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**Department of Defense  
Fiscal Year (FY) 2021 Budget Estimates**

February 2020



**Air Force**

*Justification Book Volume 2 of 2*

***Aircraft Procurement, Air Force***

**Vol-2 Mods**

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Air Force • Budget Estimates FY 2021 • Procurement

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Department of the Air Force  
 FY 2021 President's Budget  
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 Total Obligational Authority  
 (Dollars in Thousands)

22 Jan 2020

Appropriation: Aircraft Procurement, Air Force

Budget Activity -----	FY 2019 (Base + OCO) -----	FY 2020 Base Enacted -----	FY 2020 Emergency -----	FY 2020 OCO Enacted -----
01. Combat Aircraft	5,392,022	6,680,659		
02. Airlift Aircraft	4,084,748	3,441,468		338,000
04. Other Aircraft	1,492,546	1,567,767		388,590
05. Modification of Inservice Aircraft	4,313,490	3,658,619		73,135
06. Aircraft Spares and Repair Parts	846,490	690,555	33,124	44,560
07. Aircraft Supt Equipment & Facilities	1,780,139	1,473,293	171,324	7,025
Total Aircraft Procurement, Air Force	17,909,435	17,512,361	204,448	851,310

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22 Jan 2020

Appropriation: Aircraft Procurement, Air Force

Budget Activity -----	FY 2020 Total Enacted (Base+Emerg+ OCO) -----	FY 2021 Base -----	FY 2021 OCO for Base Requirements -----	FY 2021 OCO for Direct War and Enduring Costs -----
01. Combat Aircraft	6,680,659	6,581,165		
02. Airlift Aircraft	3,779,468	3,290,076		
04. Other Aircraft	1,956,357	1,494,099		330,260
05. Modification of Inservice Aircraft	3,731,754	3,800,965		190,331
06. Aircraft Spares and Repair Parts	768,239	926,683		22,950
07. Aircraft Supt Equipment & Facilities	1,651,642	1,815,157		25,614
Total Aircraft Procurement, Air Force	18,568,119	17,908,145		569,155

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Appropriation: Aircraft Procurement, Air Force

Budget Activity -----	FY 2021 Total OCO -----	FY 2021 Total (Base + OCO) -----
01. Combat Aircraft		6,581,165
02. Airlift Aircraft		3,290,076
04. Other Aircraft	330,260	1,824,359
05. Modification of Inservice Aircraft	190,331	3,991,296
06. Aircraft Spares and Repair Parts	22,950	949,633
07. Aircraft Supt Equipment & Facilities	25,614	1,840,771
Total Aircraft Procurement, Air Force	569,155	18,477,300

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22 Jan 2020

Appropriation: 3010F Aircraft Procurement, Air Force

Line No	Item Nomenclature	Ident Code	FY 2019 (Base + OCO)		FY 2020 Base Enacted		FY 2020 Emergency		FY 2020 OCO Enacted		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 01: Combat Aircraft											
Tactical Forces											
1	F-35	A	56	(5,469,122)	62	(5,826,259)					U
	Less: Advance Procurement (PY)			(-608,100)		(-578,200)					U
				-----		-----					
				4,861,022		5,248,059					
2	F-35										
	Advance Procurement (CY)			406,000		811,500					U
	C (FY 2019 for FY 2020) (M)			(406,000)							
	C (FY 2020 for FY 2021) (M)					(726,500)					
	C (FY 2020 for FY 2022) (M)					(85,000)					
	C (FY 2021 for FY 2022) (M)										
	C (FY 2021 for FY 2023) (M)										
3	F-15e	A			6	621,100					U
4	F-15EX	A									U
5	F-15EX										
	Advance Procurement (CY)										U
	C (FY 2021 for FY 2022) (M)										
Other Combat Aircraft											
6	C-135B	A		125,000							U
				-----		-----					
Total Combat Aircraft				5,392,022		6,680,659					
Budget Activity 02: Airlift Aircraft											
Tactical Airlift											
7	KC-46A MDAP	A	15	2,290,932	12	2,139,705					U



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Appropriation: 3010F Aircraft Procurement, Air Force

Line No	Item Nomenclature	Ident Code	FY 2020 Total Enacted (Base+Emerg+OCO)		FY 2021 Base		FY 2021 OCO for Base Requirements		FY 2021 OCO for Direct War and Enduring Costs		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 01: Combat Aircraft											
Tactical Forces											
1	F-35	A	62	(5,826,259)	48	(5,293,518)					U
	Less: Advance Procurement (PY)			(-578,200)		(-726,500)					U
				5,248,059		4,567,018					
2	F-35										
	Advance Procurement (CY)			811,500		610,800					U
	C (FY 2019 for FY 2020) (M)										
	C (FY 2020 for FY 2021) (M)			(726,500)							
	C (FY 2020 for FY 2022) (M)			(85,000)							
	C (FY 2021 for FY 2022) (M)					(462,200)					
	C (FY 2021 for FY 2023) (M)					(148,600)					
3	F-15e	A	6	621,100							U
4	F-15EX	A			12	1,269,847					U
5	F-15EX										
	Advance Procurement (CY)					133,500					U
	C (FY 2021 for FY 2022) (M)					(133,500)					
Other Combat Aircraft											
6	C-135B	A									U
Total Combat Aircraft				6,680,659		6,581,165					
Budget Activity 02: Airlift Aircraft											
Tactical Airlift											
7	KC-46A MDAP	A	12	2,139,705	15	2,850,151					U

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Line No	Item Nomenclature	Ident Code	FY 2021 Total OCO		FY 2021 Total (Base + OCO)		S e c
			Quantity	Cost	Quantity	Cost	
Budget Activity 01: Combat Aircraft							
Tactical Forces							
1	F-35	A			48	(5,293,518)	U
	Less: Advance Procurement (PY)					(-726,500)	U
						4,567,018	
2	F-35						
	Advance Procurement (CY)					610,800	U
	C (FY 2019 for FY 2020) (M)						
	C (FY 2020 for FY 2021) (M)						
	C (FY 2020 for FY 2022) (M)						
	C (FY 2021 for FY 2022) (M)					(462,200)	
	C (FY 2021 for FY 2023) (M)					(148,600)	
3	F-15e	A					U
4	F-15EX	A			12	1,269,847	U
5	F-15EX						
	Advance Procurement (CY)					133,500	U
	C (FY 2021 for FY 2022) (M)					(133,500)	
Other Combat Aircraft							
6	C-135B	A					U
Total Combat Aircraft						6,581,165	
Budget Activity 02: Airlift Aircraft							
Tactical Airlift							
7	KC-46A MDAP	A			15	2,850,151	U

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Line No	Item Nomenclature	Ident Code	FY 2019 (Base + OCO)		FY 2020 Base Enacted		FY 2020 Emergency		FY 2020 OCO Enacted		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Other Airlift											
8	C-130J	A	8	674,100		404,156			4	338,000	U
9	HC-130J	A	2	183,837							U
10	MC-130J	A	6	(747,879)	9	(1,039,607)					U
	Less: Advance Procurement (FY)			(-30,000)		(-182,000)					U
				-----		-----					
				717,879		857,607					
11	MC-130J										
	Advance Procurement (CY)			218,000		40,000					U
	C (FY 2019 for FY 2020) (M)			(182,000)							
	C (FY 2019 for FY 2021) (M)			(16,000)							
	C (FY 2019 for FY 2022) (M)			(16,000)							
	C (FY 2019 for FY 2023) (M)			(4,000)							
	C (FY 2020 for FY 2021) (M)					(40,000)					
	C (FY 2021 for FY 2022) (M)										
				-----		-----					
Total Airlift Aircraft				4,084,748		3,441,468				338,000	
Budget Activity 04: Other Aircraft											
-----											
Helicopters											
12	UH-1N Replacement	A									U
13	Combat Rescue Helicopter	A	10	660,358	12	850,535					U
Mission Support Aircraft											
14	C-37A	A			2	159,140					U
15	Civil Air Patrol A/C	A	17	10,800	4	11,000					U

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Line No	Item Nomenclature	Ident Code	FY 2020 Total Enacted (Base+Emerg+OCO)		FY 2021 Base		FY 2021 OCO for Base Requirements		FY 2021 OCO for Direct War and Enduring Costs		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Other Airlift											
8	C-130J	A	4	742,156		37,131					U
9	HC-130J	A									U
10	MC-130J	A	9	(1,039,607)	4	(418,807)					U
	Less: Advance Procurement (FY)			(-182,000)		(-56,000)					U
				857,607		362,807					
11	MC-130J										
	Advance Procurement (CY)			40,000		39,987					U
	C (FY 2019 for FY 2020) (M)										
	C (FY 2019 for FY 2021) (M)										
	C (FY 2019 for FY 2022) (M)										
	C (FY 2019 for FY 2023) (M)										
	C (FY 2020 for FY 2021) (M)			(40,000)							
	C (FY 2021 for FY 2022) (M)					(39,987)					
Total Airlift Aircraft				3,779,468		3,290,076					
Budget Activity 04: Other Aircraft											
-----											
Helicopters											
12	UH-1N Replacement	A			8	194,016					U
13	Combat Rescue Helicopter	A	12	850,535	16	973,473			3	174,000	U
Mission Support Aircraft											
14	C-37A	A	2	159,140							U
15	Civil Air Patrol A/C	A	4	11,000		2,811					U

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Line No	Item Nomenclature	Ident Code	FY 2021 Total		FY 2021 Total		S e c
			Quantity	Cost	(Base + OCO) Quantity	Cost	
Other Airlift							
8	C-130J	A			37,131		U
9	HC-130J	A					U
10	MC-130J	A			4	(418,807)	U
	Less: Advance Procurement (FY)					(-56,000)	U
						362,807	
11	MC-130J						
	Advance Procurement (CY)					39,987	U
	C (FY 2019 for FY 2020) (M)						
	C (FY 2019 for FY 2021) (M)						
	C (FY 2019 for FY 2022) (M)						
	C (FY 2019 for FY 2023) (M)						
	C (FY 2020 for FY 2021) (M)						
	C (FY 2021 for FY 2022) (M)					(39,987)	
Total Airlift Aircraft						3,290,076	
Budget Activity 04: Other Aircraft							
-----							
Helicopters							
12	UH-1N Replacement	A			8	194,016	U
13	Combat Rescue Helicopter	A	3	174,000	19	1,147,473	U
Mission Support Aircraft							
14	C-37A	A					U
15	Civil Air Patrol A/C	A				2,811	U

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			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Other Aircraft											
16	Target Drones	A	35	90,172	37	130,837					U
17	OC-135B	A	1								U
18	Compass Call	A	2	216,113	1	114,095					U
19	Observation Attack Replacement (OA-X)	A		100,000		210,000					U
20	MQ-9	A	24	401,603	3	92,160			21	376,440	U
21	RQ-20B Puma	A	20	13,500					18	12,150	U
Total Other Aircraft				1,492,546		1,567,767				388,590	
Budget Activity 05: Modification of Inservice Aircraft											
Strategic Aircraft											
22	B-1	A									U
23	B-2A	A		60,301		9,582					U
24	B-1B	A		39,690		18,911					U
25	B-52	A		117,230		47,926					U
26	Large Aircraft Infrared Countermeasures	A		143,225		43,758				53,335	U
Tactical Aircraft											
27	A-10	A		168,060		125,825					U
28	E-11 BACN/HAG	A				70,027					U
29	F-15	A		440,856		474,137					U

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Line No	Item Nomenclature	Ident Code	FY 2020 Total Enacted (Base+Emerg+OCO)		FY 2021 Base		FY 2021 OCO for Base Requirements		FY 2021 OCO for Direct War and Enduring Costs		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Other Aircraft											
16	Target Drones	A	37	130,837	38	133,273					U
17	OC-135B	A									U
18	Compass Call	A	1	114,095		161,117					U
19	Observation Attack Replacement (OA-X)	A		210,000							U
20	MQ-9	A	24	468,600		29,409				142,490	U
21	RQ-20B Puma	A	18	12,150						13,770	U
Total Other Aircraft				1,956,357		1,494,099				330,260	
Budget Activity 05: Modification of Inservice Aircraft											
Strategic Aircraft											
22	B-1	A				3,853					U
23	B-2A	A		9,582		31,476					U
24	B-1B	A		18,911		21,808					U
25	B-52	A		47,926		53,949					U
26	Large Aircraft Infrared Countermeasures	A		97,093		9,999				57,521	U
Tactical Aircraft											
27	A-10	A		125,825		135,793					U
28	E-11 BACN/HAG	A		70,027		33,645					U
29	F-15	A		474,137		349,304					U

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22 Jan 2020

## Appropriation: 3010F Aircraft Procurement, Air Force

Line No	Item Nomenclature	Ident Code	FY 2021 Total OCO		FY 2021 Total (Base + OCO)		S e c
			Quantity	Cost	Quantity	Cost	
Other Aircraft							
16	Target Drones	A			38	133,273	U
17	OC-135B	A					U
18	Compass Call	A				161,117	U
19	Observation Attack Replacement (OA-X)	A					U
20	MQ-9	A		142,490		171,899	U
21	RQ-20B Puma	A		13,770		13,770	U
Total Other Aircraft				330,260		1,824,359	

## Budget Activity 05: Modification of Inservice Aircraft

## Strategic Aircraft

22	B-1	A				3,853	U
23	B-2A	A				31,476	U
24	B-1B	A				21,808	U
25	B-52	A				53,949	U
26	Large Aircraft Infrared Countermeasures	A		57,521		67,520	U

## Tactical Aircraft

27	A-10	A				135,793	U
28	E-11 BACN/HAG	A				33,645	U
29	F-15	A				349,304	U

P-121PB: FY 2021 President's Budget (Published Version), as of January 22, 2020 at 10:33:23



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22 Jan 2020

Appropriation: 3010F Aircraft Procurement, Air Force

Line No	Item Nomenclature	Ident Code	FY 2019 (Base + OCO)		FY 2020 Base Enacted		FY 2020 Emergency		FY 2020 OCO Enacted		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
30	F-16	A		303,413		281,476					U
31	F-16	A		11							U
32	F-22A	A		(264,135)		(323,597)					U
	Less: Advance Procurement (FY)			(-7,500)							U
				256,635		323,597					
33	F-35 Modifications	A		237,271		329,590					U
34	F-15 EPAW	A		214,885		125,417					U
35	Increment 3.2b	A		2,007		20,213					U
36	KC-46A MDAP	A		8,547		5,213					U
Airlift Aircraft											
37	C-5	A		59,779		57,937					U
38	C-17A	A		77,221		60,244					U
39	C-21	A		17,516		216					U
40	C-32A	A		4,537		11,511					U
41	C-37A	A		419		435					U
Trainer Aircraft											
42	Glider Mods	A		137		138					U
43	T-6	A		53,150		11,826					U
44	T-1	A		21,852		26,787					U
45	T-38	A		70,623		37,341					U

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Appropriation: 3010F Aircraft Procurement, Air Force

Line No	Item Nomenclature	Ident Code	FY 2020 Total Enacted (Base+Emerg+OCO)		FY 2021 Base		FY 2021 OCO for Base Requirements		FY 2021 OCO for Direct War and Enduring Costs		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
30	F-16	A		281,476		615,760					U
31	F-16	A									U
32	F-22A	A		(323,597)		(387,905)					U
	Less: Advance Procurement (PY)										U
				-----		-----		-----		-----	
				323,597		387,905					
33	F-35 Modifications	A		329,590		322,185					U
34	F-15 EPAW	A		125,417	6	31,995					U
35	Increment 3.2b	A		20,213		5,889					U
36	KC-46A MDAP	A		5,213		24,085					U
Airlift Aircraft											
37	C-5	A		57,937		62,108					U
38	C-17A	A		60,244		66,798					U
39	C-21	A		216							U
40	C-32A	A		11,511		2,947					U
41	C-37A	A		435		12,985					U
Trainer Aircraft											
42	Glider Mods	A		138		977					U
43	T-6	A		11,826		26,829					U
44	T-1	A		26,787		4,465					U
45	T-38	A		37,341		36,806					U

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Line No	Item Nomenclature	Ident Code	FY 2021 Total		FY 2021 Total		S e c
			Quantity	Cost	(Base + OCO) Quantity	Cost	
30	F-16	A			615,760		U
31	F-16	A					U
32	F-22A	A			(387,905)		U
	Less: Advance Procurement (FY)						U
					387,905		
33	F-35 Modifications	A			322,185		U
34	F-15 EPAW	A			6	31,995	U
35	Increment 3.2b	A				5,889	U
36	KC-46A MDAP	A				24,085	U
Airlift Aircraft							
37	C-5	A			62,108		U
38	C-17A	A			66,798		U
39	C-21	A					U
40	C-32A	A			2,947		U
41	C-37A	A			12,985		U
Trainer Aircraft							
42	Glider Mods	A				977	U
43	T-6	A			26,829		U
44	T-1	A			4,465		U
45	T-38	A			36,806		U

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Line No	Item Nomenclature	Ident Code	FY 2019 (Base + OCO)		FY 2020 Base Enacted		FY 2020 Emergency		FY 2020 OCO Enacted		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Other Aircraft											
46	U-2 Mods			67,365		58,563					U
47	KC-10A (ATCA)	A		11,104		2,108					U
48	C-12	A		4,900		3,021					U
49	VC-25A Mod	A		27,238		48,624					U
50	C-40	A		251		256					U
51	C-130	A		177,164		186,066					U
52	C-130J Mods	A		101,080		128,399					U
53	C-135	A		91,410		113,351					U
54	OC-135B	A		5,913							U
55	Compass Call	A		172,261		110,754					U
56	combat flight inspection - CFIN	A		499		508					U
57	RC-135	A		394,532		227,673					U
58	E-3	A		48,365		112,092					U
59	E-4	A		67,858		58,477					U
60	E-8	A		37,807		48,778					U
61	Airborne Warning and Cntrl Sys (AWACS) 40/45	A		69,280		32,821					U
62	Family of Beyond Line-of-Sight Terminals	A		14,293		7,910					U
63	H-1	A		11,824		3,817					U
64	H-60	A		92,026		26,879					U

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Line No	Item Nomenclature	Ident Code	FY 2020 Total Enacted (Base+Emerg+OCO)		FY 2021 Base		FY 2021 OCO for Base Requirements		FY 2021 OCO for Direct War and Enduring Costs		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Other Aircraft											
46	U-2 Mods			58,563		110,618				9,600	U
47	KC-10A (ATCA)	A		2,108		117					U
48	C-12	A		3,021							U
49	VC-25A Mod	A		48,624		1,983					U
50	C-40	A		256		9,252					U
51	C-130	A		186,066		5,871					U
52	C-130J Mods	A		128,399		140,032					U
53	C-135	A		113,351		88,250					U
54	OC-135B	A									U
55	Compass Call	A		110,754		193,389				12,800	U
56	combat flight inspection - CFIN	A		508							U
57	RC-135	A		227,673		191,332					U
58	E-3	A		112,092		172,141					U
59	E-4	A		58,477		58,803					U
60	E-8	A		48,778		11,037					U
61	Airborne Warning and Cntrl Sys (AWACS) 40/45	A		32,821		53,343					U
62	Family of Beyond Line-of-Sight Terminals	A		7,910		1,573					U
63	H-1	A		3,817		4,410					U
64	H-60	A		26,879		44,538					U

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Line No	Item Nomenclature	Ident Code	FY 2021 Total OCO		FY 2021 Total (Base + OCO)		S e c
			Quantity	Cost	Quantity	Cost	
Other Aircraft							
46	U-2 Mods			9,600		120,218	U
47	KC-10A (ATCA)	A				117	U
48	C-12	A					U
49	VC-25A Mod	A				1,983	U
50	C-40	A				9,252	U
51	C-130	A				5,871	U
52	C-130J Mods	A				140,032	U
53	C-135	A				88,250	U
54	OC-135B	A					U
55	Compass Call	A		12,800		206,189	U
56	combat flight inspection - CFIN	A					U
57	RC-135	A				191,332	U
58	E-3	A				172,141	U
59	E-4	A				58,803	U
60	E-8	A				11,037	U
61	Airborne Warning and Cntrl Sys (AWACS) 40/45	A				53,343	U
62	Family of Beyond Line-of-Sight Terminals	A				1,573	U
63	H-1	A				4,410	U
64	H-60	A				44,538	U

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Line No	Item Nomenclature	Ident Code	FY 2019 (Base + OCO)		FY 2020 Base Enacted		FY 2020 Emergency		FY 2020 OCO Enacted		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
65	RQ-4 Mods	A		123,715		1,704					U
66	HC/MC-130 Modifications	A		125,654		34,850					U
67	Other Aircraft	A		98,566		50,098					U
68	MQ-9 Mods	A		189,948		254,415					U
69	MQ-9 UAS Payloads	A		23,000						19,800	U
70	CV-22 Mods	A		60,072		65,348					U
Total Modification of Inservice Aircraft				4,313,490		3,658,619				73,135	
Budget Activity 06: Aircraft Spares and Repair Parts											
-----											
Aircraft Spares and Repair Parts											
71	Initial Spares/Repair Parts	A		846,490		690,555		33,124		44,560	U
72	MQ-9	A									U
Total Aircraft Spares and Repair Parts				846,490		690,555		33,124		44,560	
Budget Activity 07: Aircraft Supt Equipment & Facilities											
-----											
Common Support Equipment											
73	Aircraft Replacement Support Equip	A		108,860		84,938		1,249		7,025	U
Post Production Support											
74	B-2A	A		1,763		1,403					U
75	B-2B	A		35,861		42,234					U
76	B-52	A		12,819		2,341					U

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			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
65	RQ-4 Mods	A		1,704		40,468					U
66	HC/MC-130 Modifications	A		34,850		20,780			58,020		U
67	Other Aircraft	A		50,098		100,774					U
68	MQ-9 Mods	A		254,415		188,387					U
69	MQ-9 UAS Payloads	A		19,800					46,100		U
70	CV-22 Mods	A		65,348		122,306			6,290		U
Total Modification of Inservice Aircraft				3,731,754		3,800,965			190,331		
Budget Activity 06: Aircraft Spares and Repair Parts											
Aircraft Spares and Repair Parts											
71	Initial Spares/Repair Parts	A		768,239		926,683			10,700		U
72	MQ-9	A							12,250		U
Total Aircraft Spares and Repair Parts				768,239		926,683			22,950		
Budget Activity 07: Aircraft Supt Equipment & Facilities											
Common Support Equipment											
73	Aircraft Replacement Support Equip	A		93,212		132,719			25,614		U
Post Production Support											
74	B-2A	A		1,403		1,683					U
75	B-2B	A		42,234		46,734					U
76	B-52	A		2,341		1,034					U



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Line No	Item Nomenclature	Ident Code	FY 2021 Total OCO		FY 2021 Total (Base + OCO)		S e c -
			Quantity	Cost	Quantity	Cost	
65	RQ-4 Mods	A			40,468		U
66	HC/MC-130 Modifications	A		58,020	78,800		U
67	Other Aircraft	A			100,774		U
68	MQ-9 Mods	A			188,387		U
69	MQ-9 UAS Payloads	A		46,100	46,100		U
70	CV-22 Mods	A		6,290	128,596		U
Total Modification of Inservice Aircraft				190,331	3,991,296		
Budget Activity 06: Aircraft Spares and Repair Parts							
-----							
Aircraft Spares and Repair Parts							
71	Initial Spares/Repair Parts	A		10,700	937,383		U
72	MQ-9	A		12,250	12,250		U
Total Aircraft Spares and Repair Parts				22,950	949,633		
Budget Activity 07: Aircraft Supt Equipment & Facilities							
-----							
Common Support Equipment							
73	Aircraft Replacement Support Equip	A		25,614	158,333		U
Post Production Support							
74	B-2A	A			1,683		U
75	B-2B	A			46,734		U
76	B-52	A			1,034		U

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Line No	Item Nomenclature	Ident Code	FY 2019 (Base + OCO)		FY 2020 Base Enacted		FY 2020 Emergency		FY 2020 OCO Enacted		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
77	C-17A	A		10,114		124,805					U
78	RC-135	A						170,075			U
79	E-11 BACN/HAG	A									U
80	F-15	A		7,472		2,589					U
81	F-16	A		4,918		11,402					U
82	F-22A	A		64,489							U
83	Other Aircraft	A		9,688							U
84	RQ-4 Post Production Charges	A		40,641		47,246					U
	Industrial Preparedness										
85	Industrial Responsiveness	A		17,378		17,705					U
	War Consumables										
86	War Consumables	A		29,342		32,102					U
	Other Production Charges										
87	Other Production Charges	A		1,400,193		1,072,335					U
89	Spectrum Relocation Fund	A		8,323							U
999	Classified Programs			28,278		34,193					U
	Total Aircraft Supt Equipment & Facilities			1,780,139		1,473,293		171,324		7,025	
	Total Aircraft Procurement, Air Force			17,909,435		17,512,361		204,448		851,310	

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Line No	Item Nomenclature	Ident Code	FY 2020 Total Enacted (Base+Emerg+OCO)		FY 2021 Base		FY 2021 OCO for Base Requirements		FY 2021 OCO for Direct War and Enduring Costs		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
77	C-17A	A		124,805							U
78	RC-135	A		170,075							U
79	E-11 BACN/HAG	A				63,419					U
80	F-15	A		2,589		2,632					U
81	F-16	A		11,402		14,163					U
82	F-22A	A									U
83	Other Aircraft	A				4,595					U
84	RQ-4 Post Production Charges	A		47,246		32,585					U
Industrial Preparedness											
85	Industrial Responsiveness	A		17,705		18,215					U
War Consumables											
86	War Consumables	A		32,102		36,046					U
Other Production Charges											
87	Other Production Charges	A		1,072,335		1,439,640					U
89	Spectrum Relocation Fund	A									U
999	Classified Programs			34,193		21,692					U
Total Aircraft Supt Equipment & Facilities				1,651,642		1,815,157				25,614	
Total Aircraft Procurement, Air Force				18,568,119		17,908,145				569,155	

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Line No	Item Nomenclature	Ident Code	FY 2021 Total		FY 2021 Total		S e c
			Quantity	Cost	(Base + OCO) Quantity	Cost	
77	C-17A	A					U
78	RC-135	A					U
79	E-11 BACN/HAG	A			63,419		U
80	F-15	A			2,632		U
81	F-16	A			14,163		U
82	F-22A	A					U
83	Other Aircraft	A			4,595		U
84	RQ-4 Post Production Charges	A			32,585		U
Industrial Preparedness							
85	Industrial Responsiveness	A			18,215		U
War Consumables							
86	War Consumables	A			36,046		U
Other Production Charges							
87	Other Production Charges	A			1,439,640		U
89	Spectrum Relocation Fund	A					U
999	Classified Programs				21,692		U
Total Aircraft Supt Equipment & Facilities				25,614	1,840,771		
Total Aircraft Procurement, Air Force				569,155	18,477,300		

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14	04	04	C03700	C-37A.....	Volume 1 - 105
15	04	04	CAPAC0	Civil Air Patrol A/C.....	Volume 1 - 107
16	04	05	10TRGT	Target Drones.....	Volume 1 - 109
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(Listing by Model)

**Lookup Matrix by Model**

<b>Model:</b>	B-2		
<b>Modification P-40a Aggregated Items Title:</b>	B-2A		
<b>Item Number</b>	<b>Item Title</b>		<b>Applies to Multiple Models</b>
<b>Uncategorized</b>			
110032	LINK 16/CID/IFR		No
110043	B-2 Adaptable Communications Suite (ACS)		No
110044	B-2 DMS / Displays		No
110054	B-2 Flex Strike Phase 1		No
110056	B61-12 Integration		No
110057	MGUE		No
8882	Common Very Low Frequency Terminal		No
99999U	B-2 Low Cost Engine Modifications		No
99999X	Low Cost Modifications		No
<b>P-3a Individual Modifications</b>			
<b>Modification Number</b>	<b>Modification Title</b>		<b>Applies to Multiple Models</b>
110031	B-2 Trainer System Upgrade		No
110035	LOW OBSERVABLE SIGNATURE AND SUPPORTABILITY MODS		No

<b>Model:</b>	B-2A		
<b>Modification P-40a Aggregated Items Title:</b>	B-2A		
<b>Item Number</b>	<b>Item Title</b>		<b>Applies to Multiple Models</b>
<b>Uncategorized</b>			
110061	IFF Mode 5/S		No

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<b>Model:</b>	<b>B-2A</b>	
<b>Modification P-40a Aggregated Items Title:</b>	<b>B-2A</b>	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
110062	Crash Survivable Memory Unit (CSMU)	No
110064	Rotary Launcher Assembly (RLA) Service Life Extension Program	No
110065	B-2 GBU-57 MOP Integration	No

<b>Model:</b>	<b>B-1B</b>	
<b>Modification P-40a Aggregated Items Title:</b>	<b>B-1B</b>	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
4280	Fully Integrated Data Links	No
4284	CITS UPGRADE	No
4291	B-1 TRAINING SUPPORT	No
92294	LAPTOP CONTROLLED TARGETING POD	No
99999X	Low Cost Modifications	No
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
8971	VERTICAL SITUATION DISPLAYS	No

<b>Model:</b>	<b>B-1</b>	
<b>Modification P-40a Aggregated Items Title:</b>	<b>B-1B</b>	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
92314	MIDS-JTRS	No

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<b>Model:</b>	<b>B-1</b>	
<b>Modification P-40a Aggregated Items Title:</b>	<b>B-1B</b>	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
92316	Radio Crypto Compliance	No
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
92317	IFF Mode 5/S	No
8674	ATP upgrade Legacy to SE	Yes
8675	ATP-SE Technology Insertion	Yes

<b>Model:</b>	<b>B-52H</b>	
<b>Modification P-40a Aggregated Items Title:</b>	<b>B-52</b>	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
3265	B-52 Anti-Skid Replacement	No
3310	B-52 Combat Network Communications Technology	No
6884	B-52 Internal Weapons Bay Upgrade	No
6885	AETC Trainers (B-52)	No
6890	B-52 Radar Modernization	No
6894	B-52 Crypto Modernization	No
6895	Advanced Targeting Pod MFCD	No
6896	B-52 VLF/LF Modernization	No
6898	B-52 IR Missile Warning System	No
99999X	Other Mods	No

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<b>Model:</b>	<b>B-52H</b>	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
6889	Bomber Tactical Data link	No
6893	GPS-IU Replacement	No

<b>Model:</b>	<b>B-52</b>	
<b>Modification P-40a Aggregated Items Title:</b>	<b>B-52</b>	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
6892	B-52 Low Cost Improvements	No
6897	B-52 CERP	No
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
8674	ATP upgrade Legacy to SE	Yes
8675	ATP-SE Technology Insertion	Yes

<b>Model:</b>	<b>C-130</b>	
<b>Modification P-40a Aggregated Items Title:</b>	<b>Large Aircraft Infrared Countermeasures</b>	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
8629C130	LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130	No
<b>Modification P-40a Aggregated Items Title:</b>	<b>C-130</b>	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		

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<b>Model:</b>	C-130		
<b>Modification P-40a Aggregated Items Title:</b>	C-130		
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>	
99999M	MISC SIMULATOR UPDATES	No	
99999X	Low Cost Modifications	No	

<b>Model:</b>	C-5B		
<b>Modification P-40a Aggregated Items Title:</b>	Large Aircraft Infrared Countermeasures		
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>	
<b>Uncategorized</b>			
8629C5	LARGE AIRCRAFT INFRARED COUNTERMEASURES C-5	Yes	
<b>Modification P-40a Aggregated Items Title:</b>	C-5		
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>	
<b>Uncategorized</b>			
8965	C-5 Fleet Blk Upgrade 01	Yes	

<b>Model:</b>	C-5C		
<b>Modification P-40a Aggregated Items Title:</b>	Large Aircraft Infrared Countermeasures		
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>	
<b>Uncategorized</b>			
8629C5	LARGE AIRCRAFT INFRARED COUNTERMEASURES C-5	Yes	
<b>Modification P-40a Aggregated Items Title:</b>	C-5		
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>	
<b>Uncategorized</b>			

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<b>Model:</b>	C-5C		
<b>Modification P-40a Aggregated Items Title:</b>	C-5		
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>	
8965	C-5 Fleet Blk Upgrade 01	Yes	

<b>Model:</b>	C-5M		
<b>Modification P-40a Aggregated Items Title:</b>	Large Aircraft Infrared Countermeasures		
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>	
<b>Uncategorized</b>			
8629C5	LARGE AIRCRAFT INFRARED COUNTERMEASURES C-5	Yes	

<b>Modification P-40a Aggregated Items Title:</b>	C-5		
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>	
<b>Uncategorized</b>			
8965	C-5 Fleet Blk Upgrade 01	Yes	
8969	C-5 Training Systems (Training Mods)	No	

<b>P-3a Individual Modifications</b>			
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>	
8966	C-5 Mission Systems Equipment- Lavatory	No	
8967	Mission Computer and Weather Radar	No	
8968	C-5M Communication Navigation Surveillance/Air Traffic Management (CNS/ATM)	No	

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<b>Model:</b>	<b>C-143</b>	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
1	LAIRCM CFIN	No

<b>Model:</b>	<b>C130J</b>	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
2	LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130J	No

<b>Model:</b>	<b>C-17</b>	
<b>Modification P-40a Aggregated Items Title:</b>	<b>C-17A</b>	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
_2000	Pylon Stub FFLZ, FF, Translating Fairing	No
_2590	ELT Frequency Change	No
_2633	MFOQA	No
1508	IFF GATM	No
2901	Automatic Dependent Surveillance - Broadcast Out (ADS-B Out)	No
6403	Filter Fire Mitigation	No
9740	Fixed Installation Satellite Antenna (FISA)	No
9742	C-17 Simulator Lateral Motion Maneuver Enhancement	No
9744	C-17 Visual System Field of View	No
9747	C-17 Training System (Other Mods)	No
99999X	Low Cost Modifications	No

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<b>Model:</b>	<b>C-17</b>	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
3	LARGE AIRCRAFT INFRARED COUNTERMEASURES C-17	No
3080	Replacement Heads Up Display (RHUD)	No
9741	Beyond Line of Sight (BLOS)	No

<b>Model:</b>	<b>A-10C</b>	
<b>Modification P-40a Aggregated Items Title:</b>	<b>A-10</b>	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
7856	MODE S/5	No
9830	Central Interface Control Unit (CICU)	No
9832	2ND GIGABIT ETHERNET SWITCH (2GES)	No
9834	A-10 High Resolution Display System (HRDS)	No
9839	SDB-1	No
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
9831	ARC-210	No
9836	3-Dimensional Audio (3DA)	No

<b>Model:</b>	<b>A-10</b>	
<b>Modification P-40a Aggregated Items Title:</b>	<b>A-10</b>	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		

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<b>Model:</b>	<b>A-10</b>	
<b>Modification P-40a Aggregated Items Title:</b>	<b>A-10</b>	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
9601	ONBOARD OXYGEN GENERATING SYSTEM (OBOGS)	No
9806	A-10 Helmet Mounted Cueing System	No
9808	Covert/Overt Landing Light Requirement (COLA)	No
9810	LARS-CSEL	No
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
9804	A-10 Wing Replacement Program	No
8674	ATP upgrade Legacy to SE	Yes
8675	ATP-SE Technology Insertion	Yes

<b>Model:</b>	<b>A01000A</b>	
<b>Modification P-40a Aggregated Items Title:</b>	<b>A-10</b>	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
9811	A-10 J-Hook System	No
9816	A-10 Conversion Fuel Tanks	No

<b>Model:</b>	<b>E-11A</b>	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
1	E-11 Mods	No

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<b>Model:</b>	F-15C		
<b>Modification P-40a Aggregated Items Title:</b>	F-15		
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>	
<b>Uncategorized</b>			
1203	F-15 C/D Secondary Power System (SPS)	Yes	
1205	:Advanced Display Core Processor, ADCP II-C	Yes	
1206	F-15C Infrared Search and Track (IRST)	Yes	
1209	F-15 C/D Flight Data Recorder (FDR)	Yes	
6158	F-15C/D APG-63(V)3 radar upgrade	Yes	
8754	F-15C/D IFF Mode 5	Yes	
8755	F-15E IFF MODE 5	Yes	
8756	F-15C/D Link 16 Cryptographic Modernization	Yes	
8794	F-15C/D Beyond Line Of Sight Communications	No	
8797	F-15C Passive Attack Sensor System	No	
8798	5th to 4th Gen Gateway	Yes	
8799	F-15C MIDS JTRS	No	
8815	F-15C Simulator Upgrade	No	
8816	F-15C/D APG-63(V)3 Common Config	Yes	
99999X	Low Cost Modifications	Yes	
<b>P-3a Individual Modifications</b>			
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>	
8801	F-15 C/D SLEP Longerons	Yes	
8674	ATP upgrade Legacy to SE	Yes	
8675	ATP-SE Technology Insertion	Yes	

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<b>Model:</b>	F-15D	
<b>Modification P-40a Aggregated Items Title:</b>	F-15	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
1203	F-15 C/D Secondary Power System (SPS)	Yes
1205	:Advanced Display Core Processor, ADCP II-C	Yes
1206	F-15C Infrared Search and Track (IRST)	Yes
1209	F-15 C/D Flight Data Recorder (FDR)	Yes
6158	F-15C/D APG-63(V)3 radar upgrade	Yes
8754	F-15C/D IFF Mode 5	Yes
8755	F-15E IFF MODE 5	Yes
8756	F-15C/D Link 16 Cryptographic Modernization	Yes
8798	5th to 4th Gen Gateway	Yes
8816	F-15C/D APG-63(V)3 Common Config	Yes
99999X	Low Cost Modifications	Yes
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
8801	F-15 C/D SLEP Longerons	Yes

<b>Model:</b>	F-15E	
<b>Modification P-40a Aggregated Items Title:</b>	F-15	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
1210	F-15E Flight Data Recorder (FDR)	No
8353	F-15E -JOINT HELMET-MOUNTED CUEING SYSTEM	No

