.336	15.795	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	1,566.707	54.713	95.173	84.694	-	84.694	410.228	464.553	104.718	239.318	Continuing	Continuing

Description:

This budget line supports procurement of Global Air Traffic Management equipment for both Fixed Wing and Rotary Wing aircraft.

Global Air Traffic Management (GATM) is the military equivalent of the International Civil Aviation architecture known as Communications, Navigation and Surveillance and air traffic management programs. GATM is a Department of Defense term that describes the equipment, training, and procedures mandated by Civilian Air Traffic Control authorities in order to operate within 21st century airspace. Most ground based navigation aids will be phased out of service as the world transitions to a modernized air traffic management system. The modernization is designed to meet the current and future service demands posed by aviation growth. The advanced architecture will provide improved safety, accessibility, flexibility, predictability, reliability, capacity, efficiency, and security. Military aircraft will face significant flight restrictions if not GATM equipped.

GATM fixed wing requirements cannot be met with a single piece of avionics equipment. Meeting worldwide GATM fixed wing requirements will entail complete modifications that may include portions of military modifications and the upgrading of some existing avionics and displays and the procurement of new systems for the fixed wing fleet to include Engineer, Furnish and Install as a complete contractual effort. It also leverages Federal Aviation Administration Supplemental Type Certificates (STC) that are already in existence and applies STCs to aircraft modifications. These modifications ensure continued worldwide deployment capability and safe operations.

Meeting worldwide GATM requirements for rotary wing and Unmanned Aircraft System (UAS) fleets will entail the upgrading of some existing avionics and the procurement of new systems. Included in the GATM program is the European mandated 8.33 kHz channel spacing requirement which is being met by the Alt Comms and Multi-Mode Aviation Radio Set programs, the Mode S requirement which is being met by the Common Transponder Program (CXP) (formerly APX-118, APX-123/123A, and Automatic Dependent Surveillance-Broadcast (ADS-B) programs), the ADS-B Out requirement which is being met through a series of upgrades to CXP components, Embedded GPS Inertial (EGI) Navigation Systems, and aircraft Flight Management Systems. Also included in the GATM program is the requirement to provide a GPS Primary Means Instrument Flight Rules navigation in civil and military controlled airspace.

This exhibit is for a budget line that procures multiple items and does not have a single Army Acquisition Objective.

Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	-	-	-	-	-	-	-	-	-
Quantity	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 8859AA0711 / GATM Rollup
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
ANG	Total Obligation Authority	19.881	20.572	14.660	-	14.660	22.623	19.277	8.920	8.622
	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	22.596	14.961	10.834	-	10.834	16.722	14.248	6.592	6.376
AR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	2.825	1.870	1.354	-	1.354	2.088	1.781	0.824	0.797
Total:	Quantity	-	-	-	-	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	45.302	37.403	26.848	-	26.848	41.433	35.306	16.336	15.795

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity:
2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft

P-1 Line Item Number / Title:
8859AA0711 / GATM Rollup

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	AA0704 / GATM Rotary Wing Aircraft (New or Improved Operational Capability)				- / 625.116	- / 45.302	- / 37.403	- / 26.848	- / -	- / 26.848
P-40	Total Gross/Weapon System Cost				- / 625.116	- / 45.302	- / 37.403	- / 26.848	- / -	- / 26.848

Exhibits Schedule					FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	AA0704 / GATM Rotary Wing Aircraft (New or Improved Operational Capability)				- / 41.433	- / 35.306	- / 16.336	- / 15.795	Continuing	Continuing
P-40	Total Gross/Weapon System Cost				- / 41.433	- / 35.306	- / 16.336	- / 15.795	Continuing	Continuing

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY 2019 Base Procurement dollars in the amount of \$2.940 million supports the installation of APX-123/123A B Kits.

 FY 2019 Base Procurement dollars in the amount of \$12.027 million supports procurement and installation of EGI Navigational System B-Kits and associated aircraft integration costs to meet GATM requirements.

 FY 2019 Base Procurement dollars in the amount of \$11.881 million supports CXP B-Kit procurements of the APX-123A. The funding also provides for conversion kit procurements and the continued upgrades to the APX-118 to APX-123 and conversions to APX-123 to APX-123A.

 In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

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Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8859AA0711 / GATM Rollup	Modification Number / Title: AA0704 / GATM Rotary Wing Aircraft

ID Code (A=Service Ready, B=Not Service Ready) :						MDAP/MAIS Code:						
Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	625.116	45.302	37.403	26.848	-	26.848	41.433	35.306	16.336	15.795	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	625.116	45.302	37.403	26.848	-	26.848	41.433	35.306	16.336	15.795	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	625.116	45.302	37.403	26.848	-	26.848	41.433	35.306	16.336	15.795	Continuing	Continuing
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	1,566.707	54.713	95.173	84.694	-	84.694	410.228	464.553	104.718	239.318	Continuing	Continuing

Description:

Global Air Traffic Management (GATM) is the military equivalent of the International Civil Aviation architecture known as Communications, Navigation, Surveillance, and Air Traffic Management programs. GATM is a Department of Defense (DoD) term that describes the equipment, training, and procedures mandated by Civilian Air Traffic Control (ATC) authorities in order to operate within 21st century airspace. Most ground based navigation aids will be phased out of service as the world transitions to a modernized air traffic management system. The modernization is designed to meet the current and future service demands posed by aviation growth. The advanced architecture will provide improved safety, accessibility, flexibility, predictability, reliability, capacity, efficiency, and security. Military aircraft will face significant flight restrictions if not GATM equipped. GATM requirements are driven by civil aviation authorities and are not under DoD control. Meeting the worldwide GATM requirement will entail the upgrading of some existing avionics and the procurement of new systems for rotary wing and Unmanned Aircraft System (UAS) fleets. Included in the GATM program is the European mandated 8.33 kHz channel spacing requirement which is being met by the Alt Comms and Multi-Mode Aviation Radio Set programs, the Mode S requirement which is being met by the Common Transponder Program (formerly APX-118, APX-123/123A, and ADS-B programs), the ADS-B Out requirement which is being met through a series of upgrades to CXP components, Embedded GPS Inertial (EGI) Navigation Systems, and aircraft Flight Management Systems. Also included in the GATM program is the requirement to provide a GPS Primary Means Instrument Flight Rules navigation in civil and military controlled airspace.

GATM provides Army aircraft improved capabilities to allow them to continue to operate in civil controlled airspace without threat of exclusion. Identification Friend or Foe (IFF) Mode 5 provides enhanced security and greatly improved performance over Mode 4. It also improves compatibility with civil ATC by providing less interference. The Full Operational Capability for Mode 5 is 2020. Europe currently mandates Mode S and plans expansion of 8.33 kHz Very High Frequency - Amplitude Modulation (VHF-AM) in controlled airspace to ground level in high volume traffic areas. Army aircraft will not be allowed to transit through or operate in European airspace affected by these mandates unless the necessary Mode S, 8.33 kHz, and ADS-B Out upgrades are made. Army aircraft will also be excluded from flying in FAA controlled airspace without the ADS-B Out upgrades. Benefits of GATM include direct routing through civil airspace resulting in significant savings in both time and training costs associated with flight hours. It allows for operations in worldwide civil controlled airspace and improves safety and operational efficiency while meeting the new worldwide frequency spectrum requirements.

This exhibit is for a budget line that procures multiple items and does not have a single Army Acquisition Objective.

FY 2019 Base Procurement dollars in the amount of \$2.940 million supports the installation of APX-123/123A B Kits.

FY 2019 Base Procurement dollars in the amount of \$12.027 million supports procurement and installation of EGI Navigational System B-Kits and associated aircraft integration costs to meet GATM requirements.

FY 2019 Base Procurement dollars in the amount of \$11.881 million supports CXP B-Kit procurements of the APX-123A. The funding also provides for conversion kit procurements and the continued upgrades to the APX-118 to APX-123 and conversions to APX-123 to APX-123A.

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Exhibit P-3a, Individual Modification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8859AA0711 / GATM Rollup	Modification Number / Title: AA0704 / GATM Rotary Wing Aircraft
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	19.881	20.572	14.660	-	14.660	22.623	19.277	8.920	8.622
ANG									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	22.596	14.961	10.834	-	10.834	16.722	14.248	6.592	6.376
AR									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	2.825	1.870	1.354	-	1.354	2.088	1.781	0.824	0.797
Total: Secondary Distribution									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	45.302	37.403	26.848	-	26.848	41.433	35.306	16.336	15.795

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Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10					P-1 Line Item Number / Title: 8859AA0711 / GATM Rollup					Modification Number / Title: AA0704 / GATM Rotary Wing Aircraft			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: UH&HH60A/L, CH47D/F, UH60M, MH47G, MH60M, A/MH6, AH64A/D/E, UAS					Modification Type: New or Improved Operational Capability				Related RDT&E PEs:				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Procurement													
Modification Item 1 of 6: Global Air Traffic Mgmt RW APX-123													
A Kits													
Recurring													
Kit Quantity - APX-123 A-Kits	680 / 2.531	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	680 / 2.531	
Aircraft Integ/RCUs/KIV77	- / 16.933	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 16.933	
ECP	- / 6.785	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 6.785	
Systems Eng/Prog Mgt (SEPM)	- / 19.551	- / 1.694	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 21.245	
Other PM Admin	- / 7.392	- / 1.045	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 8.437	
Subtotal: Recurring	680 / 53.192	- / 2.739	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	680 / 55.931	
B Kits													
Recurring													
APX-123 B Kit Conversion Kit (MWO)	871 / 6.196	636 / 4.259	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	1,507 / 10.455	
APX-123A B-Kit Production Line	702 / 25.833	119 / 4.700	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	821 / 30.533	
APX-123 B-Kit Conversion Kit Prod Line	113 / 1.144	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	113 / 1.144	
APX-123 B-Kits Production Line	185 / 6.878	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	185 / 6.878	
APX-123 B-Kit (MWO)	60 / 2.231	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	60 / 2.231	
Fielding/Training	- / 13.983	- / 7.019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 21.002	
Subtotal: Recurring	1,931 / 56.265	755 / 15.978	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2,686 / 72.243	
Non-Recurring													
B Kit													
Subtotal: Non-Recurring	- / 23.400	- / 0.296	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 23.696	
Subtotal: Global Air Traffic Mgmt RW APX-123	2,611 / 132.857	755 / 19.013	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	3,366 / 151.870	
Modification Item 2 of 6: Global Air Traffic Mgmt RW APX-118 Upgrade Kits													
A Kits													
Recurring													
Kit Qty- Upgrade A-Kits	972 / 4.076	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	972 / 4.076	
Engineering Change Orders	- / 1.123	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1.123	
System Eng/Prog Mgt (SEPM)	- / 9.205	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 9.205	
Subtotal: Recurring	972 / 14.404	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	972 / 14.404	

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Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10					P-1 Line Item Number / Title: 8859AA0711 / GATM Rollup					Modification Number / Title: AA0704 / GATM Rotary Wing Aircraft				
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:							
Models of Systems Affected: UH&HH60A/L, CH47D/F, UH60M, MH47G, MH60M, A/MH6, AH64A/D/E, UAS					Modification Type: New or Improved Operational Capability				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total		
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)		
B Kits														
Recurring														
APX-123 Upgrade Kit (MWO)	2,375 / 26.666	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	2,375 / 26.666		
Subtotal: Recurring	2,375 / 26.666	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2,375 / 26.666		
Non-Recurring														
B-Kits Nonrecurring	- / 3.520	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 3.520		
Subtotal: Non-Recurring	- / 3.520	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.520		
Subtotal: Global Air Traffic Mgmt RW APX-118 Upgrade Kits	3,347 / 44.590	- / -	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	3,347 / 44.590		
Modification Item 3 of 6: Global Air Traffic Mgmt RW ADS-B														
A Kits														
Recurring														
Kit Qty: ADS-B A-Kits	- / -	828 / 3.513	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	828 / 3.513		
Engineering Change Orders	- / 2.604	- / 1.475	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 4.079		
Data	- / 2.445	- / 1.017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 3.462		
Training Equipment	- / 3.465	- / 0.420	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 3.885		
Fielding	- / 0.625	- / 0.220	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.845		
System Eng/Prog Mgt (SEPM)	- / 6.845	- / 1.042	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 7.887		
System Test & Eval (ST&E)	- / 0.956	- / 0.211	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1.167		
Other- PM Admin	- / 5.000	- / 1.245	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 6.245		
Subtotal: Recurring	- / 21.940	828 / 9.143	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	828 / 31.083		
Non-Recurring														
Non-Recurring Engineering	- / 33.284	- / 1.952	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 35.236		
Subtotal: Non-Recurring	- / 33.284	- / 1.952	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 35.236		
Subtotal: Global Air Traffic Mgmt RW ADS-B	- / 55.224	828 / 11.095	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	828 / 66.319		
Modification Item 4 of 6: Embedded GPS Inertial (EGI) Navigation System ECP														
A Kits														
Recurring														
Training/Data/Support Equipment	- / 1.000	- / 1.070	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing		
Systems Engineering/Program Management	- / 2.000	- / -	- / 4.632	- / 3.491	- / -	- / 3.491	- / 3.581	- / 3.644	- / 1.252	- / 1.456	Continuing	Continuing		

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Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 8859AA0711 / GATM Rollup						Modification Number / Title: AA0704 / GATM Rotary Wing Aircraft			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: UH&HH60A/L, CH47D/F, UH60M, MH47G, MH60M, A/MH6, AH64A/D/E, UAS				Modification Type: New or Improved Operational Capability				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Fielding	- / 1.000	- / -	- / 0.120	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	
Subtotal: Recurring	- / 4.000	- / 1.070	- / 4.752	- / 3.491	- / -	- / 3.491	- / 3.581	- / 3.644	- / 1.252	- / 1.456	Continuing	Continuing	
B Kits													
Recurring													
EGI+	349 / 25.095	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	349 / 25.095	
EGI EAGLE-M Shipsets	- / -	- / -	- / -	35 / 5.099	- / -	35 / 5.099	- / -	22 / 5.609	- / -	- / -	- / 0.000	57 / 10.708	
EGI EAGLE SOA Retrofit Kits	- / -	- / -	89 / 2.910	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	89 / 2.910	
EGI EAGLE SOA Shipsets	- / -	87 / 11.167	43 / 4.054	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	130 / 15.221	
Subtotal: Recurring	349 / 25.095	87 / 11.167	132 / 6.964	35 / 5.099	- / -	35 / 5.099	- / -	22 / 5.609	- / -	- / -	- / -	625 / 53.934	
Non-Recurring													
Systems Testing and Evaluation	- / -	- / -	- / 2.520	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	
Aircraft Integration	- / 23.565	- / 2.096	- / -	- / 13.437	- / -	- / 13.437	- / 22.673	- / 13.470	- / 4.500	- / 5.484	Continuing	Continuing	
Subtotal: Non-Recurring	- / 23.565	- / 2.096	- / 2.520	- / 13.437	- / -	- / 13.437	- / 22.673	- / 13.470	- / 4.500	- / 5.484	Continuing	Continuing	
Subtotal: Embedded GPS Inertial (EGI) Navigation System ECP	349 / 52.660	87 / 14.333	132 / 14.236	35 / 12.027	- / -	35 / 12.027	- / 26.254	22 / 22.723	- / 5.752	- / 6.940	Continuing	Continuing	
Modification Item 5 of 6: Common Transponder (CXP)													
A Kits													
Recurring													
ADS-B A-Kit (Wire Harness)	- / -	- / -	- / 2.366	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 2.366	
System Test and Evaluation	- / -	- / -	- / 0.949	- / 0.523	- / -	- / 0.523	- / 0.320	- / 0.313	- / 0.089	- / 0.020	Continuing	Continuing	
Systems Engineering/Program Management	- / -	- / -	- / 5.220	- / 3.418	- / -	- / 3.418	- / 3.053	- / 3.257	- / 2.326	- / 2.749	Continuing	Continuing	
Fielding/Training	- / -	- / -	- / 2.668	- / 2.065	- / -	- / 2.065	- / 2.141	- / 2.678	- / 1.931	- / 1.794	Continuing	Continuing	
Ancillary Procurements	- / -	- / -	- / 0.063	- / 0.021	- / -	- / 0.021	- / 0.021	- / 0.022	- / 0.022	- / -	Continuing	Continuing	
Subtotal: Recurring	- / -	- / -	- / 11.266	- / 6.027	- / -	- / 6.027	- / 5.535	- / 6.270	- / 4.368	- / 4.563	Continuing	Continuing	
B Kits													
Recurring													
APX-123 B-Kit Conversion Kit - MWO	- / -	- / -	200 / 1.624	201 / 1.835	- / -	201 / 1.835	201 / 1.873	199 / 1.910	199 / 1.937	- / -	- / 0.000	1,000 / 9.179	
APX-123A B-Kit Production Line	- / -	- / -	119 / 4.794	81 / 3.331	- / -	81 / 3.331	81 / 3.397	81 / 3.475	81 / 3.523	66 / 3.590	39 / 0.000	548 / 22.110	
Subtotal: Recurring	- / -	- / -	319 / 6.418	282 / 5.166	- / -	282 / 5.166	282 / 5.270	280 / 5.385	280 / 5.460	66 / 3.590	39 / -	1,548 / 31.289	
Non-Recurring													
ADS-B Out Non-Recurring Integration	- / -	- / -	- / 1.211	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1.211	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 8859AA0711 / GATM Rollup						Modification Number / Title: AA0704 / GATM Rotary Wing Aircraft			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: UH&HH60A/L, CH47D/F, UH60M, MH47G, MH60M, A/MH6, AH64A/D/E, UAS				Modification Type: New or Improved Operational Capability				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
<i>Subtotal: Non-Recurring</i>	- / -	- / -	- / 1.211	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.211	
<i>Subtotal: Common Transponder (CXP)</i>	- / -	- / -	319 / 18.895	282 / 11.193	- / -	282 / 11.193	282 / 10.805	280 / 11.655	280 / 9.828	66 / 8.153	Continuing	Continuing	
Modification Item 6 of 6: Legacy GATM-RW Mods													
A Kits													
Non-Recurring													
Legacy GATM-RW Mods	- / 331.565	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 331.565	
<i>Subtotal: Non-Recurring</i>	- / 331.565	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 331.565	
<i>Subtotal: Legacy GATM-RW Mods</i>	- / 331.565	- / -	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 331.565	
<i>Subtotal: Procurement, All Modification Items</i>	6,307 / 616.896	1,670 / 44.441	451 / 33.131	317 / 23.220	- / -	317 / 23.220	282 / 37.059	302 / 34.378	280 / 15.580	66 / 15.093	Continuing	Continuing	
Installation													
Modification Item 1 of 6: Global Air Traffic Mgmt RW APX-123	60 / 0.060	46 / 0.146	400 / 2.010	425 / 2.940	- / -	425 / 2.940	600 / 3.588	36 / 0.225	- / -	- / -	- / -	1,567 / 8.969	
Modification Item 2 of 6: Global Air Traffic Mgmt RW APX-118 Upgrade Kits	1,753 / 8.160	132 / 0.715	490 / 1.040	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2,375 / 9.915	
Modification Item 3 of 6: Global Air Traffic Mgmt RW ADS-B	- / -	- / -	828 / 1.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	828 / 1.000	
Modification Item 4 of 6: Embedded GPS Inertial (EGI) Navigation System ECP	349 / 0.000	- / -	87 / 0.222	132 / 0.000	- / -	132 / 0.000	35 / 0.089	- / -	22 / 0.057	- / -	- / -	625 / 0.368	
Modification Item 5 of 6: Common Transponder (CXP)	- / -	- / -	- / -	200 / 0.688	- / -	200 / 0.688	201 / 0.697	201 / 0.703	199 / 0.699	199 / 0.702	- / -	1,000 / 3.489	
<i>Subtotal: Installation</i>	2,162 / 8.220	178 / 0.861	1,805 / 4.272	757 / 3.628	0 / 0.000	757 / 3.628	836 / 4.374	237 / 0.928	221 / 0.756	199 / 0.702	- / -	6,395 / 23.741	
Total													
Total Cost (Procurement + Support + Installation)	625.116	45.302	37.403	26.848	-	26.848	41.433	35.306	16.336	15.795	Continuing	Continuing	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8859AA0711 / GATM Rollup	Modification Number / Title: AA0704 / GATM Rotary Wing Aircraft