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<b>Model:</b>	F-15E	
<b>Modification P-40a Aggregated Items Title:</b>	F-15	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
8662	AETC MTD UPGRADES-FIELD TRAINING DETACHMENTS	No
8755	F-15E IFF MODE 5	Yes
8756	F-15C/D Link 16 Cryptographic Modernization	Yes
8811	F-15E SATCOM UON	No
8813	F-15E B61 A/C Umbilical	No
8817	F-15E DTM II	No
8820	F-15E Digital Color Display	No
99999U	LOW COST RETROFIT MODS	No
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
1202	F-15E Radar Modernization Program APG-82(V)1	No
1	Advanced Display Core Processor, ADCP II-E	No
8800	F-15E MIDS JTRS	No
8804	F-15 F-15 E/MUOS	No
8810	F-15E APG-82(V)1 Common Config	No
8796	EPAWSS F-15E	No
8674	ATP upgrade Legacy to SE	Yes
8675	ATP-SE Technology Insertion	Yes

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<b>Model:</b>	F15CD	
<b>Modification P-40a Aggregated Items Title:</b>	F-15	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
8806	F-15 C/D Cabin Pressure Indicator	No

<b>Model:</b>	F15E	
<b>Modification P-40a Aggregated Items Title:</b>	F-15	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
8807	F-15 E Cabin Pressure Indicator	No

<b>Model:</b>	F-15A	
<b>Modification P-40a Aggregated Items Title:</b>	F-15	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
99999X	Low Cost Modifications	Yes

<b>Model:</b>	F-15B	
<b>Modification P-40a Aggregated Items Title:</b>	F-15	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
99999X	Low Cost Modifications	Yes

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<b>Model:</b>	F-16	
<b>Modification P-40a Aggregated Items Title:</b>	F-16	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
633030	Aggressors Update	No
633041	Anti Jam	No
633042	Missile Warning Systems	No
661652	Link 16 Crypto	No
8662	AETC MTD UPGRADES-FIELD TRAINING DETACHMENTS	No
866251	Full Combat Mission Training	No
99999X	Low Cost Modifications	No
<b>Modification P-40a Aggregated Items Title:</b>	Other Aircraft	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
8669	Full Combat Mission Training	No
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
602148	MMC and Display Generator Upgrade	No
602600	F-16 LEGACY STRUCTURAL SLEP	No
618250	Comm Suite Upgrade	No
633031	HFLCC AGCAS	No
633032	AIFF MODE 5	No
661653	MIDS-JTRS	No
694050	AESA Radars	No

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<b>Model:</b>	F-16	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
704050	Digital Radar Warning Receiver (RWR)	No
866250	F-16 TRAINING SYSTEMS	No
8674	ATP upgrade Legacy to SE	Yes
8675	ATP-SE Technology Insertion	Yes

<b>Model:</b>	F-22	
<b>Modification P-40a Aggregated Items Title:</b>	F-22A	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
F22001	COMMON CONFIGURATION	No
F22003	INCREMENT 3.1	No
F22014	F119 Engine Modifications	No
F22022	Structures Retrofit Plan	No
F22024	Trainers Modernization	No
F22030	Mode 5 Identification Friend or Foe (IFF)	No
F22031	Mid-Life Updates	No
F22034	Navigation Systems Hardware	No
F22035	Pylon	No
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
1	Reliability and Maintainability Program	No
2	Link 16	No

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<b>Model:</b>	<b>F-22</b>	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
3	Crypto Modernization	No
4	Sensor Enhancement	No
11100	INCREMENT 3.2B	No

<b>Model:</b>	<b>F-35A</b>	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
1	Block 3i LRIP 2-5 Upgrade	No
2	Block 3F LRIP 2-5 Upgrade	No
3	Block 3F LRIP 6-8 Upgrade	No
4	Concurrency	No
5	Correction of Deficiencies	No
6	Block 4 Modifications	No

<b>Model:</b>	<b>KC-46</b>	
<b>Modification P-40a Aggregated Items Title:</b>	<b>KC-46A MDAP</b>	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
4601	R&M Safety Mods	No
4602	Pegasus Advanced Communications Suite (PACS)	No
99999X	Low Cost Modifications	No

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<b>Model:</b>	KC-46	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
1	Airworthiness Directives	No

<b>Model:</b>	C-5	
<b>Modification P-40a Aggregated Items Title:</b>	C-5	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
8964	C-5 Replace Multifunctional Co	No

<b>Model:</b>	c-17	
<b>Modification P-40a Aggregated Items Title:</b>	C-17A	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
9748	C-17 Training System (Training Mods)	No

<b>Model:</b>	C-37	
<b>Modification P-40a Aggregated Items Title:</b>	C-37A	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
1118	CNS/ATM Compliance	No
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
1117	WIDEBAND SATCOM	No

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<b>Model:</b>	<b>C-37A</b>		
<b>Modification P-40a Aggregated Items Title:</b>	<b>C-37A</b>		
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>	
<b>Uncategorized</b>			
99999S	SERVICE BULLETINS	Yes	
99999X	Low Cost Modifications	Yes	

<b>Model:</b>	<b>C-37B</b>		
<b>Modification P-40a Aggregated Items Title:</b>	<b>C-37A</b>		
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>	
<b>Uncategorized</b>			
99999S	SERVICE BULLETINS	Yes	
99999X	Low Cost Modifications	Yes	

<b>Model:</b>	<b>T-6A</b>		
<b>Modification P-40a Aggregated Items Title:</b>	<b>T-6</b>		
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>	
<b>Uncategorized</b>			
9873	Canopy Fracture Initiation System	No	
9877	Avionics Upgrades FAA Compliance	No	
9878	Aircrew Training Device (ATD) Modernization	No	
9890	Controlled Flight Into Terrain Avoidance	No	
9893	Crew System Modernization Program	No	
9894	Avionics Modernization	No	
99999S	SERVICE BULLETINS	No	

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<b>Model:</b>	T-6A	
<b>Modification P-40a Aggregated Items Title:</b>	T-6	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
99999X	Low Cost Modifications	No
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
9871	T-6A Crash Survivable Recorder	No

<b>Model:</b>	T-6	
<b>Modification P-40a Aggregated Items Title:</b>	T-6	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
9892	Reliability & Maintainability (R&M) Safety Mods	No

<b>Model:</b>	T-38	
<b>Modification P-40a Aggregated Items Title:</b>	T-38	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
6090	T-38 Avionics	No
6092	T-38 A/B ADS-B Out	No
99999A	LOW COST SAFETY MODIFICATIONS	No
99999X	Low Cost Modifications	No

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<b>Model:</b>	T-38	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
6088	Pacer Classic III	No

<b>Model:</b>	T03800	
<b>Modification P-40a Aggregated Items Title:</b>	T-38	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
6091	Talon Repair, Inspection and Maintenance	No
6093	T-38 Canopy	No

<b>Model:</b>	U-2	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
4494	U-2 Mod	No
4496	ASARS-2B Procurement for U-2	No

<b>Model:</b>	C-40B	
<b>Modification P-40a Aggregated Items Title:</b>	C-40	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
1110	Nitrogen Generation System	Yes
1120	Crew Rest Seats	No
99999S	SERVICE BULLETINS	Yes

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<b>Model:</b>	C-40B		
<b>Modification P-40a Aggregated Items Title:</b>	C-40		
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>	
99999X	Low Cost Modifications	Yes	
<b>P-3a Individual Modifications</b>			
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>	
1118	WIDEBAND SATCOM	Yes	

<b>Model:</b>	C-40C		
<b>Modification P-40a Aggregated Items Title:</b>	C-40		
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>	
<b>Uncategorized</b>			
1110	Nitrogen Generation System	Yes	
99999S	SERVICE BULLETINS	Yes	
99999X	Low Cost Modifications	Yes	
<b>P-3a Individual Modifications</b>			
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>	
1118	WIDEBAND SATCOM	Yes	

<b>Model:</b>	C-40		
<b>Modification P-40a Aggregated Items Title:</b>	C-40		
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>	
<b>Uncategorized</b>			
1119	CNS/ATM Compliance	No	

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<b>Model:</b>	<b>C-130H</b>		
<b>Modification P-40a Aggregated Items Title:</b>	<b>C-130</b>		
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>	
<b>Uncategorized</b>			
3773	C-130 8-Bladed Propeller Upgrade	No	
8221	C-130 ALR-69A Radar Warning Receiver (RWR)	No	
8518	C-130H Avionics Modernization Program (AMP) Increment 2	No	
8578	C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION)	Yes	
9139	MOD V IFF	No	
9149	C-130 Aux Hyd Pump	Yes	
92302	C-130H Avionics Modernization Program (AMP) Increment 1	No	
92308	T-56 3.5 Engine Mod	No	
92311	Electronic Propeller Control System (EPCS)	No	
92312	In-Flight Propeller Balancing System (IPBS)	No	
92315	C-130H Simulator	No	
92321	C-130H MUOS	No	
99999A	LOW COST SAFETY MODIFICATIONS	No	

<b>Model:</b>	<b>MC-130H</b>		
<b>Modification P-40a Aggregated Items Title:</b>	<b>C-130</b>		
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>	
<b>Uncategorized</b>			
8578	C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION)	Yes	
9149	C-130 Aux Hyd Pump	Yes	

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<b>Model:</b>	MC-130H		
<b>Modification P-40a Aggregated Items Title:</b>	C-130		
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>	
92316	AFSOC C-130 Mods	No	

<b>Model:</b>	HC-130P		
<b>Modification P-40a Aggregated Items Title:</b>	C-130		
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>	
<b>Uncategorized</b>			
8578	C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION)	Yes	

<b>Model:</b>	HC-130N		
<b>Modification P-40a Aggregated Items Title:</b>	C-130		
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>	
<b>Uncategorized</b>			
8578	C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION)	Yes	

<b>Model:</b>	EC-130H		
<b>Modification P-40a Aggregated Items Title:</b>	C-130		
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>	
<b>Uncategorized</b>			
8578	C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION)	Yes	
<b>P-3a Individual Modifications</b>			
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>	
1001	COMPASS CALL	No	

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<b>Model:</b>	AC-130U	
<b>Modification P-40a Aggregated Items Title:</b>	C-130	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
8578	C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION)	Yes

<b>Model:</b>	No text provided.	
<b>Modification P-40a Aggregated Items Title:</b>	C-130	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
9141	C-130 CRASHWORTHY LOADMASTER SEAT	No
<b>Modification P-40a Aggregated Items Title:</b>	Other Aircraft	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
8736	Counterdrug USSOUTHCOM Support	No

<b>Model:</b>	MC-130W	
<b>Modification P-40a Aggregated Items Title:</b>	C-130	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
9149	C-130 Aux Hyd Pump	Yes

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<b>Model:</b>	HC-130H		
<b>Modification P-40a Aggregated Items Title:</b>	C-130		
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>	
<b>Uncategorized</b>			
92309	Onboard Fire Incident Response Equipment	No	

<b>Model:</b>	HC-130		
<b>Modification P-40a Aggregated Items Title:</b>	C-130		
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>	
<b>Uncategorized</b>			
92310	HC-130P/N Variable Speed Drogue (VSD)	No	
99999C	HC-130 Low Cost Mods	No	

<b>Model:</b>	C-130J		
<b>Modification P-40a Aggregated Items Title:</b>	C-130J Mods		
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>	
<b>Uncategorized</b>			
_2612	Avionics System and Structural Modifications	No	
_5296	Wind Gust Brake	No	
8668	WST Threat Generators	No	
8669	MUOS	No	
99999X	Low Cost Modifications	No	
<b>P-3a Individual Modifications</b>			
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>	
5222	BLOCK 8.1	No	

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<b>Model:</b>	C-130J	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
8646	C-130J Center Wing Replacement	No

<b>Model:</b>	KC-135	
<b>Modification P-40a Aggregated Items Title:</b>	C-135	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
9818	VOR/ILS ANTENNAE	No
9824	ADS-B	No
9828	Real Time in the Cockpit (RTIC)	No
9829	MUOS Radios	No
99999A	LOW COST SAFETY MODIFICATIONS	No
99999X	Low Cost Modifications	No

<b>Modification P-40a Aggregated Items Title:</b>	Other Aircraft	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
8735	DAS000 (ROBE)	Yes

<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
8653	BLOCK 45	No
9826	Rudder Position Indicator (RPI)	No
9827	KC-135 AERO-I SATCOM replacement	No

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<b>Model:</b>	KC-135	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
8670	MAF Training	No

<b>Model:</b>	EC-37B	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
1003	COMPASS CALL Baseline Modifications	No

<b>Model:</b>	WC-135R	
<b>Modification P-40a Aggregated Items Title:</b>	RC-135	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
4266	CONSTANT PHOENIX	No

<b>Model:</b>	RC-135S	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
2504	COBRA BALL	Yes

<b>Model:</b>	TC-135W	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
2504	COBRA BALL	Yes

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<b>Model:</b>	TC-135W	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
4263	RIVET JOINT	Yes

<b>Model:</b>	RC-135V	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
4263	RIVET JOINT	Yes

<b>Model:</b>	RC-135W	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
4263	RIVET JOINT	Yes

<b>Model:</b>	RC-135U	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
4265	COMBAT SENT	No

<b>Model:</b>	E-3	
<b>Modification P-40a Aggregated Items Title:</b>	E-3	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
50001P	TSI	No
50001T	BLOCK 40/45 UPGRADE	No

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<b>Model:</b>	<b>E-3</b>	
<b>Modification P-40a Aggregated Items Title:</b>	<b>E-3</b>	
Item Number	Item Title	Applies to Multiple Models
7225	NEXT GENERATION IDENTIFICATION FRIEND OR FOE (IFF)	No
8662	AETC MTD UPGRADES-FIELD TRAINING DETACHMENTS	No
9707	RM&A Mod	No
9716	VERTICAL STABILIZER AND RUDDER	No
9717	ELECTRONIC PROTECTION	No
9719	Combat ID Diminishing Manufacturing Sources	No
9721	AWACS Communications Integration Program (ACIP)	No
99999XA	LOW COST MOD - AIRFRAME	No
99999XB	LOW COST MOD - AVIONICS & MISSION SYSTEMS	No
99999XC	Low Cost Mod - Communications	No
99999XD	Low Cost Mod - Human Systems	No
<b>P-3a Individual Modifications</b>		
Modification Number	Modification Title	Applies to Multiple Models
50002	Communication Networking Upgrade (CNU)	No
9718	IP-enabled Capability (IPEC)	No
1	BLOCK 40/45 BLOCK UPGRADE	No

<b>Model:</b>	<b>E-3B</b>	
<b>Modification P-40a Aggregated Items Title:</b>	<b>E-3</b>	
Item Number	Item Title	Applies to Multiple Models
<b>Uncategorized</b>		
50002T	AWACS Mode 5 Acceleration	Yes

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<b>Model:</b>	<b>E-3B</b>	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
9709	E-3 DRAGON	Yes

<b>Model:</b>	<b>E-3C</b>	
<b>Modification P-40a Aggregated Items Title:</b>	<b>E-3</b>	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
50002T	AWACS Mode 5 Acceleration	Yes
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
9709	E-3 DRAGON	Yes

<b>Model:</b>	<b>NATO AWACS Modernization Projects</b>	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
1	US Contribution to NATO AWACS Modernization Projects	No

<b>Model:</b>	<b>E-4B</b>	
<b>Modification P-40a Aggregated Items Title:</b>	<b>E-4</b>	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
3410	NPES (NC2AIS) E-4B	No
4406A	SHF Modernization	No

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<b>Model:</b>	E-4B	
<b>Modification P-40a Aggregated Items Title:</b>	E-4	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
9709F	CNS/ATM(ADS-B OUT)	No
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
3411	Survivable SHF	No
1	AEHF Compatible Terminal/PNVC	No
4409	Low Frequency Transmit System (LFTS)	No
2	SERVICE BULLETINS	No

<b>Model:</b>	E-4	
<b>Modification P-40a Aggregated Items Title:</b>	E-4	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
4380	MUOS	No
99999X	Low Cost Modifications	No

<b>Model:</b>	E-8C	
<b>Modification P-40a Aggregated Items Title:</b>	E-8	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
38202	Common Data Link	No
38203	Distributed Mission Ops Center (DMOC)	No
38207	JSTARS Re-engining	No

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<b>Model:</b>	E-8C	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
38206	SATCOM/MUOS Radios	No

<b>Model:</b>	E-8	
<b>Modification P-40a Aggregated Items Title:</b>	E-8	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
38204	JSTARS OCO Requirements	No

<b>Model:</b>	HH-60G	
<b>Modification P-40a Aggregated Items Title:</b>	H-60	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
8564	Control Display Unit (CDU)	No
8565	Navigation System Upgrade (NSU)	No
8844	Multi-function Color Display	No
8850	MODE 5	No
8852	CSAR Avionics/Electrical Upgrade	No
8853	DEFENSIVE SYSTEM UPGRADE	No
8854	HH-60 OLR Mission Modifications	No
8856	Block 162	No
8861	HH-60 DATALINKS	No
8862	HH-60G Communication Suite Control Integration	No

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<b>Model:</b>	HH-60G	
<b>Modification P-40a Aggregated Items Title:</b>	H-60	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
99999X	Low Cost Modifications	No
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
8859	DVE Sensor	No

<b>Model:</b>	RQ-4	
<b>Modification P-40a Aggregated Items Title:</b>	RQ-4 Mods	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
99999X	Low Cost Modifications	No
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
470001	GH Aircraft Mods	No
470003	GH Ground Station Mods	No
470009	ASIP Increment I	No
470010	SAR	No
470011	ASIP Install/Calibration	No
470012	MODE 5/ADS-B	No
470013	Sensor Enhancements	No
470019	Communication Interoperability/Enhancements	No
470020	EISS Enhancements	No

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<b>Model:</b>	MC-130J	
<b>Modification P-40a Aggregated Items Title:</b>	HC/MC-130 Modifications	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
8762	MC-130J Link 16	No
99999X	Low Cost Modifications	Yes
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
5222	HC/MC-130J Block 8.1	Yes
8632	MC-130J Increment 2	No
8642	(AbMN) Air borne Mission Networking	No
8648	ADS-B out Acceleration	No
8659	Broadband Antenna	No

<b>Model:</b>	HC-130J	
<b>Modification P-40a Aggregated Items Title:</b>	HC/MC-130 Modifications	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
99999X	Low Cost Modifications	Yes
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
5222	HC/MC-130J Block 8.1	Yes
8634	HC-130J Common Configuration	No
8635	HC-130J Personnel Locator System	No
8636	HC-130J Situational Awareness	No

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<b>Model:</b>	<b>HC-130J</b>	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
8639	Wireless Intercom	No
8652	(RFCM) Radio Frequency Countermeasures	No
8658	Paratroop Door	No

<b>Model:</b>	<b>AC-130J</b>	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
5222	HC/MC-130J Block 8.1	Yes

<b>Model:</b>	<b>HCMCAC-130J</b>	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
8761	HC/MC/AC MUOS	No

<b>Model:</b>	<b>KC-46A</b>	
<b>Modification P-40a Aggregated Items Title:</b>	<b>Other Aircraft</b>	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
8735	DAS000 (ROBE)	Yes

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<b>Model:</b>	E-9	
<b>Modification P-40a Aggregated Items Title:</b>	Other Aircraft	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
99999J	MISCELLANEOUS LOW COSTS MODS (Combat Developments)	No

<b>Model:</b>	HH-60U	
<b>Modification P-40a Aggregated Items Title:</b>	Other Aircraft	
<b>Item Number</b>	<b>Item Title</b>	<b>Applies to Multiple Models</b>
<b>Uncategorized</b>		
HH-60U	HH-60U	No

<b>Model:</b>	MULTI	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
8733	Battlefield ABN Comm Node (BACN)	No

<b>Model:</b>	MQ-9	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
9151	Block 5	No
9152	MQ-9 Field	No
9154	Lynx SAR	No
9155	GCS Blk 30	No
9159	R&M enhancements	No

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<b>Model:</b>	<b>MQ-9</b>		
<b>P-3a Individual Modifications</b>			
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>	
9164	Extended Range MQ-9	No	
9167	MQ-9 Upgrade	No	
1	MQ-9 Low Cost Mods	No	
9169	Gorgon Stare	No	

<b>Model:</b>	<b>CV-22</b>		
<b>P-3a Individual Modifications</b>			
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>	
8790	Block 20 Upgrade	No	
1	Low Cost Modifications	No	

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**Funding (\$ M)**

Modification P-40a Item Title P-3a Modification Title	PYS	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
<b>Exhibit P-40a</b>										
LINK 16/CID/IFR	2.607	2.296	0.200	0.203	-	0.203	0.207	0.210	0.213	0.217
B-2 Adaptable Communications Suite (ACS)	22.698	0.724	0.296	0.300	-	0.300	0.306	0.312	0.318	0.324
B-2 DMS / Displays	-	-	-	-	-	-	-	132.069	111.294	27.573
B-2 Flex Strike Phase 1	15.860	7.870	4.894	2.172	-	2.172	-	-	-	-
B61-12 Integration	39.549	-	-	-	-	-	-	-	-	-
MGUE	19.659	1.497	0.990	1.096	-	1.096	0.320	0.480	-	-
IFF Mode 5/S	-	-	-	0.000	-	0.000	15.405	15.873	10.490	-
Crash Survivable Memory Unit (CSMU)	-	-	-	-	-	-	1.599	1.628	1.657	1.688
Rotary Launcher Assembly (RLA) Service Life Extension Program	-	-	-	-	-	-	7.529	7.665	7.804	7.946
B-2 GBU-57 MOP Integration	3.038	18.456	-	-	-	-	-	-	-	-
Common Very Low Frequency Terminal	52.320	6.440	2.376	-	-	-	-	-	-	-
B-2 Low Cost Engine Modifications	18.186	0.000	0.236	0.749	-	0.749	0.965	1.078	0.792	0.807
Low Cost Modifications	19.878	0.000	0.314	0.640	-	0.640	0.854	0.965	0.677	0.689
Fully Integrated Data Links	393.194	15.338	10.202	4.715	-	4.715	14.576	9.730	0.000	-
CITS UPGRADE	117.450	6.712	1.652	1.891	-	1.891	0.109	0.111	-	-
B-1 TRAINING SUPPORT	3.429	0.450	0.458	0.041	-	0.041	0.072	0.101	0.494	0.503
LAPTOP CONTROLLED TARGETING POD	83.572	4.397	0.397	0.000	-	0.000	-	-	-	-
MIDS-JTRS	-	-	-	3.057	-	3.057	7.044	6.454	0.000	0.000
Radio Crypto Compliance	-	-	-	0.493	-	0.493	3.141	5.586	0.000	0.000
Low Cost Modifications	5.439	0.198	0.249	0.000	-	0.000	0.000	0.000	-	-

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Modification P-40a Item Title P-3a Modification Title	PYS	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
B-52 Anti-Skid Replacement	20.458	0.916	0.932	0.948	-	0.948	-	-	-	-
B-52 Combat Network Communications Technology	581.692	55.444	13.567	-	-	-	32.790	5.671	-	-
B-52 Internal Weapons Bay Upgrade	52.943	24.176	0.000	-	-	-	-	-	-	-
AETC Trainers (B-52)	9.460	2.480	2.524	0.226	-	0.226	0.397	0.554	2.712	2.762
B-52 Radar Modernization	-	-	0.009	-	-	-	2.359	39.454	193.413	240.748
B-52 Low Cost Improvements	4.709	2.362	2.412	2.457	0.000	2.457	2.508	2.553	2.600	2.647
B-52 Crypto Modernization	-	-	0.000	0.000	0.000	0.000	3.485	2.397	0.000	0.000
Advanced Targeting Pod MFCD	-	-	-	-	-	-	22.884	16.195	16.487	-
B-52 VLF/LF Modernization	-	-	-	-	-	-	33.523	19.497	8.065	0.000
B-52 CERP	-	-	-	-	-	-	-	-	-	683.929
B-52 IR Missile Warning System	-	16.400	-	-	-	-	-	-	-	-
Other Mods	2.344	15.452	5.460	0.470	-	0.470	0.480	0.489	0.498	0.506
LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130	14.301	-	-	-	-	-	-	-	-	-
LARGE AIRCRAFT INFRARED COUNTERMEASURES C-5	22.782	26.550	8.177	0.000	-	0.000	-	-	-	-
MODE S/5	11.000	3.520	0.000	0.858	-	0.858	-	-	-	-
ONBOARD OXYGEN GENERATING SYSTEM (OBOGS)	20.545	5.436	-	-	-	-	-	-	-	-
A-10 Helmet Mounted Cueing System	-	0.890	3.050	3.018	-	3.018	4.880	4.548	-	-
Covert/Overt Landing Light Requirement (COLA)	0.850	-	-	-	-	-	-	-	-	-
LARS-CSEL	27.000	-	-	-	-	-	-	-	-	-
A-10 J-Hook System	-	0.750	-	-	-	-	-	-	-	-
A-10 Conversion Fuel Tanks	-	8.700	-	-	-	-	-	-	-	-
Central Interface Control Unit (CICU)	-	-	-	-	-	-	-	-	60.929	57.902

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Modification P-40a Item Title P-3a Modification Title	PYS	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
2ND GIGABIT ETHERNET SWITCH (2GES)	-	-	5.000	4.900	-	4.900	-	-	-	-
A-10 High Resolution Display System (HRDS)	-	-	6.250	1.400	0.000	1.400	7.458	21.609	18.711	7.000
SDB-1	-	-	8.000	-	-	-	-	-	-	-
F-15 C/D Secondary Power System (SPS)	7.492	-	-	-	-	-	-	-	-	-
:Advanced Display Core Processor, ADCP II-C	49.258	58.091	72.094	0.000	-	0.000	0.000	0.000	-	-
F-15C Infrared Search and Track (IRST)	62.151	63.394	0.000	-	-	-	-	-	-	-
F-15 C/D Flight Data Recorder (FDR)	24.808	0.020	-	-	-	-	-	-	-	-
F-15E Flight Data Recorder (FDR)	142.446	0.027	-	-	-	-	-	-	-	-
F-15C/D APG-63(V)3 radar upgrade	1,364.928	0.011	23.681	0.000	-	0.000	-	-	-	-
F-15E -JOINT HELMET-MOUNTED CUEING SYSTEM	103.924	0.600	-	-	-	-	-	-	-	-
AETC MTD UPGRADES-FIELD TRAINING DETACHMENTS	6.500	0.296	1.147	0.103	-	0.103	0.181	0.252	1.233	1.255
F-15C/D IFF Mode 5	-	24.909	29.656	0.000	-	0.000	-	-	-	-
F-15E IFF MODE 5	36.041	17.671	15.257	2.080	-	2.080	0.190	0.200	-	-
F-15C/D Link 16 Cryptographic Modernization	0.002	-	-	-	-	-	-	-	-	-
F-15C/D Beyond Line Of Sight Communications	54.427	0.001	-	-	-	-	-	-	-	-
F-15C Passive Attack Sensor System	28.577	-	-	-	-	-	-	-	-	-
5th to 4th Gen Gateway	-	3.698	-	-	-	-	-	-	-	-
F-15C MIDS JTRS	7.430	19.270	41.640	-	-	-	18.556	3.564	-	-
F-15 C/D Cabin Pressure Indicator	2.653	0.120	-	-	-	-	-	-	-	-
F-15 E Cabin Pressure Indicator	7.648	8.245	-	-	-	-	-	-	-	-
F-15E SATCOM UON	17.700	-	-	-	-	-	-	-	-	-
F-15E B61 A/C Umbilical	0.542	-	-	-	-	-	-	-	-	-

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F-15C Simulator Upgrade	15.000	-	-	-	-	-	-	-	-	-
F-15C/D APG-63(V)3 Common Config	-	4.326	4.352	1.510	-	1.510	0.909	0.069	-	-
F-15E DTM II	-	-	-	-	-	-	7.540	9.920	11.010	50.000
F-15E Digital Color Display	-	-	-	-	-	-	15.159	17.619	25.216	90.930
LOW COST RETROFIT MODS	5.765	1.501	0.001	0.001	-	0.001	-	-	-	-
Low Cost Modifications	5.788	0.001	0.001	-	-	-	-	-	-	-
Aggressors Update	8.206	1.154	0.000	1.988	0.000	1.988	0.000	-	-	-
Anti Jam	5.000	-	-	-	-	-	-	-	-	-
Missile Warning Systems	12.000	-	-	-	-	-	-	-	-	-
Link 16 Crypto	0.139	-	-	-	-	-	-	-	-	-
AETC MTD UPGRADES-FIELD TRAINING DETACHMENTS	106.935	5.335	5.431	0.487	-	0.487	0.858	1.193	5.732	5.888
Full Combat Mission Training	-	5.641	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-
Low Cost Modifications	10.948	1.720	0.010	0.010	-	0.010	0.146	0.151	0.257	0.189
COMMON CONFIGURATION	669.208	-	-	-	-	-	-	-	-	-
INCREMENT 3.1	252.649	7.500	-	-	-	-	-	-	-	-
F119 Engine Modifications	82.092	1.186	2.541	4.971	-	4.971	4.755	1.516	14.508	25.311
Structures Retrofit Plan	272.398	2.836	0.000	-	-	-	-	-	-	-
Trainers Modernization	90.346	3.455	13.724	2.489	-	2.489	2.681	2.481	2.481	3.426
Mode 5 Identification Friend or Foe (IFF)	-	13.713	-	-	-	-	0.000	28.037	29.462	43.603
Mid-Life Updates	-	-	-	-	-	-	-	-	-	-
Navigation Systems Hardware	-	-	-	-	-	-	-	27.388	30.100	54.436
Pylon	-	-	-	-	-	-	-	-	30.630	55.210

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R&M Safety Mods	-	-	-	0.000	-	0.000	16.253	19.919	0.000	0.000
Pegasus Advanced Communications Suite (PACS)	-	-	-	0.000	-	0.000	-	0.000	0.000	0.000
Low Cost Modifications	-	0.039	2.000	2.000	-	2.000	2.000	2.000	0.000	0.000
C-5 Replace Multifunctional Co	-	-	-	-	-	-	-	17.879	19.266	-
C-5 Fleet Blk Upgrade 01	13.093	-	-	-	-	-	-	-	-	-
C-5 Training Systems (Training Mods)	-	-	-	-	-	-	-	2.635	-	-
Pylon Stub FFLZ, FF, Translating Fairing	93.956	-	-	1.618	-	1.618	0.050	0.050	0.050	0.050
ELT Frequency Change	5.182	-	-	-	-	-	-	-	-	-
MFOQA	14.070	-	-	-	-	-	-	-	-	-
IFF GATM	123.454	1.109	-	0.050	-	0.050	-	-	-	-
Automatic Dependent Surveillance - Broadcast Out (ADS-B Out)	83.245	-	-	0.050	-	0.050	-	-	-	-
Filter Fire Mitigation	-	-	0.440	1.320	-	1.320	1.830	1.940	1.980	2.030
Fixed Installation Satellite Antenna (FISA)	-	17.160	8.088	4.900	-	4.900	0.100	0.100	0.100	0.100
C-17 Simulator Lateral Motion Maneuver Enhancement	-	1.438	-	-	-	-	-	-	-	-
C-17 Visual System Field of View	-	1.008	-	-	-	-	-	-	-	-
C-17 Training System (Other Mods)	-	4.178	1.479	1.009	-	1.009	1.009	1.097	1.183	-
C-17 Training System (Training Mods)	-	-	11.370	-	-	-	-	10.553	-	-
Low Cost Modifications	3.246	0.061	0.100	0.066	-	0.066	0.051	0.053	0.050	0.051
CNS/ATM Compliance	17.606	0.000	-	-	-	-	-	-	-	-
SERVICE BULLETINS	-	-	0.100	0.000	0.000	0.000	-	-	-	-
Low Cost Modifications	0.030	0.419	0.335	-	-	-	-	-	-	-
Canopy Fracture Initiation System	1.131	-	-	-	-	-	-	-	-	-

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Avionics Upgrades FAA Compliance	3.825	19.149	6.225	-	-	-	-	-	-	0.000
Aircrew Training Device (ATD) Modernization	35.331	2.210	3.601	4.323	-	4.323	3.200	2.920	2.910	-
Controlled Flight Into Terrain Avoidance	-	-	-	-	-	-	3.205	2.828	-	-
Reliability & Maintainability (R&M) Safety Mods	-	-	0.100	0.071	-	0.071	0.100	0.100	0.100	-
Crew System Modernization Program	-	30.600	0.100	0.100	-	0.100	0.100	0.100	0.100	-
Avionics Modernization	-	-	-	-	-	-	-	-	-	30.198
SERVICE BULLETINS	-	-	0.100	0.100	-	0.100	0.100	0.100	0.100	0.100
Low Cost Modifications	2.041	1.191	1.700	1.700	-	1.700	0.100	0.100	0.000	-
T-38 Avionics	68.777	27.470	0.126	0.000	-	0.000	1.585	2.372	6.944	1.634
Talon Repair, Inspection and Maintenance	-	2.700	3.660	2.685	-	2.685	12.562	26.101	33.089	28.855
T-38 A/B ADS-B Out	4.193	4.076	-	0.000	-	0.000	-	-	-	-
T-38 Canopy	-	0.000	0.181	1.573	-	1.573	1.574	1.573	1.602	1.631
LOW COST SAFETY MODIFICATIONS	0.034	0.005	0.005	0.005	-	0.005	0.005	0.005	0.005	0.005
Low Cost Modifications	0.037	0.006	0.006	0.006	-	0.006	0.006	0.006	0.006	0.006
Nitrogen Generation System	6.065	-	-	-	-	-	-	-	-	-
CNS/ATM Compliance	22.412	-	-	-	-	-	-	-	-	-
Crew Rest Seats	7.543	-	-	-	-	-	-	-	-	-
SERVICE BULLETINS	0.009	0.151	0.156	0.161	-	0.161	0.167	0.172	-	-
Low Cost Modifications	0.215	0.100	0.100	0.100	-	0.100	0.100	0.100	-	-
C-130 8-Bladed Propeller Upgrade	141.004	55.000	55.000	-	-	-	-	-	-	-
C-130 ALR-69A Radar Warning Receiver (RWR)	36.000	-	-	-	-	-	-	-	-	-
C-130H Avionics Modernization Program (AMP) Increment 2	-	-	-	0.050	-	0.050	20.403	106.691	77.575	74.573

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C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION)	673.070	0.475	14.512	-	-	-	0.000	0.000	-	0.001
MOD V IFF	40.773	1.327	-	-	-	-	-	-	-	-
C-130 CRASHWORTHY LOADMASTER SEAT	1.853	-	-	-	-	-	-	-	-	-
C-130 Aux Hyd Pump	16.599	-	-	-	-	-	-	-	-	-
C-130H Avionics Modernization Program (AMP) Increment 1	77.200	6.541	7.338	3.841	-	3.841	0.000	-	-	-
T-56 3.5 Engine Mod	187.000	74.000	79.000	-	-	-	-	-	-	-
Onboard Fire Incident Response Equipment	84.266	36.116	5.104	-	-	-	-	-	-	-
HC-130P/N Variable Speed Drogue (VSD)	1.410	-	-	-	-	-	-	-	-	-
Electronic Propeller Control System (EPCS)	141.770	-	-	-	-	-	-	-	-	-
In-Flight Propeller Balancing System (IPBS)	1.500	-	-	-	-	-	-	-	-	-
C-130H Simulator	25.000	-	15.675	-	-	-	22.697	35.415	0.000	-
AFSOC C-130 Mods	11.000	3.705	7.937	-	-	-	-	-	-	-
C-130H MUOS	-	-	-	-	-	-	-	-	-	10.179
LOW COST SAFETY MODIFICATIONS	3.034	0.000	-	-	-	-	-	-	-	-
HC-130 Low Cost Mods	1.907	-	-	-	-	-	-	-	-	-
MISC SIMULATOR UPDATES	0.703	-	-	-	-	-	-	-	-	-
Low Cost Modifications	11.648	-	1.500	1.980	-	1.980	1.977	1.894	1.930	1.999
Avionics System and Structural Modifications	30.828	1.000	-	0.750	-	0.750	0.250	0.230	-	0.250
Wind Gust Brake	39.499	0.350	-	-	-	-	-	-	-	-
WST Threat Generators	-	1.567	-	5.948	-	5.948	-	-	-	-
MUOS	-	-	-	-	-	-	-	-	-	20.000
Low Cost Modifications	10.210	0.000	0.650	0.750	-	0.750	0.250	0.230	0.000	0.250

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VOR/ILS ANTENNAE	9.284	0.001	0.001	0.001	-	0.001	0.001	0.001	-	-
ADS-B	13.843	3.200	-	-	-	-	-	-	-	-
Real Time in the Cockpit (RTIC)	-	26.200	18.200	-	-	-	-	-	-	-
MUOS Radios	-	-	-	-	-	-	-	-	-	26.644
LOW COST SAFETY MODIFICATIONS	-	0.025	0.025	0.025	-	0.025	0.025	0.025	0.025	0.025
Low Cost Modifications	12.121	1.995	0.995	1.995	-	1.995	1.995	1.995	1.995	1.995
CONSTANT PHOENIX	-	208.290	7.937	-	-	-	-	-	-	-
TSI	19.007	0.000	-	0.000	-	0.000	-	-	-	-
BLOCK 40/45 UPGRADE	658.246	0.000	-	0.000	-	0.000	0.000	-	-	-
AWACS Mode 5 Acceleration	-	-	2.343	1.003	-	1.003	1.283	-	-	-
NEXT GENERATION IDENTIFICATION FRIEND OR FOE (IFF)	56.833	-	-	-	-	-	-	-	-	-
AETC MTD UPGRADES-FIELD TRAINING DETACHMENTS	7.699	0.707	0.719	0.065	-	0.065	0.114	0.158	0.775	0.789
RM&A Mod	22.219	0.075	0.328	0.320	-	0.320	-	-	-	-
VERTICAL STABILIZER AND RUDDER	1.816	-	-	-	-	-	-	-	-	-
ELECTRONIC PROTECTION	-	-	-	-	-	-	-	-	0.000	28.707
Combat ID Diminishing Manufacturing Sources	-	-	-	-	-	-	-	-	19.002	27.509
AWACS Communications Integration Program (ACIP)	-	-	-	-	-	-	46.680	46.680	46.680	46.680
LOW COST MOD - AIRFRAME	2.449	1.999	1.999	1.999	-	1.999	1.999	1.999	1.999	1.999
LOW COST MOD - AVIONICS & MISSION SYSTEMS	2.449	1.999	1.999	1.999	-	1.999	1.999	1.999	1.999	1.999
Low Cost Mod - Communications	-	-	-	1.999	-	1.999	1.999	1.999	1.999	1.999
Low Cost Mod - Human Systems	-	-	-	1.999	-	1.999	1.999	1.999	1.999	1.999
NPES (NC2AIS) E-4B	2.730	-	-	-	-	-	-	-	-	-

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MUOS	-	0.000	5.700	2.399	-	2.399	-	-	-	-
SHF Modernization	109.088	11.000	-	-	-	-	-	-	-	-
CNS/ATM(ADS-B OUT)	9.978	0.000	0.000	-	-	-	-	-	-	-
Low Cost Modifications	10.350	1.990	1.990	1.990	-	1.990	1.990	1.990	1.990	1.990
Common Data Link	-	24.807	23.778	3.436	-	3.436	23.589	11.763	-	35.960
Distributed Mission Ops Center (DMOC)	-	-	5.000	0.000	-	0.000	-	-	-	-
JSTARS OCO Requirements	-	13.000	0.000	0.000	-	0.000	-	-	-	-
JSTARS Re-engining	-	-	20.000	0.000	-	0.000	-	-	-	-
Control Display Unit (CDU)	31.634	0.110	-	-	-	-	-	-	-	-
Navigation System Upgrade (NSU)	64.282	1.210	1.298	1.310	-	1.310	0.010	-	-	-
Multi-function Color Display	39.821	3.480	2.610	4.210	-	4.210	4.210	2.210	2.210	-
MODE 5	29.777	2.485	2.148	3.624	-	3.624	2.910	0.010	-	-
CSAR Avionics/Electrical Upgrade	17.257	0.780	0.324	0.160	0.000	0.160	0.240	-	-	-
DEFENSIVE SYSTEM UPGRADE	15.029	40.560	-	1.800	-	1.800	0.010	-	-	-
HH-60 OLR Mission Modifications	452.321	0.400	12.643	1.710	-	1.710	1.570	-	-	-
Block 162	48.390	0.030	3.370	0.250	-	0.250	0.010	-	-	-
HH-60 DATALINKS	10.361	17.478	0.550	3.344	-	3.344	4.860	7.649	1.800	15.543
HH-60G Communication Suite Control Integration	4.490	1.000	0.540	-	-	-	-	-	-	-
Low Cost Modifications	7.019	0.753	0.210	0.120	-	0.120	0.185	1.443	0.824	1.968
Low Cost Modifications	0.000	-	-	2.000	-	2.000	2.000	2.000	2.000	-
MC-130J Link 16	-	-	-	-	4.420	4.420	0.000	0.000	-	-
Low Cost Modifications	8.148	0.640	1.000	1.988	-	1.988	1.000	0.998	0.914	-
Full Combat Mission Training	76.404	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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DAS000 (ROBE)	-	10.400	-	-	-	-	-	-	-	-
Counterdrug USSOUTHCOM Support	-	1.200	-	-	-	-	-	-	-	-
MISCELLANEOUS LOW COSTS MODS (Combat Developments)	142.687	0.248	4.616	0.154	-	0.154	0.157	0.160	0.163	0.166
HH-60U	3.608	-	1.900	1.897	-	1.897	1.898	1.897	1.897	1.932
<b>Exhibit P-3a</b>										
B-2 Trainer System Upgrade	44.912	7.800	0.000	6.465	0.000	6.465	6.705	6.933	16.461	1.122
LOW OBSERVABLE SIGNATURE AND SUPPORTABILITY MODS	57.187	15.218	0.276	19.851	0.000	19.851	24.003	26.210	20.991	11.743
VERTICAL SITUATION DISPLAYS	280.113	12.595	0.000	5.617	0.000	5.617	8.292	7.093	0.000	-
IFF Mode 5/S	0.796	0.000	5.953	5.994	0.000	5.994	0.000	0.000	0.000	0.000
Bomber Tactical Data link	0.000	0.000	11.925	25.977	0.000	25.977	20.696	9.854	3.796	-
GPS-IU Replacement	0.000	0.000	11.097	23.871	0.000	23.871	22.337	0.000	0.000	-
LAIRCM CFIN	-	-	-	0.000	7.500	7.500	0.000	0.000	0.000	0.000
LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130J	124.808	46.872	53.335	0.000	50.021	50.021	59.310	66.526	0.000	10.023
LARGE AIRCRAFT INFRARED COUNTERMEASURES C-17	145.091	69.803	35.581	9.999	0.000	9.999	0.000	0.000	0.000	19.980
A-10 Wing Replacement Program	103.000	148.764	93.755	99.967	0.000	99.967	100.000	99.968	0.000	0.000
ARC-210	0.000	0.000	8.770	18.350	0.000	18.350	7.580	5.000	5.000	20.015
3-Dimensional Audio (3DA)	0.000	0.000	1.000	7.300	0.000	7.300	8.900	3.700	2.500	2.700
E-11 Mods	0.000	0.000	70.027	33.645	0.000	33.645	25.322	53.063	89.606	1.840
F-15E Radar Modernization Program APG-82(V)1	1,336.722	168.118	176.225	234.248	0.000	234.248	92.462	94.114	95.814	102.808
Advanced Display Core Processor, ADCP II-E	86.257	10.520	49.187	43.956	0.000	43.956	78.142	65.876	40.328	0.000

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F-15E MIDS JTRS	14.983	19.040	27.844	29.011	0.000	29.011	41.119	19.818	33.051	0.000
F-15 C/D SLEP Longerons	7.023	5.900	24.627	6.333	0.000	6.333	26.054	31.695	0.000	0.000
F-15 F-15 E/MUOS	-	-	0.630	8.050	0.000	8.050	8.680	30.952	31.509	91.019
F-15E APG-82(V)1 Common Config	0.000	35.097	7.795	24.012	0.000	24.012	4.967	5.056	5.147	-
MMC and Display Generator Upgrade	0.000	0.000	0.000	29.386	0.000	29.386	37.754	51.018	43.318	30.400
F-16 LEGACY STRUCTURAL SLEP	13.353	37.173	45.050	85.751	0.000	85.751	100.120	114.970	117.580	120.840
Comm Suite Upgrade	9.890	20.968	29.171	115.544	0.000	115.544	70.021	66.681	125.973	90.430
HFLCC AGCAS	13.118	14.060	18.153	20.807	0.000	20.807	17.577	1.906	0.000	0.000
AIFF MODE 5	5.031	36.381	0.000	9.868	0.000	9.868	13.088	40.989	0.000	0.000
MIDS-JTRS	120.454	176.661	1.469	11.093	0.000	11.093	0.000	0.000	-	-
AESA Radars	270.638	0.000	175.890	269.893	0.000	269.893	317.629	286.141	173.049	178.221
Digital Radar Warning Receiver (RWR)	0.000	0.000	0.000	28.187	0.000	28.187	61.709	74.235	96.875	203.798
F-16 TRAINING SYSTEMS	11.649	4.320	6.302	42.746	0.000	42.746	6.492	3.091	5.007	7.132
Reliability and Maintainability Program	1,360.926	123.329	74.547	89.446	0.000	89.446	89.807	87.180	92.015	97.238
Link 16	0.000	103.700	77.600	147.340	0.000	147.340	139.900	28.023	9.100	-
Crypto Modernization	3.704	8.416	3.305	6.069	0.000	6.069	0.000	0.000	0.000	-
Sensor Enhancement	-	-	151.880	137.590	0.000	137.590	297.172	423.883	393.767	380.700
Block 3i LRIP 2-5 Upgrade	206.518	2.117	8.171	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Block 3F LRIP 2-5 Upgrade	7.336	2.005	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Block 3F LRIP 6-8 Upgrade	0.056	0.000	2.800	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Concurrency	380.294	233.149	206.324	154.330	0.000	154.330	35.880	0.000	0.000	0.000
Correction of Deficiencies	0.000	0.000	98.045	126.855	0.000	126.855	121.639	163.997	167.241	170.652
Block 4 Modifications	-	-	14.000	41.000	0.000	41.000	3.240	0.000	0.000	0.000

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EPAWSS F-15E	-	214.885	125.417	31.995	0.000	31.995	308.509	337.335	265.765	270.625
INCREMENT 3.2B	273.739	2.007	20.213	5.889	0.000	5.889	0.000	-	-	-
Airworthiness Directives	0.000	8.508	3.213	22.085	0.000	22.085	51.936	34.733	0.000	0.000
C-5 Mission Systems Equipment- Lavatory	9.461	10.943	8.742	12.866	0.000	12.866	3.838	0.000	-	-
Mission Computer and Weather Radar	36.437	28.353	16.809	15.365	0.000	15.365	6.928	3.036	4.779	0.000
C-5M Communication Navigation Surveillance/Air Traffic Management (CNS/ATM)	0.000	20.483	32.386	33.877	0.000	33.877	14.911	7.661	0.000	0.000
Replacement Heads Up Display (RHUD)	20.315	51.754	37.567	34.418	0.000	34.418	37.961	39.280	33.739	35.065
Beyond Line of Sight (BLOS)	-	0.513	1.200	23.367	0.000	23.367	44.440	31.253	11.152	65.316
WIDEBAND SATCOM	-	0.000	0.000	12.985	0.000	12.985	0.000	0.000	0.000	0.000
T-6A Crash Survivable Recorder	-	0.000	0.000	20.535	0.000	20.535	7.342	0.000	0.000	0.000
Pacer Classic III	181.653	36.366	33.363	32.537	0.000	32.537	36.414	35.277	31.615	27.477
U-2 Mod	90.346	67.365	58.563	62.480	9.600	72.080	57.070	53.838	54.809	55.845
ASARS-2B Procurement for U-2	-	-	0.000	48.138	0.000	48.138	72.268	28.071	15.860	12.593
WIDEBAND SATCOM	91.349	0.000	0.000	8.991	0.000	8.991	0.000	0.000	-	-
BLOCK 8.1	241.424	93.695	93.491	119.190	0.000	119.190	112.117	165.774	76.547	23.231
C-130J Center Wing Replacement	104.011	4.468	34.258	13.394	0.000	13.394	0.510	10.517	0.529	0.539
BLOCK 45	246.974	53.865	47.617	60.185	0.000	60.185	73.601	74.414	55.187	65.579
Rudder Position Indicator (RPI)	2.905	6.124	17.932	9.770	0.000	9.770	8.779	8.999	8.119	0.150
KC-135 AERO-I SATCOM replacement	-	0.000	28.581	16.274	0.000	16.274	23.682	24.580	1.330	0.100
COMPASS CALL	0.000	36.400	0.000	0.000	12.800	12.800	0.000	-	-	-
COMPASS CALL Baseline Modifications	324.443	135.861	110.754	193.389	0.000	193.389	143.387	116.080	100.027	87.496
COBRA BALL	19.428	6.776	12.177	12.414	0.000	12.414	12.656	12.902	13.154	13.392

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RIVET JOINT	530.930	169.664	197.574	168.952	0.000	168.952	188.889	187.225	62.004	207.978
COMBAT SENT	37.154	9.802	9.985	9.966	0.000	9.966	10.191	10.375	10.562	10.753
Communication Networking Upgrade (CNU)	0.000	0.000	4.423	28.044	0.000	28.044	9.159	15.893	9.660	6.281
E-3 DRAGON	122.726	32.709	83.670	75.393	0.000	75.393	87.162	126.943	159.992	122.487
IP-enabled Capability (IPEC)	77.017	10.876	16.611	22.919	0.000	22.919	10.642	5.907	2.296	-
US Contribution to NATO AWACS Modernization Projects	-	0.000	0.000	36.401	0.000	36.401	65.497	46.712	48.169	49.050
Survivable SHF	-	0.000	0.000	14.663	0.000	14.663	29.696	29.706	30.241	30.794
AEHF Compatible Terminal/PNVC	0.017	8.107	3.472	13.986	0.000	13.986	14.651	1.078	2.742	2.792
Low Frequency Transmit System (LFTS)	36.954	41.281	41.748	20.039	0.000	20.039	0.000	0.000	0.000	0.000
SERVICE BULLETINS	25.523	5.480	5.567	5.726	0.000	5.726	5.903	6.043	6.187	6.337
SATCOM/MUOS Radios	-	-	-	7.601	0.000	7.601	7.601	7.601	7.601	7.601
BLOCK 40/45 BLOCK UPGRADE	742.595	69.280	32.821	53.343	0.000	53.343	42.412	0.000	0.000	0.000
DVE Sensor	1.940	23.740	3.186	28.010	0.000	28.010	6.066	17.557	30.176	15.210
GH Aircraft Mods	432.163	101.290	1.704	29.468	0.000	29.468	30.076	53.433	112.305	0.000
GH Ground Station Mods	15.523	-	-	-	-	-	-	-	-	-
ASIP Increment I	37.154	2.573	0.000	0.000	0.000	0.000	-	-	-	-
SAR	3.640	-	-	-	-	-	-	-	-	-
ASIP Install/Calibration	4.834	-	-	-	-	-	-	-	-	-
MODE 5/ADS-B	6.267	0.000	0.000	-	-	-	-	-	-	-
Sensor Enhancements	29.382	0.000	0.000	0.000	0.000	0.000	-	-	-	-
Communication Interoperability/Enhancements	3.000	0.000	0.000	9.000	0.000	9.000	9.000	9.000	9.000	8.991
EISS Enhancements	0.000	19.852	0.000	0.000	0.000	0.000	0.000	-	-	-
HC/MC-130J Block 8.1	-	26.808	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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Modification P-40a Item Title P-3a Modification Title	PYS	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
MC-130J Increment 2	39.364	0.065	0.000	0.000	0.000	0.000	0.000	0.000	-	-
HC-130J Common Configuration	42.233	4.509	0.000	0.000	0.000	0.000	0.000	0.000	-	-
HC-130J Personnel Locator System	104.444	2.793	1.938	2.021	0.000	2.021	-	-	-	-
HC-130J Situational Awareness	48.236	21.200	12.411	0.000	24.700	24.700	3.095	3.371	3.533	2.398
Wireless Intercom	0.700	11.059	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(AbMN) Air borne Mission Networking	14.692	0.000	19.501	16.771	0.000	16.771	45.195	10.609	0.000	-
ADS-B out Acceleration	1.780	2.530	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-
(RFCM) Radio Frequency Countermeasures	40.680	22.150	0.000	0.000	28.900	28.900	0.000	0.000	0.000	-
Paratroop Door	0.000	24.500	0.000	0.000	0.000	0.000	0.000	0.000	-	-
Broadband Antenna	0.000	9.400	0.000	0.000	0.000	0.000	0.000	0.000	-	-
HC/MC/AC MUOS	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	31.074
MAF Training	33.686	0.000	0.100	16.505	0.000	16.505	0.099	0.101	0.103	0.105
ATP upgrade Legacy to SE	69.914	36.303	29.861	30.553	0.000	30.553	0.987	1.485	0.000	0.989
ATP-SE Technology Insertion	52.076	35.300	13.621	13.814	0.000	13.814	14.127	14.379	52.802	52.778
Battlefield ABN Comm Node (BACN)	0.000	15.115	0.000	37.851	0.000	37.851	38.653	30.580	44.830	-
Block 5	74.752	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MQ-9 Field	244.499	55.617	25.715	20.407	0.000	20.407	14.404	3.985	0.000	0.000
Lynx SAR	96.137	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GCS Blk 30	140.766	45.181	0.000	7.229	0.000	7.229	0.000	0.000	0.000	0.000
R&M enhancements	72.782	20.024	13.134	11.626	0.000	11.626	7.386	5.222	0.000	0.000
Extended Range MQ-9	243.791	46.485	51.362	17.368	0.000	17.368	6.350	0.533	0.000	0.000
MQ-9 Upgrade	264.216	22.641	164.204	129.757	0.000	129.757	130.972	152.655	9.882	10.099
MQ-9 Low Cost Mods	14.570	0.000	0.000	2.000	0.000	2.000	2.000	2.000	2.000	2.000

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Air Force • Budget Estimates FY 2021 • Procurement  
 Exhibit P-1M, Procurement Programs - Modification Summary  
 (Funding for Modifications)

Modification P-40a Item Title P-3a Modification Title	PYS	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Gorgon Stare	27.905	23.000	19.800	0.000	46.100	46.100	0.000	0.000	-	-
Block 20 Upgrade	301.101	58.073	63.349	120.307	6.290	126.597	162.064	149.354	144.679	59.208
Low Cost Modifications	19.406	1.999	1.999	1.999	0.000	1.999	1.999	1.999	1.999	1.999
<b>Totals (Total Obligation Authority)</b>										
<b>Total Obligation Authority</b>	<b>19,249.966</b>	<b>4,201.166</b>	<b>3,627.114</b>	<b>3,780.640</b>	<b>190.331</b>	<b>3,970.971</b>	<b>4,213.495</b>	<b>4,457.225</b>	<b>3,814.547</b>	<b>4,562.298</b>

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## ACRONYMS

### *GENERAL ACRONYMS*

A&AS	- Advisory & Assistance Services
ABIDES	- Automated Budget Interactive Data Environment System
ACAT	- Acquisition Category
ACTD	- Advanced Concept Technology Demonstration
AGM	- Air-to-Ground Missile
AIM	- Air Intercept Missile
AIS	- Avionics Intermediate Shop
ACMI	- Aircraft Combat Maneuvering Instrumentation
AMRAAM	- Advanced Medium-Range Air-to-Air Missile
APPN	- Appropriation
ATD	- Advanced Technology Development
BA	- Budget Activity
BES	- Budget Estimate Submission
BY	- Budget Year
C3	- Command, Control, and Communication System
CFE	- Contractor Furnished Equipment
CONOPS	- Concept of Operation
CONUS	- Continental United States
CPMS	- Comprehensive Power Management System
CPT	- Cockpit Procedures Trainer
CRA	- Continuing Resolution Authority
CTS	- Countermeasures Test Set
CY	- Current Year
ECCM	- Electronic Counter Counter-Measures
ECM	- Electronic Counter Measures
ECO	- Engineering Change Orders
EOQ	- Economic Order Quantity
ECP	- Engineering Change Proposal
EPA	- Economic Price Adjustment
EW	- Electronic Warfare
EWAISP	- Electronic Warfare Avionics Integration Support Facility
FLIR	- Forward Looking Infra Red

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FOT&E	- Follow-on Test and Evaluation
FOC	- Fully Operational Capability
FLTS	- Flight Line Test Set
FPIF	- Fixed Price Incentive Firm
FPIS	- Fixed Price Incentive Fee, Successive Targets
FY	- Fiscal Year
GANS	- Global Access Navigation & Safety
GATM	- Global Air Traffic Management
GFE	- Government Furnished Equipment
GFP	- Government Furnished Property
GPS	- Global Positioning System
GSE	- Ground Support Equipment
ICS	- Interim Contractor Support
IOC	- Initial Operating Capability
IT	- Information Technology
JUON	- Joint Urgent Operational Need
MAIS	- Major Automated Information System Program
MDAP	- Major Defense Acquisition Program
METS	- Mobile Electronic Test Stations
MYP	- Multiyear Procurement
NAVWAR	- Navigation Warfare
NMC Rate	- Not Mission Capable Rate
OCO	- Overseas Contingency Operations
OT&E	- Operational Test and Evaluation
OWRM	- Other War Reserve Material
PAGEL	- Priced Aerospace Ground Equipment List
PB	- President's Budget
PBR	- Program Budget Review
PMA	- Program Management Administration
PMC	- Procurement Method Code
PNO	- Acquisition Program Number (MDAP Codes)
PR	- Purchase Request
PRCP	- Program Resource Collection Process
PTT	- Part Task Trainer
PY	- Prior Year
R&M	- Reliability and Maintainability

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RAA	- Rapid Acquisition Authority
RDT&E	- Research, Development, Test and Evaluation
RWR	- Radar Warning Receiver
ROM	- Rough Order of Magnitude
SS	- Sole Source
SOF	- Special Operation Force
TAF	- Tactical Air Force
TCAS	- Traffic Collision Alert and Avoidance System
TEWS	- Tactical Electronic Warfare System
TISS	- TEWS Intermediate Support System
TOA	- Total Obligation Authority
WCF	- Working Capital Fund
WRM	- War Reserve Material
WST	- Weapon System Trainer
UAV	- Unmanned Aerial Vehicle
XML	- Extensible Markup Language

### ***BASE / ORGANIZATIONAL ACRONYMS***

ACC	- Air Combat Command
AETC	- Air Education & Training Command
AFCAO	- Air Force Computer Acquisition Office
AFCESA	- Air Force Civil Engineering Support Agency
AFCIC	- AF Communications & Information Center
AFCSC	- Air Force Cryptologic Service Center
AFESC	- Air Force Engineering Services Center
AFGWC	- Air Force Global Weather Central
AFIT	- Air Force Institute of Technology
AFLCMC	- Air Force Life Cycle Management Center
AFMC	- Air Force Materiel Command
AFMETCAL	- Air Force Metrology and Calibration Office
AFMLO	- Air Force Medical Logistics Office
AFOSI	- Air Force Office of Special Investigation
AFOTEC	- Air Force Operational Test & Evaluation Center
AFPC	- Air Force Personnel Center
AFPSL	- AF Primary Standards Lab

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AFR	- Air Force Reserve
AFSOC	- AF Special Operations Command
AFSPC	- Air Force Space Command
AIA	- Air Intelligence Agency
ALC	- Air Logistics Center
AMC	- Air Mobility Command
ANG	- Air National Guard
ASC	- Aeronautical Systems Center
AETC	- Air Education Training Command
AU	- Air University
AWS	- Air Weather Service
CIA	- Central Intelligence Agency
DGSC	- Defense General Support Center
DLA	- Defense Logistics Center
DOE	- Department of Energy
DPSC	- Defense Personnel Support Center
DSCC	- Defense Supply Center, Columbus
DTIC	- Defense Technical Information Center
ER	- Eastern Range
ESC	- Electronic Systems Center
FAA	- Federal Aviation Agency
FBI	- Federal Bureau of Investigation
GSA	- General Services Administration
JCS	- Joint Chiefs of Staff
NATO	- North Atlantic Treaty Organization
OSD	- Office of the Secretary of Defense
PACAF	- Pacific Air Forces
USAF	- United States Air Force
USAFA	- United States Air Force Academy
USAFE	- United States Air Force Europe
USCENTCOM	- United States Central Command
USEUCOM	- United States European Command
USMC	- United States Marine Corps
USSTRATCOM	- United States Strategic Command
WP AFB	- Wright-Patterson AFB, OH

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### *CONTRACT METHOD / TYPE ACRONYMS*

C	- Competitive
BA	- Basic Agreement
BOA	- Basic Ordering Agreement
BPA	- Blanket Purchasing Agreement
CS	- Cost Sharing
IDDQ	- Indefinite Delivery, Definite Quantity
IDIQ	- Indefinite Delivery, Indefinite Quantity
IDRT	- Indefinite Delivery, Requirements
Letter	- Letter
LH	- Labor-hour
MIPR	- Military Interdepartmental Purchase Request
MIPR-C	- Military Interdepartmental Purchase Request - Competitive
MIPR-OPT	- Military Interdepartmental Purchase Request - Option
MIPR-OTH	- Military Interdepartmental Purchase Request - Other
MIPR-SS	- Military Interdepartmental Purchase Request - Sole Source
OPT	- Option
OTH	- Other
PO	- Project Order
REQN	- Requisition
SS	- Sole Source
T&M	- Time and Materials
UCA	- Undefinitized Contract Action
WP	- Work Project

### *CONTRACTED BY ACRONYMS*

11 WING	- 11th Support Wing, Washington, DC
ACC	- Air Combat Command, Langley AFB, VA
AEDC	- Arnold Engineering Development Center, Arnold AFB, TN
AAC	- Air Armament Center, Eglin AFB, FL
AEDC	- Arnold Engineering Development Center, Arnold AFB, TN
AETC	- Air Education and Training Command, Randolph AFB, TX
AFCIC	- Air Force Communications and Information Center, Washington, DC
AFCESA	- Air Force Civil Engineering Support Agency, Tyndall AFB, FL
AFFTC	- Air Force Flight Test Center, Edwards AFB, CA

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AFLCMC	- Air Force Life Cycle Management Center, Wright-Patterson AFB, OH
AFMC	- Air Force Materiel Command, Wright-Patterson AFB, OH
AFMETCAL	- Air Force Metrology and Calibration Office, Heath, Ohio
AFMLO	- Air Force Medical Logistics Office, Ft Detrick, MD
AIA	- Air Intelligence Agency, Kelly AFB, TX
AMC	- Air Mobility Command, Scott AFB, IL
ASC	- Aeronautical Systems Center, Wright-Patterson AFB, OH & Eglin AFB, FL
AFWA	- Air Force Weather Agency, Offutt AFB, NE
DGSC	- Defense General Support Center, Richmond, VA
DPSC	- Defense Personnel Support Center, Philadelphia, PA
ER	- Eastern Range, Patrick AFB, FL
ESC	- Electronic Systems Center, Hanscom AFB, MA
HSC	- Human Services Center, Brook AFB, TX
OC-ALC	- Oklahoma City Air Logistics Center, Tinker AFB, OK
OO-ALC	- Ogden Air Logistics Center, Hill AFB, UT
SMC	- Space & Missile Systems Center, Los Angeles AFB, CA
US STRATCOM	- US Strategic Command, Offutt AFB, NE
WACC	- Washington Area Contracting Center, Washington DC
WR	- Western Range, Vandenberg AFB, CA
WR-ALC	- Warner-Robins Air Logistics Center, Robins AFB, GA
AFSPC	- Air Force Space Command, Peterson AFB, CO
HQ ANG	- Headquarters, Air National Guard, Washington, DC
USAFE	- United States Air Force Europe, Ramstein AB, GE
USAFA	- United States Air Force Academy, Colorado Springs, CO

### ***IDENTIFICATION CODES***

Code "A"	- Line items of material which have been approved for Air Force service use.
Code "B"	- Line items of material that have not been approved for Service use
OBAN	- Operating Budget Account Number, 2-digit code for unit allocated funds

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 1: Strategic Aircraft	<b>P-1 Line Item Number / Title:</b> B00100 / B-1
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ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0101126F	Other Related Program Elements: 0101126F
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	0.000	0.000	0.000	3.853	0.000	3.853	5.086	4.495	0.000	0.000	-	13.434
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	0.000	0.000	0.000	3.853	0.000	3.853	5.086	4.495	0.000	0.000	-	13.434
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>3.853</b>	<b>0.000</b>	<b>3.853</b>	<b>5.086</b>	<b>4.495</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>13.434</b>

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

**Description:**

The B-1B Lancer is a swing-wing, supersonic, long-range, conventional bomber. It carries the largest payload of both guided and unguided weapons in the Air Force inventory. The multi-mission B-1B is the backbone of America's long-range bomber force and can rapidly deliver massive quantities of precision and non-precision weapons against any adversary, anywhere in the world, at any time. The Air Force maintains 62 B-1B's in its inventory. The B-1B averages 9,503 airframe hours as of August, 2018 (Source LIMS-EV). The current service life extends beyond 2037. Funding may be used to address Diminishing Manufacturing Sources (DMS) issues. The specific modifications budgeted and programmed are below.

**Justification:**

This funding (B00100) was not mapped correctly. FY21 (\$3.853M), FY22 (\$5.086M) and FY23 (\$4.495M) should be part of the B01B00 line. This funding is part of the overall CITS Upgrade identified in Line number 24 (B01B00). The Air Force will fix FY22/23 in the upcoming POM.

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 1: Strategic Aircraft	<b>P-1 Line Item Number / Title:</b> B00200 / B-2A
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0101125F, 0101127F	Other Related Program Elements: 0101127F
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	295.894	60.301	9.582	31.476	-	31.476	57.893	193.423	170.697	52.109	0.000	871.375
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	295.894	60.301	9.582	31.476	-	31.476	57.893	193.423	170.697	52.109	0.000	871.375
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>295.894</b>	<b>60.301</b>	<b>9.582</b>	<b>31.476</b>	<b>-</b>	<b>31.476</b>	<b>57.893</b>	<b>193.423</b>	<b>170.697</b>	<b>52.109</b>	<b>0.000</b>	<b>871.375</b>

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

**Description:**

The B-2 is a multi-engine, long range bomber incorporating low-observable ('stealth') technology that enables the B-2 to penetrate enemy air defenses and strike high-value targets. Specific modifications, budgeted and programmed, are below.

Funding for the exhibit is primarily in PE 0101127F (B-2 Squadrons). Some trainer efforts are funded in PE 0809731F (Training Support to Units), and other efforts are funded under PE 0207446F (Bomber Tactical Data Link).

Funds may be used to resolve emerging safety of flight and diminishing manufacturing sources issues, accommodate technology insertion and fulfill FAA or other mandates necessary to ensure continued aircrew safety and mission effectiveness.

All Trainer funding removed in FY 2020 as early to need, and re-phased to FY 2024.

Restructuring B-2 Defensive Management System - Modernization (DMS-M) saved \$327.9M in FY 2021.

Restructuring B-2 DMS-M Description: Delays in the acquisition of B-2 DMS-M reduced return on investment. In response to this shifting timeline, the Air Force realigns funding to address reliability and sustainment of the B-2 cockpit display system until end-of-life, while developing new capabilities aligned to the National Defense Strategy (NDS).

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**Exhibit P-40, Budget Line Item Justification: PB 2021 Air Force** **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 1: Strategic Aircraft

**P-1 Line Item Number / Title:**  
B00200 / B-2A

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0101125F, 0101127F **Other Related Program Elements:** 0101127F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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***	110032 / LINK 16/CID/IFR (Capability Improvement)				- / 2.607	- / 2.296	- / 0.200	- / 0.203	- / -	- / 0.203
P-40a***	110043 / B-2 Adaptable Communications Suite (ACS) (Capability Improvement)				- / 22.698	- / 0.724	- / 0.296	- / 0.300	- / -	- / 0.300
P-40a***	110044 / B-2 DMS / Displays (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	110054 / B-2 Flex Strike Phase 1 (Capability Improvement)				- / 15.860	- / 7.870	- / 4.894	- / 2.172	- / -	- / 2.172
P-40a***	110056 / B61-12 Integration (Capability Improvement)				- / 39.549	- / -	- / -	- / -	- / -	- / -
P-40a***	110057 / MGUE (Capability Improvement)				- / 19.659	- / 1.497	- / 0.990	- / 1.096	- / -	- / 1.096
P-40a***	110061 / IFF Mode 5/S (Capability Improvement)				- / -	- / -	- / -	- / 0.000	- / -	- / 0.000
P-40a***	110062 / Crash Survivable Memory Unit (CSMU) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	110064 / Rotary Launcher Assembly (RLA) Service Life Extension Program (Service Life Extension)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	110065 / B-2 GBU-57 MOP Integration (Capability Improvement)				- / 3.038	- / 18.456	- / -	- / -	- / -	- / -
P-40a***	8882 / Common Very Low Frequency Terminal (Capability Improvement)				- / 52.320	- / 6.440	- / 2.376	- / -	- / -	- / -
P-40a***	99999U / B-2 Low Cost Engine Modifications (Reliability & Maintainability)				- / 18.186	- / 0.000	- / 0.236	- / 0.749	- / -	- / 0.749
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 19.878	- / 0.000	- / 0.314	- / 0.640	- / -	- / 0.640
P-3a	110031 / B-2 Trainer System Upgrade (Capability Improvement)		A		- / 44.912	- / 7.800	- / 0.000	- / 6.465	- / 0.000	- / 6.465
P-3a	110035 / LOW OBSERVABLE SIGNATURE AND SUPPORTABILITY MODS (Reliability & Maintainability)		A		- / 57.187	- / 15.218	- / 0.276	- / 19.851	- / 0.000	- / 19.851
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 295.894</b>	<b>- / 60.301</b>	<b>- / 9.582</b>	<b>- / 31.476</b>	<b>- / -</b>	<b>- / 31.476</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	110032 / LINK 16/CID/IFR (Capability Improvement)				- / 0.207	- / 0.210	- / 0.213	- / 0.217	- / -	- / 6.153
P-40a***	110043 / B-2 Adaptable Communications Suite (ACS) (Capability Improvement)				- / 0.306	- / 0.312	- / 0.318	- / 0.324	- / -	- / 25.278
P-40a***	110044 / B-2 DMS / Displays (Capability Improvement)				- / -	- / 132.069	- / 111.294	- / 27.573	- / -	- / 270.936
P-40a***	110054 / B-2 Flex Strike Phase 1 (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 30.796
P-40a***	110056 / B61-12 Integration (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 39.549
P-40a***	110057 / MGUE (Capability Improvement)				- / 0.320	- / 0.480	- / -	- / -	- / -	- / 24.042
P-40a***	110061 / IFF Mode 5/S (Capability Improvement)				- / 15.405	- / 15.873	- / 10.490	- / -	- / -	- / 41.768
P-40a***	110062 / Crash Survivable Memory Unit (CSMU) (Capability Improvement)				- / 1.599	- / 1.628	- / 1.657	- / 1.688	- / -	- / 6.572

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 1: Strategic Aircraft

**P-1 Line Item Number / Title:**  
B00200 / B-2A

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0101125F, 0101127F **Other Related Program Elements:** 0101127F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	110064 / Rotary Launcher Assembly (RLA) Service Life Extension Program (Service Life Extension)				- / 7.529	- / 7.665	- / 7.804	- / 7.946	- / -	- / 30.944
P-40a***	110065 / B-2 GBU-57 MOP Integration (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 21.494
P-40a***	8882 / Common Very Low Frequency Terminal (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 61.136
P-40a***	99999U / B-2 Low Cost Engine Modifications (Reliability & Maintainability)				- / 0.965	- / 1.078	- / 0.792	- / 0.807	- / -	- / 22.813
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 0.854	- / 0.965	- / 0.677	- / 0.689	- / -	- / 24.017
P-3a	110031 / B-2 Trainer System Upgrade (Capability Improvement)		A		- / 6.705	- / 6.933	- / 16.461	- / 1.122	- / -	- / 90.398
P-3a	110035 / LOW OBSERVABLE SIGNATURE AND SUPPORTABILITY MODS (Reliability & Maintainability)		A		- / 24.003	- / 26.210	- / 20.991	- / 11.743	- / -	- / 175.479
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 57.893</b>	<b>- / 193.423</b>	<b>- / 170.697</b>	<b>- / 52.109</b>	<b>- / 0.000</b>	<b>- / 871.375</b>

\*\*\* Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

\*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 B-2 DMS / Displays program provides improved receiver-processors, antennas and display system to improve aircrew situational awareness and aircraft survivability.

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1	<b>P-1 Line Item Number / Title:</b> B00200 / B-2A	<b>Modification Number / Title:</b> 110031 / B-2 Trainer System Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : A							MDAP/MAIS Code:					
Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	44.912	7.800	0.000	6.465	0.000	6.465	6.705	6.933	16.461	1.122	-	90.398
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	44.912	7.800	0.000	6.465	0.000	6.465	6.705	6.933	16.461	1.122	-	90.398
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>44.912</b>	<b>7.800</b>	<b>0.000</b>	<b>6.465</b>	<b>0.000</b>	<b>6.465</b>	<b>6.705</b>	<b>6.933</b>	<b>16.461</b>	<b>1.122</b>	-	<b>90.398</b>
<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 Millions)	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The B-2 Training System upgrade program ensures concurrency with the aircraft, provides for the evolution of the B-2 Training System as dictated by technology, global threat, and national security realities, and enables the B-2 anti-access/area denial and global strike mission. The B-2 Training System provides initial qualification, proficiency, continuation, re-qualification, mission rehearsal, and upgrade training for B-2 aircrew, maintainers, and weapons loaders. It includes, but is not limited to, the following training elements at Whiteman AFB: three Weapon System Trainers (WSTs) with instructor-operator stations, four Cockpit Procedure Trainers (CPTs), a Weapons Loading Trainer (WLT); a Crew Escape System Maintenance Trainer (CESMT); a Flight Control System Trainer (FCST); a Mission Viewing Room (MVR); and a Training System Support Center (TSSC). The B-2 Training System also includes five maintenance training classrooms each consisting of a Computerized Maintenance Training System (CMTS), six computer-based training (CBT) Weapon System Training Aids (WSTAs), and an instructor operator station.

The B-2 Training System upgrade effort includes, but is not limited to, updates to training device hardware and computers, simulation software, courseware lessons and academics materials, instructional system design architectures, engineering drawings, and system documentation not driven by a funded aircraft modification. These upgrades are ongoing and necessary to ensure concurrency with the B-2 weapon system while providing the combat fidelity necessary to train operational and warfighter employment requirements, preserving precious flight hours, avoiding 30-40 hour on-aircraft training sorties or committing an aircraft to maintenance and weapons loading training negatively affecting aircraft availability. Upgrades include, but are not limited to, updates to threat systems parametric and order of battle information, upgrades of radar emulation components and capabilities in the WSTs/Mission Trainers, updates of display systems and subsystems, and fidelity upgrades of the WST to more precisely resemble air refueling and approach/landing procedures experienced in the jet. Additional improvements include updates to courseware and simulation associated with nuclear and conventional guided weapons delivery, expanded crypto keyfill training, upgrade of the electronic combat environment threat database. Improvements will also include expanded "freeplay" capability on the CPTs and CMTSs, upgrade of the WST simulation to provide weapons as powered up upon completion of initial conditions, upgrade of the current Defensive Management System simulation and the alternative/emergency procedures courseware, and upgrade of the Suppressor tool. Additionally provides a Mission Director Room, including providing two-way communication (voice and text), provide the ability to prepare scripted events and/or input real-time modifications to the virtual environment (i.e. weather, players, etc.), the means to preview missions, observe live events, and review recorded events, and upgrade of the simulation and computational processors as necessary. Efforts also include a replacement of the current communications suite to meet current and future training needs, upgrades to the Mission Generation System, allowing faster generation of WST missions, among other benefits, and efforts to enhance training fidelity and realism. Additionally, Diminishing Manufacturing Sources efforts to include removal of end-of-life software/hardware within simulators systems and move to a modular, common open systems architecture that is sustainable and cyber-resilient. Implement requirements and standards defined under the Simulator Common Architecture Requirements and Standards (SCARS) initiative. Life of Type buys may be implemented when appropriate to address diminishing manufacturing sources and materiel shortages for affected components and subassemblies to protect the planned production program by mitigating unplanned part redesign and re-qualification risks.