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 6: Global Air Traffic Mgmt RW APX-123

Manufacturer Information

Manufacturer Name: BAE Systems, Incorporated	Manufacturer Location: Greenlawn, NY
Administrative Leadtime (in Months): 5	Production Leadtime (in Months): 14

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates	Mar 2017						
Delivery Dates	Apr 2018						

Installation Information

Method of Implementation: Modification Work Order (MWO) - Contractor

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	60 / 0.060	46 / 0.146	400 / 2.010	425 / 2.940	- / -	425 / 2.940	- / -	- / -	- / -	- / -	- / -	931 / 5.156
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	600 / 3.588	36 / 0.225	- / -	- / -	- / -	636 / 3.813
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	0 / 0.000	- / -	- / -
Total	60 / 0.060	46 / 0.146	400 / 2.010	425 / 2.940	0 / 0.000	425 / 2.940	600 / 3.588	36 / 0.225	- / -	- / -	- / -	1,567 / 8.969

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot				
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4						
In	60	-	-	23	23	100	100	100	100	106	106	106	107	150	150	150	150	9	9	9	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	60	-	-	-	23	23	100	100	100	100	106	106	106	107	150	150	150	150	9	9	9	9	-	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8859AA0711 / GATM Rollup	Modification Number / Title: AA0704 / GATM Rotary Wing Aircraft

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 2 of 6: Global Air Traffic Mgmt RW APX-118 Upgrade Kits

Manufacturer Information

Manufacturer Name: BAE Systems, Incorporated	Manufacturer Location: Greenlawn, NY
Administrative Leadtime (in Months):	Production Leadtime (in Months):

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Modification Work Order (MWO) - Contractor

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	1,753 / 8.160	132 / 0.715	490 / 1.040	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2,375 / 9.915
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	1,753 / 8.160	132 / 0.715	490 / 1.040	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	2,375 / 9.915

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1,753	33	33	33	33	123	123	122	122	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	1,592	161	33	33	33	33	123	123	122	122	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8859AA0711 / GATM Rollup	Modification Number / Title: AA0704 / GATM Rotary Wing Aircraft

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 3 of 6: Global Air Traffic Mgmt RW ADS-B

Manufacturer Information

Manufacturer Name: SSAI	Manufacturer Location: Huntsville, AL
Administrative Leadtime (in Months): 11	Production Leadtime (in Months): 8

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates	Sep 2017						
Delivery Dates	Apr 2018						

Installation Information

Method of Implementation: Modification Work Order (MWO) - Contractor

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	828 / 1.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	828 / 1.000
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 0.000	0 / 0.000	828 / 1.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	828 / 1.000

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	414	414	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	-	-	-	-	-	-	-	-	414	414	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8859AA0711 / GATM Rollup	Modification Number / Title: AA0704 / GATM Rotary Wing Aircraft

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 4 of 6: Embedded GPS Inertial (EGI) Navigation System ECP

Manufacturer Information

Manufacturer Name: Honeywell, Incorporated	Manufacturer Location: Clearwater, FL
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 12

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates	Dec 2016	Dec 2017	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022
Delivery Dates	Nov 2017	Nov 2018	Nov 2019	Nov 2020	Nov 2021	Nov 2022	Nov 2023

Installation Information

Method of Implementation: Modification Work Order (MWO)

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	349 / 0.000	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	349 / 0.000
FY 2017	- / -	- / -	87 / 0.222	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	87 / 0.222
FY 2018	- / -	- / -	- / -	132 / 0.000	- / -	132 / 0.000	- / -	- / -	- / -	- / -	- / -	132 / 0.000
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	35 / 0.089	- / -	- / -	- / -	- / -	35 / 0.089
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	22 / 0.057	- / -	- / -	22 / 0.057
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	349 / 0.000	0 / 0.000	87 / 0.222	132 / 0.000	0 / 0.000	132 / 0.000	35 / 0.089	- / -	22 / 0.057	- / -	- / -	625 / 0.368

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	349	-	-	-	-	22	22	22	21	33	33	33	33	8	9	9	9	-	-	-	-	6	6	5	5	-	-	-	-	-	-
Out	349	-	-	-	-	-	22	22	22	21	33	33	33	33	8	9	9	9	-	-	-	-	6	6	5	5	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8859AA0711 / GATM Rollup	Modification Number / Title: AA0704 / GATM Rotary Wing Aircraft

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 5 of 6: Common Transponder (CXP)

Manufacturer Information

Manufacturer Name: BAE Systems, Incorporated	Manufacturer Location: Greenlawn, NY
Administrative Leadtime (in Months): 5	Production Leadtime (in Months): 16

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates		Mar 2018	Mar 2019	Mar 2020	Mar 2021	Mar 2022	Mar 2023
Delivery Dates		Jun 2019	Jun 2020	Jun 2021	Jun 2022	Jun 2023	Jun 2024

Installation Information

Method of Implementation: TBD

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	200 / 0.688	- / -	200 / 0.688	- / -	- / -	- / -	- / -	- / -	200 / 0.688
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	201 / 0.697	- / -	- / -	- / -	- / -	201 / 0.697
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	201 / 0.703	- / -	- / -	- / -	201 / 0.703
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	199 / 0.699	- / -	- / -	199 / 0.699
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	199 / 0.702	- / -	199 / 0.702
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 0.000	0 / 0.000	0 / 0.000	200 / 0.688	0 / 0.000	200 / 0.688	201 / 0.697	201 / 0.703	199 / 0.699	199 / 0.702	- / -	1,000 / 3.489

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	50	50	50	50	51	50	50	50	51	50	50	50	50	50	50	49	50	50	50	49	-	1,000
Out	-	-	-	-	-	-	-	-	-	-	50	50	50	50	51	50	50	50	51	50	50	50	50	50	50	49	50	50	50	49	1,000

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army						Date: February 2018	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 8859AA0711 / GATM Rollup			Modification Number / Title: AA0704 / GATM Rotary Wing Aircraft	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 6 of 6: Legacy GATM-RW Mods							
Manufacturer Information							
Manufacturer Name: N/A				Manufacturer Location: N/A			
Administrative Leadtime (in Months):				Production Leadtime (in Months):			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							
Installation Information							
Method of Implementation (Organic): N/A					Installation Quantity: 0		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 8660A00713 / Degraded Visual Environment
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	-	-	30.000	-	30.000	-	-	-	-	-	30.000
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	-	-	30.000	-	30.000	-	-	-	-	-	30.000
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	-	-	30.000	-	30.000	-	-	-	-	-	30.000

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	2,500.000	-	2,500.000	-	-	-	-	-	2,500.000

Description:

Funds in this budget line are a New Start Program. The Degraded Visual Environment (DVE) system provides situational awareness to enable hazard avoidance through fixed multi-sensor fused imagery in support of approach, landing, and takeoff for single aircraft operations in brownout conditions. The Army's DVE Directed Requirement calls for DVE system integration onto Army Medical Evacuation and Special Operations helicopters to address an immediate capability gap in DVE brownout environments. The Army Directed Requirement is to develop, integrate, procure, ship, operationally test, and field 40 x DVE systems and initial spares.

The DVE Army Acquisition Objective has not been established yet. The FY19 funding on this budget request is in support of the Quick Reaction Capability Directed Requirement which is to procure 40 DVE Systems.

Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	30.000	-	30.000	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	30.000	-	30.000	-	-	-

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 8660A00713 / Degraded Visual Environment
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	A00713 / Degraded Visual Environment (New or Improved Operational Capability)				- / -	- / -	- / -	- / 30.000	- / -	- / 30.000
P-40	Total Gross/Weapon System Cost				- / -	- / -	- / -	- / 30.000	- / -	- / 30.000

Exhibits Schedule					FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	A00713 / Degraded Visual Environment (New or Improved Operational Capability)				- / -	- / -	- / -	- / -	- / -	- / 30.000
P-40	Total Gross/Weapon System Cost				- / -	- / -	- / -	- / -	- / -	- / 30.000

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY 2019 Base procurement dollars in the amount of \$30.000 million supports the procurement of 12 DVE (12 A Kits and 12 B Kits) systems necessary to train, field and employ the DVE system on Army and Special Operations helicopters. These kits support production line and modification work order (MWO) installations for the HH-60M and MH-60M helicopters.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army	Date: February 2018
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Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8660A00713 / Degraded Visual Environment	Modification Number / Title: A00713 / Degraded Visual Environment
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	-	-	-	30.000	-	30.000	-	-	-	-	-	30.000
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	-	-	-	30.000	-	30.000	-	-	-	-	-	30.000
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	-	-	-	30.000	-	30.000	-	-	-	-	-	30.000

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost <i>(\$ in Thousands)</i>	-	-	-	2,500.000	-	2,500.000	-	-	-	-	-	2,500.000

Description:

Funds in this budget line are a New Start Program. The Degraded Visual Environment (DVE) system provides situational awareness to enable hazard avoidance through fixed multi-sensor fused imagery in support of approach, landing, and takeoff for single aircraft operations in brownout conditions. The Army's DVE Directed Requirement calls for DVE system integration onto Army Medical Evacuation and Special Operations helicopters to address an immediate capability gap in DVE brownout environments. The Army Directed Requirement is to develop, integrate, procure, ship, operationally test, and field 40 x DVE systems and initial spares.

Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	-	-	30.000	-	30.000	-	-	-	-
Total:									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	-	-	30.000	-	30.000	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 8660A00713 / Degraded Visual Environment						Modification Number / Title: A00713 / Degraded Visual Environment			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: HH-60M/MH-60M				Modification Type: New or Improved Operational Capability				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Procurement													
<i>Modification Item 1 of 1:</i> Degraded Visual Environment													
A Kits													
Recurring													
A Kit	- / -	- / -	- / -	- / 13.798	- / -	- / 13.798	- / -	- / -	- / -	- / -	- / 10.000	- / 13.798	
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / 13.798	- / -	- / 13.798	- / -	- / -	- / -	- / -	- / -	- / 13.798	
B Kits													
Recurring													
B Kit	- / -	- / -	- / -	12 / 14.728	- / -	12 / 14.728	- / -	- / -	- / -	- / -	- / 10.000	12 / 14.728	
Systems Engineering	- / -	- / -	- / -	- / 1.142	- / -	- / 1.142	- / -	- / -	- / -	- / -	- / 10.000	- / 1.142	
Fielding/Training/Support Equipment	- / -	- / -	- / -	- / 6.018	- / -	- / 6.018	- / -	- / -	- / -	- / -	- / 10.000	- / 6.018	
Other PM Admin	- / -	- / -	- / -	- / 13.904	- / -	- / 13.904	- / -	- / -	- / -	- / -	- / 10.000	- / 13.904	
Systems Test and Evaluation	- / -	- / -	- / -	- / 10.410	- / -	- / 10.410	- / -	- / -	- / -	- / -	- / 10.000	- / 10.410	
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	12 / 26.202	- / -	12 / 26.202	- / -	- / -	- / -	- / -	- / -	12 / 26.202	
<i>Subtotal: Degraded Visual Environment</i>	- / -	- / -	- / -	12 / 30.000	- / -	12 / 30.000	- / -	- / -	- / -	- / -	- / -	12 / 30.000	
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / -	- / -	12 / 30.000	- / -	12 / 30.000	- / -	- / -	- / -	- / -	- / -	12 / 30.000	
Installation													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
Total													
Total Cost (Procurement + Support + Installation)	-	-	-	30.000	-	30.000	-	-	-	-	-	30.000	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8660A00713 / Degraded Visual Environment	Modification Number / Title: A00713 / Degraded Visual Environment

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 1: Degraded Visual Environment

Manufacturer Information

Manufacturer Name: Sierra Nevada Corporation	Manufacturer Location: Sparks, NV
Administrative Leadtime (in Months): 8	Production Leadtime (in Months): 13

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates			Jun 2019				
Delivery Dates			Jun 2020				

Installation Information

Method of Implementation: Modification Work Order (MWO)

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	0 / 0.000

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Out	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 9555A00018 / RQ-7 UAV MODS
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0305204A, 0305233A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,737.409	135.408	83.160	103.246	50.868	154.114	21.560	14.868	23.789	19.955	-	2,190.263
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,737.409	135.408	83.160	103.246	50.868	154.114	21.560	14.868	23.789	19.955	-	2,190.263
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,737.409	135.408	83.160	103.246	50.868	154.114	21.560	14.868	23.789	19.955	-	2,190.263

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	86,870.450	135,408.000	3,615.652	2,024.431	2,211.652	2,082.622	1,540.000	1,351.636	1,829.923	798.200	-	12,100.901

Description:

The TUAS provides Army Brigade Combat Teams, Aviation Brigades, and Special Operation Groups situational awareness, improved wide-area target acquisition, Laser Designation, and high value target (HVT) tracking to conduct both shaping and decisive operations with greatly increased lethality. The TUAS meets the need for a day/night, multi sensor collection system with improved connectivity to joint forces that provides real time battle information that cannot be observed from standoff airborne sensor systems, ground collection systems, and scouts. The key performance parameters are blocked into RQ-7B (production) thresholds and subsequent upgrade objectives. The RQ-7B system is a Reconnaissance Surveillance Target Acquisition (RSTA), Command, Control, Communications, and Intelligence (C3I) system that supports Brigade, Battalion, and lower level elements. The RQ-7B Shadow has logged over 1,110,000 flight hours in support of Overseas Contingency Operations (OCO).

The TUAS RQ-7B completed production of 104 Army systems in 2011 (FY 2009 Funding) and entered a modifications phase. These modifications are divided into three primary sections: RQ-7B v2, System Modifications, and Payload Modifications. The RQ-7B v2 or Shadow v2 effort incorporates Type 1 Encryption, STANAG 4586 Compliant Software, a Universal Ground Control Station (UGCS), a Universal Ground Data Terminal (UGDT), a STANAG 4586 compliant Portable Ground Control Station, and standardizes modifications introduced during the wars in Iraq and Afghanistan. System Modifications and Payload Modifications consolidate development activities not included in the Shadow v2 modification.

In 2009, the Product Office placed the last of the authorized 104 systems on contract, ending the Production phase of the acquisition. In 2010, the Army G8 established a RQ-7B UAV MODS Aircraft Procurement Exhibit approving several modifications for development and production. These modifications will be incrementally integrated, tested, and fielded in accordance with the technology readiness and funding profile. The major modifications are grouped as follows: (1) v2 Modifications (includes TCDL and Encryption), (2) Payload Modifications, (3) Air Vehicle Modifications, and (4) Ground Support Modifications. The RQ-7B v2 will be compliant with STANAG 4586 and the Joint Interoperability Profiles. To achieve this, the system incorporates the UGCS and UGDT along with an upgraded Air Data Terminal, Airborne Computer, and onboard software.

The RQ-7B v2 Shadow upgrade program complies with the congressionally mandated Tactical Control Data Link (TCDL) and North Atlantic Treaty Organization (NATO) Standardization Agreement 4586 in order to meet requirements in the Operational Requirements Document, provide a secure data link, an enhanced propulsion system, payload improvements, avionics improvements, and ground equipment improvements.

Changed the P-Form Modification structure to comply with MIL-STD-881C, align with the R-Forms, and align with ACAT-I reporting requirements. The OSRVT Modification moved to Modification Line A00121 in 2017.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 9555A00018 / RQ-7 UAV MODS
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0305204A, 0305233A
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Line Item MDAP/MAIS Code: N/A

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	125.408	73.160	99.246	50.868	150.114	19.560	14.868	23.789	19.955
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	10.000	10.000	4.000	-	4.000	2.000	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	135.408	83.160	103.246	50.868	154.114	21.560	14.868	23.789	19.955

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 9555A00018 / RQ-7 UAV MODS
--	--

ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0305204A, 0305233A
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Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	A00018 / RQ-7 UAV MODS (UNCLASSIFIED)				- / 1,737.409	- / 135.408	- / 83.160	- / 103.246	- / 50.868	- / 154.114
P-40	Total Gross/Weapon System Cost				- / 1,737.409	- / 135.408	- / 83.160	- / 103.246	- / 50.868	- / 154.114

Exhibits Schedule					FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	A00018 / RQ-7 UAV MODS (UNCLASSIFIED)				- / 21.560	- / 14.868	- / 23.789	- / 19.955	- / -	- / 2,190.263
P-40	Total Gross/Weapon System Cost				- / 21.560	- / 14.868	- / 23.789	- / 19.955	- / -	- / 2,190.263

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 On 16 Nov 2017 the Army Acquisition Executive (AAE) approved an increase to the Shadow Army Acquisition Objective (AAO) from 104 to 115 Shadow systems.

 FY 2019 Funding of \$103.246 million provides for the procurement and fielding of Shadow system components; 16 Block III Upgrade Kits, 2 Air Vehicles, 11 UGCS, New Equipment Training (NET), and 35 high powered launchers. The Block III Upgrade Kit includes Weatherization, Small Mission Computer, Electro Optical / Infrared / Laser Designator (EO/IR/LD) Universal Interface Assembly, Block III Engine, Communications Relay Installation Kit, and Voice over Internet Protocol (VoIP). Funding also procures Engineering, Logistics, and Fielding Support.

 FY2019 also has OCO Funding of \$50.868 million for 8 Air Vehicles, 4 Universal Ground Control Stations (UGCS), 4 Universal Ground Data Terminals (UGDT), and 4 High Power Launchers.