Quantities and delivery dates have not been included due to the wide variety of ongoing modification efforts to the various elements of the B-2 Training System. B-2 Training System funding includes aircraft modification funds from PE 0809731F, specifically for the Maintenance Training System. These amounts are reflected on the P3-A in the "EQUIPMENT Group B (Active)" row. Funds may be used to resolve emerging safety of flight and diminishing manufacturing sources issues, accommodate technology insertion and fulfill FAA or other mandates necessary to ensure continued aircrew safety and mission effectiveness.

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1	<b>P-1 Line Item Number / Title:</b> B00200 / B-2A	<b>Modification Number / Title:</b> 110031 / B-2 Trainer System Upgrade
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A		<b>MDAP/MAIS Code:</b>
<p>FY 2020 funding rephased to FY 2024.</p> <p>Milestone/Development Status</p> <p>Development of B-2 Training System upgrades is a continuous process relative to the needs of each funded effort. Some efforts do not require RDT&amp;E, while others require design and test activities. This program has associated Research Development Test and Evaluation (RDT&amp;E) funding in PE 0101127F.</p>		

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1					<b>P-1 Line Item Number / Title:</b> B00200 / B-2A					<b>Modification Number / Title:</b> 110031 / B-2 Trainer System Upgrade			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> B-2				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0101127F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> B-2 Trainer Mods													
A Kits													
Recurring													
B-2 Trainer Mods:INSTALL KITS Group A (Active)	- / 5.889	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.889	
<i>Subtotal: Recurring</i>	- / 5.889	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.889	
B Kits													
Recurring													
B-2 Trainer Mods:EQUIPMENT Group B (Active)	- / 29.865	- / 7.800	- / -	- / 6.465	- / -	- / 6.465	- / 6.705	- / 6.933	- / 16.461	- / 1.122	- / -	- / 75.351	
<i>Subtotal: Recurring</i>	- / 29.865	- / 7.800	- / -	- / 6.465	- / -	- / 6.465	- / 6.705	- / 6.933	- / 16.461	- / 1.122	- / -	- / 75.351	
<i>Subtotal: B-2 Trainer Mods</i>	- / 35.754	- / 7.800	- / -	- / 6.465	- / -	- / 6.465	- / 6.705	- / 6.933	- / 16.461	- / 1.122	- / -	- / 81.240	
<i>Subtotal: Procurement, All Modification Items</i>	- / 35.754	- / 7.800	- / -	- / 6.465	- / -	- / 6.465	- / 6.705	- / 6.933	- / 16.461	- / 1.122	- / -	- / 81.240	
<b>Support (All Modification Items)</b>													
SIM/TRAINER	0 / 8.591	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 8.591	
OTHER GOVT	- / 0.567	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.567	
<i>Subtotal: Support</i>	0 / 9.158	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 9.158	
<b>Installation</b>													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>44.912</b>	<b>7.800</b>	<b>0.000</b>	<b>6.465</b>	<b>0.000</b>	<b>6.465</b>	<b>6.705</b>	<b>6.933</b>	<b>16.461</b>	<b>1.122</b>	<b>-</b>	<b>90.398</b>	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1			<b>P-1 Line Item Number / Title:</b> B00200 / B-2A			<b>Modification Number / Title:</b> 110031 / B-2 Trainer System Upgrade	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 1 of 1:</b> B-2 Trainer Mods							
<b>Manufacturer Information</b>							
Manufacturer Name: L3 Comm				Manufacturer Location: Binghamton, NY			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 0			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 0		

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1	<b>P-1 Line Item Number / Title:</b> B00200 / B-2A	<b>Modification Number / Title:</b> 110035 / LOW OBSERVABLE SIGNATURE AND SUPPORTABILITY MODS

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	57.187	15.218	0.276	19.851	0.000	19.851	24.003	26.210	20.991	11.743	-	175.479
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	57.187	15.218	0.276	19.851	0.000	19.851	24.003	26.210	20.991	11.743	-	175.479
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>57.187</b>	<b>15.218</b>	<b>0.276</b>	<b>19.851</b>	<b>0.000</b>	<b>19.851</b>	<b>24.003</b>	<b>26.210</b>	<b>20.991</b>	<b>11.743</b>	-	<b>175.479</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The Low Observable Signature and Supportability Modifications (LOSSM) program supports the B-2 ability to penetrate anti-access combat environments, performing missions directed by the National Command Authority while ensuring aircrew survivability. The LOSSM program reduces low observable (LO) maintenance, increases aircraft availability, and maintains and improves the combat-ready LO signature for the B-2 fleet. This program includes multiple improvement projects including, but not limited to, improved LO materials (conductive gap fillers and tape, adhesives, electrically resistive materials, radar absorbing material, fastener fills, coatings, and improved processes), LO structures (radar radomes, hot trailing edges and tiles, intermediate section doors, tailpipes, windows, lib bay panels, permanent fasteners, exhaust pockets, gust load alleviation system, inlets, radar absorbing structures, antenna optimization, overall signature stability, and Alternate High Frequency Material expansion), and radio frequency (RF) diagnostic tools and evaluation systems (SCI-2k radar, Tier One Material Inspection System, Signature Diagnostic System, Portable Laser Removal Tool, next generation Tier II and Tier III systems, Hand held Imaging Tool, Test Article 0998 optimization, LO-related special test equipment, and B-2 specific improvements/efforts to Air Force Research Laboratory's Mobile Diagnostic Laboratory).

As this program encompasses multiple projects, the number of installs will not be representative of the number of aircraft affected. Some modifications will be made to each of the 20 B-2 aircraft and other modifications will be made to related B-2 support equipment. Various lead times are required for the different modifications causing different contract and delivery dates.

This program is essential to B-2 Anti-Access and Global Strike mission and supports Aircraft Availability Improvement Program goals. The "Method of Implementation" for these components varies based on the teams performing these component installations. Installs occur at Depot and flight line level and can include either organic or contractor field teams.

LOSSM is fielding many important modifications currently: six Alternate High Frequency Material II upgrades, Pressure Sensitive Adhesive Kapton, new Upper Gust Load Alleviation Panels, new Radar Altimeter, Antennas, and Signature Diagnostic System upgrades.

Funds may be used to resolve emerging safety of flight and diminishing manufacturing sources issues, accommodate technology insertion and fulfill FAA or other mandates necessary to ensure continued aircrew safety and mission effectiveness.

The increase in funding from the FY 2020 budget to the FY 2021 budget will be used for prioritized FY 2021 projects in support of the continued survivability and maintainability of the B-2 fleet, including the Upper GLA panel and the Radar Altimeter Antenna.

Milestone/Development Status



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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1	<b>P-1 Line Item Number / Title:</b> B00200 / B-2A	<b>Modification Number / Title:</b> 110035 / LOW OBSERVABLE SIGNATURE AND SUPPORTABILITY MODS

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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The Low Observable Signature and Supportability Modification program captures a family of projects. Development efforts continue to mature LO materials and technologies. This program has associated Research Development Test and Evaluation funding in PE 0101127F.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1	<b>P-1 Line Item Number / Title:</b> B00200 / B-2A	<b>Modification Number / Title:</b> 110035 / LOW OBSERVABLE SIGNATURE AND SUPPORTABILITY MODS

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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<b>Models of Systems Affected:</b> B-2	<b>Modification Type:</b> Reliability & Maintainability	<b>Related RDT&amp;E PEs:</b> 0101127F
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Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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> LO Upgrades												
A Kits												
Recurring												
LO Upgrades:INSTALL KITS Group A (Active)	- / 20.751	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 20.751
<i>Subtotal: Recurring</i>	- / 20.751	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 20.751
<i>Subtotal: LO Upgrades</i>	- / 20.751	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 20.751
<i>Subtotal: Procurement, All Modification Items</i>	- / 20.751	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 20.751

**Support (All Modification Items)**

GROUP A: TOTAL NONRECURRING	- / 2.717	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.717
Data	- / 5.603	- / -	- / -	- / 0.000	- / -	- / 0.000	- / 2.580	- / 8.646	- / 1.051	- / -	- / -	- / 17.880
OTHER GOVT	- / 13.075	- / 12.679	- / -	- / 16.553	- / -	- / 16.553	- / 18.776	- / 15.137	- / 13.082	- / 9.243	- / -	- / 98.545
SUPPORT-EQUIP	- / 8.805	- / -	- / 0.276	- / 0.000	- / -	- / 0.000	- / 0.333	- / 0.237	- / 0.000	- / 0.000	- / -	- / 9.651
PMA - Other Gov't Costs	- / 6.236	- / 2.539	- / -	- / 3.298	- / -	- / 3.298	- / 2.314	- / 2.190	- / 6.858	- / 2.500	- / -	- / 25.935
<i>Subtotal: Support</i>	- / 36.436	- / 15.218	- / 0.276	- / 19.851	- / -	- / 19.851	- / 24.003	- / 26.210	- / 20.991	- / 11.743	- / -	- / 154.728

**Installation**

<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
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**Total**

<b>Total Cost (Procurement + Support + Installation)</b>	<b>57.187</b>	<b>15.218</b>	<b>0.276</b>	<b>19.851</b>	<b>0.000</b>	<b>19.851</b>	<b>24.003</b>	<b>26.210</b>	<b>20.991</b>	<b>11.743</b>	<b>-</b>	<b>175.479</b>
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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1			<b>P-1 Line Item Number / Title:</b> B00200 / B-2A			<b>Modification Number / Title:</b> 110035 / LOW OBSERVABLE SIGNATURE AND SUPPORTABILITY MODS	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 1 of 1:</b> LO Upgrades							
<b>Manufacturer Information</b>							
Manufacturer Name: Various				Manufacturer Location: Various			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 0			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 0		

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 1: Strategic Aircraft	<b>P-1 Line Item Number / Title:</b> B01B00 / B-1B
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ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0101126F	Other Related Program Elements: 0101126F
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	883.993	39.690	18.911	21.808	-	21.808	33.234	29.075	0.494	0.503	0.000	1,027.708
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	883.993	39.690	18.911	21.808	-	21.808	33.234	29.075	0.494	0.503	0.000	1,027.708
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>883.993</b>	<b>39.690</b>	<b>18.911</b>	<b>21.808</b>	<b>-</b>	<b>21.808</b>	<b>33.234</b>	<b>29.075</b>	<b>0.494</b>	<b>0.503</b>	<b>0.000</b>	<b>1,027.708</b>

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

Initial Spares ( <i>\$ in Millions</i> )	-	-	-	0.717	-	0.717	0.855	0.871	-	-	-	2.443
Flyaway Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The B-1B Lancer is a swing-wing, supersonic, long-range, conventional bomber. It carries the largest payload of both guided and unguided weapons in the Air Force inventory. The multi-mission B-1B is the backbone of America's long-range bomber force and can rapidly deliver massive quantities of precision and non-precision weapons against any adversary, anywhere in the world, at any time. The Air Force maintains 62 B-1B's in its inventory. In FY21, the Air Force retires 17 B-1B aircraft, bringing the total aircraft inventory to 45. The B-1B averages 9,701 airframe hours as of January 2020 (Source LIMS-EV). Funding may be used to address Diminishing Manufacturing Sources (DMS) issues. The specific modifications budgeted and programmed are below.

This line item funds modifications to the B-1B aircraft and associated simulators and equipment. Funding for this exhibit contained in PE 0101126F.

FY20 Change Summary: Decrease of \$3.2M for Congressional Mark ADS-B (-\$3.2M)

**UNCLASSIFIED**

**Exhibit P-40, Budget Line Item Justification: PB 2021 Air Force** **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 1: Strategic Aircraft

**P-1 Line Item Number / Title:**  
B01B00 / B-1B

**ID Code** (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** 0101126F **Other Related Program Elements:** 0101126F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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***	4280 / Fully Integrated Data Links (Capability Improvement)				- / 393.194	- / 15.338	- / 10.202	- / 4.715	- / -	- / 4.715
P-40a***	4284 / CITS UPGRADE (Service Life Extension)				- / 117.450	- / 6.712	- / 1.652	- / 1.891	- / -	- / 1.891
P-40a***	4291 / B-1 TRAINING SUPPORT (Capability Improvement)				- / 3.429	- / 0.450	- / 0.458	- / 0.041	- / -	- / 0.041
P-40a***	92294 / LAPTOP CONTROLLED TARGETING POD (Capability Improvement)				- / 83.572	- / 4.397	- / 0.397	- / 0.000	- / -	- / 0.000
P-40a***	92314 / MIDS-JTRS (Capability Improvement)				- / -	- / -	- / -	- / 3.057	- / -	- / 3.057
P-40a***	92316 / Radio Crypto Compliance (Capability Improvement)				- / -	- / -	- / -	- / 0.493	- / -	- / 0.493
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 5.439	- / 0.198	- / 0.249	- / 0.000	- / -	- / 0.000
P-3a	8971 / VERTICAL SITUATION DISPLAYS (Service Life Extension)		B		- / 280.113	- / 12.595	- / 0.000	- / 5.617	- / 0.000	- / 5.617
P-3a	92317 / IFF Mode 5/S (Capability Improvement)		B		- / 0.796	- / 0.000	- / 5.953	- / 5.994	- / 0.000	- / 5.994
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 883.993</b>	<b>- / 39.690</b>	<b>- / 18.911</b>	<b>- / 21.808</b>	<b>- / -</b>	<b>- / 21.808</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	4280 / Fully Integrated Data Links (Capability Improvement)				- / 14.576	- / 9.730	- / 0.000	- / -	- / -	- / 1447.755
P-40a***	4284 / CITS UPGRADE (Service Life Extension)				- / 0.109	- / 0.111	- / -	- / -	- / -	- / 127.925
P-40a***	4291 / B-1 TRAINING SUPPORT (Capability Improvement)				- / 0.072	- / 0.101	- / 0.494	- / 0.503	- / -	- / 5.548
P-40a***	92294 / LAPTOP CONTROLLED TARGETING POD (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 88.366
P-40a***	92314 / MIDS-JTRS (Capability Improvement)				- / 7.044	- / 6.454	- / 0.000	- / 0.000	- / -	- / 16.555
P-40a***	92316 / Radio Crypto Compliance (Capability Improvement)				- / 3.141	- / 5.586	- / 0.000	- / 0.000	- / 0.000	- / 9.220
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 0.000	- / 0.000	- / -	- / -	- / -	- / 5.886
P-3a	8971 / VERTICAL SITUATION DISPLAYS (Service Life Extension)		B		- / 8.292	- / 7.093	- / 0.000	- / -	- / -	- / 313.710
P-3a	92317 / IFF Mode 5/S (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 12.743
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 33.234</b>	<b>- / 29.075</b>	<b>- / 0.494</b>	<b>- / 0.503</b>	<b>- / 0.000</b>	<b>- / 1,027.708</b>

\*\*\* Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

\*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:**  
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1	<b>P-1 Line Item Number / Title:</b> B01B00 / B-1B	<b>Modification Number / Title:</b> 8971 / VERTICAL SITUATION DISPLAYS

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

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	280.113	12.595	0.000	5.617	0.000	5.617	8.292	7.093	0.000	-	-	313.710
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	280.113	12.595	0.000	5.617	0.000	5.617	8.292	7.093	0.000	-	-	313.710
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>280.113</b>	<b>12.595</b>	<b>0.000</b>	<b>5.617</b>	<b>0.000</b>	<b>5.617</b>	<b>8.292</b>	<b>7.093</b>	<b>0.000</b>	-	-	<b>313.710</b>

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

Initial Spares ( <i>\$ in Millions</i> )	17.867	-	-	-	-	-	-	-	-	-	-	17.867
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Vertical Situation Display Upgrade (VSDU) is a safety-critical program to replace B-1B pilot and co-pilot primary flight displays and associated flight instruments. The current VSDs are monochrome cathode ray tube displays, which along with the "steam gauge" primary flight instruments, are experiencing Diminishing Manufacturing Sources (DMS) issues with the potential to ground aircraft. Spares are no longer procurable due to obsolescence. Modification funds will procure and install Group A and Group B kits for the VSDU upgrade to the B-1B. This modification installs two 8"x6" color displays at pilot and co-pilot stations to provide Primary Flight Information (PFI) and backup PFI to meet flight safety standards. These displays also provide front crew situational awareness from the Fully Integrated Data Link (FIDL) enhancing the ability to avoid threats and strike emerging targets. VSDU installations are scheduled concurrently with Central Integrated Test System (CITS) and FIDL to reduce installation costs, aircraft downtime, and to keep fielded aircraft configurations to a minimum for aircrew training, maintenance, and operational deployment efficiencies. Modification funding will be used for DMS and Material Shortages (DMSMS). DMSMS activities can include, but are not limited to, life of type buy or minor redesign. Procurement modification funding will be used to establish depot repair capability and for Interim Contractor Support (ICS). Activities comprised in the equipment non-recurring line include, but are not limited to, production test equipment and tooling. Group B non-recurring also includes Systems Engineering Program Management (SEPM).

Requirement listed in ORD: B-1B Conventional Mission Upgrade Program (26 Jan 05) (ORD CAF-357-92 (SAC 007-92) I/II-A, Rev 2, Annex A).

**FY21 Funds:**

- OTHER GOVT includes Depot Activation cost

**Milestone/Development Status**

The Engineering & Manufacturing Development (EMD) phase completed in March 2014. Two aircraft were modified as a part of the development program and funded with RDT&E funding in PE 0604226F / 0101126F.

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1					<b>P-1 Line Item Number / Title:</b> B01B00 / B-1B					<b>Modification Number / Title:</b> 8971 / VERTICAL SITUATION DISPLAYS			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> B-1B			<b>Modification Type:</b> Service Life Extension				<b>Related RDT&amp;E PEs:</b> 0101126F						
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0101126F	2 / 166.669	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 166.669	
<b>Procurement</b>													
<i>Modification Item 1 of 1: IBS (3)</i>													
A Kits													
Recurring													
IBS:INSTALL KITS Group A (Active)	60 / 14.878	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 14.878	
<i>Subtotal: Recurring</i>	- / 14.878	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 14.878	
B Kits													
Recurring													
IBS:EQUIPMENT Group B (Active)	60 / 69.183	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 69.183	
<i>Subtotal: Recurring</i>	- / 69.183	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 69.183	
<i>Subtotal: IBS (3)</i>	- / 84.061	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 84.061	
<i>Subtotal: Procurement, All Modification Items</i>	- / 84.061	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 84.061	
<b>Support (All Modification Items)</b>													
GROUP B: TOTAL NONRECURRING	- / 14.903	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 14.903	
Change Orders	- / 10.718	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.718	
Data	- / 1.540	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.540	
SIM/TRAINER	2 / 4.962	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 4.962	
SUPPORT-EQUIP	- / 18.646	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 18.646	
ICS-Material	- / 18.788	- / 6.595	- / -	- / 14.617	- / -	- / 14.617	- / 14.500	- / 14.700	- / -	- / -	- / -	- / 39.200	
OTHER GOVT	- / 137.947	- / 15.000	- / -	- / -	- / -	- / -	- / 13.792	- / 11.893	- / -	- / -	- / -	- / 148.632	
PMA - Contractor Services	- / 17.562	- / 11.000	- / -	- / 11.000	- / -	- / 11.000	- / -	- / 10.500	- / -	- / -	- / -	- / 110.062	
PMA - Other Gov't Costs	- / 10.411	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.411	
<i>Subtotal: Support</i>	2 / 115.477	- / 12.595	- / -	- / 15.617	- / -	- / 15.617	- / 18.292	- / 17.093	- / -	- / -	- / -	2 / 149.074	
<b>Installation</b>													
<i>Modification Item 1 of 1: IBS (3)</i>	60 / 80.575	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 80.575	
<i>Subtotal: Installation</i>	60 / 80.575	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 80.575	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>280.113</b>	<b>12.595</b>	<b>0.000</b>	<b>5.617</b>	<b>0.000</b>	<b>5.617</b>	<b>8.292</b>	<b>7.093</b>	<b>0.000</b>	<b>-</b>	<b>-</b>	<b>313.710</b>	



**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1	<b>P-1 Line Item Number / Title:</b> B01B00 / B-1B	<b>Modification Number / Title:</b> 8971 / VERTICAL SITUATION DISPLAYS

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** IBS (3)

**Manufacturer Information**

Manufacturer Name: Boeing	Manufacturer Location: Oklahoma City, OK
Administrative Leadtime (in Months): 4	Production Leadtime (in Months): 20

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 / 80.575	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 80.575
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	60 / 80.575	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 80.575

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	2	3	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	60	
Out	42	3	3	2	2	3	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	60		

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1	<b>P-1 Line Item Number / Title:</b> B01B00 / B-1B	<b>Modification Number / Title:</b> 92317 / IFF Mode 5/S

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

<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	0.796	0.000	5.953	5.994	0.000	5.994	0.000	0.000	0.000	0.000	-	12.743
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	0.796	0.000	5.953	5.994	0.000	5.994	0.000	0.000	0.000	0.000	-	12.743
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>0.796</b>	<b>0.000</b>	<b>5.953</b>	<b>5.994</b>	<b>0.000</b>	<b>5.994</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>12.743</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

IFF Mode 5 modification meets: Air Force Requirements Oversight Council (AFROC) mandate. The modification will use existing APX-119-0518 transponders enabling Mode 5/S capabilities through the Graphics Controller (GC). The program will have 10 a/c with Mode 5 Level 1 capability by 30 Sep 20 (2 test and 8 combat ready a/c).

FY20 funding included 8 production aircraft for accelerated IFF effort, program withholds, and program management funding.

Funding may be used to address Diminishing Manufacturing Sources (DMS) issues.

Funding for this exhibit contained in PE 0101126F.

Milestone/Development Status

Acquisition Strategy approved in 1QFY19.

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1					<b>P-1 Line Item Number / Title:</b> B01B00 / B-1B					<b>Modification Number / Title:</b> 92317 / IFF Mode 5/S			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> B-1				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0101126F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0101126F	- / -	10 / 17.057	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 17.057	
<b>Procurement</b>													
<b>Modification Item 1 of 2: APX-119-0518</b>													
B Kits													
Recurring													
APX-119-0518:EQUIPMENT Group B (Active)	- / -	- / -	12 / 1.142	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 1.142	
<i>Subtotal: Recurring</i>	- / -	- / -	- / 1.142	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.142	
<i>Subtotal: APX-119-0518</i>	- / -	- / -	- / 1.142	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.142	
<b>Modification Item 2 of 2: Wiring (2)</b>													
A Kits													
Recurring													
Wiring:INSTALL KITS Group A (Active)	- / -	- / -	8 / 0.640	27 / 2.909	- / -	27 / 2.909	- / -	- / -	- / -	- / -	- / -	35 / 3.549	
<i>Subtotal: Recurring</i>	- / -	- / -	- / 0.640	- / 2.909	- / -	- / 2.909	- / -	- / -	- / -	- / -	- / -	- / 3.549	
<i>Subtotal: Wiring (2)</i>	- / -	- / -	- / 0.640	- / 2.909	- / -	- / 2.909	- / -	- / -	- / -	- / -	- / -	- / 3.549	
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / -	- / 1.782	- / 2.909	- / -	- / 2.909	- / -	- / -	- / -	- / -	- / -	- / 4.691	
<b>Support (All Modification Items)</b>													
Mod of Spares	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / 0.000	
Change Orders	- / -	- / -	- / 0.470	- / 2.000	- / -	- / 2.000	- / 0.000	- / -	- / -	- / -	- / -	- / 2.470	
SUPPORT-EQUIP	- / -	- / -	- / 0.140	- / 0.889	- / -	- / 0.889	- / 0.000	- / -	- / -	- / -	- / -	- / 1.029	
PMA - Contractor Services	1 / 0.615	- / -	- / 0.000	- / -	- / -	- / -	- / 0.000	- / -	- / -	- / -	- / -	1 / 0.615	
SIM/TRAINER	- / -	- / -	1 / 1.861	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.861	
Data	- / -	- / -	- / 1.700	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.700	
A&AS	1 / 0.181	1 / 0.000	- / 0.000	- / -	- / -	- / -	- / 0.000	- / -	- / -	- / -	- / -	2 / 0.181	
PMA - Other Gov't Costs	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / 0.000	
<i>Subtotal: Support</i>	2 / 0.796	1 / 0.000	1 / 4.171	- / 2.889	- / -	- / 2.889	- / 0.000	- / -	- / -	- / -	- / -	4 / 7.856	
<b>Installation</b>													
<b>Modification Item 1 of 2: APX-119-0518</b>	- / -	- / -	- / -	29 / 0.196	- / -	29 / 0.196	6 / 0.000	- / -	- / -	- / -	- / -	35 / 0.196	
<i>Subtotal: Installation</i>	- / -	- / -	- / -	29 / 0.196	- / -	29 / 0.196	6 / 0.000	- / -	- / -	- / -	- / -	35 / 0.196	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>0.796</b>	<b>0.000</b>	<b>5.953</b>	<b>5.994</b>	<b>0.000</b>	<b>5.994</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>12.743</b>	

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1	<b>P-1 Line Item Number / Title:</b> B01B00 / B-1B	<b>Modification Number / Title:</b> 92317 / IFF Mode 5/S
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 2:** APX-119-0518

**Manufacturer Information**

Manufacturer Name: Raytheon	Manufacturer Location: Mass
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Administrative Leadtime (in Months): 1	Production Leadtime (in Months): 11
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Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Feb 2020					
Delivery Dates		Jan 2021					

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	29 / 0.196	- / -	29 / 0.196	6 / 0.000	- / -	- / -	- / -	- / -	35 / 0.196
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	- / -	- / -	- / -	29 / 0.196	- / -	29 / 0.196	6 / 0.000	- / -	- / -	- / -	- / -	35 / 0.196

**Installation Schedule**

PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	-	8	7	14	6	-	-	-	-	-	-	-	-	-	-	-	-	-	0	35	
Out	0	-	-	-	-	-	-	-	-	-	-	8	7	14	6	-	-	-	-	-	-	-	-	-	-	-	-	0	35	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1			<b>P-1 Line Item Number / Title:</b> B01B00 / B-1B			<b>Modification Number / Title:</b> 92317 / IFF Mode 5/S	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 2 of 2:</b> Wiring (2)							
<b>Manufacturer Information</b>							
Manufacturer Name: N/A				Manufacturer Location: N/A			
Administrative Leadtime (in Months):				Production Leadtime (in Months):			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 0		

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 1: Strategic Aircraft	<b>P-1 Line Item Number / Title:</b> B05200 / B-52
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0101113F	Other Related Program Elements: 0101113F
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	671.606	117.230	47.926	53.949	-	53.949	141.459	96.664	227.571	930.592	0.000	2,286.997
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	671.606	117.230	47.926	53.949	-	53.949	141.459	96.664	227.571	930.592	0.000	2,286.997
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>671.606</b>	<b>117.230</b>	<b>47.926</b>	<b>53.949</b>	<b>-</b>	<b>53.949</b>	<b>141.459</b>	<b>96.664</b>	<b>227.571</b>	<b>930.592</b>	<b>0.000</b>	<b>2,286.997</b>

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

Initial Spares ( <i>\$ in Millions</i> )	-	0.174	2.499	2.692	-	2.692	8.252	3.976	2.477	-	-	20.070
Flyaway Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This line item funds modifications to the B-52H aircraft. The B-52H strategic bomber maintains nuclear and conventional taskings. The Air Force maintains 76 B-52Hs in its inventory. The B-52H averages 19,760 airframe hours as of January 2020 (Source: LIMS-EV). The specific modifications budgeted and programmed are below.

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.

Funding for the exhibit contained in PE 0101113F. Funding under this PE may be used to alleviate Diminishing Manufacturing Sources (DMS) issues.

**Funding Changes:**

FY20: Decrease of \$21.722M consists of: (-\$4.000M) Link-16, (-\$17.722M) Radio Crypto Mod

FY21: (PE 0101113F): Decrease of \$56.004M consists of: (-\$4.237M) Link 16, (-\$22.260M) CONECT, (-\$21.030M) Radio Crypto Mod, GPS-IU (-\$0.033), LCM (-\$0.004M), VLF/LF (-\$8.410M)

FY21: (PE 0809731F): Decrease of \$2.342M consists of AETC Training support.

FY21: Total Decrease of \$58.346M

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	102.645	43.435	46.967	0.000	46.967	129.234	91.084	227.571	930.592
AFR	Quantity	-	-	-	-	-	-	-	-	-

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Air Force							<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 1: Strategic Aircraft					<b>P-1 Line Item Number / Title:</b> B05200 / B-52				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A			<b>Program Elements for Code B Items:</b> 0101113F			<b>Other Related Program Elements:</b> 0101113F			
<b>Line Item MDAP/MAIS Code:</b> N/A									

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
	Total Obligation Authority	14.585	4.491	6.982	-	6.982	12.225	5.580	0.000	-
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>117.230</b>	<b>47.926</b>	<b>53.949</b>	<b>0.000</b>	<b>53.949</b>	<b>141.459</b>	<b>96.664</b>	<b>227.571</b>	<b>930.592</b>



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**Exhibit P-40, Budget Line Item Justification: PB 2021 Air Force** **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 1: Strategic Aircraft

**P-1 Line Item Number / Title:**  
B05200 / B-52

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0101113F **Other Related Program Elements:** 0101113F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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***	3265 / B-52 Anti-Skid Replacement (Reliability & Maintainability)				- / 20.458	- / 0.916	- / 0.932	- / 0.948	- / -	- / 0.948
P-40a***	3310 / B-52 Combat Network Communications Technology (Capability Improvement)				- / 581.692	- / 55.444	- / 13.567	- / -	- / -	- / -
P-40a***	6884 / B-52 Internal Weapons Bay Upgrade (Capability Improvement)				- / 52.943	- / 24.176	- / 0.000	- / -	- / -	- / -
P-40a***	6885 / AETC Trainers (B-52) (Other)				- / 9.460	- / 2.480	- / 2.524	- / 0.226	- / -	- / 0.226
P-40a***	6890 / B-52 Radar Modernization (Capability Improvement)				- / -	- / -	- / 0.009	- / -	- / -	- / -
P-40a***	6892 / B-52 Low Cost Improvements (Capability Improvement)				- / 4.709	- / 2.362	- / 2.412	- / 2.457	- / 0.000	- / 2.457
P-40a***	6894 / B-52 Crypto Modernization (Capability Improvement)				- / -	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40a***	6895 / Advanced Targeting Pod MFCD (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	6896 / B-52 VLF/LF Modernization (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	6897 / B-52 CERP (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	6898 / B-52 IR Missile Warning System (Safety)				- / -	- / 16.400	- / -	- / -	- / -	- / -
P-40a***	99999X / Other Mods (Other)				- / 2.344	- / 15.452	- / 5.460	- / 0.470	- / -	- / 0.470
P-3a	6889 / Bomber Tactical Data link (Capability Improvement)		B		- / 0.000	- / 0.000	- / 11.925	- / 25.977	- / 0.000	- / 25.977
P-3a	6893 / GPS-IU Replacement (Capability Improvement)		B		- / 0.000	- / 0.000	- / 11.097	- / 23.871	- / 0.000	- / 23.871
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 671.606</b>	<b>- / 117.230</b>	<b>- / 47.926</b>	<b>- / 53.949</b>	<b>- / -</b>	<b>- / 53.949</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	3265 / B-52 Anti-Skid Replacement (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / 23.254
P-40a***	3310 / B-52 Combat Network Communications Technology (Capability Improvement)				- / 32.790	- / 5.671	- / -	- / -	- / -	- / 689.164
P-40a***	6884 / B-52 Internal Weapons Bay Upgrade (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 77.119
P-40a***	6885 / AETC Trainers (B-52) (Other)				- / 0.397	- / 0.554	- / 2.712	- / 2.762	- / -	- / 21.115
P-40a***	6890 / B-52 Radar Modernization (Capability Improvement)				- / 2.359	- / 39.454	- / 193.413	- / 240.748	- / 0.000	- / 475.983
P-40a***	6892 / B-52 Low Cost Improvements (Capability Improvement)				- / 2.508	- / 2.553	- / 2.600	- / 2.647	- / -	- / 22.248
P-40a***	6894 / B-52 Crypto Modernization (Capability Improvement)				- / 3.485	- / 2.397	- / 0.000	- / 0.000	- / -	- / 5.882
P-40a***	6895 / Advanced Targeting Pod MFCD (Capability Improvement)				- / 22.884	- / 16.195	- / 16.487	- / -	- / -	- / 55.566
P-40a***	6896 / B-52 VLF/LF Modernization (Capability Improvement)				- / 33.523	- / 19.497	- / 8.065	- / 0.000	- / 0.000	- / 61.085
P-40a***	6897 / B-52 CERP (Reliability & Maintainability)				- / -	- / -	- / -	- / 683.929	- / -	- / 683.929
P-40a***	6898 / B-52 IR Missile Warning System (Safety)				- / -	- / -	- / -	- / -	- / -	- / 16.400
P-40a***	99999X / Other Mods (Other)				- / 0.480	- / 0.489	- / 0.498	- / 0.506	- / -	- / 25.699
P-3a	6889 / Bomber Tactical Data link (Capability Improvement)		B		- / 20.696	- / 9.854	- / 3.796	- / -	- / -	- / 72.248
P-3a	6893 / GPS-IU Replacement (Capability Improvement)		B		- / 22.337	- / 0.000	- / 0.000	- / -	- / -	- / 57.305

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 1: Strategic Aircraft

**P-1 Line Item Number / Title:**  
B05200 / B-52

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0101113F **Other Related Program Elements:** 0101113F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	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>
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				- / 141.459	- / 96.664	- / 227.571	- / 930.592	- / 0.000	- / 2,286.997

\*\*\* Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

\*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:**  
No production new starts FY21

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1	<b>P-1 Line Item Number / Title:</b> B05200 / B-52	<b>Modification Number / Title:</b> 6889 / Bomber Tactical Data link

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	0.000	11.925	25.977	0.000	25.977	20.696	9.854	3.796	-	-	72.248
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	0.000	11.925	25.977	0.000	25.977	20.696	9.854	3.796	-	-	72.248
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>0.000</b>	<b>0.000</b>	<b>11.925</b>	<b>25.977</b>	<b>0.000</b>	<b>25.977</b>	<b>20.696</b>	<b>9.854</b>	<b>3.796</b>	-	-	<b>72.248</b>

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

Initial Spares (\$ in Millions)	-	-	2.381	2.495	-	2.495	-	-	-	-	-	4.876
Gross/Weapon System Unit Cost (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The Tactical Data Link (TDL) will provide low latency, jam-resistant situational awareness and command/control needed to support in-theater operations/missions via a Line-of-Sight (LOS) Link 16 capability. The program consist of integrating an existing off-the-shelf Link 16 terminal into the B-52H. Integration includes Group A wiring, rack and antennas, and the Group B terminal, blanking unit and notch filter LRUs. The terminals will be installed inside section 41 of the aircraft and two external antennas will be mounted on the top and bottom of the fuselage. The TDL terminal and LOS capability will be integrated with the rest of the COmbat Network Communications Technology (CONNECT) subsystem. Updates to Common Link Integration Processing (CLIP) will be required to support both LOS and Beyond Line-of-Sight (BLOS) message processing.

This modification includes procurements of 75 aircraft kits + 1 EMD kits that will be installed via a contract field team. The two kits will be procured under the EMD contract to support on-aircraft developmental testing.

Funds may be used to resolve emerging safety of flight and diminishing manufacturing sources (DMS) issues, accommodate technology insertion and fulfill FAA or other mandates necessary to ensure continued aircrew safety and mission effectiveness.

DMS efforts to include removal of end-of-life software/hardware within simulators systems and move to a modular, common open system architecture that is sustainable and cyber-resilient. Implement requirements and standards defined under the Simulator Common Architecture Requirements and Standards (SCARS) initiative.