 In accordance with Section 1815 of the FY2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

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Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 9555A00018 / RQ-7 UAV MODS	Modification Number / Title: A00018 / RQ-7 UAV MODS

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,737.409	135.408	83.160	103.246	50.868	154.114	21.560	14.868	23.789	19.955	-	2,190.263
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,737.409	135.408	83.160	103.246	50.868	154.114	21.560	14.868	23.789	19.955	-	2,190.263
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,737.409	135.408	83.160	103.246	50.868	154.114	21.560	14.868	23.789	19.955	-	2,190.263

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	86,870.450	135,408.000	3,615.652	2,024.431	2,211.652	2,082.622	1,540.000	1,351.636	1,829.923	798.200	-	12,100.901

Description:

Changed the P-Form Modification structure to comply with MIL-STD-881C, align with the R-Forms, and align with ACAT-I reporting requirements. The OSRVT Modification moved to Modification Line A00121 in 2017.

Justification:

FY 2019 Funding of \$103.246 million provides for production and fielding of Shadow hardware procured in prior years. It also funds Block III Upgrade Kits for 16 systems, 2 Block III Air Vehicles, and 35 high powered launchers for the Block III Upgrade Kits. The Block III Upgrade Kit includes Weatherization, Small Mission Computer, Electro Optical / Infrared /Laser Designator (EO/IR/LD) Universal Interface Assembly, Block III Engine, Communications Relay Installation Kit, and Voice over Internet Protocol (VoIP). Funding also procures Engineering, Logistics, and Fielding Support.

Block III Air Vehicle Modifications:

Air Vehicle (AV) Modifications include the procurement of Block III Upgrade Kits, initial spares Block III Kits, and installation of those kits via Shadow aircraft retrofits. Weatherization modifications allow the AV to fly in low visibility conditions and in up to two inches of rain per hour. The SMC is an onboard computer that provides airborne processing power. The SMC addresses obsolescence concerns, features a dual processor, and also contains 50x more processing power than the current computer. The EO/ IR/LD Universal Interface Assembly eliminates reliance on a proprietary payload interface, introducing the capability to support payloads from multiple vendors. The Block III engine improves reliability over the current engine, increases thrust and reduces the noise signature of the Shadow system. The Communication Relay upgrade will enable voice communications to additional users who utilize other waveforms in the VHF and UHF bands. The VoIP upgrade will extend voice communications range from 85 km to 125 km, and will also provide a more reliable means of voice communications.

Ground Support Modifications:

Ground Support Modifications include New Equipment Training (NET) for newly fielded v2 systems, Launchers for Block III upgrade kits, and Government Furnished Equipment (GFE). NET is necessary to introduce new equipment to units that transition from the Shadow V2 to the Shadow V2 Block III system. The Block III upgrade kit requires 1 high powered launcher per unit to support operations at high altitudes. These high powered launchers will replace 1 of the standard launchers which currently reside with the unit. The high powered launchers are hydraulic-pneumatic rail launchers, enabling AV launch in austere tactical locations and at high altitudes with the Block III upgrade kits. GFE is required to procure hardware to support the production of Shadow v2 retrofit kits in production.

Payloads Modifications:

Payload modifications include program management, engineering, and logistics support to develop a competitive contract to select, integrate, and procure improved Shadow EO/IR/LD payloads.

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Exhibit P-3a, Individual Modification: PB 2019 Army	Date: February 2018
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Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 9555A00018 / RQ-7 UAV MODS	Modification Number / Title: A00018 / RQ-7 UAV MODS
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	125.408	73.160	99.246	50.868	150.114	19.560	14.868	23.789	19.955
ANG									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	10.000	10.000	4.000	-	4.000	2.000	-	-	-
Total: Secondary Distribution									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	135.408	83.160	103.246	50.868	154.114	21.560	14.868	23.789	19.955

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Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 9555A00018 / RQ-7 UAV MODS						Modification Number / Title: A00018 / RQ-7 UAV MODS			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: N/A				Modification Type: UNCLASSIFIED				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Procurement													
Modification Item 1 of 6: SHADOW Version 2 (v2)													
A Kits													
Recurring													
Software	- / 11.648	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 11.648	
Pubs/Tech Data	- / 3.747	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 3.747	
GFE	- / 56.117	- / 14.170	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 60.287	
Training Equipment	40 / 33.006	6 / 4.509	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	46 / 37.515	
Training (NET)	- / 143.491	- / 18.307	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 51.798	
Program Management	- / 139.972	- / 10.776	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 40.748	
Engineering	- / 120.746	- / 10.234	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 20.980	
Logistics	- / 125.552	- / 10.155	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 25.707	
Subtotal: Recurring	40 / 234.279	6 / 18.151	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 252.430	
Non-Recurring													
Nonrecurring Engineering Obsolescence	- / 79.877	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 79.877	
Subtotal: Non-Recurring	- / 79.877	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 79.877	
B Kits													
Recurring													
Shadow v2 Retrofit Kits	100 / 732.964	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	100 / 732.964	
UGCS Only System Retrofit	28 / 89.763	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	28 / 89.763	
Launchers	92 / 38.200	8 / 4.004	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	100 / 42.204	
MMF Retrofit Kits	21 / 16.846	13 / 17.807	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	34 / 34.653	
Subtotal: Recurring	241 / 877.773	21 / 21.811	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	262 / 899.584	
Subtotal: SHADOW Version 2 (v2)	281 / 1,191.929	27 / 39.962	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	308 / 1,231.891	
Modification Item 2 of 6: SHADOW SYSTEM MODIFICATIONS													
A Kits													
Recurring													
Weatherization	40 / 1.670	228 / 7.014	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	268 / 8.684	
Nonrecurring Engineering (NRE)	- / 2.150	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 2.150	
Program Management	- / 14.240	- / 1.664	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 5.904	
Engineering	- / 11.634	- / 10.417	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 12.051	
Logistics	- / 2.395	- / 10.328	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 12.723	

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Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 9555A00018 / RQ-7 UAV MODS						Modification Number / Title: A00018 / RQ-7 UAV MODS			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: N/A			Modification Type: UNCLASSIFIED					Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Communication Relay Installation Kit	- / -	228 / 11.985	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	228 / 11.985	
<i>Subtotal: Recurring</i>	40 / 12.089	456 / 21.408	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	496 / 33.497	
B Kits													
Recurring													
Shadow Expeditionary Kit	- / -	11 / 19.986	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	11 / 19.986	
Voice Over Internet Protocol	- / -	171 / 7.150	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	171 / 7.150	
Attrition Air Vehicles	71 / 56.223	1 / 1.775	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	72 / 57.998	
Small Mission Computer	- / -	144 / 15.215	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	144 / 15.215	
Block III Engine	- / -	232 / 15.732	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	232 / 15.732	
<i>Subtotal: Recurring</i>	71 / 56.223	559 / 59.858	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	630 / 116.081	
<i>Subtotal: SHADOW SYSTEM MODIFICATIONS</i>	111 / 68.312	1,015 / 81.266	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	1,126 / 149.578	
Modification Item 3 of 6: SHADOW PAYLOAD UPGRADES/MODIFICATIONS													
A Kits													
Recurring													
Program Management	- / 3.506	- / -	- / 1.408	- / 0.486	- / -	- / 0.486	- / 0.495	- / 0.304	- / 0.312	- / 0.433	- / 0.000	- / 6.944	
Engineering	- / 1.399	- / -	- / 0.328	- / 0.486	- / -	- / 0.486	- / 0.496	- / 0.336	- / 0.342	- / 0.403	- / 0.000	- / 3.790	
Logistics	- / 2.698	- / -	- / 0.328	- / 0.486	- / -	- / 0.486	- / 0.496	- / 0.406	- / 0.405	- / 0.446	- / 0.000	- / 5.265	
EO/IR/LD Universal Interface Assembly	- / -	228 / 14.180	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	228 / 14.180	
<i>Subtotal: Recurring</i>	- / 7.603	228 / 14.180	- / 2.064	- / 1.458	- / -	- / 1.458	- / 1.487	- / 1.046	- / 1.059	- / 1.282	- / -	228 / 30.179	
B Kits													
Recurring													
Laser Designator	106 / 108.850	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	106 / 108.850	
EO/IR/LD Upgrade Payloads	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 10.456	25 / 17.775	19 / 13.779	- / 0.000	59 / 42.010	
Boresight Tools	19 / 1.749	- / -	- / -	- / -	- / -	- / -	9 / 0.896	5 / 0.508	20 / 2.071	18 / 1.901	- / 0.000	71 / 7.125	
Training	- / 5.700	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 5.700	
<i>Subtotal: Recurring</i>	125 / 116.299	- / -	- / -	- / -	- / -	- / -	9 / 0.896	20 / 10.964	45 / 19.846	37 / 15.680	- / -	236 / 163.685	
<i>Subtotal: SHADOW PAYLOAD UPGRADES/MODIFICATIONS</i>	125 / 123.902	228 / 14.180	- / 2.064	- / 1.458	- / -	- / 1.458	9 / 2.383	20 / 12.010	45 / 20.905	37 / 16.962	- / -	464 / 193.864	
Modification Item 4 of 6: OSRVT MODIFICATIONS													
A Kits													
Recurring													
Army TIES Retrofit Kits	470 / 56.900	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	470 / 56.900	

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Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 9555A00018 / RQ-7 UAV MODS						Modification Number / Title: A00018 / RQ-7 UAV MODS		
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:					
Models of Systems Affected: N/A			Modification Type: UNCLASSIFIED					Related RDT&E PEs:				
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Program Management	- / 15.763	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 15.763
Logistics/TPF/NET	- / 12.286	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 12.286
Subtotal: Recurring	470 / 84.949	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	470 / 84.949
Non-Recurring												
Non Recurring Engineering	- / 2.570	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 2.570
OSRVT Software License	- / 2.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 2.000
Engineering/Technical Services	- / 8.753	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 8.753
Subtotal: Non-Recurring	- / 13.323	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 13.323
B Kits												
Recurring												
OSRVT System	70 / 11.108	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	70 / 11.108
OSRVT Retrofit Kits	2,937 / 212.900	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	2,937 / 212.900
OSRVT MDAS Antennas	273 / 18.726	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	273 / 18.726
BI-Directional Retrofit Kits	280 / 12.260	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	280 / 12.260
Subtotal: Recurring	3,560 / 254.994	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3,560 / 254.994
Subtotal: OSRVT MODIFICATIONS	4,030 / 353.266	- / -	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	4,030 / 353.266
Modification Item 5 of 6: Air Vehicle Modifications												
A Kits												
Recurring												
Block III Upgrade Kits	- / -	- / -	32 / 51.418	16 / 24.530	- / -	16 / 24.530	6 / 9.384	- / -	- / -	- / -	- / 0.000	54 / 85.332
Engineering	- / -	- / -	- / 0.564	- / 0.439	- / -	- / 0.439	- / 0.484	- / 0.335	- / 0.375	- / 0.410	- / 0.000	- / 2.607
Logistics	- / -	- / -	- / 0.282	- / 0.453	- / -	- / 0.453	- / 0.398	- / 0.427	- / 0.381	- / 0.393	- / 0.000	- / 2.334
Program Management	- / -	- / -	- / 2.084	- / 0.453	- / -	- / 0.453	- / 0.397	- / 0.432	- / 0.431	- / 0.459	- / 0.000	- / 4.256
Subtotal: Recurring	- / -	- / -	32 / 54.348	16 / 25.875	- / -	16 / 25.875	6 / 10.663	- / 1.194	- / 1.187	- / 1.262	- / -	54 / 94.529
Non-Recurring												
Nonrecurring Engineering Obsolescence	- / -	- / -	- / 1.500	- / 0.288	- / -	- / 0.288	- / 0.727	- / -	- / -	- / -	- / 0.000	- / 2.515
Subtotal: Non-Recurring	- / -	- / -	- / 1.500	- / 0.288	- / -	- / 0.288	- / 0.727	- / -	- / -	- / -	- / -	- / 2.515
B Kits												
Recurring												
Air Vehicle (Block III)	- / -	- / -	- / -	2 / 7.403	8 / 27.698	10 / 35.101	- / -	- / -	- / -	- / -	- / 0.000	10 / 35.101
Subtotal: Recurring	- / -	- / -	- / -	2 / 7.403	8 / 27.698	10 / 35.101	- / -	- / -	- / -	- / -	- / -	10 / 35.101
Subtotal: Air Vehicle Modifications	- / -	- / -	32 / 55.848	18 / 33.566	8 / 27.698	26 / 61.264	6 / 11.390	- / 1.194	- / 1.187	- / 1.262	- / -	64 / 132.145

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Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 9555A00018 / RQ-7 UAV MODS						Modification Number / Title: A00018 / RQ-7 UAV MODS			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: N/A				Modification Type: UNCLASSIFIED				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Modification Item 6 of 6: Ground Support Modifications													
A Kits													
Recurring													
Training NET	- / -	- / -	- / 17.980	- / 16.020	- / -	- / 16.020	- / 1.573	- / -	- / -	- / -	- / 10.000	- / 15.573	
Program Management	- / -	- / -	- / 10.885	- / 10.748	- / -	- / 10.748	- / 0.551	- / 0.562	- / 0.573	- / 0.585	- / 10.000	- / 13.904	
Engineering	- / -	- / -	- / 10.252	- / 10.511	- / -	- / 10.511	- / 0.540	- / 0.551	- / 0.562	- / 0.573	- / 10.000	- / 12.989	
Logistics	- / -	- / -	- / 10.123	- / 10.486	- / -	- / 10.486	- / 0.540	- / 0.551	- / 0.562	- / 0.573	- / 10.000	- / 12.835	
Subtotal: Recurring	- / -	- / -	- / 19.240	- / 17.765	- / -	- / 17.765	- / 3.204	- / 1.664	- / 1.697	- / 1.731	- / -	- / 25.301	
Non-Recurring													
Nonrecurring Engineering	- / -	- / -	- / 10.224	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.000	- / 10.224	
Subtotal: Non-Recurring	- / -	- / -	- / 10.224	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.224	
B Kits													
Recurring													
Universal Ground Control Station (UGCS)	- / -	- / -	- / -	11 / 35.870	4 / 13.043	15 / 48.913	- / -	- / -	- / -	- / -	- / 10.000	15 / 48.913	
GFE	- / -	- / -	- / 14.042	- / 11.878	- / -	- / 11.878	- / -	- / -	- / -	- / -	- / 10.000	- / 15.920	
Launchers	- / -	- / -	23 / 11.742	35 / 22.709	4 / 12.924	39 / 25.633	8 / 4.583	- / -	- / -	- / -	- / 10.000	70 / 41.958	
Universal Ground Data Terminal (UGDT)	- / -	- / -	- / -	0 / 0.000	4 / 17.203	4 / 17.203	- / -	- / -	- / -	- / -	- / 10.000	4 / 17.203	
Subtotal: Recurring	- / -	- / -	23 / 15.784	46 / 60.457	12 / 23.170	58 / 83.627	8 / 4.583	- / -	- / -	- / -	- / -	89 / 103.994	
Subtotal: Ground Support Modifications	- / -	- / -	23 / 25.248	46 / 68.222	12 / 23.170	58 / 91.392	8 / 7.787	- / 1.664	- / 1.697	- / 1.731	- / -	89 / 129.519	
Subtotal: Procurement, All Modification Items	4,547 / 1,737.409	1,270 / 135.408	55 / 83.160	64 / 103.246	20 / 50.868	84 / 154.114	23 / 21.560	20 / 14.868	45 / 23.789	37 / 19.955	- / -	6,081 / 2,190.263	
Installation													
Modification Item 1 of 6: SHADOW Version 2 (v2)	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000	
Modification Item 2 of 6: SHADOW SYSTEM MODIFICATIONS	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000	
Modification Item 3 of 6: SHADOW PAYLOAD UPGRADES/MODIFICATIONS	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000	
Modification Item 4 of 6: OSRVT MODIFICATIONS	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000	
Modification Item 5 of 6: Air Vehicle Modifications	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000	
Modification Item 6 of 6: Ground Support Modifications	1 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000	
Subtotal: Installation	6 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	6 / 0.000	
Total													

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 9555A00018 / RQ-7 UAV MODS	Modification Number / Title: A00018 / RQ-7 UAV MODS
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Models of Systems Affected: N/A **Modification Type:** UNCLASSIFIED **Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Total Cost (Procurement + Support + Installation)	1,737.409	135.408	83.160	103.246	50.868	154.114	21.560	14.868	23.789	19.955	-	2,190.263

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 9555A00018 / RQ-7 UAV MODS	Modification Number / Title: A00018 / RQ-7 UAV MODS

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 6: SHADOW Version 2 (v2)

Manufacturer Information

Manufacturer Name: AAI	Manufacturer Location: Hunt Valley, MD
Administrative Leadtime (in Months): 7	Production Leadtime (in Months): 18

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: FFP Contract

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	1 / 0.000	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Out	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 9555A00018 / RQ-7 UAV MODS	Modification Number / Title: A00018 / RQ-7 UAV MODS

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 2 of 6: SHADOW SYSTEM MODIFICATIONS

Manufacturer Information

Manufacturer Name: AAI	Manufacturer Location: Hunt Valley, MD
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 6

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: FFP Contract

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	1 / 0.000	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 9555A00018 / RQ-7 UAV MODS	Modification Number / Title: A00018 / RQ-7 UAV MODS
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 3 of 6: SHADOW PAYLOAD UPGRADES/MODIFICATIONS

Manufacturer Information

Manufacturer Name: AAI	Manufacturer Location: Hunt Valley, MD
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 6

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: FFP Contract

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	1 / 0.000	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 9555A00018 / RQ-7 UAV MODS	Modification Number / Title: A00018 / RQ-7 UAV MODS

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 4 of 6: OSRVT MODIFICATIONS

Manufacturer Information

Manufacturer Name: AAI	Manufacturer Location: Hunt Valley, MD
Administrative Leadtime (in Months): 4	Production Leadtime (in Months): 12

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: FFP Contract

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	1 / 0.000	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Out	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 9555A00018 / RQ-7 UAV MODS	Modification Number / Title: A00018 / RQ-7 UAV MODS
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 5 of 6: Air Vehicle Modifications

Manufacturer Information

Manufacturer Name: AAI	Manufacturer Location: Hunt Valley, MD
Administrative Leadtime (in Months): 18	Production Leadtime (in Months): 18

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: FFP

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	1 / 0.000	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Out	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 9555A00018 / RQ-7 UAV MODS	Modification Number / Title: A00018 / RQ-7 UAV MODS

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 6 of 6: Ground Support Modifications

Manufacturer Information

Manufacturer Name: AAI	Manufacturer Location: Hunt Valley, MD
Administrative Leadtime (in Months): 7	Production Leadtime (in Months): 18

Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: FFP

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	1 / 0.000	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000
FY 2017	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 9556A01002 / UAS MODS
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ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	27.744	26.109	17.644	3.402	21.046	9.278	0.293	0.008	0.124	-	84.602
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	27.744	26.109	17.644	3.402	21.046	9.278	0.293	0.008	0.124	-	84.602
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	27.744	26.109	17.644	3.402	21.046	9.278	0.293	0.008	0.124	-	84.602

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	355.692	32.636	30.473	40.024	31.696	85.907	-	-	-	-	51.274

Description:

The One System Remote Video Terminal (OSRVT) systems require an update to an Increment II OSRVT. The OSRVT Increment II Upgrade Program of Record (POR) began in FY 2012. The OSRVT Increment II consists of a Remote Operations Video Enhanced Receiver (ROVER), Miltope tablet, Antennas, UHF Modem, Type I encryption, Ku-Directional Antennas (KuDA) with an On-The-Move (OTM) capable variant, and an extended range Mobile Directional Antennas System (MDAS). Software supports decoding Telemetry Data from multiple Unmanned Aircraft Systems (UASs), provides Electro-Optical (EO)/Infrared (IR) payload control, and supports off-target calculations.

The OSRVT MODS APE A000121000, began in FY 2017. Prior to FY2017, OSRVT Procurement funds were provided via the SHADOW MODS APE A00018000.

Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	27.744	22.109	14.044	3.402	17.446	7.278	0.197	0.008
ANG	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	4.000	3.600	-	3.600	2.000	0.096	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	27.744	26.109	17.644	3.402	21.046	9.278	0.293	0.008

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft **P-1 Line Item Number / Title:** 9556A01002 / UAS MODS

ID Code (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	A00121 / OSRVT (UNCLASSIFIED)				- / -	- / 27.744	- / 26.109	- / 17.644	- / 3.402	- / 21.046
P-40	Total Gross/Weapon System Cost				- / -	- / 27.744	- / 26.109	- / 17.644	- / 3.402	- / 21.046

Exhibits Schedule					FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	A00121 / OSRVT (UNCLASSIFIED)				- / 9.278	- / 0.293	- / 0.008	- / 0.124	- / -	- / 84.602
P-40	Total Gross/Weapon System Cost				- / 9.278	- / 0.293	- / 0.008	- / 0.124	- / -	- / 84.602

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY 2019 Base funding of \$17.644 million provides for production of 26 OSRVT systems, as part of an Army Procurement Objective (APO) increase to support the Army Airborne Command and Control System (A2C2S) and the production of 595 Bi-Directional Retrofit Kits (BD-Retrofit Kits). FY2019 OCO funding of \$3.402 million provides for production of 25 of 66 OSRVT systems as part of the Security Forces Army Brigade (SFAB) Operational Needs Statement (ONS) requirement.

In accordance with 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses and providing military support to civil authorities.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 9556A01002 / UAS MODS	Modification Number / Title: A00121 / OSRVT

ID Code (A=Service Ready, B=Not Service Ready) : _____ **MDAP/MAIS Code:** _____

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	27.744	26.109	17.644	3.402	21.046	9.278	0.293	0.008	0.124	-	84.602
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	27.744	26.109	17.644	3.402	21.046	9.278	0.293	0.008	0.124	-	84.602
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	27.744	26.109	17.644	3.402	21.046	9.278	0.293	0.008	0.124	-	84.602

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	355.692	32.636	30.473	40.024	31.696	85.907	-	-	-	-	51.274

Description:

The One System Remote Video Terminal (OSRVT) systems requires an update to an Increment II OSRVT. The OSRVT Increment II Upgrade Program of Record (POR) began in FY 2012. The OSRVT Increment II consists of a Remote Operations Video Enhanced Receiver (ROVER), Miltope tablet, Antennas, UHF Modem, Type I encryption, Ku-Directional Antennas (KuDA) with an On-The-Move (OTM) capable variant, and an extended range Mobile Directional Antennas System (MDAS). Software supports decoding Telemetry Data from multiple Unmanned Aircraft Systems (UASs), provides Electro-Optical (EO)/ Infrared (IR) payload control, and supports off target calculations.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	27.744	22.109	14.044	3.402	17.446	7.278	0.197	0.008	0.124
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	4.000	3.600	-	3.600	2.000	0.096	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	27.744	26.109	17.644	3.402	21.046	9.278	0.293	0.008	0.124

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10					P-1 Line Item Number / Title: 9556A01002 / UAS MODS					Modification Number / Title: A00121 / OSRVT			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: N/A				Modification Type: UNCLASSIFIED				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Procurement													
<i>Modification Item 1 of 1:</i> OSRVT Mods													
B Kits													
Recurring													
OSRVT System	- / -	59 / 9.540	35 / 5.802	36 / 6.411	25 / 3.402	61 / 9.813	24 / 4.359	- / -	- / -	- / -	- / 0.000	179 / 29.514	
Bi-Directional Retrofit Kits	- / -	750 / 10.030	1,003 / 13.614	309 / 4.196	- / -	309 / 4.196	- / -	- / -	- / -	- / -	- / 0.000	2,062 / 27.840	
MDAS	- / -	8 / 0.987	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	8 / 0.987	
<i>Subtotal: Recurring</i>	- / -	817 / 20.557	1,038 / 19.416	345 / 10.607	25 / 3.402	370 / 14.009	24 / 4.359	- / -	- / -	- / -	- / -	2,249 / 58.341	
Non-Recurring													
Non-Recurring Engineering	- / -	- / 0.802	- / 0.963	- / 0.948	- / -	- / 0.948	- / 0.303	- / 0.293	- / 0.008	- / 0.124	- / 0.000	- / 3.441	
Program Management	- / -	- / 0.868	- / 0.878	- / 1.261	- / -	- / 1.261	- / 1.204	- / -	- / -	- / -	- / 0.000	- / 4.211	
Engineering Technical Services	- / -	- / 0.868	- / 0.878	- / 1.261	- / -	- / 1.261	- / 1.204	- / -	- / -	- / -	- / 0.000	- / 4.211	
Logistics/TPF/NET	- / -	- / 4.649	- / 3.974	- / 3.567	- / -	- / 3.567	- / 2.208	- / -	- / -	- / -	- / 0.000	- / 14.398	
<i>Subtotal: Non-Recurring</i>	- / -	- / 7.187	- / 6.693	- / 7.037	- / -	- / 7.037	- / 4.919	- / 0.293	- / 0.008	- / 0.124	- / -	- / 26.261	
<i>Subtotal: OSRVT Mods</i>	- / -	817 / 27.744	1,038 / 26.109	345 / 17.644	25 / 3.402	370 / 21.046	24 / 9.278	- / 0.293	- / 0.008	- / 0.124	- / -	2,249 / 84.602	
<i>Subtotal: Procurement, All Modification Items</i>	- / -	817 / 27.744	1,038 / 26.109	345 / 17.644	25 / 3.402	370 / 21.046	24 / 9.278	- / 0.293	- / 0.008	- / 0.124	- / -	2,249 / 84.602	
Installation													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
Total													
Total Cost (Procurement + Support + Installation)	-	27.744	26.109	17.644	3.402	21.046	9.278	0.293	0.008	0.124	-	84.602	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2019 Army					Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 9556A01002 / UAS MODS			Modification Number / Title: A00121 / OSRVT	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 1 of 1: OSRVT Mods							
Manufacturer Information							
Manufacturer Name: Textron/AAI				Manufacturer Location: Hunt Valley, MD			
Administrative Leadtime (in Months): 4				Production Leadtime (in Months): 12			
Dates	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Contract Dates							
Delivery Dates							
Installation Information							
Method of Implementation (Organic): FFP Contract					Installation Quantity: 0		

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UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity:
2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 10: Ground Support Avionics

P-1 Line Item Number / Title:
3632AZ3504 / Aircraft Survivability Equipment

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	597.472	89.377	70.913	57.170	-	57.170	115.649	92.153	96.762	168.387	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	11.565	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Net Procurement (P-1) (<i>\$ in Millions</i>)	585.907	89.377	70.913	57.170	-	57.170	115.649	92.153	96.762	168.387	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	11.565	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Total Obligation Authority (<i>\$ in Millions</i>)	597.472	89.377	70.913	57.170	-	57.170	115.649	92.153	96.762	168.387	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	3,081.966	2,954.708	2,382.083	-	2,382.083	4,818.708	3,839.708	4,031.750	1,683.870	Continuing	Continuing

Description:

The Aircraft Survivability Equipment (ASE) budget line includes ASE Laser Countermeasures (AZ3508) and ASE Radio Frequency Countermeasures (AZ3511).

AZ3508 ASE Laser CM

Army Procurement Objective (APO) = 1,332 (APO based on B-Kits)

The AN/AVR-2B Laser Detecting Set (LDS) installed on Army rotary-wing aircraft passively detects laser-aided weapons targeting the aircraft and alerts aircrews, allowing them to engage the threat or maneuver to break the targeting. The system detects aircraft illumination by laser rangefinders, laser target designators, and laser beam rider surface-to-air missiles. The system provides the aircrew visual and aural warnings prioritized by threat lethality using 360 degree azimuth and 90 degree elevation field of view coverage.

AZ3511 Radio Frequency CM

APO = 1,200 (APO based on B-Kits)

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.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 10: Ground Support Avionics	P-1 Line Item Number / Title: 3632AZ3504 / Aircraft Survivability Equipment
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Phase 2 RWR Modernization begins by adopting the United States Navy APR-39D(V)2 system. APR-39D(V)2 will significantly improve the RF threat coverage, automatic detection and identification of threat types, bearing, and lethality. The APR-39D(V)2 will be procured in limited quantity during the development of the Modernized RWR (MRWR). This phase ends upon completion of the MRWR which is an ECP to the APR-39D(V)2 that will implement enhanced hardware upgrades to keep the APR-39D(V)2 technically relevant against agile threats.

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).

	Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	89.377	70.913	57.170	-	57.170	115.649	92.153	96.762	168.387
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	89.377	70.913	57.170	-	57.170	115.649	92.153	96.762	168.387

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 10: Ground Support Avionics
P-1 Line Item Number / Title: 3632AZ3504 / Aircraft Survivability Equipment

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	AZ3508 / ASE Laser CM	P-5a			- / 413.983	- / 16.952	- / 13.170	- / 6.035	- / -	- / 6.035
P-5	AZ3511 / Radio Frequency CM	P-5a, P-21			- / 183.489	- / 72.425	- / 57.743	- / 51.135	- / -	- / 51.135
P-40	Total Gross/Weapon System Cost				- / 597.472	- / 89.377	- / 70.913	- / 57.170	- / -	- / 57.170

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 AZ3508 ASE Laser CM: Fiscal Year (FY) 2019 Base procurement dollars in the amount of \$6.088 million supports A-Kit installation on Rotary Wing aircraft in support of required operational capabilities and integration of AN/AVR-2B LDS with other ASE systems.

 AZ3511 Radio Frequency CM: Fiscal Year (FY) 2019 Base Procurement dollars in the amount of \$51.584 million funds procurement and fielding of B-Kits and A-Kits for Rotary Wing aircraft.

 In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

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Exhibit P-5, Cost Analysis: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 3632AZ3504 / Aircraft Survivability Equipment	Item Number / Title [DODIC]: AZ3508 / ASE Laser CM

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	413.983	16.952	13.170	6.035	-	6.035
Less PY Advance Procurement (\$ in Millions)	11.565	0.000	0.000	0.000	-	0.000
Net Procurement (P-1) (\$ in Millions)	402.418	16.952	13.170	6.035	-	6.035
Plus CY Advance Procurement (\$ in Millions)	11.565	0.000	0.000	0.000	-	0.000
Total Obligation Authority (\$ in Millions)	413.983	16.952	13.170	6.035	-	6.035

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
Non Recurring Engineering (A-Kit)	-	-	11.700	-	-	1.988	-	-	-	-	-	-	-	-	-	-	-	-
A-Kit Procurement ^(†)	42.179	988	41.673	43.984	125	5.498	-	-	-	-	-	-	-	-	-	-	-	-
A-Kit Installation ^(†)	72.884	653	47.593	94.917	48	4.556	94.589	95	8.986	138.500	4	0.554	-	-	-	138.500	4	0.554
A-Kit filters	-	-	18.529	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B-Kit Procurement	146.928	1,332	195.708	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Systems Engineering	-	-	16.969	-	-	0.907	-	-	0.619	-	-	0.292	-	-	-	-	-	0.292
Program Management	-	-	15.369	-	-	0.788	-	-	0.698	-	-	0.235	-	-	-	-	-	0.235
Prime Contractor Prgm Mgt / Engr Spt	-	-	6.170	-	-	-	-	-	0.300	-	-	0.081	-	-	-	-	-	0.081
Software	-	-	9.326	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Engineering Changes	-	-	0.638	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Systems Test and Evaluation	-	-	21.995	-	-	1.958	-	-	2.537	-	-	2.832	-	-	-	-	-	2.832
Training / Logistics	-	-	19.457	-	-	1.069	-	-	-	-	-	1.637	-	-	-	-	-	1.637
Depot / Field Support	-	-	5.986	-	-	-	-	-	-	-	-	0.374	-	-	-	-	-	0.374
Fielding	-	-	2.870	-	-	-	-	-	0.030	-	-	-	-	-	-	-	-	-
Other Procurement	-	-	-	-	-	0.188	-	-	-	-	-	0.030	-	-	-	-	-	0.030
Subtotal: Recurring Cost	-	-	413.983	-	-	16.952	-	-	13.170	-	-	6.035	-	-	-	-	-	6.035
Subtotal: Flyaway Cost	-	-	413.983	-	-	16.952	-	-	13.170	-	-	6.035	-	-	-	-	-	6.035

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Exhibit P-5, Cost Analysis: PB 2019 Army												Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10						P-1 Line Item Number / Title: 3632AZ3504 / Aircraft Survivability Equipment						Item Number / Title [DODIC]: AZ3508 / ASE Laser CM					
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:					

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Gross/Weapon System Cost	-	-	413.983	-	-	16.952	-	-	13.170	-	-	6.035	-	-	-	-	-	6.035

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	16.952	13.170	6.035	-	6.035
Total:	Quantity	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	16.952	13.170	6.035	-	6.035

(t) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 3632AZ3504 / Aircraft Survivability Equipment	Item Number / Title [DODIC]: AZ3508 / ASE Laser CM
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
A-Kit Procurement		2017	Prototype Integration Facility / Redstone Arsenal, AL	C / CPFF	ACC, Redstone Arsenal, AL	Mar 2017	Dec 2017	125	43.980			
A-Kit Installation		2017	Army Field Maint Division / Ft Leonardwood, ID	MIPR	Ft Leonardwood, Boise, ID	Mar 2017	Sep 2017	48	94.920			
A-Kit Installation		2018	Army Field Maint Division / Ft Leonardwood, ID	MIPR	Ft Leonardwood, Boise, ID	Sep 2018	Mar 2019	95	94.590			
A-Kit Installation		2019	Army Field Maint Division / Ft Leonardwood, ID	MIPR	Ft Leonardwood, Boise, ID	Dec 2018	Dec 2019	4	138.500			

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Exhibit P-5, Cost Analysis: PB 2019 Army					Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10			P-1 Line Item Number / Title: 3632AZ3504 / Aircraft Survivability Equipment			Item Number / Title [DODIC]: AZ3511 / Radio Frequency CM			
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:					
Resource Summary				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Procurement Quantity (Units in Each)				-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)				183.489	72.425	57.743	51.135	-	51.135
Less PY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)				183.489	72.425	57.743	51.135	-	51.135
Plus CY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)				183.489	72.425	57.743	51.135	-	51.135
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>									
Initial Spares (\$ in Millions)				-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)				-	2,497.414	2,405.958	2,130.625	-	2,130.625

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Non Recurring Cost																		
A-Kit NRE	-	-	121.923	-	-	6.243	-	-	17.585	-	-	1.849	-	-	-	-	-	1.849
<i>Subtotal: Non Recurring Cost</i>	-	-	121.923	-	-	6.243	-	-	17.585	-	-	1.849	-	-	-	-	-	1.849
Subtotal: Flyaway Cost	-	-	121.923	-	-	6.243	-	-	17.585	-	-	1.849	-	-	-	-	-	1.849
Hardware Cost																		
Recurring Cost																		
A-Kit Procurement ^(†)	-	-	-	93.790	105	9.848	93.740	50	4.687	93.801	156	14.633	-	-	-	93.801	156	14.633
A-Kit Installs	-	-	-	-	-	-	-	-	2.036	-	-	1.999	-	-	-	-	-	1.999
B-Kit Procurement ^(†)	576.000	32	18.432	974.917	12	11.699	974.917	24	23.398	996.938	16	15.951	-	-	-	996.938	16	15.951
Replacement Flight Line Test Sets	-	-	3.778	-	-	5.391	-	-	-	-	-	-	-	-	-	-	-	-
Retrofit	-	-	3.221	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B-Kit Spares	-	-	-	-	-	4.100	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	25.431	-	-	31.038	-	-	30.121	-	-	32.583	-	-	-	-	-	32.583
Non Recurring Cost																		
System Test and Evaluation	-	-	1.328	-	-	13.449	-	-	0.664	-	-	0.015	-	-	-	-	-	0.015
Other	-	-	10.000	-	-	5.282	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	11.328	-	-	18.731	-	-	0.664	-	-	0.015	-	-	-	-	-	0.015
Subtotal: Hardware Cost	-	-	36.759	-	-	49.769	-	-	30.785	-	-	32.598	-	-	-	-	-	32.598

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Exhibit P-5, Cost Analysis: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10 **P-1 Line Item Number / Title:** 3632AZ3504 / Aircraft Survivability Equipment **Item Number / Title [DODIC]:** AZ3511 / Radio Frequency CM

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Software Cost																		
Non Recurring Cost																		
Mission Data Set (MDS)	-	-	4.034	-	-	7.790	-	-	-	-	-	1.645	-	-	-	-	-	1.645
Other	-	-	8.359	-	-	0.195	-	-	0.084	-	-	0.171	-	-	-	-	-	0.171
<i>Subtotal: Non Recurring Cost</i>	-	-	12.393	-	-	7.985	-	-	0.084	-	-	1.816	-	-	-	-	-	1.816
<i>Subtotal: Software Cost</i>	-	-	12.393	-	-	7.985	-	-	0.084	-	-	1.816	-	-	-	-	-	1.816
Logistics Cost																		
Recurring Cost																		
Training	-	-	0.304	-	-	0.077	-	-	0.421	-	-	1.288	-	-	-	-	-	1.288
Fielding	-	-	1.006	-	-	-	-	-	1.118	-	-	1.738	-	-	-	-	-	1.738
<i>Subtotal: Recurring Cost</i>	-	-	1.310	-	-	0.077	-	-	1.539	-	-	3.026	-	-	-	-	-	3.026
Non Recurring Cost																		
Other	-	-	0.927	-	-	1.053	-	-	1.639	-	-	1.869	-	-	-	-	-	1.869
Depot Stand Up	-	-	-	-	-	-	-	-	-	-	-	1.694	-	-	-	-	-	1.694
<i>Subtotal: Non Recurring Cost</i>	-	-	0.927	-	-	1.053	-	-	1.639	-	-	3.563	-	-	-	-	-	3.563
<i>Subtotal: Logistics Cost</i>	-	-	2.237	-	-	1.130	-	-	3.178	-	-	6.589	-	-	-	-	-	6.589
Support - Program Management Cost																		
Contractor Management	-	-	7.222	-	-	5.063	-	-	3.597	-	-	3.954	-	-	-	-	-	3.954
Government Management	-	-	2.396	-	-	2.235	-	-	2.094	-	-	3.468	-	-	-	-	-	3.468
<i>Subtotal: Support - Program Management Cost</i>	-	-	9.618	-	-	7.298	-	-	5.691	-	-	7.422	-	-	-	-	-	7.422
Support - System Engineering Cost																		
System Engineering	-	-	0.559	-	-	-	-	-	0.421	-	-	0.861	-	-	-	-	-	0.861
<i>Subtotal: Support - System Engineering Cost</i>	-	-	0.559	-	-	-	-	-	0.421	-	-	0.861	-	-	-	-	-	0.861
Gross/Weapon System Cost	-	-	183.489	2,497.414	-	72.425	2,405.958	-	57.743	2,130.625	-	51.135	-	-	-	2,130.625	-	51.135