Milestone/Development Status

EMD Contract awarded 9 Sep 17

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	0.000	10.004	23.033	-	23.033	14.167	6.968	3.796	-
AFR									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	-	1.921	2.944	-	2.944	6.529	2.886	-	-
<b>Total:</b>									
<b>Quantity</b>	-	-	-	-	-	-	-	-	-

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force	<b>Date:</b> February 2020
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<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1	<b>P-1 Line Item Number / Title:</b> B05200 / B-52	<b>Modification Number / Title:</b> 6889 / Bomber Tactical Data link
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Secondary Distribution	Total Obligation Authority	0.000	11.925	25.977	0.000	25.977	20.696	9.854	3.796	-

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**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1					<b>P-1 Line Item Number / Title:</b> B05200 / B-52					<b>Modification Number / Title:</b> 6889 / Bomber Tactical Data link			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> B-52H				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0101113F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0101113F	- / 15.870	- / 12.568	1 / 2.878	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 31.316	
<b>Procurement</b>													
<b>Modification Item 1 of 1:</b> Link-16													
A Kits													
Recurring													
Link-16:INSTALL KITS Group A (Active)	- / -	- / -	11 / 0.915	22 / 1.733	- / -	22 / 1.733	24 / 1.822	- / -	- / -	- / -	- / -	57 / 14.470	
Link-16:INSTALL KITS Group A (Reserve)	- / -	- / -	4 / 0.366	6 / 0.594	- / -	6 / 0.594	8 / 0.609	- / -	- / -	- / -	- / -	18 / 1.569	
<b>Subtotal: Recurring</b>	- / -	- / -	- / 1.281	- / 2.327	- / -	- / 2.327	- / 2.431	- / -	- / -	- / -	- / -	- / 6.039	
B Kits													
Recurring													
Link-16:EQUIPMENT Group B (Active)	- / -	- / -	11 / 3.880	22 / 8.594	- / -	22 / 8.594	24 / 5.539	- / -	- / -	- / -	- / -	57 / 18.013	
Link-16:EQUIPMENT Group B (Reserve)	- / -	- / -	4 / 1.555	6 / 2.350	- / -	6 / 2.350	8 / 3.110	- / -	- / -	- / -	- / -	18 / 7.015	
<b>Subtotal: Recurring</b>	- / -	- / -	- / 5.435	- / 10.944	- / -	- / 10.944	- / 8.649	- / -	- / -	- / -	- / -	- / 25.028	
<b>Subtotal: Link-16</b>	- / -	- / -	- / 6.716	- / 13.271	- / -	- / 13.271	- / 11.080	- / -	- / -	- / -	- / -	- / 31.067	
<b>Subtotal: Procurement, All Modification Items</b>	- / -	- / -	- / 6.716	- / 13.271	- / -	- / 13.271	- / 11.080	- / -	- / -	- / -	- / -	- / 31.067	
<b>Support (All Modification Items)</b>													
GROUP B: TOTAL NONRECURRING	- / -	- / -	- / 0.000	- / 1.874	- / -	- / 1.874	- / -	- / -	- / -	- / -	- / -	- / 1.874	
SIM/TRAINER	- / -	- / -	0 / 2.500	0 / 2.300	- / -	0 / 2.300	0 / 1.000	- / -	- / -	- / -	- / -	0 / 5.800	
OTHER GOVT	- / -	- / 0.000	- / 1.585	- / 15.454	- / -	- / 15.454	- / 10.565	- / 1.897	- / 0.546	- / -	- / -	- / 10.047	
PMA - Contractor Services	- / -	- / -	- / 1.074	- / 1.035	- / -	- / 1.035	- / 1.190	- / 0.746	- / 0.425	- / -	- / -	- / 14.470	
PMA - Other Gov't Costs	- / -	- / -	- / 0.050	- / 0.043	- / -	- / 0.043	- / 0.050	- / 0.000	- / -	- / -	- / -	- / 0.143	
<b>Subtotal: Support</b>	- / -	- / 0.000	0 / 5.209	0 / 10.706	- / -	0 / 10.706	0 / 2.805	- / 2.643	- / 0.971	- / -	- / -	0 / 22.334	
<b>Installation</b>													
<b>Modification Item 1 of 1:</b> Link-16	- / -	- / -	- / -	5 / 2.000	- / -	5 / 2.000	24 / 6.811	30 / 7.211	16 / 2.825	- / -	- / -	75 / 18.847	
<b>Subtotal: Installation</b>	- / -	- / -	- / -	5 / 2.000	- / -	5 / 2.000	24 / 6.811	30 / 7.211	16 / 2.825	- / -	- / -	75 / 18.847	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>0.000</b>	<b>0.000</b>	<b>11.925</b>	<b>25.977</b>	<b>0.000</b>	<b>25.977</b>	<b>20.696</b>	<b>9.854</b>	<b>3.796</b>	<b>-</b>	<b>-</b>	<b>72.248</b>	

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1	<b>P-1 Line Item Number / Title:</b> B05200 / B-52	<b>Modification Number / Title:</b> 6889 / Bomber Tactical Data link
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** Link-16

**Manufacturer Information**

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Aug 2020	Jan 2021	Jan 2022			
Delivery Dates		May 2021	Oct 2021	Oct 2022			

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	5 / 2.000	- / -	5 / 2.000	10 / 3.208	- / -	- / -	- / -	- / -	15 / 5.208
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	14 / 3.603	14 / 3.360	- / -	- / -	- / -	28 / 6.963
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 3.851	16 / 2.825	- / -	- / -	32 / 6.676
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	- / -	- / -	- / -	5 / 2.000	- / -	5 / 2.000	24 / 6.811	30 / 7.211	16 / 2.825	- / -	- / -	75 / 18.847

**Installation Schedule**

PYS	In	Out	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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		
	0	0	-	-	-	-	-	-	-	-	-	-	-	5	5	5	7	7	7	7	8	8	8	8	-	-	-	-	-	-	0	75
	0	0	-	-	-	-	-	-	-	-	-	-	-	5	5	5	7	7	7	7	8	8	8	8	-	-	-	-	-	-	0	75

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1	<b>P-1 Line Item Number / Title:</b> B05200 / B-52	<b>Modification Number / Title:</b> 6893 / GPS-IU Replacement

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	0.000	0.000	11.097	23.871	0.000	23.871	22.337	0.000	0.000	-	-	57.305
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	0.000	0.000	11.097	23.871	0.000	23.871	22.337	0.000	0.000	-	-	57.305
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>0.000</b>	<b>0.000</b>	<b>11.097</b>	<b>23.871</b>	<b>0.000</b>	<b>23.871</b>	<b>22.337</b>	<b>0.000</b>	<b>0.000</b>	-	-	<b>57.305</b>

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

Initial Spares ( <i>\$ in Millions</i> )	-	-	-	-	-	-	8.052	1.543	-	-	-	9.595
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The Global Positioning System (GPS) Interface Unit (IU) acts as a controller for a MIL-STD-1553 data bus communications path between computer systems onboard the B-52H.

The GPS IU Upgrade program will provide increased throughput and memory capacity by replacing the current processor, static memory, and necessary associated electronics with a newer processor, more memory, and sustainable electronic packages. This program will replace six Circuit Card Assemblies (CCA) which include combining three Circuit Cards into one Input/Output (I/O) CCA. The Backplane and Motherboard will require an upgrade to integrate the new CCAs: the Central Processing Unit / 1553, the power supply CCA, and the video graphics cards. The Input/Output CCA will combine the Discrete Inputs Analog, Audio Video (DAAV), Discrete Outputs (DOA) and Serial Busses functionality. This upgrade will improve system reliability and address Diminishing Manufacturing Sources and Material Shortages (DMSMS) issues on subcomponents of the IU.

In addition, the new GPS IU will retain the existing functions and interfaces of the legacy GPS IU, and provide additional interfaces to allow for future growth requirements: Which include two Ethernet Ports and two connectors on face-plate for future growth.

This program includes associated changes to training and support equipment, technical data, and procurement of initial spares. Requirements for GPS IU Replacement were validated by AF/A5R with an approved 1067 in June 2013. This program has associated Research Development Test and Evaluation (RDT&E) funding in PE 0101113F.

This modification includes procurement of 76 aircraft kits that will be installed via intermediate level maintenance.

FY20 funds for "Group B: Total Nonrecurring" are required for the procurement of long lead parts. Milestone decision authority approved procurement in June 2018.

Funds will be used to address emerging and short-notice Diminishing Manufacturing Sources (DMS) and Material Shortage (DMSMS) issues. Funds will be used to resolve emerging safety of flight and DMS issues, accommodate technology insertion and fulfill FAA or other mandates necessary to ensure continued aircrew safety and mission effectiveness.

**Milestone/Development Status**

Technical Maturation and Risk Reduction Contract Award (Feb 17)

Milestone A (Mar 17)

Milestone B (Jun 18)

EMD Contract Award (Sep 18)

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1	<b>P-1 Line Item Number / Title:</b> B05200 / B-52	<b>Modification Number / Title:</b> 6893 / GPS-IU Replacement
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**ID Code** (A=Service Ready, B=Not Service Ready) : B **MDAP/MAIS Code:**

Early authorization for procurement of long lead items for production was granted by MDA in Jun 18 to award long lead parts in 1QFY21.

	<b>Secondary Distribution</b>	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	11.097	19.833	-	19.833	20.537	0.000	-	-
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	4.038	-	4.038	1.800	-	-	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>0.000</b>	<b>11.097</b>	<b>23.871</b>	<b>0.000</b>	<b>23.871</b>	<b>22.337</b>	<b>0.000</b>	<b>0.000</b>	-



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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date: February 2020</b>			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1					<b>P-1 Line Item Number / Title:</b> B05200 / B-52					<b>Modification Number / Title:</b> 6893 / GPS-IU Replacement			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> B-52H				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0101113F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0101113F	- / 25.119	- / 28.424	- / 1.986	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 55.529	
<b>Procurement</b>													
<i>Modification Item 1 of 1: GPS IU Upgrade</i>													
B Kits													
Recurring													
GPS IU Upgrade:EQUIPMENT Group B (Active)	- / -	- / -	- / -	26 / 5.830	- / -	26 / 5.830	32 / 7.170	- / -	- / -	- / -	- / -	58 / 13.000	
GPS IU Upgrade:EQUIPMENT Group B (Reserve)	- / -	- / -	- / -	18 / 4.038	- / -	18 / 4.038	- / -	- / -	- / -	- / -	- / -	18 / 4.038	
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / 9.868	- / -	- / 9.868	- / 7.170	- / -	- / -	- / -	- / -	- / 17.038	
<i>Subtotal: GPS IU Upgrade</i>	- / -	- / -	- / -	- / 9.868	- / -	- / 9.868	- / 7.170	- / -	- / -	- / -	- / -	- / 17.038	
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / -	- / -	- / 9.868	- / -	- / 9.868	- / 7.170	- / -	- / -	- / -	- / -	- / 17.038	
<b>Support (All Modification Items)</b>													
GROUP B: TOTAL NONRECURRING	- / -	- / -	- / 10.223	- / 11.857	- / -	- / 11.857	- / 8.188	- / -	- / -	- / -	- / -	- / 30.268	
PMA - Contractor Services	- / -	- / -	- / 0.230	- / 0.200	- / -	- / 0.200	- / 0.200	- / -	- / -	- / -	- / -	- / 0.630	
Data	- / -	- / -	- / 0.194	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.194	
OTHER GOVT	- / -	- / -	- / 0.450	- / 1.146	- / -	- / 1.146	- / 1.373	- / -	- / -	- / -	- / -	- / 2.969	
Change Orders	- / -	- / -	- / -	- / 0.800	- / -	- / 0.800	- / 1.006	- / -	- / -	- / -	- / -	- / 1.806	
<i>Subtotal: Support</i>	- / -	- / -	- / 11.097	- / 14.003	- / -	- / 14.003	- / 10.767	- / -	- / -	- / -	- / -	- / 35.867	
<b>Installation</b>													
<i>Modification Item 1 of 1: GPS IU Upgrade</i>	- / -	- / -	- / -	- / -	- / -	- / -	44 / 4.400	32 / 0.000	- / -	- / -	- / -	76 / 4.400	
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	44 / 4.400	32 / 0.000	- / -	- / -	- / -	76 / 4.400	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>0.000</b>	<b>0.000</b>	<b>11.097</b>	<b>23.871</b>	<b>0.000</b>	<b>23.871</b>	<b>22.337</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>-</b>	<b>57.305</b>	

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1	<b>P-1 Line Item Number / Title:</b> B05200 / B-52	<b>Modification Number / Title:</b> 6893 / GPS-IU Replacement
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** GPS IU Upgrade

**Manufacturer Information**

Manufacturer Name: Boeing	Manufacturer Location: Oklahoma City, Ok
Administrative Leadtime (in Months): 12	Production Leadtime (in Months): 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Nov 2021	May 2022			
Delivery Dates			May 2022	Nov 2022			

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	44 / 4.400	- / -	- / -	- / -	- / -	44 / 4.400
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 0.000	- / -	- / -	- / -	32 / 0.000
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	- / -	- / -	- / -	- / -	- / -	- / -	44 / 4.400	32 / 0.000	- / -	- / -	- / -	76 / 4.400

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	-	-	-	-	-	44	-	-	32	-	-	-	-	-	-	-	-	-	-	-	0	76
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	44	-	-	32	-	-	-	-	-	-	-	-	-	-	-	0	76

**UNCLASSIFIED**

**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 1: Strategic Aircraft	<b>P-1 Line Item Number / Title:</b> LAIRCM / Large Aircraft Infrared Countermeasures
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0401134F	Other Related Program Elements: 0401134F
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	306.982	143.225	97.093	9.999	57.521	67.520	59.310	66.526	0.000	30.003	473.564	1,244.223
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	306.982	143.225	97.093	9.999	57.521	67.520	59.310	66.526	0.000	30.003	473.564	1,244.223
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>306.982</b>	<b>143.225</b>	<b>97.093</b>	<b>9.999</b>	<b>57.521</b>	<b>67.520</b>	<b>59.310</b>	<b>66.526</b>	<b>0.000</b>	<b>30.003</b>	<b>473.564</b>	<b>1,244.223</b>

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

**Description:**

The Large Aircraft Infrared Countermeasures (LAIRCM) system provides a significantly improved defensive capability for the Department of Defense to counter the proliferating infrared (IR) man-portable air defense systems (MANPADS) missile threats by detecting, tracking, and countering incoming IR missiles. This system is fully autonomous following power-up and consists of Group A aircraft modification kits and Group B hardware. Group B hardware for the LAIRCM system [AN/AQQ-24(V)] currently consists of missile warning sensors; laser transmitter assemblies; a control indicator unit; a system processor, and repeaters, as needed by the platform.

The production program maintains a robust reliability program which results in the incorporation of reliability enhancements improving overall producibility, while gaining the inherent benefit of improved long-term sustainment. There are numerous LAIRCM configurations installed on a variety of aircraft, however, all configurations include a processor and a control indicator unit. Configurations can be differentiated by the type of missile warning sensors and laser transmitter assemblies.

Funding supports efforts that include, but are not limited to, Hardware Procurement (Group A and Group B), Installation, Installation Support, Initial Spares, Support Equipment, Government Furnished Equipment (GFE) and GFE Repairs, Line Replaceable Unit (LRU) Repairs, Interim Contractor Support (ICS), Depot Standup, Systems Engineering and Program Management (SEPM), Failure Reporting and Corrective Analysis Support (FRACAS), Other Government Costs (OGCs), Pre-Planned Product Improvements, Program Management and Administration (PMA) costs, simulators, and data.

Like most programs, LAIRCM faces the challenges associated with resolving Diminishing Manufacturing Sources (DMS) issues and software errors/inefficiencies. The LAIRCM program office seeks to ensure continued production of LAIRCM components for all LAIRCM customers. Funding may be used to address (DMS) issues and software corrections or minor improvements. The LAIRCM DMS program includes all activities associated with monitoring and identifying DMS issues. It also includes all activities required to resolve DMS issues such as: 1) the use of existing material solutions which involves actions to secure availability of existing supply (i.e., life of type buy and extension of production or support); 2) implementing substitutes which includes engineering activities to qualify and implement the identified substitute (i.e., approved part; repair, refurbishment, or reclamation; simple substitute; and complex substitute); and 3) redesign which includes all aspects of engineering and qualification to implement new or highly modified equipment (i.e., development of a new item or source; redesign of a next higher assembly; and redesign of a complex/system replacement).

LAIRCM kit quantities purchased are dependent on the unit cost and/or the installation cost of the 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.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 1: Strategic Aircraft		<b>P-1 Line Item Number / Title:</b> LAIRCM / Large Aircraft Infrared Countermeasures
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> 0401134F	<b>Other Related Program Elements:</b> 0401134F
<b>Line Item MDAP/MAIS Code:</b> N/A		

FY 2019 funding totals include \$143.225M for Overseas Contingency Operations.  
 FY 2020 funding totals include \$53.335M for Overseas Contingency Operations.  
 Funding for this exhibit contained in PE 0401134F.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	98.556	91.816	8.136	57.521	65.657	59.310	66.526	0.000	30.003
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	28.348	4.588	0.000	-	0.000	0.000	-	-	-
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	16.321	0.689	1.863	-	1.863	0.000	0.000	-	-
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>143.225</b>	<b>97.093</b>	<b>9.999</b>	<b>57.521</b>	<b>67.520</b>	<b>59.310</b>	<b>66.526</b>	<b>0.000</b>	<b>30.003</b>

**UNCLASSIFIED**

**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 1: Strategic Aircraft

**P-1 Line Item Number / Title:**  
LAIRCM / Large Aircraft Infrared Countermeasures

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0401134F **Other Related Program Elements:** 0401134F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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***	8629C130 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130 (Capability Improvement)				- / 14.301	- / -	- / -	- / -	- / -	- / -
P-40a***	8629C5 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-5 (Capability Improvement)				- / 22.782	- / 26.550	- / 8.177	- / 0.000	- / -	- / 0.000
P-3a	1 / LAIRCM CFIN (Capability Improvement)		B		- / -	- / -	- / -	- / 0.000	- / 7.500	- / 7.500
P-3a	2 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130J (Capability Improvement)		B		- / 124.808	- / 46.872	- / 53.335	- / 0.000	- / 50.021	- / 50.021
P-3a	3 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-17 (Capability Improvement)		B		- / 145.091	- / 69.803	- / 35.581	- / 9.999	- / 0.000	- / 9.999
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 306.982</b>	<b>- / 143.225</b>	<b>- / 97.093</b>	<b>- / 9.999</b>	<b>- / 57.521</b>	<b>- / 67.520</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	8629C130 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130 (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 14.301
P-40a***	8629C5 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-5 (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 57.509
P-3a	1 / LAIRCM CFIN (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 7.500
P-3a	2 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130J (Capability Improvement)		B		- / 59.310	- / 66.526	- / 0.000	- / 10.023	- / 473.564	- / 884.459
P-3a	3 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-17 (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 19.980	- / -	- / 280.454
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 59.310</b>	<b>- / 66.526</b>	<b>- / 0.000</b>	<b>- / 30.003</b>	<b>- / 473.564</b>	<b>- / 1,244.223</b>

\*\*\* Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

\*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:**  
This program, P-3A Mod 8629CFIN, LAIRCM CFIN, is a new start.

FY 2021 funding procures LARICM kits and installs for C-17, C-130J and C-143B aircraft.

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1	<b>P-1 Line Item Number / Title:</b> LAIRCM / Large Aircraft Infrared Countermeasures	<b>Modification Number / Title:</b> 1 / LAIRCM CFIN

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	-	-	0.000	7.500	7.500	0.000	0.000	0.000	0.000	-	7.500
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	-	-	0.000	7.500	7.500	0.000	0.000	0.000	0.000	-	7.500
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	-	-	-	<b>0.000</b>	<b>7.500</b>	<b>7.500</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	-	<b>7.500</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This program, P-3A Mod 8629CFIN, LAIRCM CFIN, is a new start.

The program modifies 2 C-143 aircraft with an updated Large Aircraft Infrared Countermeasures (LAIRCM) system, replacing block 10 with block 40.

The C-143B is a commercial derivative of the Bombardier Challenger 600 series aircraft. The aircraft provides combat flight inspection to the DoD. The aircraft are FAA-owned, and jointly operated between the Air Force and FAA.

Combat Flight Inspection (CFIN) capability: CFIN is an Air Force combat capability to validate and certify airfield instrument approach and landing equipment, and associated instrument procedures. This is necessary to ensure that aircraft approach and landing are safe and meet specifications before all-weather combat flight operations can begin. Challenger 600 series aircraft are modified with unique military equipment required for the CFIN mission, including secure anti-jam radios, military Identification Friend or Foe Mode IV and V transponders, and LAIRCM. Up to four C-143B aircraft may be selected to receive Block 40 LAIRCM

The LAIRCM system provides a significantly improved defensive capability for the C-143B to counter the proliferating infrared (IR) man-portable air defense systems (MANPADS) missile threats. CFIN C-143B aircraft are required to loiter for extended periods of time at low altitudes near airfields in potentially contested areas, making them more susceptible to small arms and laser engagement. LAIRCM Block 40 capability provides MANPADS self-defense and adds hostile fire and laser warning capabilities to the LAIRCM sensor.

This system is fully automatic following power-up and consists of group A aircraft modification kits and group B equipment. The LAIRCM system consists of missile warning sensors (MWS), transmitter assemblies, a colorless eye-safe multiband laser, control indicator unit (CIU), and a system processor to detect, track, and counter incoming infrared (IR) missiles.

This program only includes efforts needed to procure LAIRCM mods. Other program costs will be the responsibility of the FAA. These include but are not limited to: installation, installation support, support equipment, Interim Contractor Support (ICS), depot standup, Systems Engineering and Program Management (SEPM), Failure Reporting and Corrective Analysis Support (FRACAS), Other Government Costs (OGCs), Pre-planned product Improvements (P3I), data, and Program management and administration (PMA) costs.

**Milestone/Development Status**

Fully developed Military unique equipment

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force							<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1			<b>P-1 Line Item Number / Title:</b> LAIRCM / Large Aircraft Infrared Countermeasures				<b>Modification Number / Title:</b> 1 / LAIRCM CFIN			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B					<b>MDAP/MAIS Code:</b>					
<b>Secondary Distribution</b>		<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	-	7.500	7.500	-	-	-	-
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	-	-	0.000	7.500	7.500	0.000	0.000	0.000	0.000

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1				<b>P-1 Line Item Number / Title:</b> LAIRCM / Large Aircraft Infrared Countermeasures						<b>Modification Number / Title:</b> 1 / LAIRCM CFIN			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> C-143				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b>					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> kits													
A Kits													
Recurring													
kits:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	2 / 3.750	2 / 3.750	- / -	- / -	- / -	- / -	- / -	2 / 3.750	
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / -	- / 3.750	- / 3.750	- / -	- / -	- / -	- / -	- / -	- / 3.750	
<i>Subtotal: kits</i>	- / -	- / -	- / -	- / -	- / 3.750	- / 3.750	- / -	- / -	- / -	- / -	- / -	- / 3.750	
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / -	- / -	- / -	- / 3.750	- / 3.750	- / -	- / -	- / -	- / -	- / -	- / 3.750	
<b>Support (All Modification Items)</b>													
GROUP B: TOTAL NONRECURRING	- / -	- / -	- / -	- / -	- / 3.750	- / 3.750	- / -	- / -	- / -	- / -	- / -	- / 3.750	
<i>Subtotal: Support</i>	- / -	- / -	- / -	- / -	- / 3.750	- / 3.750	- / -	- / -	- / -	- / -	- / -	- / 3.750	
<b>Installation</b>													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	-	-	-	0.000	7.500	7.500	0.000	0.000	0.000	0.000	-	7.500	



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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1			<b>P-1 Line Item Number / Title:</b> LAIRCM / Large Aircraft Infrared Countermeasures			<b>Modification Number / Title:</b> 1 / LAIRCM CFIN	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B				<b>MDAP/MAIS Code:</b>			
<b>Modification Item 1 of 1:</b> kits							
<b>Manufacturer Information</b>							
Manufacturer Name: NORTHROP GRUMMAN				Manufacturer Location: ROLLING MEADOWS, IL			
Administrative Leadtime (in Months): 6				Production Leadtime (in Months): 16			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates			Apr 2021				
Delivery Dates			Aug 2022				
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 0		

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1	<b>P-1 Line Item Number / Title:</b> LAIRCM / Large Aircraft Infrared Countermeasures	<b>Modification Number / Title:</b> 2 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130J

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	124.808	46.872	53.335	0.000	50.021	50.021	59.310	66.526	0.000	10.023	473.564	884.459
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	124.808	46.872	53.335	0.000	50.021	50.021	59.310	66.526	0.000	10.023	473.564	884.459
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>124.808</b>	<b>46.872</b>	<b>53.335</b>	<b>0.000</b>	<b>50.021</b>	<b>50.021</b>	<b>59.310</b>	<b>66.526</b>	<b>0.000</b>	<b>10.023</b>	<b>473.564</b>	<b>884.459</b>

*(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 Millions)	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The Large Aircraft Infrared Countermeasures (LAIRCM) system significantly improves defensive capability for the C-130J to counter the proliferating Infrared (IR) man-portable air defense systems (MANPADS) missile threats. The system is fully automatic following power-up. The LAIRCM kit housed behind a turret assembly and functions using missile warning sensors (MWS), two Turret Assemblies, a control indicator unit (CIU), a colorless eye-safe multiband laser, and a system processor to detect, track, and counter incoming IR missiles. As Line Replaceable Units (LRUs) updated, LAIRCM will update with the latest configuration of LRUs.

This program includes costs for the following C-130J aircraft variants: C-130J stretch aircraft, C-130J short aircraft.

This funding includes Rapid Global Mobility (RGM) platform related activities including but not limited to fielding actions such as kit buys, installation and support equipment.

This program includes efforts needed to procure and install retrofit kits for 151 aircraft and deploy the system and support LAIRCM. These efforts include, but not limited to, hardware procurement, installation, installation support, initial spares, support equipment, Government Furnished Equipment (GFE) and GFE repairs, Interim Contractor Support (ICS), depot stand up, mod-line repairs, Systems Engineering and Program Management (SEPM), Failure Reporting and Corrective Analysis Support (FRACAS), Technical Orders, Other Government Costs (OGCs), and Program Management and Administration (PMA) costs. Costs for the identification, review, monitoring, and mitigation of items impacted by diminishing manufacturing sources (DMS) are included. Additionally, "change orders" include NRE/replacement costs for equipment updates to increase reliability, availability, and maintainability of LAIRCM group B components as identified during the fiscal year. To date, 49 Block 20 installs are complete and retrofit to Block 30 of these aircraft will commence in FY28. Funding used to address (DMS) issues and software corrections. The LAIRCM DMS program includes all activities associated with monitoring and identifying DMS issues.

The cost element "Data" in this P3A includes costs for DMS, these costs are explained below.

Like most programs, LAIRCM faces the challenges associated with resolving Diminishing Manufacturing Sources (DMS) issues and software errors/inefficiencies. The LAIRCM program office seeks to ensure continued production of LAIRCM components for all LAIRCM customers. Funding may be used to address (DMS) issues and software corrections or minor improvements. The LAIRCM DMS program includes all activities associated with monitoring and identifying DMS issues. It also includes all activities required to resolve DMS issues such as: 1) the use of existing material solutions which involves actions to secure availability of existing supply (i.e., life of type buy and extension of production or support); 2) implementing substitutes which includes engineering activities to qualify and implement the identified substitute (i.e., approved part; repair, refurbishment, or reclamation; simple substitute; and complex substitute); and 3) redesign which includes all aspects of engineering and qualification to implement new or highly modified equipment (i.e., development of a new item or source; redesign of a next higher assembly; and redesign of a complex/system replacement).

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1	<b>P-1 Line Item Number / Title:</b> LAIRCM / Large Aircraft Infrared Countermeasures	<b>Modification Number / Title:</b> 2 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130J

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

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	46.872	53.335	0.000	50.021	50.021	59.310	66.526	0.000	10.023
<b>Total: Secondary Distribution</b>	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	46.872	53.335	0.000	50.021	50.021	59.310	66.526	0.000	10.023

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1					<b>P-1 Line Item Number / Title:</b> LAIRCM / Large Aircraft Infrared Countermeasures					<b>Modification Number / Title:</b> 2 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130J			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> C130J				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0401134F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<b>Modification Item 1 of 3: Basic Js (Block 20)</b>													
A Kits													
Recurring													
Basic Js (Block 20):INSTALL KITS Group A (Active)	32 / 13.275	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 13.275	
Basic Js (Block 20):INSTALL KITS Group A (Guard)	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	
<b>Subtotal: Recurring</b>	<b>- / 13.275</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 13.275</b>	
B Kits													
Recurring													
Basic Js (Block 20):EQUIPMENT Group B (Active)	32 / 41.386	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 41.386	
Basic Js (Block 20):EQUIPMENT Group B (Guard)	2 / 3.964	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 3.964	
<b>Subtotal: Recurring</b>	<b>- / 45.350</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 45.350</b>	
<b>Subtotal: Basic Js (Block 20)</b>	<b>- / 58.625</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 58.625</b>	
<b>Modification Item 2 of 3: Basic Js (Block 30)</b>													
A Kits													
Recurring													
Basic Js (Block 30):INSTALL KITS Group A (Active)	0 / 0.000	2 / 1.870	6 / 5.883	- / -	12 / 12.242	12 / 12.242	12 / 12.255	12 / 9.046	0 / 0.000	- / -	104 / 56.569	148 / 97.865	
<b>Subtotal: Recurring</b>	<b>- / 0.000</b>	<b>- / 1.870</b>	<b>- / 5.883</b>	<b>- / -</b>	<b>- / 12.242</b>	<b>- / 12.242</b>	<b>- / 12.255</b>	<b>- / 9.046</b>	<b>- / 0.000</b>	<b>- / -</b>	<b>- / 56.569</b>	<b>- / 97.865</b>	
B Kits													
Recurring													
Basic Js (Block 30):EQUIPMENT Group B (Active)	2 / 3.916	6 / 12.037	- / -	- / -	12 / 26.970	12 / 26.970	12 / 25.231	12 / 25.920	0 / 0.000	0 / 0.000	107 / 209.385	151 / 303.459	
<b>Subtotal: Recurring</b>	<b>- / 3.916</b>	<b>- / 12.037</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 26.970</b>	<b>- / 26.970</b>	<b>- / 25.231</b>	<b>- / 25.920</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 209.385</b>	<b>- / 303.459</b>	
<b>Subtotal: Basic Js (Block 30)</b>	<b>- / 3.916</b>	<b>- / 13.907</b>	<b>- / 5.883</b>	<b>- / -</b>	<b>- / 39.212</b>	<b>- / 39.212</b>	<b>- / 37.486</b>	<b>- / 34.966</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 265.954</b>	<b>- / 401.324</b>	
<b>Modification Item 3 of 3: EC-130Js</b>													
A Kits													
Recurring													
EC-130Js:INSTALL KITS Group A (Active)	5 / 3.800	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 3.800	
<b>Subtotal: Recurring</b>	<b>- / 3.800</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 3.800</b>	
B Kits													
Recurring													

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1					<b>P-1 Line Item Number / Title:</b> LAIRCM / Large Aircraft Infrared Countermeasures					<b>Modification Number / Title:</b> 2 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130J			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> C130J			<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0401134F						
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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)	
EC-130Js:EQUIPMENT Group B (Active)	5 / 11.900	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 11.900	
<i>Subtotal: Recurring</i>	- / 11.900	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.900	
<i>Subtotal: EC-130Js</i>	- / 15.700	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 15.700	
<i>Subtotal: Procurement, All Modification Items</i>	- / 78.241	- / 13.907	- / 5.883	- / -	- / 39.212	- / 39.212	- / 37.486	- / 34.966	- / 0.000	- / 0.000	- / 265.954	- / 475.649	
<b>Support (All Modification Items)</b>													
GROUP A: TOTAL NONRECURRING	- / 4.064	- / 7.586	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.650	
GROUP B: TOTAL NONRECURRING	- / 5.672	- / 0.000	- / -	- / -	- / -	- / -	- / 3.893	- / 0.000	- / 0.000	- / -	- / -	- / 9.565	
Data	- / 0.753	- / 3.719	- / 136.621	- / -	- / 15.086	- / 15.086	- / 14.347	- / 6.431	- / 0.000	- / -	- / 0.298	- / 57.255	
SIM/TRAINER	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 4.627	0 / 0.000	- / -	- / -	12 / 4.627	
SUPPORT-EQUIP	- / 1.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.500	
Change Orders	- / 2.283	- / 0.554	- / -	- / -	- / 1.826	- / 1.826	- / 2.413	- / 3.071	- / 0.000	- / -	- / 17.694	- / 27.841	
ICS-Labor	- / 1.033	- / 0.287	- / 0.935	- / -	- / 0.960	- / 0.960	- / 0.987	- / 1.014	- / -	- / -	- / 1.707	- / 6.923	
CY Advance Procurement	- / -	- / 15.843	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 15.843	
PMA - Contractor Services	- / 0.642	- / 2.086	- / 0.321	- / 0.000	- / -	- / 0.000	- / 0.234	- / 0.642	- / 0.000	- / -	- / 4.037	- / 7.962	
OTHER GOVT	- / 8.202	- / 0.022	- / 7.540	- / 0.000	- / 1.554	- / 1.554	- / 0.000	- / 0.568	- / 0.000	- / -	- / 57.098	- / 74.984	
PMA - Other Gov't Costs	- / 4.156	- / 0.049	- / 2.035	- / 0.000	- / 1.383	- / 1.383	- / 0.857	- / 0.000	- / 0.000	- / -	- / 13.186	- / 21.666	
<i>Subtotal: Support</i>	- / 28.305	- / 30.146	- / 47.452	- / 0.000	- / 10.809	- / 10.809	- / 12.731	12 / 16.353	0 / 0.000	- / -	- / 94.020	12 / 239.816	
<b>Installation</b>													
<i>Modification Item 1 of 3:</i> Basic Js (Block 20)	32 / 12.493	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 12.493	
<i>Modification Item 2 of 3:</i> Basic Js (Block 30)	- / -	2 / 2.819	- / -	- / -	- / -	- / -	6 / 9.093	12 / 15.207	- / -	12 / 10.023	119 / 113.590	151 / 150.732	
<i>Modification Item 3 of 3:</i> EC-130Js	5 / 5.769	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 5.769	
<i>Subtotal: Installation</i>	37 / 18.262	2 / 2.819	- / -	- / -	- / -	- / -	6 / 9.093	12 / 15.207	- / -	12 / 10.023	119 / 113.590	188 / 168.994	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>124.808</b>	<b>46.872</b>	<b>53.335</b>	<b>0.000</b>	<b>50.021</b>	<b>50.021</b>	<b>59.310</b>	<b>66.526</b>	<b>0.000</b>	<b>10.023</b>	<b>473.564</b>	<b>884.459</b>	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1	<b>P-1 Line Item Number / Title:</b> LAIRCM / Large Aircraft Infrared Countermeasures	<b>Modification Number / Title:</b> 2 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130J

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 3:** Basic Js (Block 20)

**Manufacturer Information**

Manufacturer Name: NORTHROP GRUMMAN	Manufacturer Location: ROLLING MEADOWS
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 16

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	32 / 12.493	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 12.493
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	32 / 12.493	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 12.493

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	32	
Out	31	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	32		

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1	<b>P-1 Line Item Number / Title:</b> LAIRCM / Large Aircraft Infrared Countermeasures	<b>Modification Number / Title:</b> 2 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130J

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 2 of 3:** Basic Js (Block 30)

**Manufacturer Information**

Manufacturer Name: Northrop Grumman	Manufacturer Location: ROLLING MEADOWS
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 16

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jun 2019	Apr 2020	Apr 2021	Apr 2022	Apr 2023		
Delivery Dates	Sep 2020	Aug 2021	Aug 2022	Aug 2023	Aug 2024		

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	2 / 2.819	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.819
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	6 / 9.093	- / -	- / -	- / -	- / -	6 / 9.093
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 15.207	- / -	- / -	- / -	12 / 15.207
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 10.023	- / -	12 / 10.023
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 15.207	12 / 15.207
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	107 / 98.383	107 / 98.383
Total	- / -	2 / 2.819	- / -	- / -	- / -	- / -	6 / 9.093	12 / 15.207	- / -	12 / 10.023	119 / 113.590	151 / 150.732

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	2	-	-	-	-	-	-	-	-	-	0	2	2	2	3	3	3	3	0	0	0	0	3	3	3	3	119	151
Out	0	-	-	2	-	-	-	-	-	-	-	-	-	0	2	2	2	3	3	3	3	0	0	0	0	3	3	3	3	119	151

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1	<b>P-1 Line Item Number / Title:</b> LAIRCM / Large Aircraft Infrared Countermeasures	<b>Modification Number / Title:</b> 2 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130J

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 3 of 3:** EC-130Js

**Manufacturer Information**

Manufacturer Name: Northrop Grumman	Manufacturer Location: Rolling Meadows
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 16

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	5 / 5.769	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 5.769
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	5 / 5.769	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 5.769

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	5
Out	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	5



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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1	<b>P-1 Line Item Number / Title:</b> LAIRCM / Large Aircraft Infrared Countermeasures	<b>Modification Number / Title:</b> 3 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-17

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	145.091	69.803	35.581	9.999	0.000	9.999	0.000	0.000	0.000	19.980	-	280.454
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	145.091	69.803	35.581	9.999	0.000	9.999	0.000	0.000	0.000	19.980	-	280.454
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>145.091</b>	<b>69.803</b>	<b>35.581</b>	<b>9.999</b>	<b>0.000</b>	<b>9.999</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>19.980</b>	-	<b>280.454</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The Large Aircraft Infrared Countermeasures (LAIRCM) system provides a significantly improved defensive capability for the Department of Defense to counter the proliferating infrared (IR) man-portable air defense systems (MANPADS) missile threats by detecting, tracking, and countering incoming IR missiles. This system is fully autonomous following power-up and consists of Group A aircraft modification kits and Group B hardware. Group B hardware for the LAIRCM system [AN/AQQ-24(V)] currently consists of missile warning sensors; laser transmitter assemblies; a control indicator unit; a system processor, and repeaters, as needed by the platform.

LAIRCM enhancements and retrofits to the current configuration are planned for purchase and installation from FY16 and beyond. These enhancements include retrofits to bring the C-17 fleet to the LAIRCM Block 30 configuration and will continue to provide updates using new technology that would advance the system to further upcoming configurations. Other components are slated to be replaced with updated versions that address diminishing manufacturing sources (DMS) and reliability efforts and Life of Type Buys(LTB).

The "Change Orders" line in the funding table includes DMS costs for the identification, review, and monitoring of items with high DMS risk potential, classification of identified items according to criticality, identification of alternatives for items having high DMS risks, and non-recurring engineering (NRE)/replacement cost for DMS components. Additionally, "change orders" include NRE/replacement costs for equipment updates to increase reliability, availability, and maintainability of LAIRCM group B components as identified during the fiscal year.

This program includes all efforts needed to procure, field, and support LAIRCM. These efforts include, but are not limited to, Hardware procurement, installation, installation support, initial and readiness spares, support equipment, government furnished equipment (GFE) and GFE repairs, Interim Contractor Support (ICS), depot standup, Systems Engineering and Program Management (SEPM), Failure Reporting and Corrective Analysis Support (FRACAS), Other Government Costs (OGCs), Pre-planned Product Improvements (P3I), program management and administration (PMA) costs, simulators and data.

Training Systems: Support for Simulator upgrades to the current LAIRCM Block configuration will be preformed as part of this effort.

Milestone/Development Status

Development is complete.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF Quantity	-	-	-	-	-	-	-	-	-

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1	<b>P-1 Line Item Number / Title:</b> LAIRCM / Large Aircraft Infrared Countermeasures	<b>Modification Number / Title:</b> 3 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-17

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

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
	Total Obligation Authority	25.134	30.304	8.136	0.000	8.136	0.000	0.000	-	19.980
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	28.348	4.588	0.000	-	0.000	0.000	-	-	-
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	16.321	0.689	1.863	-	1.863	0.000	0.000	-	-
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>69.803</b>	<b>35.581</b>	<b>9.999</b>	<b>0.000</b>	<b>9.999</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>19.980</b>

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1					<b>P-1 Line Item Number / Title:</b> LAIRCM / Large Aircraft Infrared Countermeasures					<b>Modification Number / Title:</b> 3 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-17			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> C-17				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0401134F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<b>Modification Item 1 of 3: Block 20 to Block 30</b>													
A Kits													
Recurring													
Block 20 to Block 30:INSTALL KITS Group A (Active)	22 / 0.573	22 / 0.279	5 / 0.063	- / -	- / 0.000	- / 0.000	- / -	- / -	- / -	- / -	- / -	49 / 0.915	
Block 20 to Block 30:INSTALL KITS Group A (Guard)	- / -	- / -	17 / 0.216	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 0.216	
Block 20 to Block 30:INSTALL KITS Group A (Reserve)	- / -	- / -	- / -	7 / 0.118	- / -	7 / 0.118	- / -	- / -	- / -	- / -	- / -	7 / 0.118	
<b>Subtotal: Recurring</b>	<b>- / 0.573</b>	<b>- / 0.279</b>	<b>- / 0.279</b>	<b>- / 0.118</b>	<b>- / 0.000</b>	<b>- / 0.118</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 1.249</b>	
B Kits													
Recurring													
Block 20 to Block 30:EQUIPMENT Group B (Active)	91 / 86.791	2 / 1.718	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	93 / 88.509	
Block 20 to Block 30:EQUIPMENT Group B (Guard)	- / -	33 / 28.348	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	33 / 28.348	
Block 20 to Block 30:EQUIPMENT Group B (Reserve)	- / -	19 / 16.321	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 16.321	
<b>Subtotal: Recurring</b>	<b>- / 86.791</b>	<b>- / 46.387</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 133.178</b>	
<b>Subtotal: Block 20 to Block 30</b>	<b>- / 87.364</b>	<b>- / 46.666</b>	<b>- / 0.279</b>	<b>- / 0.118</b>	<b>- / 0.000</b>	<b>- / 0.118</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 134.427</b>	
<b>Modification Item 2 of 3: Block 20 to Block 30/depot</b>													
A Kits													
Recurring													
Block 20 to Block 30/depot:INSTALL KITS Group A (Active)	22 / 0.572	22 / 0.278	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	44 / 0.850	
Block 20 to Block 30/depot:INSTALL KITS Group A (Guard)	- / -	- / -	16 / 0.202	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 0.202	
Block 20 to Block 30/depot:INSTALL KITS Group A (Reserve)	- / -	- / -	6 / 0.076	6 / 0.102	- / -	6 / 0.102	- / -	- / -	- / -	- / -	- / -	12 / 0.178	
<b>Subtotal: Recurring</b>	<b>- / 0.572</b>	<b>- / 0.278</b>	<b>- / 0.278</b>	<b>- / 0.102</b>	<b>- / -</b>	<b>- / 0.102</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 1.230</b>	
<b>Subtotal: Block 20 to Block 30/depot</b>	<b>- / 0.572</b>	<b>- / 0.278</b>	<b>- / 0.278</b>	<b>- / 0.102</b>	<b>- / -</b>	<b>- / 0.102</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 1.230</b>	
<b>Modification Item 3 of 3: Block 30- to Block 30</b>													
A Kits													
Recurring													
Block 30- to Block 30:INSTALL KITS Group A (Active)	- / -	- / 0.000	30 / 0.000	- / -	- / -	- / -	15 / 0.000	- / -	- / -	- / -	- / -	45 / 0.000	
<b>Subtotal: Recurring</b>	<b>- / -</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 0.000</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 0.000</b>	
B Kits													

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>											<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1				<b>P-1 Line Item Number / Title:</b> LAIRCM / Large Aircraft Infrared Countermeasures						<b>Modification Number / Title:</b> 3 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-17			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> C-17				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0401134F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Recurring</b>													
Block 30- to Block 30:EQUIPMENT Group B (Active)	- / -	23 / 9.204	7 / 2.953	15 / 6.360	- / -	15 / 6.360	- / -	- / -	- / -	49 / 19.980	- / -	94 / 38.497	
<b>Subtotal: Recurring</b>	- / -	- / 9.204	- / 2.953	- / 6.360	- / -	- / 6.360	- / -	- / -	- / -	- / 19.980	- / -	- / 38.497	
<b>Subtotal: Block 30- to Block 30</b>	- / -	- / 9.204	- / 2.953	- / 6.360	- / -	- / 6.360	- / 0.000	- / -	- / -	- / 19.980	- / -	- / 38.497	
<b>Subtotal: Procurement, All Modification Items</b>	- / 87.936	- / 56.148	- / 3.510	- / 6.580	- / 0.000	- / 6.580	- / 0.000	- / -	- / -	- / 19.980	- / -	- / 174.154	
<b>Support (All Modification Items)</b>													
Change Orders	- / 4.243	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.243	
CY Advance Procurement	- / -	- / 4.435	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.435	
Data	- / 4.453	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.453	
SIM/TRAINER	0 / 0.390	- / -	0 / 19.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 19.490	
SUPPORT-EQUIP	- / 0.080	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.080	
Mod of Spares	- / 11.510	- / 2.971	- / 0.546	- / 0.763	- / -	- / 0.763	- / -	- / -	- / -	- / -	- / -	- / 15.790	
ICS-Labor	- / 4.164	- / 0.235	- / 1.000	- / 1.013	- / -	- / 1.013	- / -	- / -	- / -	- / -	- / -	- / 6.412	
PMA - Contractor Services	- / 2.443	- / 0.275	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.718	
OTHER GOVT	- / 24.890	- / 0.561	- / 6.029	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 31.480	
<b>Subtotal: Support</b>	0 / 52.173	- / 8.477	0 / 26.675	- / 1.776	- / -	- / 1.776	- / -	- / -	- / -	- / -	- / -	0 / 89.101	
<b>Installation</b>													
<b>Modification Item 1 of 3:</b> Block 20 to Block 30	0 / 2.491	0 / 2.589	21 / 2.698	24 / 0.822	- / -	24 / 0.822	24 / 0.000	4 / 0.000	- / -	- / -	- / -	73 / 8.600	
<b>Modification Item 2 of 3:</b> Block 20 to Block 30/depot	0 / 2.491	0 / 2.589	22 / 2.698	24 / 0.821	- / -	24 / 0.821	24 / 0.000	2 / 0.000	- / -	- / -	- / -	72 / 8.599	
<b>Modification Item 3 of 3:</b> Block 30- to Block 30	- / -	- / -	- / -	17 / 0.000	- / -	17 / 0.000	24 / 0.000	4 / 0.000	- / -	- / -	- / -	45 / 0.000	
<b>Subtotal: Installation</b>	- / 4.982	0 / 5.178	43 / 5.396	65 / 1.643	- / -	65 / 1.643	72 / 0.000	10 / 0.000	- / -	- / -	- / -	190 / 17.199	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	145.091	69.803	35.581	9.999	0.000	9.999	0.000	0.000	0.000	19.980	-	280.454	

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1	<b>P-1 Line Item Number / Title:</b> LAIRCM / Large Aircraft Infrared Countermeasures	<b>Modification Number / Title:</b> 3 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-17

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 3:** Block 20 to Block 30

**Manufacturer Information**

Manufacturer Name: The Boeing Company	Manufacturer Location: San Antonio, TX
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jul 2019	Apr 2020	Apr 2021				
Delivery Dates	Jul 2020	Apr 2021	Apr 2022				

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 / 2.491	0 / 0.000	21 / 0.000	1 / 0.000	- / -	1 / 0.000	- / -	- / -	- / -	- / -	- / -	22 / 2.491
FY 2019	- / -	0 / 2.589	- / -	22 / 0.000	- / -	22 / 0.000	- / -	- / -	- / -	- / -	- / -	22 / 2.589
FY 2020	- / -	- / -	0 / 2.698	1 / 0.000	- / -	1 / 0.000	21 / 0.000	- / -	- / -	- / -	- / -	22 / 2.698
FY 2021	- / -	- / -	- / -	0 / 0.822	- / -	0 / 0.822	3 / 0.000	4 / 0.000	- / -	- / -	- / -	7 / 0.822
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 2.491	0 / 2.589	21 / 2.698	24 / 0.822	- / -	24 / 0.822	24 / 0.000	4 / 0.000	- / -	- / -	- / -	73 / 8.600

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	5	5	5	6	6	6	6	6	6	6	6	6	4	-	-	-	-	-	-	-	-	-	-	-	0	73
Out	0	-	-	-	-	5	5	5	6	6	6	6	6	6	6	6	6	4	-	-	-	-	-	-	-	-	-	-	-	0	73

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1	<b>P-1 Line Item Number / Title:</b> LAIRCM / Large Aircraft Infrared Countermeasures	<b>Modification Number / Title:</b> 3 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-17

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 2 of 3:** Block 20 to Block 30/depot

**Manufacturer Information**

Manufacturer Name: The Boeing Company	Manufacturer Location: Robins AFB
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jul 2019	Apr 2020	Apr 2021				
Delivery Dates	Jul 2020	Apr 2021	Apr 2022				

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 / 2.491	- / -	22 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	22 / 2.491
FY 2019	- / -	0 / 2.589	- / -	22 / 0.000	- / -	22 / 0.000	- / -	- / -	- / -	- / -	- / -	22 / 2.589
FY 2020	- / -	- / -	0 / 2.698	2 / 0.000	- / -	2 / 0.000	20 / 0.000	- / -	- / -	- / -	- / -	22 / 2.698
FY 2021	- / -	- / -	- / -	0 / 0.821	- / -	0 / 0.821	4 / 0.000	2 / 0.000	- / -	- / -	- / -	6 / 0.821
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 2.491	0 / 2.589	22 / 2.698	24 / 0.821	- / -	24 / 0.821	24 / 0.000	2 / 0.000	- / -	- / -	- / -	72 / 8.599

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	4	6	6	6	6	6	6	6	6	6	6	6	2	-	-	-	-	-	-	-	-	-	-	-	0	72
Out	0	-	-	-	-	4	6	6	6	6	6	6	6	6	6	6	6	2	-	-	-	-	-	-	-	-	-	-	-	0	72

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 1	<b>P-1 Line Item Number / Title:</b> LAIRCM / Large Aircraft Infrared Countermeasures	<b>Modification Number / Title:</b> 3 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-17

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 3 of 3:** Block 30- to Block 30

**Manufacturer Information**

Manufacturer Name: N/A	Manufacturer Location: N/A
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Apr 2020	Apr 2020	Apr 2021				Apr 2025
Delivery Dates	Apr 2021	Apr 2021	Apr 2022				Apr 2026

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	17 / 0.000	- / -	17 / 0.000	13 / 0.000	- / -	- / -	- / -	- / -	30 / 0.000
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	11 / 0.000	4 / 0.000	- / -	- / -	- / -	15 / 0.000
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	17 / 0.000	- / -	17 / 0.000	24 / 0.000	4 / 0.000	- / -	- / -	- / -	45 / 0.000

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	-	5	6	6	6	6	6	6	4	-	-	-	-	-	-	-	-	-	-	-	0	45
Out	0	-	-	-	-	-	-	-	-	-	5	6	6	6	6	6	6	4	-	-	-	-	-	-	-	-	-	-	-	0	45

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft /  
BSA 2: Tactical Aircraft

**P-1 Line Item Number / Title:**  
A01000 / A-10

**ID Code** (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** 0207131F **Other Related Program Elements:** 0207131F

**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	162.395	168.060	125.825	135.793	0.000	135.793	128.818	134.825	87.140	87.617	0.000	1,030.473
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	162.395	168.060	125.825	135.793	0.000	135.793	128.818	134.825	87.140	87.617	0.000	1,030.473
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>162.395</b>	<b>168.060</b>	<b>125.825</b>	<b>135.793</b>	<b>0.000</b>	<b>135.793</b>	<b>128.818</b>	<b>134.825</b>	<b>87.140</b>	<b>87.617</b>	<b>0.000</b>	<b>1,030.473</b>

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

**Description:**

This line item funds modifications and upgrades to the A-10 weapon system to ensure it remains combat effective. The A-10 is a twin engine, single seat aircraft capable of delivering a full range of air-to-ground munitions as well as self-defense air-to-air missiles. The A-10 provides persistent, effective and precise Close Air Support, Interdiction, Forward Air Controller (airborne), Combat Search & Rescue and Strike Control & Reconnaissance. Funding for this exhibit contained in PE 0207131F.

Wing Replacement Program (ATTACK) (FY20 \$93.755M) procures new wings to enable the A-10 Fleet to fly and fight into 2030+. A new wing procurement effort will provide flexibility in fleet size options and provides resiliency in the existing fleet.

Helmet Mounted Cueing System (HMCS0 Interim Contractor Support (ICS), (FY20 \$3.05M)- Interim Contract Support (ICS) is needed to repair critical components to keep units fully operational. The HMCS program is jointly managed by the A-10 and F-16 System Program Offices and provides extant A-10Cs and F-16C+ Block 30/32 aircraft with a Helmet Mounted Integrated Targeting (HMIT) System that will provide off-boresight cueing, targeting, and situational awareness capability.

ARC-210, (FY20 \$8.77M) - Replace current ARC-210 Gen 4 radio(s) with Gen 6 to insure crypto compliance. Replace current Radio Control Unit (RCU) with C-12561B (required update for Gen 6). Maintain same functionality of the Gen 4. Continue using 1553 Bus controller vice an Ethernet connection. Replace ARC-164 with ARC-210 Gen 4 (Suite 11). Installs will be either CFT or DSL. Procurement funds are for the hardware purchases for the fleet FY20-22. Procurement funds after that will be used for installs. Suite 11 scheduled to field 3rd Qtr FY22. ARC-210 Gen 6 installs will follow soon after. Currently pursuing an integration contract via RDT&E dollars.

2ND Gigabit Ethernet Switch (2GES), (FY20 \$5.0M)- Supports future avionics modernizations. Predecessor to 3 Dimensional Audio (3DA), High Resolution Display (HRDS), and ARC-210 programs

A-10 High Resolution Display System (HRDS), (FY20 \$6.25M) - HRDS is a technology enabler providing a platform for enhanced tactical applications which will function as a Primary Flight Display and provide Hi Resolution video from Advanced Targeting Pods. The A-10 HRDS is a true next-gen digital interface that will replace legacy analog flight instruments and provide higher resolution video signals to improve the pilot's ability to find, fix, track, target and engage ground targets and threats while reducing pilot workload.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft		<b>P-1 Line Item Number / Title:</b> A01000 / A-10

<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B	<b>Program Elements for Code B Items:</b> 0207131F	<b>Other Related Program Elements:</b> 0207131F
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**Line Item MDAP/MAIS Code:** N/A

3-Dimensional Audio (3DA), (FY20 \$1.0M) - This modification is to improve the spatial, battle space, and situational awareness (SA) of A-10C pilots through the addition of a digital intercom system upgrade, active and electronic noise reduction, three-dimensional spatial separation for up to four audio channels, and three-dimensional auditory threat cueing from the aircraft missile warning system and radar warning receiver.

Small Diameter Bomb-1 (SDB-1), (FY20 \$8.0M)- Support equipment - bomb lift adapters for loading the weapon, CMBRE testers for the back shop to verify software loads, BRU61 trainers for load barn

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 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	162.624	120.141	123.550	0.000	123.550	124.818	131.825	87.140	87.617
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.000	2.842	6.237	-	6.237	2.000	2.000	-	-
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	2.842	6.006	-	6.006	2.000	1.000	-	-
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>162.624</b>	<b>125.825</b>	<b>135.793</b>	<b>0.000</b>	<b>135.793</b>	<b>128.818</b>	<b>134.825</b>	<b>87.140</b>	<b>87.617</b>

**UNCLASSIFIED**

**Exhibit P-40, Budget Line Item Justification: PB 2021 Air Force** **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft

**P-1 Line Item Number / Title:**  
A01000 / A-10

**ID Code** (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** 0207131F **Other Related Program Elements:** 0207131F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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***	7856 / MODE S/5 (Capability Improvement)				- / 11.000	- / 3.520	- / 0.000	- / 0.858	- / -	- / 0.858
P-40a***	9601 / ONBOARD OXYGEN GENERATING SYSTEM (OBOGS) (Reliability & Maintainability)				- / 20.545	- / 5.436	- / -	- / -	- / -	- / -
P-40a***	9806 / A-10 Helmet Mounted Cueing System (Capability Improvement)				- / -	- / 0.890	- / 3.050	- / 3.018	- / -	- / 3.018
P-40a***	9808 / Covert/Overt Landing Light Requirement (COLA) (Capability Improvement)				- / 0.850	- / -	- / -	- / -	- / -	- / -
P-40a***	9810 / LARS-CSEL (Capability Improvement)				- / 27.000	- / -	- / -	- / -	- / -	- / -
P-40a***	9811 / A-10 J-Hook System (Reliability & Maintainability)				- / -	- / 0.750	- / -	- / -	- / -	- / -
P-40a***	9816 / A-10 Conversion Fuel Tanks (Capability Improvement)				- / -	- / 8.700	- / -	- / -	- / -	- / -
P-40a***	9830 / Central Interface Control Unit (CICU) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	9832 / 2ND GIGABIT ETHERNET SWITCH (2GES) (Capability Improvement)				- / -	- / -	- / 5.000	- / 4.900	- / -	- / 4.900
P-40a***	9834 / A-10 High Resolution Display System (HRDS) (Capability Improvement)				- / -	- / -	- / 6.250	- / 1.400	- / 0.000	- / 1.400
P-40a***	9839 / SDB-1 (Capability Improvement)				- / -	- / -	- / 8.000	- / -	- / -	- / -
P-3a	9804 / A-10 Wing Replacement Program (Reliability & Maintainability)		B		- / 103.000	- / 148.764	- / 93.755	- / 99.967	- / 0.000	- / 99.967
P-3a	9831 / ARC-210 (Capability Improvement)		B		- / 0.000	- / 0.000	- / 8.770	- / 18.350	- / 0.000	- / 18.350
P-3a	9836 / 3-Dimensional Audio (3DA) (Capability Improvement)		B		- / 0.000	- / 0.000	- / 1.000	- / 7.300	- / 0.000	- / 7.300
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 162.395</b>	<b>- / 168.060</b>	<b>- / 125.825</b>	<b>- / 135.793</b>	<b>- / 0.000</b>	<b>- / 135.793</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	7856 / MODE S/5 (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 15.378
P-40a***	9601 / ONBOARD OXYGEN GENERATING SYSTEM (OBOGS) (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / 25.981
P-40a***	9806 / A-10 Helmet Mounted Cueing System (Capability Improvement)				- / 4.880	- / 4.548	- / -	- / -	- / -	- / 16.386
P-40a***	9808 / Covert/Overt Landing Light Requirement (COLA) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 0.850
P-40a***	9810 / LARS-CSEL (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 27.000
P-40a***	9811 / A-10 J-Hook System (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / 0.750
P-40a***	9816 / A-10 Conversion Fuel Tanks (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 8.700
P-40a***	9830 / Central Interface Control Unit (CICU) (Capability Improvement)				- / -	- / -	- / 60.929	- / 57.902	- / -	- / 118.831
P-40a***	9832 / 2ND GIGABIT ETHERNET SWITCH (2GES) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 9.900
P-40a***	9834 / A-10 High Resolution Display System (HRDS) (Capability Improvement)				- / 7.458	- / 21.609	- / 18.711	- / 7.000	- / -	- / 62.428

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft

**P-1 Line Item Number / Title:**  
A01000 / A-10

**ID Code** (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** 0207131F **Other Related Program Elements:** 0207131F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	9839 / SDB-1 (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 8.000
P-3a	9804 / A-10 Wing Replacement Program (Reliability & Maintainability)		B		- / 100.000	- / 99.968	- / 0.000	- / 0.000	- / -	- / 645.454
P-3a	9831 / ARC-210 (Capability Improvement)		B		- / 7.580	- / 5.000	- / 5.000	- / 20.015	- / -	- / 64.715
P-3a	9836 / 3-Dimensional Audio (3DA) (Capability Improvement)		B		- / 8.900	- / 3.700	- / 2.500	- / 2.700	- / -	- / 26.100
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 128.818</b>	<b>- / 134.825</b>	<b>- / 87.140</b>	<b>- / 87.617</b>	<b>- / 0.000</b>	<b>- / 1,030.473</b>

\*\*\* Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

\*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:**  
This line item funds modifications and upgrades to the A-10 weapon system to ensure it remains combat effective. The A-10 is a twin engine, single seat aircraft capable of delivering a full range of air-to-ground munitions as well as self-defense air-to-air missiles. The A-10 provides persistent, effective and precise Close Air Support, Interdiction, Forward Air Controller (airborne), Combat Search & Rescue and Strike Control & Reconnaissance. Funding for this exhibit contained in PE 0207131F.

Wing Replacement Program (ATTACK) (FY20 \$93.755M) procures new wings to enable the A-10 Fleet to fly and fight into 2030+. A new wing procurement effort will provide flexibility in fleet size options and provides resiliency in the existing fleet.

Helmet Mounted Cueing System (HMCS0 Interim Contractor Support (ICS), (FY20 \$3.05M)- Interim Contract Support (ICS) is needed to repair critical components to keep units fully operational. The HMCS program is jointly managed by the A-10 and F-16 System Program Offices and provides extant A-10Cs and F-16C+ Block 30/32 aircraft with a Helmet Mounted Integrated Targeting (HMIT) System that will provide off-boresight cueing, targeting, and situational awareness capability.

ARC-210, (FY20 \$8.77M) - Replace current ARC-210 Gen 4 radio(s) with Gen 6 to insure crypto compliance. Replace current Radio Control Unit (RCU) with C-12561B (required update for Gen 6). Maintain same functionality of the Gen 4. Continue using 1553 Bus controller vice an Ethernet connection. Replace ARC-164 with ARC-210 Gen 4 (Suite 11). Installs will be either CFT or DSL. Procurement funds are for the hardware purchases for the fleet FY20-22. Procurement funds after that will be used for installs. Suite 11 scheduled to field 3rd Qtr FY22. ARC-210 Gen 6 installs will follow soon after. Currently pursuing an integration contract via RDT&E dollars.

2ND Gigabit Ethernet Switch (2GES), (FY20 \$5.0M)- Supports future avionics modernizations. Predecessor to 3 Dimensional Audio (3DA), High Resolution Display (HRDS), and ARC-210 programs

A-10 High Resolution Display System (HRDS), (FY20 \$6.25M) - HRDS is a technology enabler providing a platform for enhanced tactical applications which will function as a Primary Flight Display and provide Hi Resolution video from Advanced Targeting Pods. The A-10 HRDS is a true next-gen digital interface that will replace legacy analog flight instruments and provide higher resolution video signals to improve the pilot's ability to find, fix, track, target and engage ground targets and threats while reducing pilot workload.

3-Dimensional Audio (3DA), (FY20 \$1.0M) - This modification is to improve the spatial, battle space, and situational awareness (SA) of A-10C pilots through the addition of a digital intercom system upgrade, active and electronic noise reduction, three-dimensional spatial separation for up to four audio channels, and three-dimensional auditory threat cueing from the aircraft missile warning system and radar warning receiver.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft		<b>P-1 Line Item Number / Title:</b> A01000 / A-10
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B	<b>Program Elements for Code B Items:</b> 0207131F	<b>Other Related Program Elements:</b> 0207131F
<b>Line Item MDAP/MAIS Code:</b> N/A		
Small Diameter Bomb-1 (SDB-1), (FY20 \$8.0M)- Support equipment - bomb lift adapters for loading the weapon, CMBRE testers for the back shop to verify software loads, BRU61 trainers for load barn		
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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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> A01000 / A-10	<b>Modification Number / Title:</b> 9804 / A-10 Wing Replacement Program

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

<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	103.000	148.764	93.755	99.967	0.000	99.967	100.000	99.968	0.000	0.000	-	645.454
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	103.000	148.764	93.755	99.967	0.000	99.967	100.000	99.968	0.000	0.000	-	645.454
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>103.000</b>	<b>148.764</b>	<b>93.755</b>	<b>99.967</b>	<b>0.000</b>	<b>99.967</b>	<b>100.000</b>	<b>99.968</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>645.454</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The Wing Replacement Program (WRP) incorporates several reliability and maintainability improvements to known critical fatigue locations. With these improvements, the Enhanced Wing Assemblies (EWAs) do not require major structural inspections for the first 10,000 hours of service life. Operational Requirement Document: A-10 Multi-Stage Improvement Program, dated 19 Oct 1999.

The FY20 funds procure 22 Wing kits being organically installed. Funds may be used to resolve emerging safety of flight efforts and diminishing manufacturing sources issues, accommodate technology insertion and fulfill FAA or other mandates necessary to ensure continued aircrew safety and mission effectiveness.

Milestone/Development Status

Full rate production

<b>Secondary Distribution</b>		<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	148.764	93.755	99.967	-	99.967	100.000	99.968	-	-
<b>Total:</b> Secondary Distribution	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>148.764</b>	<b>93.755</b>	<b>99.967</b>	<b>0.000</b>	<b>99.967</b>	<b>100.000</b>	<b>99.968</b>	<b>0.000</b>	<b>0.000</b>

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2					<b>P-1 Line Item Number / Title:</b> A01000 / A-10					<b>Modification Number / Title:</b> 9804 / A-10 Wing Replacement Program			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> A-10				<b>Modification Type:</b> Reliability & Maintainability				<b>Related RDT&amp;E PEs:</b> 0207131F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> WRP kits, Center/Outer wing panels													
B Kits													
Recurring													
WRP kits, Center/Outer wing panels:EQUIPMENT Group B (Active)	- / -	24 / 148.764	22 / 93.755	24 / 99.967	- / -	24 / 99.967	24 / 100.000	15 / 99.968	- / -	- / -	- / -	109 / 542.454	
<i>Subtotal: Recurring</i>	<i>- / -</i>	<i>- / 148.764</i>	<i>- / 93.755</i>	<i>- / 99.967</i>	<i>- / -</i>	<i>- / 99.967</i>	<i>- / 100.000</i>	<i>- / 99.968</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 542.454</i>	
<i>Subtotal: WRP kits, Center/Outer wing panels</i>	<i>- / -</i>	<i>- / 148.764</i>	<i>- / 93.755</i>	<i>- / 99.967</i>	<i>- / -</i>	<i>- / 99.967</i>	<i>- / 100.000</i>	<i>- / 99.968</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 542.454</i>	
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / -</i>	<i>- / 148.764</i>	<i>- / 93.755</i>	<i>- / 99.967</i>	<i>- / -</i>	<i>- / 99.967</i>	<i>- / 100.000</i>	<i>- / 99.968</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 542.454</i>	
<b>Support (All Modification Items)</b>													
GROUP A: TOTAL NONRECURRING	- / 103.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 103.000	
<i>Subtotal: Support</i>	<i>- / 103.000</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 103.000</i>	
<b>Installation</b>													
<i>Subtotal: Installation</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>103.000</b>	<b>148.764</b>	<b>93.755</b>	<b>99.967</b>	<b>0.000</b>	<b>99.967</b>	<b>100.000</b>	<b>99.968</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>645.454</b>	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2			<b>P-1 Line Item Number / Title:</b> A01000 / A-10			<b>Modification Number / Title:</b> 9804 / A-10 Wing Replacement Program	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 1 of 1:</b> WRP kits, Center/Outer wing panels							
<b>Manufacturer Information</b>							
Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime (in Months): 6				Production Leadtime (in Months): 3			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates	Oct 2019	Oct 2020	Oct 2021	Oct 2022	Oct 2023		
Delivery Dates	Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024		
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 109		



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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> A01000 / A-10	<b>Modification Number / Title:</b> 9831 / ARC-210

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	0.000	8.770	18.350	0.000	18.350	7.580	5.000	5.000	20.015	-	64.715
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	0.000	8.770	18.350	0.000	18.350	7.580	5.000	5.000	20.015	-	64.715
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>0.000</b>	<b>0.000</b>	<b>8.770</b>	<b>18.350</b>	<b>0.000</b>	<b>18.350</b>	<b>7.580</b>	<b>5.000</b>	<b>5.000</b>	<b>20.015</b>	<b>-</b>	<b>64.715</b>

*(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 Millions)	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Continued modernization efforts require the replacement of legacy communication systems in the A-10C. These systems are logistically unsupported and vulnerable to emerging cyber threats due to the lack of updates. A National Security Agency (NSA) mandate exists that requires updates/compliance to current cyber security threats. Also, current communication radios in the jet are not setup to handle all necessary frequencies and networks required for military communications over the next 10 years. Active duty is tasked to pay for the fleet upgrade including AFRC/ANG aircraft.

Replace current ARC-210 Gen 4 radio(s) with Gen 6 to insure crypto compliance. Replace current Radio Control Unit (RCU) with C-12561B (required update for Gen 6). Maintain same functionality of the Gen 4. Continue using 1553 Bus controller vice an Ethernet connection. Replace ARC-164 with ARC-210 Gen 4 (Suite 12). Installs will be either CFT or DSL. Procurement funds are for the hardware purchases for the fleet FY20-22. Procurement funds after that will be used for installs. Suite 11 scheduled to field 3rd Qtr FY22. ARC-210 Gen 6 installs will follow soon after. Currently pursuing an integration contract via RDT&E dollars.

The original estimate in 2018 did not capture the need for additional hardware or installation costs. The revised cost estimate in 2019 was completed and revealed and captured the costs that were previously left out of the estimate. A shortage of \$130M in procurement and installation were noted in the new estimate.

Milestone/Development Status

Development Complete

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	3.086	6.107	-	6.107	3.580	2.000	5.000	20.015
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	2.842	6.237	-	6.237	2.000	2.000	-	-
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	2.842	6.006	-	6.006	2.000	1.000	-	-
<b>Total:</b>	<b>Quantity</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force	<b>Date:</b> February 2020
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<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> A01000 / A-10	<b>Modification Number / Title:</b> 9831 / ARC-210
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Secondary Distribution	Total Obligation Authority	0.000	8.770	18.350	0.000	18.350	7.580	5.000	5.000	20.015

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2					<b>P-1 Line Item Number / Title:</b> A01000 / A-10					<b>Modification Number / Title:</b> 9831 / ARC-210			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> A-10C				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207131F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1: Equipment</i>													
B Kits													
Recurring													
Equipment:EQUIPMENT Group B (Active)	- / -	- / -	15 / 3.086	26 / 6.107	- / -	26 / 6.107	51 / 3.580	38 / 2.000	- / 5.000	- / 20.015	- / -	130 / 39.788	
Equipment:EQUIPMENT Group B (Guard)	- / -	- / -	14 / 2.842	27 / 6.237	- / -	27 / 6.237	30 / 2.000	19 / 2.000	- / -	- / -	- / -	90 / 13.079	
Equipment:EQUIPMENT Group B (Reserve)	- / -	- / -	14 / 2.842	26 / 6.006	- / -	26 / 6.006	20 / 2.000	13 / 1.000	- / -	- / -	- / -	73 / 11.848	
<i>Subtotal: Recurring</i>	- / -	- / -	- / 8.770	- / 18.350	- / -	- / 18.350	- / 7.580	- / 5.000	- / 5.000	- / 20.015	- / -	- / 64.715	
<i>Subtotal: Equipment</i>	- / -	- / -	- / 8.770	- / 18.350	- / -	- / 18.350	- / 7.580	- / 5.000	- / 5.000	- / 20.015	- / -	- / 64.715	
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / -	- / 8.770	- / 18.350	- / -	- / 18.350	- / 7.580	- / 5.000	- / 5.000	- / 20.015	- / -	- / 64.715	
<b>Installation</b>													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>0.000</b>	<b>0.000</b>	<b>8.770</b>	<b>18.350</b>	<b>0.000</b>	<b>18.350</b>	<b>7.580</b>	<b>5.000</b>	<b>5.000</b>	<b>20.015</b>	<b>-</b>	<b>64.715</b>	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2			<b>P-1 Line Item Number / Title:</b> A01000 / A-10			<b>Modification Number / Title:</b> 9831 / ARC-210	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 1 of 1:</b> Equipment							
<b>Manufacturer Information</b>							
Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 0			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates		Oct 2019	Nov 2020	Nov 2021	Nov 2022		
Delivery Dates		Oct 2019	Nov 2020	Nov 2021	Nov 2022		
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 293		

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> A01000 / A-10	<b>Modification Number / Title:</b> 9836 / 3-Dimensional Audio (3DA)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	0.000	0.000	1.000	7.300	0.000	7.300	8.900	3.700	2.500	2.700	-	26.100
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	0.000	0.000	1.000	7.300	0.000	7.300	8.900	3.700	2.500	2.700	-	26.100
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>0.000</b>	<b>0.000</b>	<b>1.000</b>	<b>7.300</b>	<b>0.000</b>	<b>7.300</b>	<b>8.900</b>	<b>3.700</b>	<b>2.500</b>	<b>2.700</b>	-	<b>26.100</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The purpose of this modification is to improve the spatial, battle space, and situational awareness (SA) of A-10C pilots through the addition of a digital intercom system upgrade, active and electronic noise reduction, three-dimensional spatial separation for up to four audio channels, and three-dimensional auditory threat cueing from the aircraft missile warning system and radar warning receiver. The A-10C has received several upgrades adding additional inputs for the pilot to process; however, there is no aural component to these upgrades, meaning that unless the pilot is looking at the data source, he will not receive the data. Also, the pilot could have several auditory sources providing input at the same time. This system will supplement other situational awareness aids in the A-10C by providing an aural component to the suite of capabilities already present in the aircraft.

Milestone/Development Status

Development Complete

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	1.000	7.300	-	7.300	8.900	3.700	2.500	2.700
<b>Total:</b> Secondary Distribution	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>0.000</b>	<b>1.000</b>	<b>7.300</b>	<b>0.000</b>	<b>7.300</b>	<b>8.900</b>	<b>3.700</b>	<b>2.500</b>	<b>2.700</b>

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> A01000 / A-10	<b>Modification Number / Title:</b> 9836 / 3-Dimensional Audio (3DA)
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**ID Code** (A=Service Ready, B=Not Service Ready) : B **MDAP/MAIS Code:**

**Models of Systems Affected:** A-10C **Modification Type:** Capability Improvement **Related RDT&E PEs:** 0207131F

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>												
<i>Modification Item 1 of 1:</i> Equipment (4)												
B Kits												
Recurring												
Equipment:EQUIPMENT Group B (Active)	- / -	- / -	7 / 1.000	34 / 7.300	- / -	34 / 7.300	40 / 8.900	16 / 3.700	12 / 2.500	- / 2.700	- / -	109 / 26.100
<i>Subtotal: Recurring</i>	- / -	- / -	- / 1.000	- / 7.300	- / -	- / 7.300	- / 8.900	- / 3.700	- / 2.500	- / 2.700	- / -	- / 26.100
<i>Subtotal: Equipment (4)</i>	- / -	- / -	- / 1.000	- / 7.300	- / -	- / 7.300	- / 8.900	- / 3.700	- / 2.500	- / 2.700	- / -	- / 26.100
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / -	- / 1.000	- / 7.300	- / -	- / 7.300	- / 8.900	- / 3.700	- / 2.500	- / 2.700	- / -	- / 26.100
<b>Installation</b>												
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>												
<b>Total Cost (Procurement + Support + Installation)</b>	<b>0.000</b>	<b>0.000</b>	<b>1.000</b>	<b>7.300</b>	<b>0.000</b>	<b>7.300</b>	<b>8.900</b>	<b>3.700</b>	<b>2.500</b>	<b>2.700</b>	<b>-</b>	<b>26.100</b>

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2			<b>P-1 Line Item Number / Title:</b> A01000 / A-10			<b>Modification Number / Title:</b> 9836 / 3-Dimensional Audio (3DA)	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 1 of 1:</b> Equipment (4)							
<b>Manufacturer Information</b>							
Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 0			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates		Oct 2019	Nov 2020	Nov 2021	Nov 2022	Nov 2023	
Delivery Dates		Oct 2019	Nov 2020	Nov 2021	Nov 2022	Nov 2023	
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 109		

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	<b>P-1 Line Item Number / Title:</b> E011A0 / E-11 BACN/HAG
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0207610F
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	0.000	0.000	70.027	33.645	-	33.645	25.322	53.063	89.606	1.840	-	273.503
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	0.000	0.000	70.027	33.645	-	33.645	25.322	53.063	89.606	1.840	-	273.503
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>0.000</b>	<b>0.000</b>	<b>70.027</b>	<b>33.645</b>	<b>-</b>	<b>33.645</b>	<b>25.322</b>	<b>53.063</b>	<b>89.606</b>	<b>1.840</b>	<b>-</b>	<b>273.503</b>

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

**Description:**

Battlefield Airborne Communication Node (BACN) provides a Combatant Commander (CCDR) flexible, long-endurance, responsive airborne communications capability. BACN provides a dedicated airborne capability to conduct voice bridging/translation, Tactical Data Link (TDL) gateway, and TDL relay functions for beyond-line-of-sight (BLOS) data communications. Includes integration of Survivability UON - Military GPS (MIL GPS), M Code Military GPS, Protected Tactical Waveform (PTW), High Capacity Backbone (HCB), Fifth-To-Fourth Generation Gateway (524 GW), Identify Friend or Foe (IFF), and Electronic Flight Bags (EFB).

Funding for this exhibit contained in PE 0207610F and PE 0207238F.

Fifth-To-Fourth Generation Gateway Urgent Operational Need (524 GW UON) is also funded under BP 11 Line Item # 63 OTHACF PE 0207610F.

Beginning in FY21, to support the divestiture of the EQ-4B (a variant of the RQ-4 Block 20/30 aircraft) efforts will taper accordingly, to include BACN payload sustainment & other BACN specific 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 mission, domestic emergency responses, and providing military support to civilian authorities.