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	72.425	57.743	51.135	-	51.135
Total:	Quantity	-	-	-	-	-

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Exhibit P-5, Cost Analysis: PB 2019 Army				Date: February 2018		
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10		P-1 Line Item Number / Title: 3632AZ3504 / Aircraft Survivability Equipment		Item Number / Title [DODIC]: AZ3511 / Radio Frequency CM		
ID Code (A=Service Ready, B=Not Service Ready) :			MDAP/MAIS Code:			
Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Secondary Distribution	Total Obligation Authority	72.425	57.743	51.135	-	51.135

(t) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 3632AZ3504 / Aircraft Survivability Equipment	Item Number / Title [DODIC]: AZ3511 / Radio Frequency CM
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
A-Kit Procurement ^(†)		2017	Prototype Integration Facility / Redstone Arsenal, AL	C / CPFF	Redstone Arsenal, AL	Mar 2017	Dec 2017	105	93.790			
A-Kit Procurement ^(†)		2018	Prototype Integration Facility / Redstone Arsenal, AL	C / CPFF	Redstone Arsenal, AL	Mar 2018	Dec 2018	50	93.740			
A-Kit Procurement ^(†)		2019	Prototype Integration Facility / Redstone Arsenal, AL	C / CPFF	Redstone Arsenal, AL	Mar 2019	Dec 2019	156	93.800			
B-Kit Procurement ^(†)		2015	Northrop Grumman / Rolling Meadows, IL	SS / IDIQ	Patuxent River, MD	Aug 2015	Jan 2017	20	921.600			
B-Kit Procurement ^(†)		2016	Northrop Grumman / Rolling Meadows, IL	SS / IDIQ	TBD	Sep 2017	Jan 2019	12	974.750			
B-Kit Procurement ^(†)		2017	Northrop Grumman / Rolling Meadows, IL	SS / IDIQ	TBD	Sep 2017	Jan 2019	12	974.920			
B-Kit Procurement ^(†)		2018	Northrop Grumman / Rolling Meadows, IL	SS / IDIQ	TBD	Jan 2018	Jun 2019	24	974.920			

^(†) indicates the presence of a P-21

Remarks:
Fiscal Year (FY) 2017 and 2018 leverages Navy contract for B-Kit procurements.

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Exhibit P-21, Production Schedule: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 3632AZ3504 / Aircraft Survivability Equipment	Item Number / Title [DODIC]: AZ3511 / Radio Frequency CM
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2015												Fiscal Year 2016												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	Calendar Year 2015												Calendar Year 2016												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
A-Kit Procurement																															
	1	2017	ARMY	105	0	105																							105		
	1	2018	ARMY	50	0	50																							50		
	1	2019	ARMY	156	0	156																							156		
B-Kit Procurement																															
	2	2015	ARMY	20	0	20																							20		
	2	2016	ARMY	12	0	12																							12		
	2	2017	ARMY	12	0	12																							12		
	2	2018	ARMY	24	0	24																							24		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10 **P-1 Line Item Number / Title:** 3632AZ3504 / Aircraft Survivability Equipment **Item Number / Title [DODIC]:** AZ3511 / Radio Frequency CM

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2017														Fiscal Year 2018														BALANCE
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017														Calendar Year 2018													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				
A-Kit Procurement																																		
	1	2017	ARMY	105	0	105																												78
	1	2018	ARMY	50	0	50																												50
	1	2019	ARMY	156	0	156																												156
B-Kit Procurement																																		
	2	2015	ARMY	20	0	20	-	-	-	1	1	2	-	-	-	1	2	5	4	4														0
	2	2016	ARMY	12	0	12												A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	
	2	2017	ARMY	12	0	12												A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	
	2	2018	ARMY	24	0	24																												24
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				

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Exhibit P-21, Production Schedule: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 3632AZ3504 / Aircraft Survivability Equipment	Item Number / Title [DODIC]: AZ3511 / Radio Frequency CM
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2019												Fiscal Year 2020												BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019												Calendar Year 2020												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
A-Kit Procurement																															
	1	2017	ARMY	105	27	78	3	3	3	3	3	3	3	3	3	3	5	5	3	3	5	5	5	5	5	5	2	0			
	1	2018	ARMY	50	0	50	-	-	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2			0			
	1	2019	ARMY	156	0	156															3	3	3	3	3	3	3	3	126		
B-Kit Procurement																															
	2	2015	ARMY	20	20	0																						0			
	2	2016	ARMY	12	0	12	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0			
	2	2017	ARMY	12	0	12	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0			
	2	2018	ARMY	24	0	24	-	-	-	-	-	-	-	-	2	2	2	2	2	2	2	2	2	2	2	2	2	0			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10 **P-1 Line Item Number / Title:** 3632AZ3504 / Aircraft Survivability Equipment **Item Number / Title [DODIC]:** AZ3511 / Radio Frequency CM

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2021														Fiscal Year 2022														BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021														Calendar Year 2022														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
A-Kit Procurement																																			
	1	2017	ARMY	105	105	0																								0					
	1	2018	ARMY	50	50	0																								0					
	1	2019	ARMY	156	30	126	3	3	3	3	3	3	3	3	3	5	5	3	3	3	3	3	3	3	3	3	3	5	5	46					
B-Kit Procurement																																			
	2	2015	ARMY	20	20	0																								0					
	2	2016	ARMY	12	12	0																								0					
	2	2017	ARMY	12	12	0																								0					
	2	2018	ARMY	24	24	0																								0					
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 3632AZ3504 / Aircraft Survivability Equipment	Item Number / Title [DODIC]: AZ3511 / Radio Frequency CM
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2023												Fiscal Year 2024												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	Calendar Year 2023												Calendar Year 2024												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
A-Kit Procurement																															
	1	2017	ARMY	105	105	0																							0		
	1	2018	ARMY	50	50	0																							0		
	1	2019	ARMY	156	110	46	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	0			
B-Kit Procurement																															
	2	2015	ARMY	20	20	0																							0		
	2	2016	ARMY	12	12	0																							0		
	2	2017	ARMY	12	12	0																							0		
	2	2018	ARMY	24	24	0																							0		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 3632AZ3504 / Aircraft Survivability Equipment	Item Number / Title [DODIC]: AZ3511 / Radio Frequency CM
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)								
		MSR For 2019	1-8-5 For 2019	MAX For 2019	Initial				Reorder				
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	
1	Prototype Integration Facility - Redstone Arsenal, AL	2	20	40	0	0	0	0	0	0	0	0	0
2	Northrop Grumman - Rolling Meadows, IL	2	10	20	0	3	15	18	0	3	15	18	18

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity:
2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 10: Ground Support Avionics

P-1 Line Item Number / Title:
5044AZ3507 / Survivability CM

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	3,472.037	9.565	5.884	5.853	-	5.853	8.435	-	-	8.761	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	3,472.037	9.565	5.884	5.853	-	5.853	8.435	-	-	8.761	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	3,472.037	9.565	5.884	5.853	-	5.853	8.435	-	-	8.761	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Advanced Threat Infrared Countermeasure (ATIRCM) is an infrared (IR) countermeasure system that interfaces with the Common Missile Warning System (CMWS) to provide near spherical protection of the host aircraft platform in order to defeat IR threat missiles. The operational concept of ATIRCM is as part of the Suite of Integrated Infrared Countermeasures (SIIRCM). The core components of the SIIRCM concept are: a Missile Warning System (MWS), expendable countermeasures (flares) and a laser based IR countermeasure (IRCM). The CMWS detects, declares, and initiates IRCM against IR-guided Surface-to-Air Missiles (SAM) or Air-to-Air Missiles (AAM). ATIRCM takes a hand-off cue from CMWS and then takes immediate action as a laser based countermeasure against the incoming threat missile.

The A-Kit for ATIRCM includes mounting hardware, wiring harnesses, and other components necessary to install and interface the mission kit on host aircraft. The ATIRCM B-Kit is the mission kit (laser, optical coupler, infrared jam head, and jam head control unit) required to achieve near spherical coverage for an aircraft.

The ATIRCM program is a post-Milestone C, Acquisition Category (ACAT) 1C program of record fielded on CH-47F aircraft.

The approved Army Acquisition Objective (AAO) for ATIRCM is 340 A-Kits and 120 B-Kits.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	9.565	5.884	5.853	-	5.853	8.435	-	-	8.761
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	9.565	5.884	5.853	-	5.853	8.435	-	-	8.761

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 10: Ground Support Avionics
P-1 Line Item Number / Title: 5044AZ3507 / Survivability CM

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	AZ3507 / Survivability CM	P-5a			- / 3,472.037	- / 9.565	- / 5.884	- / 5.853	- / -	- / 5.853
P-40	Total Gross/Weapon System Cost				- / 3,472.037	- / 9.565	- / 5.884	- / 5.853	- / -	- / 5.853

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

FY 2019 Base Procurement dollars in the amount of \$5.853 million supports A-Kit and Pod Bay Door installations, software concurrency and support across the CH-47F aircraft fleet to include integration requiring recurring modification work order activities.

In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic responses, and providing military support to civil authorities.

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Exhibit P-5, Cost Analysis: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 5044AZ3507 / Survivability CM	Item Number / Title [DODIC]: AZ3507 / Survivability CM

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	3,472.037	9.565	5.884	5.853	-	5.853
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	3,472.037	9.565	5.884	5.853	-	5.853
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	3,472.037	9.565	5.884	5.853	-	5.853

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
Non-Recurring Production	-	-	140.382	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A-Kit Procurement	541.000	167	90.347	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A-Kit/Pod Bay Door Installation ^(†)	215.000	167	35.905	36.000	43	1.548	-	-	5.296	52.000	57	2.964	-	-	52.000	57	2.964	-
B-Kit Procurement	3,416.000	120	409.920	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pod Bay Door Procurement	15.000	167	2.505	-	-	0.005	-	-	-	-	-	0.005	-	-	-	-	-	0.005
Engineering Changes	-	-	10.772	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Program Management	-	-	53.414	-	-	0.956	-	-	0.588	-	-	0.590	-	-	-	-	-	0.590
System Test & Evaluation	-	-	84.195	-	-	6.703	-	-	-	-	-	2.294	-	-	-	-	-	2.294
Training	-	-	14.518	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Data	-	-	0.776	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support Equipment	-	-	3.501	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fielding	-	-	129.565	-	-	0.353	-	-	-	-	-	-	-	-	-	-	-	-
Sunk procurement per RFS database (placeholder)	-	-	2,496.237	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	<i>3,472.037</i>	-	-	<i>9.565</i>	-	-	<i>5.884</i>	-	-	<i>5.853</i>	-	-	-	-	-	<i>5.853</i>
<i>Subtotal: Flyaway Cost</i>	-	-	<i>3,472.037</i>	-	-	<i>9.565</i>	-	-	<i>5.884</i>	-	-	<i>5.853</i>	-	-	-	-	-	<i>5.853</i>

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Exhibit P-5, Cost Analysis: PB 2019 Army												Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10						P-1 Line Item Number / Title: 5044AZ3507 / Survivability CM						Item Number / Title [DODIC]: AZ3507 / Survivability CM					
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:					

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Gross/Weapon System Cost	-	-	3,472.037	-	-	9.565	-	-	5.884	-	-	5.853	-	-	-	-	-	5.853

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	9.565	5.884	5.853	-	5.853
Total:	Quantity	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	9.565	5.884	5.853	-	5.853

(t) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 5044AZ3507 / Survivability CM	Item Number / Title [DODIC]: AZ3507 / Survivability CM
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
A-Kit/Pod Bay Door Installation		2017	Aviation Field Maint Division / Redstone Arsenal, AL	MIPR	Redstone Arsenal, AL	Oct 2016	Oct 2016	43	36.000			
A-Kit/Pod Bay Door Installation		2018	Aviation Field Maint Division / Redstone Arsenal, AL	MIPR	Redstone Arsenal, AL	Oct 2017	Oct 2017	0	0.000			
A-Kit/Pod Bay Door Installation		2019	Aviation Field Maint Division / Redstone Arsenal, AL	MIPR	Redstone Arsenal, AL	Oct 2018	Oct 2019	57	52.000			

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity:
 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 10: Ground Support Avionics

P-1 Line Item Number / Title:
 5397AZ3517 / CMWS

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0605051A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	638.732	97.741	166.567	13.496	84.387	97.883	14.077	10.645	10.110	8.325	-	1,044.080
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	638.732	97.741	166.567	13.496	84.387	97.883	14.077	10.645	10.110	8.325	-	1,044.080
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	638.732	97.741	166.567	13.496	84.387	97.883	14.077	10.645	10.110	8.325	-	1,044.080

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	1,542.287	-	-	-	-	-	-	-	-	9,667.407

Description:

Army Procurement Objective (APO) = 1,351 (B-Kits)

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 Advanced Threat Infrared Countermeasures (ATIRCM)-equipped CH-47 platform only). In addition, the CMWS ECU receives from the EOMS unguided munitions detection data which is also passed to the aircrew through aural and visual cues. The aircrew then applies the appropriate Tactics, Techniques and Procedures (TTPs) to break contact or engage the enemy with on-ship ordnance. The CMWS Generation 3 (Gen 3) ECU in conjunction with ongoing software development efforts will address outstanding materiel release conditions to achieve a Full Materiel 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.

APO = 42 (B-Kits)

Phase 2a DoN LAIRCM (JUONS S0-0010) and Phase 3 ATW & CIRCM QRC Initially, a select number of aircraft in the threat area of responsibility will be outfitted with the Phase 2a Department of the Navy Large Aircraft Infrared Countermeasure (DoN LAIRCM) system. However, this approach came with a Space, Weight and Power - Cooling (SWaP-C) penalty which is being addressed as a follow-on JUONS solution requirement using the Phase 3 Advanced Threat Warner (ATW) and Common Infrared Countermeasure (CIRCM) Quick Reaction Capability (QRC). The intent of the Phase 3 ATW & CIRCM QRC effort is to reduce the SWaP-C associated with the Phase 2a solution.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 10: Ground Support Avionics
P-1 Line Item Number / Title: 5397AZ3517 / CMWS

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0605051A

Line Item MDAP/MAIS Code: N/A

Phase 4 Limited Interim Missile Warning System (LIMWS) QRC The Phase 4 LIMWS QRC effort is a follow-on bridging solution to the JUONS SO-0010 to fill a global capability gap until the Advanced Threat Detection System (ATDS) Program of Record is fielded. The LIMWS QRC effort provides advance missile detection capability to an increased number of aircraft outside of the Phase 2a and Phase 3 efforts areas of responsibility.

Joint Staff, J-8 Deputy Director for Requirements (DOR) memorandum, April 24, 2015

Phase 2a SOCOM JUONS S0-0010, Joint Rapid Acquisition Cell (JRAC) memorandum, May 29, 2015

Directed Requirement for the Phase 3 Advanced Threat Warner and Common Infrared Countermeasure Quick Reaction Capability (ATW & CIRCM QRC) to Support Joint Urgent Operational Need (JUON) S0-0010, CIRCM Critical Intelligence Parameters Breach, December 18, 2015

Directed Requirement for the Phase 4 Limited Interim Missile Warning System (LIMWS) QRC, March 26, 2017

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	97.741	166.567	13.496	84.387	97.883	14.077	10.645	10.110	8.325
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	97.741	166.567	13.496	84.387	97.883	14.077	10.645	10.110	8.325

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 10: Ground Support Avionics **P-1 Line Item Number / Title:** 5397AZ3517 / CMWS

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0605051A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	AZ3517 / CMWS	P-5a, P-21			- / 638.732	- / 97.741	- / 166.567	- / 13.496	- / 84.387	- / 97.883
P-40	Total Gross/Weapon System Cost				- / 638.732	- / 97.741	- / 166.567	- / 13.496	- / 84.387	- / 97.883

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 Common Missile Warning System (CMWS): Fiscal Year (FY) 2019 Base procurement dollars in the amount of \$13.496 million supports CMWS software modifications, software transition to sustainment, contractor support and system test and evaluation efforts.

JUONS Phase 2a DoN LAIRCM and Phase 3 ATW & CIRCM QRC: FY 2019 Overseas Contingency Operations (OCO) procurement dollars in the amount of \$16.470 million supports JUONS program management, systems engineering, software, and fielding support.

Phase 3 ATW & CIRCM QRC: FY 2019 OCO procurement dollars in the amount of \$11.200 million supports Phase 3 ATW & CIRCM QRC procurement of ATW A-Kit procurement and installation, System Test & Evaluation (ST&E), and Program Management for all QRC identified platforms.

Phase 4 Limited Interim Missile Warning System (LIMWS) QRC: FY 2019 OCO Procurement dollars in the amount of \$56.717 million fund a quantity of 35 LIMWS QRC B-Kits, 31 A-Kits, and Systems Engineering Program Management (SEPM) in support of LIMWS QRC efforts.

In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

All COMPO 1 Active

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Exhibit P-5, Cost Analysis: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 5397AZ3517 / CMWS	Item Number / Title [DODIC]: AZ3517 / CMWS

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	638.732	97.741	166.567	13.496	84.387	97.883
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	638.732	97.741	166.567	13.496	84.387	97.883
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	638.732	97.741	166.567	13.496	84.387	97.883

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	1,542.287	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
CMWS A-Kit Fixed Wing Installation	4,934.333	9	44.409	903.000	9	8.127	-	-	1.000	-	-	-	-	-	-	-	-	-
CMWS A-Kit Rotary Wing Installation	657.000	10	6.570	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CMWS Gen 3 ECU Hardware ^(†)	261.671	432	113.042	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CMWS Gen 3 User Data Module (UDM)	-	-	9.607	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CMWS Other Recurring Prod (Software/Engineer)	-	-	160.296	-	-	17.523	-	-	9.889	-	-	7.039	-	-	-	-	-	7.039
CMWS Systems Engineering	-	-	23.235	-	-	2.289	-	-	1.500	-	-	0.749	-	-	-	-	-	0.749
CMWS Program Management	-	-	20.434	-	-	1.873	-	-	1.200	-	-	0.612	-	-	-	-	-	0.612
CMWS Systems Test and Evaluation	-	-	57.848	-	-	5.528	-	-	7.276	-	-	3.697	-	-	-	-	-	3.697
JUONS SO-0010 A-Kit Procurement	432.174	69	29.820	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JUONS SO-0010 A-Kit Installation	355.500	4	1.422	377.692	65	24.550	-	-	-	-	-	-	-	-	-	-	-	-
JUONS SO-0010 B-Kit Procurement	2,824.200	45	127.089	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: PB 2019 Army												Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10						P-1 Line Item Number / Title: 5397AZ3517 / CMWS						Item Number / Title [DODIC]: AZ3517 / CMWS					

ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:							
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Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
JUONS SO-0010 Systems Engineering	-	-	0.404	-	-	2.780	-	-	2.733	-	-	-	-	-	2.733	-	-	2.733
JUONS SO-0010 Program Management	-	-	0.494	-	-	2.280	-	-	2.237	-	-	-	-	-	2.237	-	-	2.237
JUONS SO-0010 Systems Test & Evaluation	-	-	4.783	-	-	7.755	-	-	-	-	-	-	-	-	-	-	-	-
JUONS SO-0010 Fielding	-	-	3.500	-	-	18.750	-	-	6.500	-	-	-	-	-	6.500	-	-	6.500
JUONS SO-0010 Software	-	-	-	-	-	-	-	-	5.000	-	-	-	-	-	5.000	-	-	5.000
Phase 3 ATW & CIRC M QRC ATW B-Kit Procurement ^(f)	-	-	-	-	-	-	1,118.157	108	120.761	-	-	-	-	-	-	-	-	-
ATW & CIRC M QRC PCMCIA Cards Procurement	-	-	-	-	-	-	1.075	400	0.430	-	-	-	-	-	-	-	-	-
ATW & CIRC M QRC MEONS Procurement	-	-	-	-	-	-	147.000	10	1.470	-	-	-	-	-	-	-	-	-
ATW & CIRC M QRC Systems Engineering	-	-	-	-	-	-	-	-	0.336	-	-	-	-	-	-	-	-	-
ATW & CIRC M QRC Program Management	-	-	-	-	-	-	-	-	0.275	-	-	-	-	-	1.120	-	-	1.120
ATW & CIRC A-Kit Installation	-	-	-	-	-	-	-	-	-	-	-	-	66.370	135	8.960	66.370	135	8.960
ATW & CIRC M QRC ST&E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.120	-	-	1.120
LIMWS A-Kit Procurement ^(f)	-	-	-	-	-	-	-	-	-	-	-	-	291.323	31	9.031	291.323	31	9.031
Systems Engineering Program Management	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.721	-	-	1.721
Phase 4 LIMWS QRC B-Kit Procurement ^(f)	-	-	-	-	-	-	-	-	-	-	-	-	1,313.286	35	45.965	1,313.286	35	45.965
Subtotal: Recurring Cost	-	-	602.953	-	-	91.455	-	-	160.607	-	-	12.097	-	-	84.387	-	-	96.484
Non Recurring Cost																		
CMWS Other Modifications (5th Sensor and P3I)	-	-	2.073	-	-	0.617	-	-	2.155	-	-	-	-	-	-	-	-	-
CMWS Other Procurement	-	-	3.176	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 5397AZ3517 / CMWS	Item Number / Title [DODIC]: AZ3517 / CMWS
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Non Recurring Cost</i>	-	-	5.249	-	-	0.617	-	-	2.155	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware Cost</i>	-	-	608.202	-	-	92.072	-	-	162.762	-	-	12.097	-	-	84.387	-	-	96.484
Support - Fielding Cost																		
Fielding	-	-	24.915	-	-	5.169	-	-	1.713	-	-	1.203	-	-	-	-	-	1.203
<i>Subtotal: Support - Fielding Cost</i>	-	-	24.915	-	-	5.169	-	-	1.713	-	-	1.203	-	-	-	-	-	1.203
Support - Training Cost																		
Equipment	-	-	5.615	-	-	0.500	-	-	2.092	-	-	0.196	-	-	-	-	-	0.196
<i>Subtotal: Support - Training Cost</i>	-	-	5.615	-	-	0.500	-	-	2.092	-	-	0.196	-	-	-	-	-	0.196
Gross/Weapon System Cost	-	-	638.732	-	-	97.741	1,542.287	-	166.567	-	-	13.496	-	-	84.387	-	-	97.883

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	97.741	166.567	13.496	84.387	97.883
Total:	Quantity	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	97.741	166.567	13.496	84.387	97.883

(t) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 5397AZ3517 / CMWS	Item Number / Title [DODIC]: AZ3517 / CMWS
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
CMWS Gen 3 ECU Hardware		2014	BAE Systems / Nashua, NH	SS / FFP	AMCOM Contracting Command, RSA	May 2014	Feb 2015	216	159.000			
Phase 3 ATW & CIRCM QRC ATW B-Kit Procurement		2018	Northrop Grumman / Rolling Meadows, IL	SS / FFP	AMCOM Contracting Command, RSA	Dec 2017	Dec 2018	108	1,118.160			
LIMWS A-Kit Procurement ^(†)	✓	2019	TBD / TBD	C / FFP	AMCOM Contracting Command, RSA	Dec 2018	May 2019	31	291.320			
Phase 4 LIMWS QRC B-Kit Procurement ^(†)	✓	2019	TBD / TBD	C / FFP	AMCOM Contracting Command, RSA	Mar 2019	Mar 2020	35	1,313.290			

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 5397AZ3517 / CMWS	Item Number / Title [DODIC]: AZ3517 / CMWS
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2014												Fiscal Year 2015												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2013	BAL DUE AS OF 1 OCT	Calendar Year 2014												Calendar Year 2015												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
LIMWS A-Kit Procurement																														31	
✓	1	2019	ARMY	31	0	31																									31
Phase 4 LIMWS QRC B-Kit Procurement																														35	
✓	2	2019	ARMY	35	0	35																									35
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P		

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Exhibit P-21, Production Schedule: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 5397AZ3517 / CMWS	Item Number / Title [DODIC]: AZ3517 / CMWS
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2016												Fiscal Year 2017												B A L A N C E	
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016												Calendar Year 2017												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
LIMWS A-Kit Procurement																															
✓	1	2019	ARMY	31	0	31																							31		
Phase 4 LIMWS QRC B-Kit Procurement																															
✓	2	2019	ARMY	35	0	35																							35		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10 **P-1 Line Item Number / Title:** 5397AZ3517 / CMWS **Item Number / Title [DODIC]:** AZ3517 / CMWS

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2018														Fiscal Year 2019										BALANCE										
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018														Calendar Year 2019																			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P									
LIMWS A-Kit Procurement																																								
✓	1	2019	ARMY	31	0	31																							A -	-	-	-	-	5	5	5	5	5	5	6
Phase 4 LIMWS QRC B-Kit Procurement																																								
✓	2	2019	ARMY	35	0	35																							A -	-	-	-	-	-	-	-	-	-	-	35
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P										

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Exhibit P-21, Production Schedule: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 5397AZ3517 / CMWS	Item Number / Title [DODIC]: AZ3517 / CMWS
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2020												Fiscal Year 2021												BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020												Calendar Year 2021												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
LIMWS A-Kit Procurement																															
✓	1	2019	ARMY	31	25	6	5	1																					0		
Phase 4 LIMWS QRC B-Kit Procurement																															
✓	2	2019	ARMY	35	0	35	-	-	-	-	-	10	10	10	5														0		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 5397AZ3517 / CMWS	Item Number / Title [DODIC]: AZ3517 / CMWS
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)								
		MSR For 2019	1-8-5 For 2019	MAX For 2019	Initial				Reorder				
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	
1	TBD - TBD	1	5	240	0	0	0	0	0	0	0	0	0
2	TBD - TBD	1	5	240	0	0	0	0	0	0	0	0	0

Remarks:
LIMWS: Competitive Contract was awarded December 2017.

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity:
2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 10: Ground Support Avionics

P-1 Line Item Number / Title:
5399AZ3537 / Common Infrared Countermeasures (CIRCM)

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	108.721	49.777	36.839	24.060	60.899	112.473	118.623	147.972	166.900	-	765.365
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	108.721	49.777	36.839	24.060	60.899	112.473	118.623	147.972	166.900	-	765.365
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	108.721	49.777	36.839	24.060	60.899	112.473	118.623	147.972	166.900	-	765.365

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	1,411.961	1,659.233	1,534.958	1,503.750	1,522.475	2,343.188	2,471.313	3,082.750	2,781.667	-	2,180.527

Description:

Army Procurement Objective (APO) = 1,076 (B-Kits only)

The Common Infrared Countermeasure (CIRCM) budget line includes 1) CIRCM (AZ3537), 2) funding to counter emerging technology as identified in Joint Urgent Operational Needs Statement (JUONS) SO-0010 Phase 2a and the Headquarters Department of the Army (HQDA) Directed Requirement for the Advanced Threat Warner Common Infrared Countermeasures Quick Reaction Capability (ATW & CIRCM QRC), and 3) funding to support HQDA Directed Requirement for the Limited Interim Missile Warning System (LIMWS) Quick Reaction Capability (QRC).

CIRCM (AZ3537)

The Common Infrared Countermeasure (CIRCM) is the next generation lightweight, laser-based Infrared Countermeasure (IRCM) component that will interface with both the Army's Common Missile Warning System (CMWS) and future missile warning systems (MWS) to defeat current and emerging missile threats that use multispectral technology for rotary-wing, tilt-rotor and small fixed-wing aircraft across the DoD. CIRCM receives an angular bearing hand-off from the MWS, employs a pointing and tracking system which acquires the handed-over threat and tracks the incoming missile during and after motor burnout. CIRCM jams the missile by using modulated laser energy in the missile seeker band, thus degrading the tracking capability of the missile and causing it to miss the aircraft. CIRCM is utilizing Open Systems Architecture which allows flexibility with software and hardware refreshes to keep pace with future threats.

The CIRCM A-Kit includes mounting hardware, wiring harnesses, 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.

JUONS SO-0010 and ATW & CIRCM QRC

Phase 2a DoN LAIRCM (JUONS S0-0010) and Phase 3 ATW & CIRCM QRC: Initially, a select number of aircraft in the threat area of responsibility will be outfitted with the Phase 2a Department of the Navy Large Aircraft Infrared Countermeasure (DoN LAIRCM) system. However, this approach came with a Space, Weight and Power - Cooling (SWaP-C) penalty which is being addressed as a follow-on JUONS solution requirement using the Phase 3 Advanced Threat Warner (ATW) and Common Infrared Countermeasure (CIRCM) Quick Reaction Capability (QRC). The intent of the Phase 3 ATW & CIRCM QRC effort is to reduce the SWaP-C associated with the Phase 2a solution.

LIMWS QRC

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 10: Ground Support Avionics	P-1 Line Item Number / Title: 5399AZ3537 / Common Infrared Countermeasures (CIRCM)
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Phase 4 Limited Interim Missile Warning System (LIMWS) QRC: The Phase 4 LIMWS QRC effort is a follow-on bridging solution to the JUONS SO-0010 to fill a global capability gap until the Advanced Threat Detection System (ATDS) Program of Record is fielded. The LIMWS QRC effort provides advance missile detection capability to an increased number of aircraft outside of the Phase 2a and Phase 3 efforts areas of responsibility.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	108.721	49.777	36.839	24.060	60.899	112.473	118.623	147.972	166.900
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	108.721	49.777	36.839	24.060	60.899	112.473	118.623	147.972	166.900

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 10: Ground Support Avionics
P-1 Line Item Number / Title: 5399AZ3537 / Common Infrared Countermeasures (CIRCM)

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	AZ3537 / Common Infrared Countermeasures (CIRCM)	P-5a, P-21			- / -	- / 108.721	- / 49.777	- / 36.839	- / 24.060	- / 60.899
P-40	Total Gross/Weapon System Cost				- / -	- / 108.721	- / 49.777	- / 36.839	- / 24.060	- / 60.899

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

FY 2019 Base procurement dollars in the amount of \$36.839 million will fund CIRCM PoR Low Rate Initial Production Two (LRIP 2).

FY 2019 OCO procurement dollars in the amount of \$10.950 million will fund A-Kit installations for Phase 3 ATW & CIRCM QRC effort.

FY 2019 OCO procurement dollars in the amount of \$13.110 million will fund a quantity of 9 CIRCM B-Kits and 30 CIRCM A-Kits in support of Phase 4 LIMWS QRC installation and fielding plan.

In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

All COMPO 1 Active

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Exhibit P-5, Cost Analysis: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 5399AZ3537 / Common Infrared Countermeasures (CIRCM)	Item Number / Title [DODIC]: AZ3537 / Common Infrared Countermeasures (CIRCM)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	-	108.721	49.777	36.839	24.060	60.899
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	108.721	49.777	36.839	24.060	60.899
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	-	108.721	49.777	36.839	24.060	60.899

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	1,411.961	1,659.233	1,534.958	1,503.750	1,522.475

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
B-Kit Manufacturing ^(†)	-	-	-	-	-	-	-	-	-	485.833	24	11.660	-	-	-	485.833	24	11.660
Other Recurring Production	-	-	-	-	-	-	-	-	0.910	-	-	0.990	-	-	-	-	-	0.990
Low Rate Initial Production Two	-	-	-	-	-	-	-	-	-	-	-	14.592	-	-	-	-	-	14.592
Phase 3 ATW & CIRCM QRC B-Kit Manufacturing ^(†)	-	-	-	1,200.169	77	92.413	1,200.000	30	36.000	-	-	-	-	-	-	-	-	-
ATW & CIRCM QRC A-Kit Installs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.855	-	-	9.855
ATW & CIRCM QRC SEPM	-	-	-	-	-	8.154	-	-	7.440	-	-	-	-	-	1.095	-	-	1.095
ATW & CIRCM QRC Training	-	-	-	-	-	2.718	-	-	-	-	-	-	-	-	-	-	-	-
ATW & CIRCM QRC Fielding	-	-	-	-	-	5.436	-	-	-	-	-	-	-	-	-	-	-	-
B-Kit Manufacturing to Support Phase 4 LIMWS QRC ^(†)	-	-	-	-	-	-	-	-	-	-	-	-	1,041.111	9	9.370	1,041.111	9	9.370
A-Kit Manufacturing to Support Phase 4 LIMWS QRC ^(†)	-	-	-	-	-	-	-	-	-	-	-	-	124.667	30	3.740	124.667	30	3.740

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Exhibit P-5, Cost Analysis: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 5399AZ3537 / Common Infrared Countermeasures (CIRCM)	Item Number / Title [DODIC]: AZ3537 / Common Infrared Countermeasures (CIRCM)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	108.721	-	-	44.350	-	-	27.242	-	-	24.060	-	-	51.302
<i>Subtotal: Flyaway Cost</i>	-	-	-	-	-	108.721	-	-	44.350	-	-	27.242	-	-	24.060	-	-	51.302
Support - Data Cost																		
Technical Publications	-	-	-	-	-	-	-	-	0.080	-	-	0.580	-	-	-	-	-	0.580
<i>Subtotal: Support - Data Cost</i>	-	-	-	-	-	-	-	-	0.080	-	-	0.580	-	-	-	-	-	0.580
Support - Engineering Change Proposals Cost																		
Engineering Change Proposals	-	-	-	-	-	-	-	-	1.390	-	-	1.890	-	-	-	-	-	1.890
<i>Subtotal: Support - Engineering Change Proposals Cost</i>	-	-	-	-	-	-	-	-	1.390	-	-	1.890	-	-	-	-	-	1.890
Support - Fielding Cost																		
Fielding	-	-	-	-	-	-	-	-	2.077	-	-	1.087	-	-	-	-	-	1.087
<i>Subtotal: Support - Fielding Cost</i>	-	-	-	-	-	-	-	-	2.077	-	-	1.087	-	-	-	-	-	1.087
Support - Peculiar Support Equipment Cost																		
Test and Measurement Equipment	-	-	-	-	-	-	-	-	0.050	-	-	0.100	-	-	-	-	-	0.100
<i>Subtotal: Support - Peculiar Support Equipment Cost</i>	-	-	-	-	-	-	-	-	0.050	-	-	0.100	-	-	-	-	-	0.100
Support - System Engineering Cost																		
System Engineering	-	-	-	-	-	-	-	-	0.460	-	-	2.000	-	-	-	-	-	2.000
<i>Subtotal: Support - System Engineering Cost</i>	-	-	-	-	-	-	-	-	0.460	-	-	2.000	-	-	-	-	-	2.000
Support - Training Cost																		
Services	-	-	-	-	-	-	-	-	1.370	-	-	3.940	-	-	-	-	-	3.940
<i>Subtotal: Support - Training Cost</i>	-	-	-	-	-	-	-	-	1.370	-	-	3.940	-	-	-	-	-	3.940
Gross/Weapon System Cost	-	-	-	1,411.961	-	108.721	1,659.233	-	49.777	1,534.958	-	36.839	1,503.750	-	24.060	1,522.475	-	60.899

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	108.721	49.777	36.839	24.060	60.899
Total:	Quantity	-	-	-	-	-

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Exhibit P-5, Cost Analysis: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 5399AZ3537 / Common Infrared Countermeasures (CIRCM)	Item Number / Title [DODIC]: AZ3537 / Common Infrared Countermeasures (CIRCM)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Secondary Distribution	Total Obligation Authority	108.721	49.777	36.839	24.060	60.899

(t) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2019 Army							Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10			P-1 Line Item Number / Title: 5399AZ3537 / Common Infrared Countermeasures (CIRCM)				Item Number / Title [DODIC]: AZ3537 / Common Infrared Countermeasures (CIRCM)					

Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
B-Kit Manufacturing ^(†)		2019	Northrop Grumman Systems Corp / Rolling Meadows	C / FPIF	HQ ACC, Redstone Arsenal, AL	Jun 2019	Oct 2019	24	485.830			
Phase 3 ATW & CIRCM QRC B-Kit Manufacturing		2017	Northrop Grumman Systems Corp / Rolling Meadows	C / FFP	HQ ACC, Redstone Arsenal, AL	Oct 2017	Dec 2018	77	1,200.170			
Phase 3 ATW & CIRCM QRC B-Kit Manufacturing		2018	Northrop Grumman Systems Corp / Rolling Meadows	C / FFP	HQ ACC, Redstone Arsenal, AL	Jan 2018	Mar 2019	30	1,200.000			
B-Kit Manufacturing to Support Phase 4 LIMWS QRC ^(†)	✓	2019	TBD / TBD	C / FPIF	HQ ACC, Redstone Arsenal, AL	Mar 2019	May 2020	9	1,041.110			
A-Kit Manufacturing to Support Phase 4 LIMWS QRC	✓	2019	TBD / TBD	C / FPIF	HQ ACC, Redstone Arsenal, AL	Mar 2019	Mar 2020	30	124.670			

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2019 Army																							Date: February 2018																									
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10										P-1 Line Item Number / Title: 5399AZ3537 / Common Infrared Countermeasures (CIRCM)										Item Number / Title [DODIC]: AZ3537 / Common Infrared Countermeasures (CIRCM)																												
Cost Elements <i>(Units in Each)</i>						Fiscal Year 2018													Fiscal Year 2019													B A L A N C E																
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018													Calendar Year 2019																												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P																		
B-Kit Manufacturing																							A	-	-	-	-	24																				
B-Kit Manufacturing to Support Phase 4 LIMWS QRC																							A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
✓	2	2019	ARMY	9	0	9	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P																		

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Exhibit P-21, Production Schedule: PB 2019 Army															Date: February 2018														
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10										P-1 Line Item Number / Title: 5399AZ3537 / Common Infrared Countermeasures (CIRCM)										Item Number / Title [DODIC]: AZ3537 / Common Infrared Countermeasures (CIRCM)									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2020												Fiscal Year 2021												B A L A N C E	
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020												Calendar Year 2021												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
B-Kit Manufacturing																															
	1	2019	ARMY	24	0	24	12	-	-	-	-	-	-	12																0	
B-Kit Manufacturing to Support Phase 4 LIMWS QRC																															
✓	2	2019	ARMY	9	0	9	-	-	-	-	-	-	-	-	9															0	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10		P-1 Line Item Number / Title: 5399AZ3537 / Common Infrared Countermeasures (CIRCM)
		Item Number / Title [DODIC]: AZ3537 / Common Infrared Countermeasures (CIRCM)

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2019	1-8-5 For 2019	MAX For 2019	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Northrop Grumman Systems Corp - Rolling Meadows	5	15	25	0	10	0	10	0	0	0	0
2	TBD - TBD	3	10	15	0	0	0	0	0	0	0	0

Remarks:
Competitive contract award for LIMWS was awarded in December 2017. Production rates are TBD.