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft

**P-1 Line Item Number / Title:**  
E011A0 / E-11 BACN/HAG

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0207610F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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	1 / E-11 Mods (Other)		A		- / 0.000	- / 0.000	- / 70.027	- / 33.645	- / 0.000	- / 33.645
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 70.027</b>	<b>- / 33.645</b>	<b>- / -</b>	<b>- / 33.645</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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	1 / E-11 Mods (Other)		A		- / 25.322	- / 53.063	- / 89.606	- / 1.840	- / -	- / 273.503
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 25.322</b>	<b>- / 53.063</b>	<b>- / 89.606</b>	<b>- / 1.840</b>	<b>- / -</b>	<b>- / 273.503</b>

\*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:**  
BACN includes the payload, its host platforms, and associated ground systems. The program is currently in the Operations and Support (O&S) Phase of the Life Cycle Management System. As requirements emerge for new hardware and software capabilities that improve system performance, external time references, interoperability and open mission system technologies, BACN will host the integration of these and future communication technologies, such as High Capacity Backbone (HCB), Fifth-to-Fourth Gateway (524 GW), and Protected Tactical Waveform (PTW).

Funding will be used to address Diminishing Manufacturing Sources (DMS) Issues. This may include modifications required for enhanced capability and improvements to system reliability and maintainability. Safety of flight considerations, including but not limited to, performance, aircraft structural integrity, availability, and continuity of service requirements for long range reference, local area reference, and landing/terminal reference.

This effort includes Military GPS, advanced navigation systems and any additional mandates levied on the BACN system and platforms. Funding will also be used for fulfillment of requirements in support of alteration, conversion, modernization, and transition to a normalized Program of Record.

Transition to BACN Program of Record requires additional BACN aircraft platforms to meet the service retained capability requirements of Combatant Commanders needs emerge in multiple AOR's. This will include, but not be limited to, standardization of avionics baseline and the production of all Supplemental Type Certificates of the most up to date configurations of the fleet.

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> E011A0 / E-11 BACN/HAG	<b>Modification Number / Title:</b> 1 / E-11 Mods

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	0.000	70.027	33.645	0.000	33.645	25.322	53.063	89.606	1.840	-	273.503
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	0.000	70.027	33.645	0.000	33.645	25.322	53.063	89.606	1.840	-	273.503
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>0.000</b>	<b>0.000</b>	<b>70.027</b>	<b>33.645</b>	<b>0.000</b>	<b>33.645</b>	<b>25.322</b>	<b>53.063</b>	<b>89.606</b>	<b>1.840</b>	<b>-</b>	<b>273.503</b>

*(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 Millions)	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Battlefield Airborne Communication Node (BACN) provides a Combatant Commander (CCDR) flexible, long-endurance, responsive airborne communications capability. BACN provides a dedicated airborne capability to conduct voice bridging/translation, Tactical Data Link (TDL) gateway, and TDL relay functions for beyond-line-of-sight (BLOS) data communications.

Funding will support procurement of aircraft engines to increase current BACN fleet service life expectancy. Funding supports procurement of platform provisioning supplies which is necessary to execute the current BACN product support strategy involving a transition from Contractor Operations and Maintenance to Government Operations and Maintenance. Funding will also enable procurement of unique Platform support equipment required for transition from a JUON capability stationed OCONUS to a BACN Program of Record permanent base.

Funding will also be used to procure and integrate the Fifth-To-Fourth Generation Gateway (524 GW) Capability.

Funding will support procurement and installation of retrofit kits to integrate Link 16 External Time Reference (ETR) with Global Positioning System (GPS) capability.

**Milestone/Development Status**

BACN includes the payload, its host platforms, and associated ground systems. The program is currently in the Operations and Support (O&S) Phase of the Life Cycle Management System. As requirements emerge for new hardware and software capabilities that improve system performance, external time references, interoperability and open mission system technologies, BACN will host the integration of these and future communication technologies. Funding will be used to address Diminishing Manufacturing Sources (DMS) Issues. This may include modifications required for enhanced capability and improvements to system reliability and maintainability. Safety of flight considerations, including but not limited to, performance, aircraft structural integrity, availability, and continuity of service requirements for long range reference, local area reference, and landing/terminal reference. This effort includes Military GPS, advanced navigation systems and any additional mandates levied on the BACN system and platforms. Funding will also be used for fulfillment of requirements in support of alteration, conversion, modernization, and transition to a normalized Program of Record. Transition to BACN Program of Record may require additional BACN aircraft platforms to meet the service retained capability requirements of Combatant Commanders needs emerge in multiple AOR's. This will include, but not be limited to, standardization of avionics baseline and the production of all Supplemental Type Certificates of the most up to date configurations of the fleet.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2				<b>P-1 Line Item Number / Title:</b> E011A0 / E-11 BACN/HAG						<b>Modification Number / Title:</b> 1 / E-11 Mods			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> E-11A				<b>Modification Type:</b> Other				<b>Related RDT&amp;E PEs:</b> 0207610F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<b>Modification Item 1 of 8: Aircraft Support Equipment</b>													
A Kits													
Recurring													
Aircraft Support Equipment:INSTALL KITS Group A (Active)	- / -	- / -	- / -	1 / 3.964	- / -	1 / 3.964	- / -	- / -	- / -	1 / 1.840	- / -	2 / 5.804	
<b>Subtotal: Recurring</b>	- / -	- / -	- / -	- / 3.964	- / -	- / 3.964	- / -	- / -	- / -	- / 1.840	- / -	- / 5.804	
<b>Subtotal: Aircraft Support Equipment</b>	- / -	- / -	- / -	- / 3.964	- / -	- / 3.964	- / -	- / -	- / -	- / 1.840	- / -	- / 5.804	
<b>Modification Item 2 of 8: E-11A Modification</b>													
A Kits													
Recurring													
E-11A Modification:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 174.417	- / -	- / -	- / 174.417	
<b>Subtotal: Recurring</b>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 174.417	- / -	- / -	- / 174.417	
<b>Subtotal: E-11A Modification</b>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 174.417	- / -	- / -	- / 174.417	
<b>Modification Item 3 of 8: E-11A Survivability</b>													
A Kits													
Recurring													
E-11A Survivability:INSTALL KITS Group A (Active)	- / -	- / -	- / -	4 / 16.462	- / -	4 / 16.462	- / -	1 / 8.136	1 / 4.018	- / -	- / -	6 / 28.616	
<b>Subtotal: Recurring</b>	- / -	- / -	- / -	- / 16.462	- / -	- / 16.462	- / -	- / 8.136	- / 4.018	- / -	- / -	- / 28.616	
<b>Subtotal: E-11A Survivability</b>	- / -	- / -	- / -	- / 16.462	- / -	- / 16.462	- / -	- / 8.136	- / 4.018	- / -	- / -	- / 28.616	
<b>Modification Item 4 of 8: Engines</b>													
A Kits													
Recurring													
Engines:INSTALL KITS Group A (Active)	- / -	- / -	4 / 52.360	4 / 10.307	- / -	4 / 10.307	- / -	- / -	- / -	- / -	- / -	8 / 62.667	
<b>Subtotal: Recurring</b>	- / -	- / -	- / 52.360	- / 10.307	- / -	- / 10.307	- / -	- / -	- / -	- / -	- / -	- / 62.667	
<b>Subtotal: Engines</b>	- / -	- / -	- / 52.360	- / 10.307	- / -	- / 10.307	- / -	- / -	- / -	- / -	- / -	- / 62.667	
<b>Modification Item 5 of 8: MIDS-J</b>													
A Kits													
Recurring													
MIDS-J:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	- / 19.771	- / -	- / -	- / -	- / -	- / 19.771	
<b>Subtotal: Recurring</b>	- / -	- / -	- / -	- / -	- / -	- / -	- / 19.771	- / -	- / -	- / -	- / -	- / 19.771	
<b>Subtotal: MIDS-J</b>	- / -	- / -	- / -	- / -	- / -	- / -	- / 19.771	- / -	- / -	- / -	- / -	- / 19.771	

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2				<b>P-1 Line Item Number / Title:</b> E011A0 / E-11 BACN/HAG						<b>Modification Number / Title:</b> 1 / E-11 Mods			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> E-11A				<b>Modification Type:</b> Other				<b>Related RDT&amp;E PEs:</b> 0207610F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Modification Item 6 of 8: Protected Tactical Waveform (PTW)</b>													
A Kits													
Recurring													
Protected Tactical Waveform (PTW):INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 42.209	- / 4.998	- / -	- / -	- / 47.207	
<b>Subtotal: Recurring</b>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 42.209	- / 4.998	- / -	- / -	- / 47.207	
<b>Subtotal: Protected Tactical Waveform (PTW)</b>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 42.209	- / 4.998	- / -	- / -	- / 47.207	
<b>Modification Item 7 of 8: Simulators</b>													
A Kits													
Recurring													
Simulators:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	4 / 13.551	- / -	- / -	- / -	- / -	4 / 13.551	
<b>Subtotal: Recurring</b>	- / -	- / -	- / -	- / -	- / -	- / -	- / 13.551	- / -	- / -	- / -	- / -	- / 13.551	
<b>Subtotal: Simulators</b>	- / -	- / -	- / -	- / -	- / -	- / -	- / 13.551	- / -	- / -	- / -	- / -	- / 13.551	
<b>Modification Item 8 of 8: UON Integration</b>													
A Kits													
Recurring													
UON Integration:INSTALL KITS Group A (Active)	- / -	- / -	1 / 15.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 15.200	
<b>Subtotal: Recurring</b>	- / -	- / -	- / 15.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 15.200	
<b>Subtotal: UON Integration</b>	- / -	- / -	- / 15.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 15.200	
<b>Subtotal: Procurement, All Modification Items</b>	- / -	- / -	- / 67.560	- / 30.733	- / -	- / 30.733	- / 23.322	- / 50.345	- / 83.433	- / 1.840	- / -	- / 257.233	
<b>Support (All Modification Items)</b>													
PMA - Contractor Services	- / -	- / -	- / 2.467	- / 2.912	- / -	- / 2.912	- / 2.000	- / 2.718	- / 6.173	- / -	- / -	- / 16.270	
<b>Subtotal: Support</b>	- / -	- / -	- / 2.467	- / 2.912	- / -	- / 2.912	- / 2.000	- / 2.718	- / 6.173	- / -	- / -	- / 16.270	
<b>Installation</b>													
<b>Subtotal: Installation</b>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>0.000</b>	<b>0.000</b>	<b>70.027</b>	<b>33.645</b>	<b>0.000</b>	<b>33.645</b>	<b>25.322</b>	<b>53.063</b>	<b>89.606</b>	<b>1.840</b>	<b>-</b>	<b>273.503</b>	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2			<b>P-1 Line Item Number / Title:</b> E011A0 / E-11 BACN/HAG			<b>Modification Number / Title:</b> 1 / E-11 Mods	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 1 of 8:</b> Aircraft Support Equipment							
<b>Manufacturer Information</b>							
Manufacturer Name: Northrop Grumman				Manufacturer Location: Various			
Administrative Leadtime (in Months): 3				Production Leadtime (in Months): 3			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates		Mar 2020	May 2021	Jan 2022	Feb 2023	Jan 2024	
Delivery Dates		Jun 2020	Aug 2021	Apr 2022	May 2023	Apr 2024	
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 0		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2			<b>P-1 Line Item Number / Title:</b> E011A0 / E-11 BACN/HAG			<b>Modification Number / Title:</b> 1 / E-11 Mods	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 2 of 8:</b> E-11A Modification							
<b>Manufacturer Information</b>							
Manufacturer Name: Northrop Grumman				Manufacturer Location: Various			
Administrative Leadtime (in Months): 3				Production Leadtime (in Months): 3			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates		Mar 2020	Jan 2021	Jan 2022	Jan 2023	Jun 2024	
Delivery Dates		Jun 2020	Apr 2021	Apr 2022	Apr 2023	Sep 2024	
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 0		

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2			<b>P-1 Line Item Number / Title:</b> E011A0 / E-11 BACN/HAG			<b>Modification Number / Title:</b> 1 / E-11 Mods	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 3 of 8:</b> E-11A Survivability							
<b>Manufacturer Information</b>							
Manufacturer Name: Northrop Grumman				Manufacturer Location: Various			
Administrative Leadtime (in Months): 3				Production Leadtime (in Months): 3			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates		Jan 2020	May 2021	Jan 2022	May 2023	Jun 2024	
Delivery Dates		Apr 2020	Aug 2021	Apr 2022	Aug 2023	Sep 2024	
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 6		



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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2			<b>P-1 Line Item Number / Title:</b> E011A0 / E-11 BACN/HAG			<b>Modification Number / Title:</b> 1 / E-11 Mods	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 4 of 8:</b> Engines							
<b>Manufacturer Information</b>							
Manufacturer Name: Rolls Royce				Manufacturer Location: Various			
Administrative Leadtime (in Months): 3				Production Leadtime (in Months): 3			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates		May 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024	
Delivery Dates		Aug 2020	Apr 2021	Apr 2022	Apr 2023	Apr 2024	
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 8		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2			<b>P-1 Line Item Number / Title:</b> E011A0 / E-11 BACN/HAG			<b>Modification Number / Title:</b> 1 / E-11 Mods	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 5 of 8:</b> MIDS-J							
<b>Manufacturer Information</b>							
Manufacturer Name: Raytheon				Manufacturer Location: Various			
Administrative Leadtime (in Months): 6				Production Leadtime (in Months): 6			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates		Apr 2020	Apr 2021	May 2022	May 2023	May 2024	
Delivery Dates		Oct 2020	Oct 2021	Nov 2022	Nov 2023	Nov 2024	
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 0		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2			<b>P-1 Line Item Number / Title:</b> E011A0 / E-11 BACN/HAG			<b>Modification Number / Title:</b> 1 / E-11 Mods	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 6 of 8:</b> Protected Tactical Waveform (PTW)							
<b>Manufacturer Information</b>							
Manufacturer Name: Northrop Grumman				Manufacturer Location: Middle River, MD			
Administrative Leadtime (in Months): 3				Production Leadtime (in Months): 3			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates		Jan 2020	Jan 2021	Jan 2022	May 2023	May 2024	
Delivery Dates		Apr 2020	Apr 2021	Apr 2022	Aug 2023	Aug 2024	
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 0		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2			<b>P-1 Line Item Number / Title:</b> E011A0 / E-11 BACN/HAG			<b>Modification Number / Title:</b> 1 / E-11 Mods	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 7 of 8:</b> Simulators							
<b>Manufacturer Information</b>							
Manufacturer Name: Northrop Grumman				Manufacturer Location: San Diego, CA			
Administrative Leadtime (in Months): 3				Production Leadtime (in Months): 3			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates		Jan 2020	Jan 2021	May 2022	Jan 2023	Jan 2024	
Delivery Dates		Apr 2020	Apr 2021	Aug 2022	Apr 2023	Apr 2024	
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 0		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2			<b>P-1 Line Item Number / Title:</b> E011A0 / E-11 BACN/HAG			<b>Modification Number / Title:</b> 1 / E-11 Mods	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 8 of 8:</b> UON Integration							
<b>Manufacturer Information</b>							
Manufacturer Name: Rockwell Collins and Honeywell					Manufacturer Location: various		
Administrative Leadtime (in Months): 3					Production Leadtime (in Months): 3		
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates		Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024	
Delivery Dates		Jun 2020	Jun 2021	Jun 2022	Jun 2023	Jun 2024	
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 1		

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	<b>P-1 Line Item Number / Title:</b> F01500 / F-15
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> 0207130F, 0207134F, 0207445F, 0809731F	<b>Other Related Program Elements:</b> 0207130F, 0207134F
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	3,388.065	440.856	474.137	349.304	-	349.304	293.959	279.135	243.308	336.012	16.870	5,821.646
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	3,388.065	440.856	474.137	349.304	-	349.304	293.959	279.135	243.308	336.012	16.870	5,821.646
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>3,388.065</b>	<b>440.856</b>	<b>474.137</b>	<b>349.304</b>	<b>-</b>	<b>349.304</b>	<b>293.959</b>	<b>279.135</b>	<b>243.308</b>	<b>336.012</b>	<b>16.870</b>	<b>5,821.646</b>
<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> )	-	15.233	34.155	16.738	-	16.738	11.240	5.295	0.340	-	-	83.001
Flyaway Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This line item funds modifications to the F-15 aircraft. The F-15C/D is a twin engine (F-15C single seat; F-15D dual seat) supersonic, all-weather, day/night, air-superiority fighter. The F-15E is a twin engine, two seat, supersonic dual-role, day/night, all-weather, deep interdiction fighter with multi-role air-to-air capabilities. The overall goals of the budgeted modifications are to improve operational capability, reliability and maintainability, and flight safety. The specific modifications budgeted and programmed are below.

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.

Funding for this exhibit is contained in PEs 0207130F, 0207134F, 0207445F, and 0809731F.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	420.031	440.912	345.574	-	345.574	287.559	270.735	243.308	336.012
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	20.825	33.225	3.730	-	3.730	6.400	8.400	0.000	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
	<b>Total Obligation Authority</b>	<b>440.856</b>	<b>474.137</b>	<b>349.304</b>	<b>-</b>	<b>349.304</b>	<b>293.959</b>	<b>279.135</b>	<b>243.308</b>	<b>336.012</b>

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft

**P-1 Line Item Number / Title:**  
F01500 / F-15

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0207130F, 0207134F, 0207445F, 0809731F **Other Related Program Elements:** 0207130F, 0207134F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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***	1203 / F-15 C/D Secondary Power System (SPS) (Reliability & Maintainability)				- / 7.492	- / -	- / -	- / -	- / -	- / -
P-40a***	1205 / :Advanced Display Core Processor, ADCP II-C (Reliability & Maintainability)				- / 49.258	- / 58.091	- / 72.094	- / 0.000	- / -	- / 0.000
P-40a***	1206 / F-15C Infrared Search and Track (IRST) (Capability Improvement)				- / 62.151	- / 63.394	- / 0.000	- / -	- / -	- / -
P-40a***	1209 / F-15 C/D Flight Data Recorder (FDR) (Capability Improvement)				- / 24.808	- / 0.020	- / -	- / -	- / -	- / -
P-40a***	1210 / F-15E Flight Data Recorder (FDR) (Capability Improvement)				- / 142.446	- / 0.027	- / -	- / -	- / -	- / -
P-40a***	6158 / F-15C/D APG-63(V)3 radar upgrade (Capability Improvement)				- / 1,364.928	- / 0.011	- / 23.681	- / 0.000	- / -	- / 0.000
P-40a***	8353 / F-15E -JOINT HELMET-MOUNTED CUEING SYSTEM (Reliability & Maintainability)				- / 103.924	- / 0.600	- / -	- / -	- / -	- / -
P-40a***	8662 / AETC MTD UPGRADES-FIELD TRAINING DETACHMENTS (Service Life Extension)				- / 6.500	- / 0.296	- / 1.147	- / 0.103	- / -	- / 0.103
P-40a***	8754 / F-15C/D IFF Mode 5 (Reliability & Maintainability)				- / -	- / 24.909	- / 29.656	- / 0.000	- / -	- / 0.000
P-40a***	8755 / F-15E IFF MODE 5 (Reliability & Maintainability)				- / 36.041	- / 17.671	- / 15.257	- / 2.080	- / -	- / 2.080
P-40a***	8756 / F-15C/D Link 16 Cryptographic Modernization (Capability Improvement)				- / 0.002	- / -	- / -	- / -	- / -	- / -
P-40a***	8794 / F-15C/D Beyond Line Of Sight Communications (Capability Improvement)				- / 54.427	- / 0.001	- / -	- / -	- / -	- / -
P-40a***	8797 / F-15C Passive Attack Sensor System (Capability Improvement)				- / 28.577	- / -	- / -	- / -	- / -	- / -
P-40a***	8798 / 5th to 4th Gen Gateway (Capability Improvement)				- / -	- / 3.698	- / -	- / -	- / -	- / -
P-40a***	8799 / F-15C MIDS JTRS (Capability Improvement)				- / 7.430	- / 19.270	- / 41.640	- / -	- / -	- / -
P-40a***	8806 / F-15 C/D Cabin Pressure Indicator (Safety)				- / 2.653	- / 0.120	- / -	- / -	- / -	- / -
P-40a***	8807 / F-15 E Cabin Pressure Indicator (Safety)				- / 7.648	- / 8.245	- / -	- / -	- / -	- / -
P-40a***	8811 / F-15E SATCOM UON (Other)				- / 17.700	- / -	- / -	- / -	- / -	- / -
P-40a***	8813 / F-15E B61 A/C Umbilical (Capability Improvement)				- / 0.542	- / -	- / -	- / -	- / -	- / -
P-40a***	8815 / F-15C Simulator Upgrade (Capability Improvement)				- / 15.000	- / -	- / -	- / -	- / -	- / -
P-40a***	8816 / F-15C/D APG-63(V)3 Common Config (Reliability & Maintainability)				- / -	- / 4.326	- / 4.352	- / 1.510	- / -	- / 1.510
P-40a***	8817 / F-15E DTM II (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	8820 / F-15E Digital Color Display (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	99999U / LOW COST RETROFIT MODS (Service Life Extension)				- / 5.765	- / 1.501	- / 0.001	- / 0.001	- / -	- / 0.001
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 5.788	- / 0.001	- / 0.001	- / -	- / -	- / -
P-3a	1202 / F-15E Radar Modernization Program APG-82(V)1 (Capability Improvement)		A		- / 1,336.722	- / 168.118	- / 176.225	- / 234.248	- / 0.000	- / 234.248



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**Exhibit P-40, Budget Line Item Justification: PB 2021 Air Force** **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft

**P-1 Line Item Number / Title:**  
F01500 / F-15

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0207130F, 0207134F, 0207445F, 0809731F **Other Related Program Elements:** 0207130F, 0207134F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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	1 / Advanced Display Core Processor, ADCP II-E (Reliability & Maintainability)		B		- / 86.257	- / 10.520	- / 49.187	- / 43.956	- / 0.000	- / 43.956
P-3a	8800 / F-15E MIDS JTRS (Capability Improvement)		B		- / 14.983	- / 19.040	- / 27.844	- / 29.011	- / 0.000	- / 29.011
P-3a	8801 / F-15 C/D SLEP Longerons (Service Life Extension)		B		- / 7.023	- / 5.900	- / 24.627	- / 6.333	- / 0.000	- / 6.333
P-3a	8804 / F-15 F-15 E/MUOS (Capability Improvement)		B		- / -	- / -	- / 0.630	- / 8.050	- / 0.000	- / 8.050
P-3a	8810 / F-15E APG-82(V)1 Common Config (Capability Improvement)		B		- / 0.000	- / 35.097	- / 7.795	- / 24.012	- / 0.000	- / 24.012
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 3,388.065</b>	<b>- / 440.856</b>	<b>- / 474.137</b>	<b>- / 349.304</b>	<b>- / -</b>	<b>- / 349.304</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	1203 / F-15 C/D Secondary Power System (SPS) (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / 7.492
P-40a***	1205 / Advanced Display Core Processor, ADCP II-C (Reliability & Maintainability)				- / 0.000	- / 0.000	- / -	- / -	- / -	- / 179.443
P-40a***	1206 / F-15C Infrared Search and Track (IRST) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 125.545
P-40a***	1209 / F-15 C/D Flight Data Recorder (FDR) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 24.828
P-40a***	1210 / F-15E Flight Data Recorder (FDR) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 142.473
P-40a***	6158 / F-15C/D APG-63(V)3 radar upgrade (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 1,388.620
P-40a***	8353 / F-15E -JOINT HELMET-MOUNTED CUEING SYSTEM (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / 104.524
P-40a***	8662 / AETC MTD UPGRADES-FIELD TRAINING DETACHMENTS (Service Life Extension)				- / 0.181	- / 0.252	- / 1.233	- / 1.255	- / -	- / 10.967
P-40a***	8754 / F-15C/D IFF Mode 5 (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / 54.565
P-40a***	8755 / F-15E IFF MODE 5 (Reliability & Maintainability)				- / 0.190	- / 0.200	- / -	- / -	- / -	- / 71.439
P-40a***	8756 / F-15C/D Link 16 Cryptographic Modernization (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 0.002
P-40a***	8794 / F-15C/D Beyond Line Of Sight Communications (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 54.428
P-40a***	8797 / F-15C Passive Attack Sensor System (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 28.577
P-40a***	8798 / 5th to 4th Gen Gateway (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 3.698
P-40a***	8799 / F-15C MIDS JTRS (Capability Improvement)				- / 18.556	- / 3.564	- / -	- / -	- / -	- / 90.460
P-40a***	8806 / F-15 C/D Cabin Pressure Indicator (Safety)				- / -	- / -	- / -	- / -	- / -	- / 2.773
P-40a***	8807 / F-15 E Cabin Pressure Indicator (Safety)				- / -	- / -	- / -	- / -	- / -	- / 15.893
P-40a***	8811 / F-15E SATCOM UON (Other)				- / -	- / -	- / -	- / -	- / -	- / 17.700

**UNCLASSIFIED**

**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft

**P-1 Line Item Number / Title:**  
F01500 / F-15

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0207130F, 0207134F, 0207445F, 0809731F **Other Related Program Elements:** 0207130F, 0207134F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	8813 / F-15E B61 A/C Umbilical (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 0.542
P-40a***	8815 / F-15C Simulator Upgrade (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 15.000
P-40a***	8816 / F-15C/D APG-63(V)3 Common Config (Reliability & Maintainability)				- / 0.909	- / 0.069	- / -	- / -	- / -	- / 11.166
P-40a***	8817 / F-15E DTM II (Reliability & Maintainability)				- / 7.540	- / 9.920	- / 11.010	- / 50.000	- / -	- / 78.470
P-40a***	8820 / F-15E Digital Color Display (Capability Improvement)				- / 15.159	- / 17.619	- / 25.216	- / 90.930	- / 7.000	- / 155.924
P-40a***	99999U / LOW COST RETROFIT MODS (Service Life Extension)				- / -	- / -	- / -	- / -	- / -	- / 7.268
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 5.790
P-3a	1202 / F-15E Radar Modernization Program APG-82(V)1 (Capability Improvement)		A		- / 92.462	- / 94.114	- / 95.814	- / 102.808	- / -	- / 2,300.511
P-3a	1 / Advanced Display Core Processor, ADCP II-E (Reliability & Maintainability)		B		- / 78.142	- / 65.876	- / 40.328	- / 0.000	- / -	- / 374.266
P-3a	8800 / F-15E MIDS JTRS (Capability Improvement)		B		- / 41.119	- / 19.818	- / 33.051	- / 0.000	- / -	- / 184.866
P-3a	8801 / F-15 C/D SLEP Longerons (Service Life Extension)		B		- / 26.054	- / 31.695	- / 0.000	- / 0.000	- / 0.000	- / 101.632
P-3a	8804 / F-15 F-15 E/MUOS (Capability Improvement)		B		- / 8.680	- / 30.952	- / 31.509	- / 91.019	- / 9.870	- / 180.710
P-3a	8810 / F-15E APG-82(V)1 Common Config (Capability Improvement)		B		- / 4.967	- / 5.056	- / 5.147	- / -	- / -	- / 82.074
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 293.959</b>	<b>- / 279.135</b>	<b>- / 243.308</b>	<b>- / 336.012</b>	<b>- / 16.870</b>	<b>- / 5,821.646</b>

\*\*\* Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

\*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.

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01500 / F-15	<b>Modification Number / Title:</b> 1202 / F-15E Radar Modernization Program APG-82(V)1

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	1,336.722	168.118	176.225	234.248	0.000	234.248	92.462	94.114	95.814	102.808	-	2,300.511
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	1,336.722	168.118	176.225	234.248	0.000	234.248	92.462	94.114	95.814	102.808	-	2,300.511
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>1,336.722</b>	<b>168.118</b>	<b>176.225</b>	<b>234.248</b>	<b>0.000</b>	<b>234.248</b>	<b>92.462</b>	<b>94.114</b>	<b>95.814</b>	<b>102.808</b>	-	<b>2,300.511</b>

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

Initial Spares (\$ in Millions)	6.114	3.880	7.771	6.218	-	6.218	5.350	4.050	-	-	-	33.383
Gross/Weapon System Unit Cost (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

F-15E Radar Modernization Program (RMP), designated the APG-82(V)1, replaces the legacy radar using existing technology from other DOD platforms. It solves parts obsolescence problems and provides improved reliability and performance (increased synthetic aperture radar (SAR) range and resolution), including air-to-air and air-to-ground modes. Also provides for future growth. Total aircraft requirement: 218. This program funded Research Development Test and Evaluation (RDT&E) in PE 0207134F. Requirements document: F-15E Radar Modernization Program CDD dated 21 March 2005. In Aug 2008, AF/ASRD again reviewed the Capabilities Production Document (CPD) requirement and determined it was no longer necessary since the operational requirements in the Capabilities Development Document were still valid and the program had already entered MS C/LRIP.

Funding may be used to resolve Diminishing Manufacturing Sources/Material Shortages (DMSMS) and/or obsolescence issues. DMSMS activities may include, but are not limited to, bridge buys, life of type buys, buys to protect production schedule, and minor engineering efforts for redesign. DMSMS costs are included in Group B NRE; SE/PM costs are include in the Group B recurring; and Depot Costs are included in Support Equipment.

**Milestone/Development Status**

Development is complete.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	168.118	176.225	234.248	-	234.248	92.462	94.114	95.814	102.808
<b>Total: Secondary Distribution</b>									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	168.118	176.225	234.248	0.000	234.248	92.462	94.114	95.814	102.808

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>											<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2				<b>P-1 Line Item Number / Title:</b> F01500 / F-15				<b>Modification Number / Title:</b> 1202 / F-15E Radar Modernization Program APG-82(V)1					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> F-15E				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207134F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> APG-82(v)1													
A Kits													
Recurring													
APG-82(v)1:INSTALL KITS Group A (Active)	170 / 245.406	17 / 23.944	16 / 24.753	15 / 24.677	- / -	15 / 24.677	- / -	- / -	- / -	- / -	- / -	218 / 318.780	
<i>Subtotal: Recurring</i>	- / 245.406	- / 23.944	- / 24.753	- / 24.677	- / -	- / 24.677	- / -	- / -	- / -	- / -	- / -	- / 318.780	
B Kits													
Recurring													
APG-82(v)1:EQUIPMENT Group B (Active)	170 / 740.377	17 / 83.732	16 / 86.516	15 / 92.201	- / -	15 / 92.201	- / -	- / -	- / -	- / -	- / -	218 / 1,002.826	
<i>Subtotal: Recurring</i>	- / 740.377	- / 83.732	- / 86.516	- / 92.201	- / -	- / 92.201	- / -	- / -	- / -	- / -	- / -	- / 1,002.826	
<i>Subtotal: APG-82(v)1</i>	- / 985.783	- / 107.676	- / 111.269	- / 116.878	- / -	- / 116.878	- / -	- / -	- / -	- / -	- / -	- / 1,321.606	
<i>Subtotal: Procurement, All Modification Items</i>	- / 985.783	- / 107.676	- / 111.269	- / 116.878	- / -	- / 116.878	- / -	- / -	- / -	- / -	- / -	- / 1,321.606	
<b>Support (All Modification Items)</b>													
GROUP B: TOTAL NONRECURRING	- / 130.435	- / 8.600	- / 5.100	- / 5.400	- / -	- / 5.400	- / -	- / -	- / -	- / -	- / -	- / 149.535	
OTHER GOVT	- / 2.886	- / 19.300	- / -	- / 37.994	- / -	- / 37.994	- / 35.363	- / 45.239	- / 60.417	- / 84.808	- / -	- / 286.007	
Change Orders	- / 91.396	- / 6.025	- / 15.366	- / 27.106	- / -	- / 27.106	- / 10.799	- / 6.275	- / 9.997	- / 10.000	- / -	- / 176.964	
Data	- / 13.295	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 13.295	
Type 1 Training	- / 0.501	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.501	
SUPPORT-EQUIP	- / 12.445	- / 1.015	- / 1.020	- / 1.035	- / -	- / 1.035	- / -	- / -	- / -	- / -	- / -	- / 15.515	
ICS-Labor	- / 140.919	- / 14.147	- / 18.070	- / 18.398	- / -	- / 18.398	- / 20.000	- / 15.000	- / 9.000	- / 5.000	- / -	- / 130.534	
PMA - Other Gov't Costs	- / 17.115	- / 3.000	- / 3.000	- / 3.000	- / -	- / 3.000	- / 3.000	- / 3.000	- / 3.000	- / 3.000	- / -	- / 38.115	
<i>Subtotal: Support</i>	- / 308.992	- / 42.087	- / 42.556	- / 92.933	- / -	- / 92.933	- / 69.162	- / 69.514	- / 82.414	- / 102.808	- / -	- / 810.466	
<b>Installation</b>													
<i>Modification Item 1 of 1:</i> APG-82(v)1	86 / 41.947	24 / 18.355	24 / 22.400	24 / 24.437	- / -	24 / 24.437	24 / 23.300	24 / 24.600	12 / 13.400	- / -	- / -	218 / 168.439	
<i>Subtotal: Installation</i>	86 / 41.947	24 / 18.355	24 / 22.400	24 / 24.437	- / -	24 / 24.437	24 / 23.300	24 / 24.600	12 / 13.400	- / -	- / -	218 / 168.439	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>1,336.722</b>	<b>168.118</b>	<b>176.225</b>	<b>234.248</b>	<b>0.000</b>	<b>234.248</b>	<b>92.462</b>	<b>94.114</b>	<b>95.814</b>	<b>102.808</b>	<b>-</b>	<b>2,300.511</b>	

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01500 / F-15	<b>Modification Number / Title:</b> 1202 / F-15E Radar Modernization Program APG-82(V)1

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** APG-82(v)1

**Manufacturer Information**

Manufacturer Name: Raytheon	Manufacturer Location: El Segundo CA/Forest MS
Administrative Leadtime (in Months): 1	Production Leadtime (in Months): 18

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Mar 2019	Mar 2020	Mar 2021				
Delivery Dates	Sep 2020	Sep 2021	Sep 2022				

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	86 / 41.947	24 / 18.355	24 / 22.400	24 / 24.437	- / -	24 / 24.437	12 / 11.650	- / -	- / -	- / -	- / -	170 / 118.789
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	12 / 11.650	5 / 5.125	- / -	- / -	- / -	17 / 16.775
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 16.400	- / -	- / -	- / -	16 / 16.400
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 3.075	12 / 13.400	- / -	- / -	15 / 16.475
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	86 / 41.947	24 / 18.355	24 / 22.400	24 / 24.437	- / -	24 / 24.437	24 / 23.300	24 / 24.600	12 / 13.400	- / -	- / -	218 / 168.439

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	86	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	-	-	-	-	-	-	0	218
Out	80	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	-	-	-	-	-	0	218

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01500 / F-15	<b>Modification Number / Title:</b> 1 / Advanced Display Core Processor, ADCP II-E

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	86.257	10.520	49.187	43.956	0.000	43.956	78.142	65.876	40.328	0.000	-	374.266
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	86.257	10.520	49.187	43.956	0.000	43.956	78.142	65.876	40.328	0.000	-	374.266
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>86.257</b>	<b>10.520</b>	<b>49.187</b>	<b>43.956</b>	<b>0.000</b>	<b>43.956</b>	<b>78.142</b>	<b>65.876</b>	<b>40.328</b>	<b>0.000</b>	<b>-</b>	<b>374.266</b>

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

Initial Spares (\$ in Millions)	0.500	6.220	6.400	6.600	-	6.600	3.400	-	-	-	-	23.120
Gross/Weapon System Unit Cost (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The F-15E requires a replacement Advanced Display Core Processor (ADCP II) to meet future and projected subsystem demands. The ADCP II program will equip the F-15E, including tail number 86-0184, with a central processor with sufficient memory, processing throughput, and Input/Output bandwidth to meet the Operational Flight Program growth requirements of Suite 8 and beyond, and to support other major platform modernization upgrades such as EPAWSS. The increased capability of ADCP II will also enable the F-15E to fully exploit the APG-82(V)1 radar capabilities, to include increased target tracks, mode simultaneity, and increased track data. The ADCP II is required to meet all APG-82(V)1 key system attributes.

Requirements: AF Form 1067 approved July 2012  
DT&E 4Q2016; FDE 4Q2017; MS C: 4Q2017

Funding may be used to resolve Diminishing Manufacturing Sources/Material Shortages (DMSMS) and/or obsolescence issues. DMSMS activities may include, but are not limited to, bridge buys, life of type buys, buys to protect production schedule, and minor engineering efforts for redesign.

DMSMS costs are included in Group B recurring; SE/PM costs are include in the Group B recurring; and Depot Costs are included in the Other Govt.

This program has associated Research Development Test and Evaluation (RDT&E) funding in PE 0207134F.