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 30: Other Support
P-1 Line Item Number / Title: 0832AZ3000 / Avionics Support Equipment

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	525.952	6.217	7.038	1.778	-	1.778	1.778	1.792	1.841	-	-	546.396
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	525.952	6.217	7.038	1.778	-	1.778	1.778	1.792	1.841	-	-	546.396
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	525.952	6.217	7.038	1.778	-	1.778	1.778	1.792	1.841	-	-	546.396

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	312.323	9.010	8.809	13.170	-	13.170	13.368	13.576	13.537	-	-	147.316

Description:

The Aviator's Night Vision Imaging System (ANVIS), supports the Army's objectives by permitting superior tactical mobility of rotary wing aircraft during darkness and low light conditions. ANVIS also supports Fixed Wing Lift permitting loading/unloading and flight during darkness and low light conditions. ANVIS is a binocular, helmet-mounted system for Aviation crew members. ANVIS is a night vision goggle that significantly expands the input dynamic range to support operations in conditions that vary from below starlight illumination levels through strong urban lighting situations. The increased capability of ANVIS yields enhanced mission performance and improved safety of flight, compared to what is now possible using previous ANVIS systems. ANVIS enhances the survivability, lethality, and tactical mobility for aviators.

The Army Acquisition Objective (AAO) for this program is 16,686.

Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	6.217	7.038	1.778	-	1.778	1.778	1.792	1.841	-
Total:									
Secondary Distribution									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	6.217	7.038	1.778	-	1.778	1.778	1.792	1.841	-

Justification:

FY 2019 Base procurement dollars in the amount of \$1.793 million supports the procurement of 76 AN/AVS-6(V)3 systems for fielding to Active Units.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity:
 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 30: Other Support

P-1 Line Item Number / Title:
 5212AZ3100 / Common Ground Equipment

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0603801A, 0605830A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,183.789	48.234	47.404	34.818	-	34.818	34.543	31.720	32.652	33.360	-	1,446.520
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,183.789	48.234	47.404	34.818	-	34.818	34.543	31.720	32.652	33.360	-	1,446.520
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,183.789	48.234	47.404	34.818	-	34.818	34.543	31.720	32.652	33.360	-	1,446.520

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	185.431	75.840	44.303	182.293	-	182.293	124.704	93.021	99.853	215.226	-	154.197

Description:

Aviation Ground Support Equipment (AGSE) acquires, fields, and modernizes aviation equipment within cost, schedule, and performance parameters, allowing Army Aviation Soldiers to carry out peacetime and wartime missions. AGSE provides life cycle systems management for Aviation Ground Power Unit (AGPU), Aviation Light Utility Mobile Maintenance Cart (ALUMMC), Tool Set, Aviation Unit Maintenance (formerly Aviation Unit Maintenance Tool Sets), Modernized Maintenance Stands (MMS), Common Aviation Tool System (CATS), Flexible Engine Diagnostic System (FEDS), Self-propelled Crane Aircraft Maintenance and Positioning Increment II (SCAMP II) Type 2 (Expeditionary Variant), Unit Maintenance Aerial Recovery Kit (UMARK), and Non-Destructive Test Equipment (NDTE). AGSE is critical to achieving operational readiness requirements of Army Aviation Units.

This exhibit is for a budget line that procures multiple items and does not have a single Army Acquisition Objective.

Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	26.620	20.481	14.040	-	14.040	13.896	12.946	15.442	33.360
ANG									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	20.067	25.023	19.266	-	19.266	19.149	17.518	15.989	-
AR									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	1.547	1.900	1.512	-	1.512	1.498	1.256	1.221	-
Total: Secondary Distribution									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	48.234	47.404	34.818	-	34.818	34.543	31.720	32.652	33.360

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 30: Other Support **P-1 Line Item Number / Title:** 5212AZ3100 / Common Ground Equipment

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0603801A, 0605830A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	AZ3520 / AVIATION GROUND SUPPORT EQUIPMENT				- / 1,183.789	- / 48.234	- / 47.404	- / 34.818	- / -	- / 34.818
P-40	Total Gross/Weapon System Cost				- / 1,183.789	- / 48.234	- / 47.404	- / 34.818	- / -	- / 34.818

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

FY 2019 Base procurement dollars in the amount of \$13.479 million procures and fields the Self-propelled Crane Aircraft Maintenance and Positioning Increment II, Type 2 (Expeditionary Variant).

FY 2019 Base procurement dollars in the amount of \$17.238 million procures and installs MWO kits for the Tool Set, Aviation Unit Maintenance.

FY 2019 Base procurement dollars in the amount of \$2.514 million procures and fields the Modernized Maintenance Stands.

FY 2019 Base procurement dollars in the amount of \$0.720 million fields the Common Aviation Tool System.

FY 2019 Base procurement dollars in the amount of \$0.867 million fields the Aviation Light Utility Mobile Maintenance Cart.

In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses and providing military support to civil authorities.

UNCLASSIFIED

Exhibit P-5, Cost Analysis: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 30	P-1 Line Item Number / Title: 5212AZ3100 / Common Ground Equipment	Item Number / Title [DODIC]: AZ3520 / AVIATION GROUND SUPPORT EQUIPMENT

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	1,183.789	48.234	47.404	34.818	-	34.818
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	1,183.789	48.234	47.404	34.818	-	34.818
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	1,183.789	48.234	47.404	34.818	-	34.818

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	185.431	75.840	44.303	182.293	-	182.293

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
Aviation Ground Power Unit	124.452	8,246	1,026.232	-	-	0.252	-	-	-	-	-	-	-	-	-	-	-	-
Avn Light Utility Mobile Maint	40.045	708	28.352	49.931	392	19.573	40.625	24	0.975	-	-	0.867	-	-	-	-	-	0.867
Modernized Maintenance Stands	-	-	5.827	-	-	-	34.515	97	3.348	7.329	343	2.514	-	-	-	7.329	343	2.514
Common Aviation Tool System	1.838	18,757	34.482	-	-	13.222	-	-	6.908	-	-	0.720	-	-	-	-	-	0.720
Flexible Engine Diagnostics Sys	26,501.500	2	53.003	-	-	14.182	-	-	14.941	-	-	-	-	-	-	-	-	-
SCAMP II Expeditionary Type 2	-	-	-	-	-	-	147.167	96	14.128	140.406	96	13.479	-	-	-	140.406	96	13.479
Unit Maint Aerial Recovery Kit	-	-	14.081	-	-	0.503	-	-	0.031	-	-	-	-	-	-	-	-	-
Non-Destructive Test Equipment	-	-	17.629	-	-	0.502	-	-	-	-	-	-	-	-	-	-	-	-
Tool Set, Aviation Unit Maintenance	-	-	1.879	-	-	-	-	-	4.766	-	-	17.238	-	-	-	-	-	17.238
<i>Subtotal: Recurring Cost</i>	-	-	<i>1,181.477</i>	-	-	<i>48.234</i>	-	-	<i>45.097</i>	-	-	<i>34.818</i>	-	-	-	-	-	<i>34.818</i>
<i>Subtotal: Flyaway Cost</i>	-	-	<i>1,181.477</i>	-	-	<i>48.234</i>	-	-	<i>45.097</i>	-	-	<i>34.818</i>	-	-	-	-	-	<i>34.818</i>

Support - Program Management Cost

UNCLASSIFIED

Exhibit P-5, Cost Analysis: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 30	P-1 Line Item Number / Title: 5212AZ3100 / Common Ground Equipment	Item Number / Title [DODIC]: AZ3520 / AVIATION GROUND SUPPORT EQUIPMENT

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Government Management	-	-	2.307	-	-	-	-	-	2.307	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Program Management Cost</i>	-	-	2.307	-	-	-	-	-	2.307	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	185.431	-	1,183.789	75.840	-	48.234	44.303	-	47.404	182.293	-	34.818	-	-	-	182.293	-	34.818

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	26.620	20.481	14.040	-	14.040
ANG	Quantity	-	-	-	-	-
	Total Obligation Authority	20.067	25.023	19.266	-	19.266
AR	Quantity	-	-	-	-	-
	Total Obligation Authority	1.547	1.900	1.512	-	1.512
Total: Secondary Distribution	Quantity	-	-	-	-	-
	Total Obligation Authority	48.234	47.404	34.818	-	34.818

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity:
2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 30: Other Support

P-1 Line Item Number / Title:
6380AZ3110 / Aircrew Integrated Systems

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0603827A, 0604601A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	780.488	30.297	47.066	27.243	-	27.243	25.198	23.147	32.096	34.788	-	1,000.323
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	780.488	30.297	47.066	27.243	-	27.243	25.198	23.147	32.096	34.788	-	1,000.323
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	780.488	30.297	47.066	27.243	-	27.243	25.198	23.147	32.096	34.788	-	1,000.323

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	258.098	39.552	63.431	50.357	-	50.357	46.150	39.500	53.227	57.980	-	135.033

Description:

Aircrew Integrated Systems funds Air Warrior and Air Soldier System Aviation Life Support Equipment efforts. The Air Warrior (AW) is the legacy Aviation Life Support Equipment system that provides Army rotary wing aircrews with protective mission and survival equipment. The AW consists of Clothing and Individual Equipment and mission electronics integrated with the aircraft that enable the crew member to successfully perform the mission as well as protect, sustain, and assist in the safe return to friendly forces in the event of a downed aircraft scenario. The Air Soldier System (Air SS) is the phased replacement of the AW that addresses AW capability gaps, including inadequate cockpit compatibility due to the bulk of aircrew-worn protective equipment; lack of modern Situational Awareness tools available to the aviator; and soldier load. Air SS integrates with the aircraft platform and consists of modernized mission electronics, flight helmets, helmet-mounted displays and symbology, and provides improved protective clothing and individual survival equipment. The Air SS reduces soldier load by reducing the bulk and weight of the protective equipment worn by the crewmember, and enhances aircrew Situational Awareness and safety with a Computer Display System and improved helmet mounted displays/Electronic Flight Bag (EFB) that reduce cockpit workload and provide enhanced flight symbology for UH-60 and CH-47 crewmembers.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	10.301	27.298	16.121	-	16.121	13.431	12.182	19.134	34.788
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	19.996	19.768	11.122	-	11.122	11.767	10.965	12.962	-
Total:	Quantity	-	-	-	-	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	30.297	47.066	27.243	-	27.243	25.198	23.147	32.096	34.788

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 30: Other Support **P-1 Line Item Number / Title:** 6380AZ3110 / Aircrew Integrated Systems

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0603827A, 0604601A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	AZ3110 / Aircrew Integrated Systems	P-5a, P-21			- / 780.488	- / 30.297	- / 47.066	- / 27.243	- / -	- / 27.243
P-40	Total Gross/Weapon System Cost				- / 780.488	- / 30.297	- / 47.066	- / 27.243	- / -	- / 27.243

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY2019 Base procurement dollars in the amount of \$27.243 million supports Engineering Changes to Air Warrior components that support Air Soldier System requirements, and production and fielding of Air SS capability consisting of improved flight helmets; a Computer and Display System for UH-60L aviators that provides digital moving map/situational awareness and Blue Force Tracking capability; improved lightweight body armor; improved environmental protective clothing and personal survival equipment; a day/night helmet-mounted display for UH-60 and CH-47 aviators; and the Electronic Flight Bag (EFB), a digital replacement for paper DoD Flight Information Publications and aircraft publications. These capabilities reduce Soldier load and enhance their Situational Awareness, Safety, and Survivability. Funds also procure Air Soldier platform-mounted components necessary for airframe interface with the Air Soldier; and installation of airframe integration kits.

Funding procures equipment and materiel to support a balanced investment strategy in support of the Army Acquisition Objective.

In accordance with section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses and providing military support to civil authorities.

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Exhibit P-5, Cost Analysis: PB 2019 Army					Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 30			P-1 Line Item Number / Title: 6380AZ3110 / Aircrew Integrated Systems			Item Number / Title [DODIC]: AZ3110 / Aircrew Integrated Systems			
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:					
Resource Summary				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Procurement Quantity (Units in Each)				-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)				780.488	30.297	47.066	27.243	-	27.243
Less PY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)				780.488	30.297	47.066	27.243	-	27.243
Plus CY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)				780.488	30.297	47.066	27.243	-	27.243
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>									
Initial Spares (\$ in Millions)				-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)				258.098	39.552	63.431	50.357	-	50.357

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
Air Warrior ECPs Supporting Air SS Rqmts	-	-	15.526	-	-	1.329	-	-	1.343	-	-	-	-	-	-	-	-	-
Air SS Soldier Kits	7.370	3,802	28.021	1.920	766	1.471	1.934	2,568	4.967	4.300	700	3.010	-	-	-	4.300	700	3.010
Air SS Airframe Kits ^(†)	64.257	521	33.478	117.277	137	16.067	218.000	86	18.748	218.000	78	17.004	-	-	-	218.000	78	17.004
Airframe Kit Install	-	-	8.015	-	-	0.946	-	-	3.845	-	-	0.989	-	-	-	-	-	0.989
Manual	-	-	14.321	-	-	-	-	-	0.379	-	-	-	-	-	-	-	-	-
New Equipment Training	-	-	3.176	-	-	0.357	-	-	1.873	-	-	0.357	-	-	-	-	-	0.357
Initial Spares	-	-	9.561	-	-	0.804	-	-	1.880	-	-	0.804	-	-	-	-	-	0.804
Support Equipment	-	-	8.758	-	-	0.149	-	-	0.738	-	-	0.149	-	-	-	-	-	0.149
Systems Test and Evaluation	-	-	15.661	-	-	0.298	-	-	0.433	-	-	0.298	-	-	-	-	-	0.298
Nonrecurring Engineering (NRE)	-	-	33.091	-	-	0.362	-	-	0.556	-	-	0.362	-	-	-	-	-	0.362
Engineering Changes	-	-	7.251	-	-	1.633	-	-	3.176	-	-	1.177	-	-	-	-	-	1.177
Systems Integration Engineering	-	-	6.621	-	-	0.383	-	-	0.528	-	-	0.383	-	-	-	-	-	0.383
Program Management & Matrix Support	-	-	26.812	-	-	5.601	-	-	5.987	-	-	2.246	-	-	-	-	-	2.246
Total Package Fielding	-	-	2.217	-	-	0.109	-	-	0.723	-	-	0.109	-	-	-	-	-	0.109

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Exhibit P-5, Cost Analysis: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 30		P-1 Line Item Number / Title: 6380AZ3110 / Aircrew Integrated Systems
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Contract Logistics Support	-	-	3.278	-	-	0.788	-	-	1.890	-	-	0.355	-	-	-	-	-	0.355
<i>Subtotal: Recurring Cost</i>	-	-	215.787	-	-	30.297	-	-	47.066	-	-	27.243	-	-	-	-	-	27.243
<i>Subtotal: Flyaway Cost</i>	-	-	215.787	-	-	30.297	-	-	47.066	-	-	27.243	-	-	-	-	-	27.243
Space Vehicle Cost																		
Recurring Cost																		
*** FIX ME ***	-	-	564.701	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	564.701	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Space Vehicle Cost</i>	-	-	564.701	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	258.098	-	780.488	39.552	-	30.297	63.431	-	47.066	50.357	-	27.243	-	-	-	50.357	-	27.243

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	10.301	27.298	16.121	-	16.121
ANG	Quantity	-	-	-	-	-
	Total Obligation Authority	19.996	19.768	11.122	-	11.122
Total: Secondary Distribution	Quantity	-	-	-	-	-
	Total Obligation Authority	30.297	47.066	27.243	-	27.243

(t) indicates the presence of a P-5a

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 30	P-1 Line Item Number / Title: 6380AZ3110 / Aircrew Integrated Systems	Item Number / Title [DODIC]: AZ3110 / Aircrew Integrated Systems
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
Air SS Airframe Kits ^(†)		2015	Various / Various	C / FFP	Redstone Arsenal, AL	Aug 2015	Mar 2016	168	62.667	Y		
Air SS Airframe Kits ^(†)		2016	Various / Various	C / FFP	Redstone Arsenal, AL	Mar 2016	Sep 2016	217	62.728	Y		
Air SS Airframe Kits ^(†)		2017	Various / Various	C / FFP	Redstone Arsenal, AL	Jan 2017	Jul 2017	137	117.277	Y		
Air SS Airframe Kits ^(†)		2018	Various / Various	C / FFP	Redstone Arsenal, AL	Jan 2018	Jul 2018	86	218.000	N		
Air SS Airframe Kits ^(†)		2019	Various / Various	C / FFP	Redstone Arsenal, AL	Jan 2019	Jul 2019	78	218.000	N		

^(†) indicates the presence of a P-21

Remarks:

Unit Cost changes across the years reflect the different mix of subsystem components procured each year. The FY17 unit costs were adjusted to realign the cost of the Head Tracker device from the Air SS Soldier Kit to the Air SS Airframe Kit.

Please note: the FY17 unit cost adjustments also apply to the unit cost reflected on the P-5.

Unit Cost in FY18 is greater than FY17 Unit Cost for Air Soldier System Airframe Kits due to the cost of additional kit components (Embedded GPS Inertial Navigation System and the Computer Display System) unique to the UH-60L aircraft platform.

Unit cost is greater in FY19 than in FY18 for the Air SS Soldier Kit due to the addition of pre-planned technology insertions/updates to that were not available in the prior year. When comparing the cost of the FY18 and FY 19 Air Soldier Kit, the cost of the common items has remained stable (no increase in price). The increased cost is purely due to the addition of the pre-planned technology insertions/upgrades.

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Exhibit P-21, Production Schedule: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 30 **P-1 Line Item Number / Title:** 6380AZ3110 / Aircrew Integrated Systems **Item Number / Title [DODIC]:** AZ3110 / Aircrew Integrated Systems

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2015												Fiscal Year 2016												B A L A N C E														
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	Calendar Year 2015												Calendar Year 2016																									
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P													
Air SS Airframe Kits																																												
Prior Years Deliveries: 136																																												
1		2015	ARMY	168	0	168																							A -	-	-	-	-	-	-	-	14	15	15	15	17	18	18	56
1		2016	ARMY	217	0	217																							A -	-	-	-	-	-	-	-	-	-	-	-	-	-	20	197
1		2017	ARMY	137	0	137																																						137
1		2018	ARMY	86	0	86																																						86
1		2019	ARMY	78	0	78																																						78
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P														

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Exhibit P-21, Production Schedule: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 30 **P-1 Line Item Number / Title:** 6380AZ3110 / Aircrew Integrated Systems **Item Number / Title [DODIC]:** AZ3110 / Aircrew Integrated Systems

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2017												Fiscal Year 2018												BALANCE		
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017												Calendar Year 2018												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L		A U G	S E P
Air SS Airframe Kits																															
Prior Years Deliveries: 136																															
1		2015	ARMY	168	112	56	18	18	20																				0		
1		2016	ARMY	217	20	197	20	20	20	20	20	20	20	20	17														0		
1		2017	ARMY	137	0	137				A	-	-	-	-	-	12	12	12	12	12	12	12	12	12	12	12	5		0		
1		2018	ARMY	86	0	86															A	-	-	-	-	-	-	7	7	8	64
1		2019	ARMY	78	0	78																							78		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 30 **P-1 Line Item Number / Title:** 6380AZ3110 / Aircrew Integrated Systems **Item Number / Title [DODIC]:** AZ3110 / Aircrew Integrated Systems

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2019													Fiscal Year 2020													BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019													Calendar Year 2020													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
Air SS Airframe Kits																																	
Prior Years Deliveries: 136																																	
1		2015	ARMY	168	168	0																							0				
1		2016	ARMY	217	217	0																							0				
1		2017	ARMY	137	137	0																							0				
1		2018	ARMY	86	22	64	8	8	8	8	8	8	8																0				
1		2019	ARMY	78	0	78					A	-	-	-	-	-	-	6	6	6	6	6	6	6	7	7	7	7	7	0			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2019 Army								Date: February 2018				
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 30				P-1 Line Item Number / Title: 6380AZ3110 / Aircrew Integrated Systems				Item Number / Title [DODIC]: AZ3110 / Aircrew Integrated Systems				
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2019	1-8-5 For 2019	MAX For 2019	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Various - Various	8	100	500	6	19	6	25	5	3	6	9

Remarks:
Monthly Quantity Production Rates are shown.

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity:
 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA
 30: Other Support

P-1 Line Item Number / Title:
 6818AA0050 / Air Traffic Control

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604633A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,479.756	50.405	83.790	63.872	-	63.872	47.695	54.320	49.562	50.267	-	1,879.667
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,479.756	50.405	83.790	63.872	-	63.872	47.695	54.320	49.562	50.267	-	1,879.667
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,479.756	50.405	83.790	63.872	-	63.872	47.695	54.320	49.562	50.267	-	1,879.667

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	27,402.889	1,229.390	1,904.318	1,557.854	-	1,557.854	1,255.132	2,469.091	4,956.200	2,185.522	-	6,885.227

Description:

Funds described herein support the acquisition of modernized tactical and fixed base Air Traffic Control (ATC) systems that will enable safety of aircraft operations. In accordance with Federal Aviation Administration (FAA) mandates for systems operating in the National Airspace System (NAS), ATC systems are required to maintain compliance with civil, military, domestic and international air traffic control and combat identification requirements.

Efforts funded include the Tactical Airspace Integration System (TAIS), Air Traffic Navigation Integration and Coordination System (ATNAVICS), the Mobile Tower System (MOTS), the Tactical Terminal Control System (TTCS), and Fixed Base systems, such as the DoD Advanced Automation System (DAAS), the Digital Airport Surveillance Radar (DASR), and other navigational control aids to include the Army Airfield Automation System (AAAS), NAS voice switch, Doppler VHF Omnidirectional Range (DVOR) system, NAS Voice Recorder (NVR) and Precision Approach Radar (PAR). The US Air Force (USAF) and the US Army have agreed to evenly share the cost of funding Ft. Sill's Common Terminal Digitizer for the Airport Surveillance Radar-8 (ASR-8) and the DAAS Display System Upgrades.

TAIS, the Army's system of record for Airspace Control (AC) and Air Traffic Services (ATS) within the Army Mission Command Information System (MCIS), requires the development and testing of web-based services for AC, and integration of these new web-based services into the TAIS common MCIS hardware, while meeting the Common Operating Environment (COE) standards. Additional capabilities will be provided through advanced surveillance and mission planning interfaces. TAIS efforts also include developing and testing improvements to the air picture including the addition of Blue Force Tracker correlation and radar fusion capability. TAIS develops software and required hardware for AC web services to operate effectively in a dynamic net-centric interconnected environment.

ATNAVICS is a PAR system that provides ATS at Army terminal airfields and landing sites at Division, Corps, and Echelons Above Corps to include services for Joint and Allied aircraft. ATNAVICS will integrate TPX-59 capabilities required to control aircraft both Outside of the Continental United States and within the Continental United States. ATNAVICS will network its radar picture and interrogator data (TPX-59) to aviation and joint network nodes through TAIS.

TTCS is a mobile ATC communications system that provides initial ATS at remote landing sites and drop zones. It enables secure ground-to-air and ground-to-ground communications between Army aircraft, other services, Allied aircraft, and ground stations. TTCS also provides aircraft separation and ground control capabilities, a meteorological measuring system for basic weather information, Blue Force Tracker which provides near real time situational awareness and precision location capability. Future improvements include incorporating advanced surveillance as risk mitigation by improving airspace situational awareness and providing an improved soldier interface that is common with other ATC systems.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity:
 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 30: Other Support

P-1 Line Item Number / Title:
 6818AA0050 / Air Traffic Control

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604633A

Line Item MDAP/MAIS Code: N/A

MOTS provides ATC and aircraft separation for both air and ground operations at tactical or remote landing sites. It replaces the 1970's era 7A mobile tower system. MOTS capabilities include weather information, secure and anti-jam communications across all required frequency bands and ranges and precision location.

Fixed Base ATC requirements (DAAS, DASR, AAAS, DVOR, NVR, NAS Voice Switch) will be met through a vast array of new technology solutions and pre-planned product improvement (P3I) of these systems resulting in highly reliable and safe ATC systems in accordance with the Joint DoD/FAA program to modernize the NAS and the FAA Next Gen program.

This exhibit is for a budget line that procures multiple items and does not have a single Army Acquisition Objective.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	38.341	53.976	48.847	-	48.847	36.843	40.159	36.328	35.497
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	12.064	26.583	13.331	-	13.331	9.765	12.676	11.889	13.262
AR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	3.231	1.694	-	1.694	1.087	1.485	1.345	1.508
Total:	Quantity	-	-	-	-	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	50.405	83.790	63.872	-	63.872	47.695	54.320	49.562	50.267

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 30: Other Support **P-1 Line Item Number / Title:** 6818AA0050 / Air Traffic Control

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604633A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	AA0050 / Air Traffic Control				- / 1,479.756	- / 50.405	- / 83.790	- / 63.872	- / -	- / 63.872
P-40	Total Gross/Weapon System Cost				- / 1,479.756	- / 50.405	- / 83.790	- / 63.872	- / -	- / 63.872

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

FY 2019 Base procurement dollars in the amount of \$3.649 million procures DAAS G5 systems to be fielded at Ft. Huachuca, Arizona and Fort Drum, New York.

FY 2019 Base procurement dollars in the amount of \$18.612 million procures Interim Voice Switch Replacement systems and site surveys for future systems, provides for AAAS system software upgrades and Information Assurance and Vulnerability Assessment.

FY 2019 Base procurement dollars in the amount of \$4.329 million procures PAR system and installation at Ansbach, Germany.

FY 2019 Base procurement dollars in the amount of \$15.568 million provides for the continuation of ongoing TAIS COE efforts, support of Joint Interoperability Testing, support of Network Integration Event testing, incorporation of emerging FAA requirements, real time retrieval of Aviation Mission Planning System mission data to mitigate risk by improving airspace situational awareness, and providing an improved solidier interface that is common with other ATC systems.

FY 2019 Base procurement dollars in the amount of \$11.991 million provides for ATNAVICS Modification of V9 retrofits to include Modification Work Order (MWO) Installation, Government Furnished Equipment, TPX-59 kits, remote work station kits and Integrated Logistics Support. ATNAVICS funding also provides for Fixed Base Precision Approach Radar V8 systems test and evaluation and flight check support through Air Traffic Services Command, technical refresh and Windows 10 compliance.

FY 2019 Base procurement dollars in the amount of \$4.325 million provides for production and fielding of the TTCS TOCNET Commonality MWO. Future MWOs will incorporate new radios and a passive receiver into the TTCS as part of the ATC Network functionality.

FY 2019 Base procurement dollars in the amount of \$5.398 million provides for MOTS Airfield Common Simulator technical refresh and program management, logistics, and technical support.

In accordance with section 1815 of the FY 2008 National Defense Authorization Act P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses and providing military support to civil authorities.

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Exhibit P-5, Cost Analysis: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 30	P-1 Line Item Number / Title: 6818AA0050 / Air Traffic Control	Item Number / Title [DODIC]: AA0050 / Air Traffic Control

ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:					
Resource Summary				Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Procurement Quantity (Units in Each)				-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)				1,479.756	50.405	83.790	63.872	-	63.872
Less PY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)				1,479.756	50.405	83.790	63.872	-	63.872
Plus CY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)				1,479.756	50.405	83.790	63.872	-	63.872
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>									
Initial Spares (\$ in Millions)				-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)				27,402.889	1,229.390	1,904.318	1,557.854	-	1,557.854

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
Fixed Base Precision Approach Radar	-	-	91.260	-	-	-	-	-	-	-	-	4.329	-	-	-	-	-	4.329
DoD Advanced Automation System (DAAS)	-	-	112.518	-	-	0.175	-	-	4.511	-	-	3.649	-	-	-	-	-	3.649
Digital Airport Surveillance Radar(DASR)	-	-	84.982	-	-	-	-	-	0.209	-	-	-	-	-	-	-	-	-
Tactical Airspace Integration Sys (TAIS)	-	-	391.792	-	-	19.330	-	-	20.005	-	-	15.568	-	-	-	-	-	15.568
Air Traffic Navigation and Integration	-	-	412.465	-	-	7.155	-	-	24.583	-	-	11.991	-	-	-	-	-	11.991
Navigational Control (AAAS, DVOR, NVS, NVR)	-	-	52.918	-	-	13.215	-	-	19.093	-	-	18.612	-	-	-	-	-	18.612
Tactical Terminal Control System (TTCS)	-	-	77.537	-	-	4.793	-	-	7.442	-	-	4.325	-	-	-	-	-	4.325
Mobile Tower System (MOTS)	12,044.765	17	204.761	-	-	5.737	-	-	7.947	-	-	5.398	-	-	-	-	-	5.398
ATC Common Simulator (ACS)	-	-	51.523	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	<i>1,479.756</i>	-	-	<i>50.405</i>	-	-	<i>83.790</i>	-	-	<i>63.872</i>	-	-	-	-	-	<i>63.872</i>
<i>Subtotal: Flyaway Cost</i>	-	-	<i>1,479.756</i>	-	-	<i>50.405</i>	-	-	<i>83.790</i>	-	-	<i>63.872</i>	-	-	-	-	-	<i>63.872</i>

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Exhibit P-5, Cost Analysis: PB 2019 Army												Date: February 2018					
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 30						P-1 Line Item Number / Title: 6818AA0050 / Air Traffic Control						Item Number / Title [DODIC]: AA0050 / Air Traffic Control					
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:					

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2017			FY 2018			FY 2019 Base			FY 2019 OCO			FY 2019 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Gross/Weapon System Cost	27,402.889	-	1,479.756	1,229.390	-	50.405	1,904.318	-	83.790	1,557.854	-	63.872	-	-	-	1,557.854	-	63.872

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	38.341	53.976	48.847	-	48.847
ANG	Quantity	-	-	-	-	-
	Total Obligation Authority	12.064	26.583	13.331	-	13.331
AR	Quantity	-	-	-	-	-
	Total Obligation Authority	-	3.231	1.694	-	1.694
Total:	Quantity	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	50.405	83.790	63.872	-	63.872

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity:
2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 30: Other Support

P-1 Line Item Number / Title:
8132AZ3300 / Industrial Facilities

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	186.109	1.217	1.397	1.417	-	1.417	1.443	1.484	1.524	1.553	-	196.144
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	186.109	1.217	1.397	1.417	-	1.417	1.443	1.484	1.524	1.553	-	196.144
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	186.109	1.217	1.397	1.417	-	1.417	1.443	1.484	1.524	1.553	-	196.144

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This program provides funding to the Army Test and Evaluation Command (ATEC) to establish, modernize, expand or replace test facilities used in production testing of Aircraft and Aircraft components. It sustains Army production test capabilities through upgrade and replacement of instrumentation and equipment that is technologically and/or economically obsolete. Modernization of test instrumentation and equipment provides increased automation and efficiencies, improved data quality and quantity and cost avoidances to Army Program Managers. Programmed funding will be used to upgrade or replace production test instrumentation and equipment at the Redstone Test Center (RTC), Huntsville, AL and Yuma Test Center (YTC), Yuma Proving Ground, AZ.

Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	1.217	1.397	1.417	-	1.417	1.443	1.484	1.524	1.553
Total:									
Secondary Distribution									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	1.217	1.397	1.417	-	1.417	1.443	1.484	1.524	1.553

Justification:

FY 2019 Base procurement dollars support the following: At RTC, procures Next Generation Airborne Instrumentation System which is to provide capabilities to support future flight test telemetry network operations in which the system must allow for data communication rates as high as 20Mbps/second. At YTC, continues procuring Aviation Production Instrumentation for the time stamping, on board recording and telemetering of data from standard 1553 data buses and sensors; and on board recorders and telemetry equipment that can meet the environment and data speeds needed for production base aviation programs. YTC also procures KTM Enhancements, KTM High Definition High Speed Camera, and Airborne High Speed Video to upgrade and replace obsolete, outdated imaging instrumentation for aviation testing.

The majority of the instrumentation being upgraded or replaced is obsolete and has met or exceeded its economic life. This instrumentation is required to ensure complete and accurate test data is collected and safety and environmental hazards are minimized. Benefits of this project include increased test efficiencies and decreased costs and risks to Army Program Managers.

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Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 30: Other Support	P-1 Line Item Number / Title: 9154A50100 / Launcher, 2.75 Rocket
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	91.265	3.055	1.911	1.901	-	1.901	2.201	2.348	2.492	2.541	-	107.714
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	91.265	3.055	1.911	1.901	-	1.901	2.201	2.348	2.492	2.541	-	107.714
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	91.265	3.055	1.911	1.901	-	1.901	2.201	2.348	2.492	2.541	-	107.714

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	207.893	14.902	15.411	15.582	-	15.582	15.610	15.758	15.974	15.981	-	72.049

Description:

The M261 19-tube analog launcher and the M260 7-tube analog launcher are used to fire 2.75 Inch Hydra-70 Rockets from the following platforms: AH-64 Apache, H-60 Blackhawk, and Special Operations aircraft. The analog launchers are non-repairable, yet durable enough to withstand at least 16 rocket firings per tube before being discarded. The empty weight of the M260 analog launcher is approximately 35 pounds and the empty weight of the M261 analog launcher is approximately 82 pounds. The analog launcher permits fuze-timing selections from the cockpit and will launch rockets using either the MK40 or the MK66 motors. 2.75 Inch Rocket Launcher procurement funding supports the launcher system to include resolution of obsolescence, safety, reliability, weapon integration activities, test sets, engineering changes, and production issues.

Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	3.055	1.911	1.901	-	1.901	2.201	2.348	2.492	2.541
Total:									
Secondary Distribution									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	3.055	1.911	1.901	-	1.901	2.201	2.348	2.492	2.541

Justification:

FY2019 base procurement dollars in the amount of \$1.901 million supports the procurement of 122 M261 19-tube analog launchers for the AH-64 Apache, H-60 Blackhawk, and Special Operation aircraft. Base procurement also supports production engineering support, to include resolution of obsolescence. Procurement replaces disposable launchers as a result of annual rocket firings for pre-deployment training, and replenishes the limited issuable stockage that has been depleted below levels acceptable to support training of Active Army, Special Operations Forces and Reserve Components usage.

The demand for the M260 analog launchers has decreased due to the Aviation Restructure Initiative.

"In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities."

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 30: Other Support		P-1 Line Item Number / Title: 9154A50100 / Launcher, 2.75 Rocket
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2019 Army **Date:** February 2018

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 30: Other Support	P-1 Line Item Number / Title: 9157J01200 / Launcher Guided Missile: Longbow Hellfire XM299
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	-	-	0.991	-	0.991	0.991	0.991	0.991	0.991	-	4.955
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	-	-	0.991	-	0.991	0.991	0.991	0.991	0.991	-	4.955
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	-	-	0.991	-	0.991	0.991	0.991	0.991	0.991	-	4.955

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This is a New Start program. The M299 launchers are qualified to carry and fire the AGM-114 Family of Missiles. Each launcher contains: Launcher electronics assembly (LEA) that communicates with the aircraft via bus commands, provides missile launch sequencing, seeker type ID, missile "Hang fire/Misfire" determination, alternate laser code algorithm processing, and AC to DC power conversion for supplying missile DC power; Wiring harnesses that provide electrical connection from LEA to missile rails (not interchangeable with M272 harnesses); Holdback latch that retains missiles on rails and Safe/Arm switch that mechanically interrupts the arm power going to the LEA. The weight of the M299 launcher (4-Rail Launcher) is approximately 114 pounds and the length of the M299 is approximately 66.3 inches.

Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	-	-	0.991	-	0.991	0.991	0.991	0.991	0.991
Total: Secondary Distribution									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	-	-	0.991	-	0.991	0.991	0.991	0.991	0.991

Justification:

FY2019 base procurement dollars in the amount of \$0.991 million supports the procurement of 7 M299 launchers for the AH-64 Apache aircraft.

In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.