**Milestone/Development Status**

Critical Design Review (CDR) completed 4QFY2013, Milestone B completed 1QFY2014. Milestone C completed 4QFY2017.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	10.520	49.187	43.956	-	43.956	78.142	65.876	40.328	-
<b>Total:</b>									
Quantity	-	-	-	-	-	-	-	-	-

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01500 / F-15	<b>Modification Number / Title:</b> 1 / Advanced Display Core Processor, ADCP II-E

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

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Secondary Distribution	Total Obligation Authority	10.520	49.187	43.956	0.000	43.956	78.142	65.876	40.328	0.000

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**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2					<b>P-1 Line Item Number / Title:</b> F01500 / F-15					<b>Modification Number / Title:</b> 1 / Advanced Display Core Processor, ADCP II-E			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> F-15E				<b>Modification Type:</b> Reliability & Maintainability				<b>Related RDT&amp;E PEs:</b> 0207134F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0207134F	- / 196.483	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 196.483	
<b>Procurement</b>													
<b>Modification Item 1 of 1: ADCP II E</b>													
A Kits													
Recurring													
ADCP II E:INSTALL KITS Group A (Active)	69 / 0.888	0 / 0.000	36 / 0.484	53 / 0.733	- / -	53 / 0.733	60 / 0.840	- / -	- / -	- / -	- / -	218 / 2.945	
<i>Subtotal: Recurring</i>	- / 0.888	- / 0.000	- / 0.484	- / 0.733	- / -	- / 0.733	- / 0.840	- / -	- / -	- / -	- / -	- / 2.945	
B Kits													
Recurring													
ADCP II E:EQUIPMENT Group B (Active)	69 / 70.048	0 / 0.000	36 / 35.255	53 / 40.741	- / -	53 / 40.741	60 / 48.502	0 / 1.735	- / -	- / -	- / -	218 / 196.281	
<i>Subtotal: Recurring</i>	- / 70.048	- / 0.000	- / 35.255	- / 40.741	- / -	- / 40.741	- / 48.502	- / 1.735	- / -	- / -	- / -	- / 196.281	
<i>Subtotal: ADCP II E</i>	- / 70.936	- / 0.000	- / 35.739	- / 41.474	- / -	- / 41.474	- / 49.342	- / 1.735	- / -	- / -	- / -	- / 199.226	
<i>Subtotal: Procurement, All Modification Items</i>	- / 70.936	- / 0.000	- / 35.739	- / 41.474	- / -	- / 41.474	- / 49.342	- / 1.735	- / -	- / -	- / -	- / 199.226	
<b>Support (All Modification Items)</b>													
GROUP B: TOTAL NONRECURRING	- / 6.808	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.808	
Type 1 Training	- / -	- / 0.043	- / 0.043	- / -	- / -	- / -	- / 0.050	- / 0.000	- / -	- / -	- / -	- / 0.136	
Change Orders	- / 2.275	- / 0.300	- / 0.258	- / 0.000	- / -	- / 0.000	- / 0.541	- / 45.089	- / 21.688	- / -	- / -	- / 70.151	
Data	- / 1.349	- / 1.406	- / 1.448	- / 0.000	- / -	- / 0.000	- / 1.690	- / 1.328	- / 1.400	- / -	- / -	- / 8.621	
SUPPORT-EQUIP	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	
ICS-Labor	- / 0.527	- / 2.735	- / 1.265	- / 1.992	- / -	- / 1.992	- / 11.517	- / 3.607	- / 3.900	- / -	- / -	- / 25.543	
OTHER GOVT	- / 1.725	- / 3.134	- / 7.625	- / -	- / -	- / -	- / 9.799	- / 8.054	- / 9.000	- / -	- / -	- / 39.337	
PMA - Other Gov't Costs	- / 2.637	- / 2.902	- / 2.699	- / -	- / -	- / -	- / 4.623	- / 5.403	- / 4.000	- / -	- / -	- / 22.264	
<i>Subtotal: Support</i>	- / 15.321	- / 10.520	- / 13.338	- / 1.992	- / -	- / 1.992	- / 28.220	- / 63.481	- / 39.988	- / -	- / -	- / 172.860	
<b>Installation</b>													
<b>Modification Item 1 of 1: ADCP II E</b>	- / -	- / -	11 / 0.110	49 / 0.490	- / -	49 / 0.490	58 / 0.580	66 / 0.660	34 / 0.340	- / -	- / -	218 / 2.180	
<i>Subtotal: Installation</i>	- / -	- / -	11 / 0.110	49 / 0.490	- / -	49 / 0.490	58 / 0.580	66 / 0.660	34 / 0.340	- / -	- / -	218 / 2.180	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>86.257</b>	<b>10.520</b>	<b>49.187</b>	<b>43.956</b>	<b>0.000</b>	<b>43.956</b>	<b>78.142</b>	<b>65.876</b>	<b>40.328</b>	<b>0.000</b>	<b>-</b>	<b>374.266</b>	



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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01500 / F-15	<b>Modification Number / Title:</b> 1 / Advanced Display Core Processor, ADCP II-E

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** ADCP II E

**Manufacturer Information**

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 15

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Jan 2020	Jan 2021	Jan 2022			
Delivery Dates		Apr 2021	Apr 2022	Apr 2023			

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	- / -	- / -	11 / 0.110	49 / 0.490	- / -	49 / 0.490	9 / 0.090	- / -	- / -	- / -	- / -	69 / 0.690
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	36 / 0.360	- / -	- / -	- / -	- / -	36 / 0.360
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	13 / 0.130	40 / 0.400	- / -	- / -	- / -	53 / 0.530
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 0.260	34 / 0.340	- / -	- / -	60 / 0.600
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	11 / 0.110	49 / 0.490	- / -	49 / 0.490	58 / 0.580	66 / 0.660	34 / 0.340	- / -	- / -	218 / 2.180

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	0	0	0	0	1	1	0	9	14	22	11	2	12	16	13	17	16	17	17	16	16	12	6	-	-	-	-	-	0	218
Out	0	0	0	0	0	1	1	0	9	14	22	11	2	12	16	13	17	16	17	17	16	16	12	6	-	-	-	-	-	0	218

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01500 / F-15	<b>Modification Number / Title:</b> 8800 / F-15E MIDS JTRS

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

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	14.983	19.040	27.844	29.011	0.000	29.011	41.119	19.818	33.051	0.000	-	184.866
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	14.983	19.040	27.844	29.011	0.000	29.011	41.119	19.818	33.051	0.000	-	184.866
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>14.983</b>	<b>19.040</b>	<b>27.844</b>	<b>29.011</b>	<b>0.000</b>	<b>29.011</b>	<b>41.119</b>	<b>19.818</b>	<b>33.051</b>	<b>0.000</b>	-	<b>184.866</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This upgrade integrates and installs a new Link 16 system on the F-15E that complies with an NSA mandate on cryptographic modernization and an FAA mandate on frequency remapping. The FAA mandate requires all fielded Link-16 terminals incorporate the frequency re-mapping capability by 2025.

In addition to meeting the two mandates, the system will significantly increase data link capacity and improve long range performance and the ability to operate in a jamming environment. It will also reduce sustainment costs due to its commonality with other DoD assets.

Funding may be used to resolve Diminishing Manufacturing Sources/Material Shortages (DMSMS) and/or obsolescence issues. DMSMS activities may include, but are not limited to, bridge buys, life of type buys, buys to protect production schedule, and minor engineering efforts for redesign.

DMSMS costs are included in Group B NRE; SE/PM costs are included in the Group B recurring; and Depot Costs are included in the Support Equipment.

Milestone/Development Status

MIDS JTRS will be integrated in OFP Suite 9. Milestone C was approved June 2018.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	19.040	27.844	29.011	-	29.011	41.119	19.818	33.051	-
<b>Total:</b> Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	<b>19.040</b>	<b>27.844</b>	<b>29.011</b>	<b>0.000</b>	<b>29.011</b>	<b>41.119</b>	<b>19.818</b>	<b>33.051</b>	<b>0.000</b>

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2					<b>P-1 Line Item Number / Title:</b> F01500 / F-15					<b>Modification Number / Title:</b> 8800 / F-15E MIDS JTRS			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> F-15E				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207134F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0207134F	- / 172.604	- / 6.670	- / 11.320	- / 1.550	- / -	- / 1.550	- / -	- / -	- / -	- / -	- / -	- / 92.144	
<b>Procurement</b>													
<b>Modification Item 1 of 1:</b> MIDS JTRS													
A Kits													
Recurring													
MIDS JTRS:INSTALL KITS Group A (Active)	26 / 0.233	44 / 0.341	26 / 0.388	40 / 0.314	- / -	40 / 0.314	61 / 0.629	- / -	- / -	- / -	- / -	197 / 1.905	
<i>Subtotal: Recurring</i>	- / 0.233	- / 0.341	- / 0.388	- / 0.314	- / -	- / 0.314	- / 0.629	- / -	- / -	- / -	- / -	- / 1.905	
B Kits													
Recurring													
MIDS JTRS:EQUIPMENT Group B (Active)	26 / 11.076	44 / 18.699	26 / 11.076	40 / 17.040	- / -	40 / 17.040	61 / 25.986	- / -	- / -	- / -	- / -	197 / 83.877	
<i>Subtotal: Recurring</i>	- / 11.076	- / 18.699	- / 11.076	- / 17.040	- / -	- / 17.040	- / 25.986	- / -	- / -	- / -	- / -	- / 83.877	
<i>Subtotal: MIDS JTRS</i>	- / 11.309	- / 19.040	- / 11.464	- / 17.354	- / -	- / 17.354	- / 26.615	- / -	- / -	- / -	- / -	- / 85.782	
<i>Subtotal: Procurement, All Modification Items</i>	- / 11.309	- / 19.040	- / 11.464	- / 17.354	- / -	- / 17.354	- / 26.615	- / -	- / -	- / -	- / -	- / 85.782	
<b>Support (All Modification Items)</b>													
GROUP B: TOTAL NONRECURRING													
Change Orders	- / 2.550	- / -	- / 6.050	- / 1.459	- / -	- / 1.459	- / 4.550	- / 18.402	- / 5.411	- / -	- / -	- / 38.422	
SUPPORT-EQUIP	- / -	- / -	- / 0.152	- / -	- / -	- / -	- / 0.530	- / -	- / -	- / -	- / -	- / 0.682	
<i>Subtotal: Support</i>	- / 3.674	- / -	- / 7.599	- / 1.459	- / -	- / 1.459	- / 6.289	- / 18.402	- / 5.411	- / -	- / -	- / 42.834	
<b>Installation</b>													
<b>Modification Item 1 of 1:</b> MIDS JTRS													
<i>Subtotal: Installation</i>	- / -	- / -	31 / 8.781	36 / 10.198	- / -	36 / 10.198	29 / 8.215	45 / 1.416	56 / 27.640	- / -	- / -	197 / 56.250	
<i>Subtotal: Installation</i>	- / -	- / -	31 / 8.781	36 / 10.198	- / -	36 / 10.198	29 / 8.215	45 / 1.416	56 / 27.640	- / -	- / -	197 / 56.250	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>14.983</b>	<b>19.040</b>	<b>27.844</b>	<b>29.011</b>	<b>0.000</b>	<b>29.011</b>	<b>41.119</b>	<b>19.818</b>	<b>33.051</b>	<b>0.000</b>	<b>-</b>	<b>184.866</b>	

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**Exhibit P-3a, Individual Modification: PB 2021 Air Force** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01500 / F-15	<b>Modification Number / Title:</b> 8800 / F-15E MIDS JTRS
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**ID Code** (A=Service Ready, B=Not Service Ready) : B **MDAP/MAIS Code:**

**Modification Item 1 of 1:** MIDS JTRS

**Manufacturer Information**

Manufacturer Name: BAE Systems Manufacturer Location: Wayne, NJ

Administrative Leadtime (in Months): 12 Production Leadtime (in Months): 11

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Oct 2019	Oct 2020	Oct 2021	Oct 2022			
Delivery Dates	Sep 2020	Sep 2021	Sep 2022	Sep 2023			

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	- / -	- / -	26 / 7.365	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 7.365
FY 2019	- / -	- / -	5 / 1.416	31 / 8.782	- / -	31 / 8.782	8 / 2.266	- / -	- / -	- / -	- / -	44 / 12.464
FY 2020	- / -	- / -	- / -	5 / 1.416	- / -	5 / 1.416	21 / 5.949	- / -	- / -	- / -	- / -	26 / 7.365
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 0.000	- / -	- / -	- / -	40 / 0.000
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.416	56 / 27.640	- / -	- / -	61 / 29.056
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	- / -	- / -	31 / 8.781	36 / 10.198	- / -	36 / 10.198	29 / 8.215	45 / 1.416	56 / 27.640	- / -	- / -	197 / 56.250

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	7	7	8	9	9	9	9	9	7	7	8	7	15	15	10	5	14	14	14	14	-	-	-	-	0	197
Out	0	-	-	-	-	7	7	8	9	9	9	9	9	7	7	8	7	15	15	10	5	14	14	14	14	-	-	-	-	0	197

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01500 / F-15	<b>Modification Number / Title:</b> 8801 / F-15 C/D SLEP Longerons

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	7.023	5.900	24.627	6.333	0.000	6.333	26.054	31.695	0.000	0.000	0.000	101.632
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	7.023	5.900	24.627	6.333	0.000	6.333	26.054	31.695	0.000	0.000	0.000	101.632
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>7.023</b>	<b>5.900</b>	<b>24.627</b>	<b>6.333</b>	<b>0.000</b>	<b>6.333</b>	<b>26.054</b>	<b>31.695</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>101.632</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The F-15C/D Service Life Extension Program (SLEP) for the Longerons is required to address a current safety of flight issue that has grounded numerous aircraft and is resulting in an increasing mission impact. Without this program, 170/234 aircraft will be grounded by 2024 and the fleet will be unable to meet its required service life. The requirement is documented via AF 1067 15-199 dated 6 Jan 16. No additional development to the existing Longerons configuration is required. Data for replacement kits is resident within the F-15 program office. This is a Group B ONLY MOD.

Funds may be used to resolve emerging safety of flight and diminishing manufacturing sources issues, obsolescence issues, accommodate technology insertion and fulfill FAA or other mandates necessary to ensure continued aircrew safety and mission effectiveness. DMSMS activities may include, but are not limited to, bridge buys, life of type buys, buys to protect production schedule, and minor engineering efforts for redesign. DMSMS costs are included in Group B NRE; SE/PM costs are included in the Group B recurring; and Depot Costs are included in the Support Equipment.

**Milestone/Development Status**

This program replaces the components according to their original design. Therefore, no development effort or funding required.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	2.500	17.247	3.343	-	3.343	19.654	23.295	0.000	-
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	3.400	7.380	2.990	-	2.990	6.400	8.400	0.000	-
<b>Total:</b> Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	<b>5.900</b>	<b>24.627</b>	<b>6.333</b>	<b>0.000</b>	<b>6.333</b>	<b>26.054</b>	<b>31.695</b>	<b>0.000</b>	<b>0.000</b>

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2					<b>P-1 Line Item Number / Title:</b> F01500 / F-15					<b>Modification Number / Title:</b> 8801 / F-15 C/D SLEP Longerons			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> F-15C, F-15D				<b>Modification Type:</b> Service Life Extension				<b>Related RDT&amp;E PEs:</b>					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> Longeron Configuration A													
B Kits													
Recurring													
Longeron Configuration A:EQUIPMENT Group B (Active)	11 / 2.090	20 / 2.380	32 / 5.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	63 / 9.570	
Longeron Configuration A:EQUIPMENT Group B (Guard)	19 / 3.610	14 / 3.400	32 / 5.780	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	65 / 12.790	
<i>Subtotal: Recurring</i>	- / 5.700	- / 5.780	- / 10.880	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 22.360	
<i>Subtotal: Longeron Configuration A</i>	- / 5.700	- / 5.780	- / 10.880	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 22.360	
<i>Subtotal: Procurement, All Modification Items</i>	- / 5.700	- / 5.780	- / 10.880	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 22.360	
<b>Support (All Modification Items)</b>													
GROUP B: TOTAL NONRECURRING	- / -	- / -	- / 0.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.200	
A&AS	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / 0.000	
SUPPORT-EQUIP	- / 1.313	- / 0.042	- / 1.062	- / -	- / -	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / 2.417	
PMA - Other Gov't Costs	- / 0.010	- / 0.038	- / 2.585	- / 0.353	- / -	- / 0.353	- / 0.077	- / -	- / -	- / -	- / -	- / 3.063	
Change Orders	- / -	- / 0.040	- / 7.100	- / -	- / -	- / -	- / 12.377	- / 18.095	- / -	- / -	- / -	- / 37.612	
<i>Subtotal: Support</i>	- / 1.323	- / 0.120	- / 10.947	- / 0.353	- / -	- / 0.353	- / 12.454	- / 18.095	- / -	- / -	- / -	- / 43.292	
<b>Installation</b>													
<i>Modification Item 1 of 1:</i> Longeron Configuration A	- / -	- / -	7 / 2.800	26 / 5.980	- / -	26 / 5.980	34 / 13.600	34 / 13.600	27 / 0.000	- / -	- / -	128 / 35.980	
<i>Subtotal: Installation</i>	- / -	- / -	7 / 2.800	26 / 5.980	- / -	26 / 5.980	34 / 13.600	34 / 13.600	27 / 0.000	- / -	- / -	128 / 35.980	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>7.023</b>	<b>5.900</b>	<b>24.627</b>	<b>6.333</b>	<b>0.000</b>	<b>6.333</b>	<b>26.054</b>	<b>31.695</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>101.632</b>	

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01500 / F-15	<b>Modification Number / Title:</b> 8801 / F-15 C/D SLEP Longerons
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**ID Code** (A=Service Ready, B=Not Service Ready) : B **MDAP/MAIS Code:**

**Modification Item 1 of 1:** Longeron Configuration A

**Manufacturer Information**

Manufacturer Name: Boeing	Manufacturer Location: Robins AFB
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 18

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jun 2019	Feb 2020					
Delivery Dates	Dec 2020	Aug 2021					

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	- / -	- / -	7 / 2.800	15 / 3.450	- / -	15 / 3.450	8 / 3.200	- / -	- / -	- / -	- / -	30 / 9.450
FY 2019	- / -	- / -	- / -	11 / 2.530	- / -	11 / 2.530	18 / 7.200	5 / 2.000	- / -	- / -	- / -	34 / 11.730
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	8 / 3.200	29 / 11.600	27 / 0.000	- / -	- / -	64 / 14.800
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	- / -	- / -	7 / 2.800	26 / 5.980	- / -	26 / 5.980	34 / 13.600	34 / 13.600	27 / 0.000	- / -	- / -	128 / 35.980

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	2	2	3	6	7	6	7	8	9	8	9	8	9	8	9	6	7	7	7	-	-	-	-	0	128
Out	0	-	-	-	-	-	2	2	3	6	7	6	7	8	9	8	9	8	9	8	9	6	7	7	7	-	-	-	-	0	128

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01500 / F-15	<b>Modification Number / Title:</b> 8804 / F-15 F-15 E/MUOS

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	-	0.630	8.050	0.000	8.050	8.680	30.952	31.509	91.019	9.870	180.710
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	-	0.630	8.050	0.000	8.050	8.680	30.952	31.509	91.019	9.870	180.710
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	-	-	<b>0.630</b>	<b>8.050</b>	<b>0.000</b>	<b>8.050</b>	<b>8.680</b>	<b>30.952</b>	<b>31.509</b>	<b>91.019</b>	<b>9.870</b>	<b>180.710</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The F-15 requires SATCOM radio upgrade for Mobile User Objective System (MUOS)/Second Generation Anti-jam Tactical UHF Radio for NATO(SATURN) capability to meet mission requirements that is limited by legacy systems. SATURN is required to provide secure line of sight tactical communication and replace the legacy Have Quick II system. It also requires an update to crypto system to overcome obsolescence of the current KY-58. The MUOS/SATURN program will equip F-15E's with MUOS/SATURN-capable radios. The MUOS/SATURN program will comply with the NSA Crypto modernization mandates.

Milestone/Development Status

MUOS will be integrated into Suite 9.2 or later

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	0.630	8.050	-	8.050	8.680	30.952	31.509	91.019
<b>Total:</b> Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	<b>0.630</b>	<b>8.050</b>	<b>0.000</b>	<b>8.050</b>	<b>8.680</b>	<b>30.952</b>	<b>31.509</b>	<b>91.019</b>



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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2					<b>P-1 Line Item Number / Title:</b> F01500 / F-15					<b>Modification Number / Title:</b> 8804 / F-15 F-15 E/MUOS			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> F-15E				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207134F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> Group B (2)													
A Kits													
Recurring													
Group B:INSTALL KITS Group A (Active)	- / -	- / -	1 / 0.010	12 / 0.120	- / -	12 / 0.120	24 / 0.240	50 / 0.500	50 / 0.500	50 / 0.500	31 / 0.310	218 / 2.180	
<i>Subtotal: Recurring</i>	- / -	- / -	- / 0.010	- / 0.120	- / -	- / 0.120	- / 0.240	- / 0.500	- / 0.500	- / 0.500	- / 0.310	- / 2.180	
B Kits													
Recurring													
Group B:EQUIPMENT Group B (Active)	- / -	- / -	1 / 0.230	12 / 5.520	- / -	12 / 5.520	24 / 8.080	50 / 11.500	50 / 11.500	50 / 11.500	31 / 7.130	218 / 55.460	
<i>Subtotal: Recurring</i>	- / -	- / -	- / 0.230	- / 5.520	- / -	- / 5.520	- / 8.080	- / 11.500	- / 11.500	- / 11.500	- / 7.130	- / 55.460	
<i>Subtotal: Group B (2)</i>	- / -	- / -	- / 0.240	- / 5.640	- / -	- / 5.640	- / 8.320	- / 12.000	- / 12.000	- / 12.000	- / 7.440	- / 57.640	
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / -	- / 0.240	- / 5.640	- / -	- / 5.640	- / 8.320	- / 12.000	- / 12.000	- / 12.000	- / 7.440	- / 57.640	
<b>Support (All Modification Items)</b>													
Change Orders	- / -	- / -	- / 0.390	- / 2.380	- / -	- / 2.380	- / -	- / 18.232	- / 18.009	- / 77.519	- / -	- / 116.530	
<i>Subtotal: Support</i>	- / -	- / -	- / 0.390	- / 2.380	- / -	- / 2.380	- / -	- / 18.232	- / 18.009	- / 77.519	- / -	- / 116.530	
<b>Installation</b>													
<i>Modification Item 1 of 1:</i> Group B (2)	- / -	- / -	- / -	1 / 0.030	- / -	1 / 0.030	12 / 0.360	24 / 0.720	50 / 1.500	50 / 1.500	81 / 2.430	218 / 6.540	
<i>Subtotal: Installation</i>	- / -	- / -	- / -	1 / 0.030	- / -	1 / 0.030	12 / 0.360	24 / 0.720	50 / 1.500	50 / 1.500	81 / 2.430	218 / 6.540	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	-	-	0.630	8.050	0.000	8.050	8.680	30.952	31.509	91.019	9.870	180.710	

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01500 / F-15	<b>Modification Number / Title:</b> 8804 / F-15 F-15 E/MUOS
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** Group B (2)

**Manufacturer Information**

Manufacturer Name: TBD	Manufacturer Location: TBD
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Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 10
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Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Oct 2020	Oct 2021	Oct 2022	Oct 2023	Oct 2024	Oct 2025
Delivery Dates		Aug 2021	Aug 2022	Aug 2023	Aug 2024	Aug 2025	Aug 2026

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	1 / 0.030	- / -	1 / 0.030	- / -	- / -	- / -	- / -	- / -	1 / 0.030
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.360	- / -	- / -	- / -	- / -	12 / 0.360
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 0.720	- / -	- / -	- / -	24 / 0.720
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	50 / 1.500	- / -	- / -	50 / 1.500
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	50 / 1.500	- / -	50 / 1.500
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	50 / 1.500	50 / 1.500
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	31 / 0.930	31 / 0.930
Total	- / -	- / -	- / -	1 / 0.030	- / -	1 / 0.030	12 / 0.360	24 / 0.720	50 / 1.500	50 / 1.500	81 / 2.430	218 / 6.540

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	-	-	-	1	-	3	4	5	6	6	6	6	12	12	13	13	12	12	13	13	81	218
Out	0	-	-	-	-	-	-	-	-	-	-	-	1	-	3	4	5	6	6	6	6	12	12	13	13	12	12	13	13	81	218

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01500 / F-15	<b>Modification Number / Title:</b> 8810 / F-15E APG-82(V)1 Common Config

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	0.000	35.097	7.795	24.012	0.000	24.012	4.967	5.056	5.147	-	-	82.074
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	0.000	35.097	7.795	24.012	0.000	24.012	4.967	5.056	5.147	-	-	82.074
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>0.000</b>	<b>35.097</b>	<b>7.795</b>	<b>24.012</b>	<b>0.000</b>	<b>24.012</b>	<b>4.967</b>	<b>5.056</b>	<b>5.147</b>	-	-	<b>82.074</b>

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

Initial Spares ( <i>\$ in Millions</i> )	0.000	-	0.000	1.470	-	1.470	1.200	0.915	-	-	-	3.585
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

APG-82(v)1 Common Config ensures common configuration of hardware across the entire F-15E fleet. GPP3 retrofit for the APG-82(v)1 radar replaces obsolete components on the F-15E aircraft to bring the Radar Modernization Program (RMP) equipped jets to a common configuration. GPP3 is a new general purpose processor needed to replace the obsolete GPP1 in the APG-82(v)1 radar. GPP3 retrofit also replaces the obsolete DDS2 waveform generator with the new DDS3. The Automatic Transformer Rectifier Unit(ATRU) retrofit provides a new Isolation Unit, current-sensing contactor, and restrictor to the RMP equipped jets in order to resolve a known Deficiency Report causing dual generator failures on the F-15E aircraft.

Milestone/Development Status

Development is complete.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	35.097	7.795	24.012	-	24.012	4.967	5.056	5.147	-
<b>Total:</b>									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	35.097	7.795	24.012	0.000	24.012	4.967	5.056	5.147	-

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2					<b>P-1 Line Item Number / Title:</b> F01500 / F-15					<b>Modification Number / Title:</b> 8810 / F-15E APG-82(V)1 Common Config			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> F-15E				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b>					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1: GPP3</i>													
A Kits													
Recurring													
GPP3:INSTALL KITS Group A (Active)	- / -	57 / 3.000	48 / 1.200	35 / 0.900	- / -	35 / 0.900	- / -	- / -	- / -	- / -	- / -	140 / 5.100	
<i>Subtotal: Recurring</i>	- / -	- / 3.000	- / 1.200	- / 0.900	- / -	- / 0.900	- / -	- / -	- / -	- / -	- / -	- / 5.100	
B Kits													
Recurring													
GPP3:EQUIPMENT Group B (Active)	- / -	57 / 21.204	48 / 6.170	35 / 8.250	- / -	35 / 8.250	- / -	- / -	- / -	- / -	- / -	140 / 35.624	
<i>Subtotal: Recurring</i>	- / -	- / 21.204	- / 6.170	- / 8.250	- / -	- / 8.250	- / -	- / -	- / -	- / -	- / -	- / 35.624	
<i>Subtotal: GPP3</i>	- / -	- / 24.204	- / 7.370	- / 9.150	- / -	- / 9.150	- / -	- / -	- / -	- / -	- / -	- / 40.724	
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / 24.204	- / 7.370	- / 9.150	- / -	- / 9.150	- / -	- / -	- / -	- / -	- / -	- / 40.724	
<b>Support (All Modification Items)</b>													
GROUP A: TOTAL NONRECURRING													
Change Orders	- / 0.000	- / 10.893	- / 0.425	- / 14.862	- / -	- / 14.862	- / 4.967	- / 5.056	- / 5.147	- / -	- / -	- / 41.350	
<i>Subtotal: Support</i>	- / 0.000	- / 10.893	- / 0.425	- / 14.862	- / -	- / 14.862	- / 4.967	- / 5.056	- / 5.147	- / -	- / -	- / 41.350	
<b>Installation</b>													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>0.000</b>	<b>35.097</b>	<b>7.795</b>	<b>24.012</b>	<b>0.000</b>	<b>24.012</b>	<b>4.967</b>	<b>5.056</b>	<b>5.147</b>	<b>-</b>	<b>-</b>	<b>82.074</b>	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2			<b>P-1 Line Item Number / Title:</b> F01500 / F-15			<b>Modification Number / Title:</b> 8810 / F-15E APG-82(V)1 Common Config	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 1 of 1:</b> GPP3							
<b>Manufacturer Information</b>							
Manufacturer Name: Raytheon				Manufacturer Location: El Segundo CA/Forest MS			
Administrative Leadtime (in Months): 3				Production Leadtime (in Months): 18			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates	Jan 2019	Jan 2020	Jan 2021				
Delivery Dates	Jul 2020	Jul 2021	Jul 2022				
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 140		

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft /  
BSA 2: Tactical Aircraft **P-1 Line Item Number / Title:**  
F01600 / F-16

**ID Code** (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** 0207133F, 0207445F, 0809731F **Other Related Program Elements:** 0207133F, 0207445F, 0207701F

**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	587.361	303.413	281.476	615.760	-	615.760	625.394	640.375	567.791	636.898	700.733	4,959.201
Less PY Advance Procurement ( <i>\$ in Millions</i> )	0.000	-	-	-	-	-	-	-	-	-	0.000	0.000
Net Procurement (P-1) ( <i>\$ in Millions</i> )	587.361	303.413	281.476	615.760	-	615.760	625.394	640.375	567.791	636.898	700.733	4,959.201
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>587.361</b>	<b>303.413</b>	<b>281.476</b>	<b>615.760</b>	-	<b>615.760</b>	<b>625.394</b>	<b>640.375</b>	<b>567.791</b>	<b>636.898</b>	<b>700.733</b>	<b>4,959.201</b>

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

Initial Spares ( <i>\$ in Millions</i> )	-	-	0.212	0.216	-	0.216	0.220	0.224	0.116	-	-	0.988
Flyaway Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The F-16 is a multi-role fighter capable of employing a wide variety of nuclear and conventional weapons and missiles in both the air-to-surface and air-to-air mission areas. There are 935 aircraft in the F-16 fleet, consisting of 610 Post-Block (40/42/50/52) and 325 Pre-Block (25/30/32). The Post-Block aircraft have a service life of 8,000 Equivalent Flight Hours (EFH) and the Pre-Block have a service life of 10,800 EFH. The average age of the fleet is 28.7 years. The F-16 provides the capacity called for in the National Defense Strategy (NDS) by supplying the USAF 48% of its fighter fleet at the highest readiness rates and lowest operating costs of any US fighter. The F-16 programs listed below also support the NDS's call to strengthen alliances by being the DoD's largest Foreign Military Sales (FMS) program servicing over 26 countries and growing. The funding described in this document directly maps to the NDS as it provides upgrades to the F-16 platform enabling the delivery of joint lethality in contested environments in the coming decades. These specific modifications budgeted and programmed are below.

Funding for AETC-MTD Trainers mod is budgeted in PE 0809731F. Funding for all other F-16 mods in this exhibit is budgeted in PE 0207133F.

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.

Funds may be used to address Diminishing Manufacturing Sources (DMS) issues.

As directed in the FY 2018 NDAA, Sec 825, amendment to PL 114-92 FY 2016 NDAA, Sec 828 Penalty for Cost Overruns, the FY 2019 Air Force penalty total is \$50.0M. The calculated percentage reduction to each research, development, test and evaluation and procurement account will be allocated proportionally from all programs, projects, or activities under such account.

Decrease Funds to Limit F-16 Digital Radar to 300 saved \$136.6M in BY. Decrease Funds to Limit F-16 Digital Radar to 300 Description: To support current war plans and the future fight, the Air Force requires only 300 of the newest F-16s receive the Digital Radar Warning Receiver (DRWR) upgrade, aligned with and complementary to the Advanced Electronically Scanned Array (AESA) radar upgrade. The resources resulting from this determination is now funding capabilities in accordance with the National Defense Strategy priorities.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft		<b>P-1 Line Item Number / Title:</b> F01600 / F-16
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B	<b>Program Elements for Code B Items:</b> 0207133F, 0207445F, 0809731F	<b>Other Related Program Elements:</b> 0207133F, 0207445F, 0207701F

**Line Item MDAP/MAIS Code:** N/A

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	239.687	183.409	517.838	0.000	517.838	502.099	452.786	421.591	405.610
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	51.144	96.186	94.871	0.000	94.871	99.911	178.949	146.200	231.288
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	12.582	1.881	3.051	0.000	3.051	23.384	8.640	-	-
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>303.413</b>	<b>281.476</b>	<b>615.760</b>	<b>0.000</b>	<b>615.760</b>	<b>625.394</b>	<b>640.375</b>	<b>567.791</b>	<b>636.898</b>



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**Exhibit P-40, Budget Line Item Justification: PB 2021 Air Force** **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft

**P-1 Line Item Number / Title:**  
F01600 / F-16

**ID Code** (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** 0207133F, 0207445F, 0809731F **Other Related Program Elements:** 0207133F, 0207445F, 0207701F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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***	633030 / Aggressors Update (Capability Improvement)				- / 8.206	- / 1.154	- / 0.000	- / 1.988	- / 0.000	- / 1.988
P-40a***	633041 / Anti Jam (Capability Improvement)				- / 5.000	- / -	- / -	- / -	- / -	- / -
P-40a***	633042 / Missile Warning Systems (Capability Improvement)				- / 12.000	- / -	- / -	- / -	- / -	- / -
P-40a***	661652 / Link 16 Crypto (Capability Improvement)				- / 0.139	- / -	- / -	- / -	- / -	- / -
P-40a***	8662 / AETC MTD UPGRADES-FIELD TRAINING DETACHMENTS (Capability Improvement)				- / 106.935	- / 5.335	- / 5.431	- / 0.487	- / -	- / 0.487
P-40a***	866251 / Full Combat Mission Training (Capability Improvement)				- / -	- / 5.641	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 10.948	- / 1.720	- / 0.010	- / 0.010	- / -	- / 0.010
P-3a	602148 / MMC and Display Generator Upgrade (Capability Improvement)			B	- / 0.000	- / 0.000	- / 0.000	- / 29.386	- / 0.000	- / 29.386
P-3a	602600 / F-16 LEGACY STRUCTURAL SLEP (Service Life Extension)			B	- / 13.353	- / 37.173	- / 45.050	- / 85.751	- / 0.000	- / 85.751
P-3a	618250 / Comm Suite Upgrade (Capability Improvement)			B	- / 9.890	- / 20.968	- / 29.171	- / 115.544	- / 0.000	- / 115.544
P-3a	633031 / HFLCC AGCAS (Capability Improvement)			B	- / 13.118	- / 14.060	- / 18.153	- / 20.807	- / 0.000	- / 20.807
P-3a	633032 / AIFF MODE 5 (Capability Improvement)			B	- / 5.031	- / 36.381	- / 0.000	- / 9.868	- / 0.000	- / 9.868
P-3a	661653 / MIDS-JTRS (Capability Improvement)			B	- / 120.454	- / 176.661	- / 1.469	- / 11.093	- / 0.000	- / 11.093
P-3a	694050 / AESA Radars (Capability Improvement)			B	- / 270.638	- / 0.000	- / 175.890	- / 269.893	- / 0.000	- / 269.893
P-3a	704050 / Digital Radar Warning Receiver (RWR) (Capability Improvement)			B	- / 0.000	- / 0.000	- / 0.000	- / 28.187	- / 0.000	- / 28.187
P-3a	866250 / F-16 TRAINING SYSTEMS (Capability Improvement)			B	- / 11.649	- / 4.320	- / 6.302	- / 42.746	- / 0.000	- / 42.746
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 587.361</b>	<b>- / 303.413</b>	<b>- / 281.476</b>	<b>- / 615.760</b>	<b>- / -</b>	<b>- / 615.760</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	633030 / Aggressors Update (Capability Improvement)				- / 0.000	- / -	- / -	- / -	- / -	- / 11.348
P-40a***	633041 / Anti Jam (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 5.000
P-40a***	633042 / Missile Warning Systems (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 12.000
P-40a***	661652 / Link 16 Crypto (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 0.139
P-40a***	8662 / AETC MTD UPGRADES-FIELD TRAINING DETACHMENTS (Capability Improvement)				- / 0.858	- / 1.193	- / 5.732	- / 5.888	- / -	- / 131.859
P-40a***	866251 / Full Combat Mission Training (Capability Improvement)				- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / 5.641
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 0.146	- / 0.151	- / 0.257	- / 0.189	- / -	- / 13.431
P-3a	602148 / MMC and Display Generator Upgrade (Capability Improvement)			B	- / 37.754	- / 51.018	- / 43.318	- / 30.400	- / 19.898	- / 211.774
P-3a	602600 / F-16 LEGACY STRUCTURAL SLEP (Service Life Extension)			B	- / 100.120	- / 114.970	- / 117.580	- / 120.840	- / 451.753	- / 1,086.590

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft

**P-1 Line Item Number / Title:**  
F01600 / F-16

**ID Code** (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** 0207133F, 0207445F, 0809731F **Other Related Program Elements:** 0207133F, 0207445F, 0207701F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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	618250 / Comm Suite Upgrade (Capability Improvement)		B		- / 70.021	- / 66.681	- / 125.973	- / 90.430	- / 151.174	- / 679.852
P-3a	633031 / HFLCC AGCAS (Capability Improvement)		B		- / 17.577	- / 1.906	- / 0.000	- / 0.000	- / -	- / 85.621
P-3a	633032 / AIFF MODE 5 (Capability Improvement)		B		- / 13.088	- / 40.989	- / 0.000	- / 0.000	- / -	- / 105.357
P-3a	661653 / MIDS-JTRS (Capability Improvement)		B		- / 0.000	- / 0.000	- / -	- / -	- / -	- / 309.677
P-3a	694050 / AESA Radars (Capability Improvement)		B		- / 317.629	- / 286.141	- / 173.049	- / 178.221	- / 0.000	- / 1,671.461
P-3a	704050 / Digital Radar Warning Receiver (RWR) (Capability Improvement)		B		- / 61.709	- / 74.235	- / 96.875	- / 203.798	- / 77.908	- / 542.712
P-3a	866250 / F-16 TRAINING SYSTEMS (Capability Improvement)		B		- / 6.492	- / 3.091	- / 5.007	- / 7.132	- / 0.000	- / 86.739
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 625.394</b>	<b>- / 640.375</b>	<b>- / 567.791</b>	<b>- / 636.898</b>	<b>- / 700.733</b>	<b>- / 4,959.201</b>

\*\*\* Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

\*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:**

This program, P-3A Mod 602148, MMC and Display Generator Upgrade, is a new start.  
This program, P-3A Mod 704050, Digital Radar Warning Receiver (RWR), is a new start.

Where applicable, justification for individual modifications is provided in the P-3A exhibits.

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01600 / F-16	<b>Modification Number / Title:</b> 602148 / MMC and Display Generator Upgrade

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	0.000	0.000	0.000	29.386	0.000	29.386	37.754	51.018	43.318	30.400	19.898	211.774
Less PY Advance Procurement ( <i>\$ in Millions</i> )	0.000	-	-	-	-	-	-	-	-	-	-	0.000
Net Procurement (P-1) ( <i>\$ in Millions</i> )	0.000	0.000	0.000	29.386	0.000	29.386	37.754	51.018	43.318	30.400	19.898	211.774
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>29.386</b>	<b>0.000</b>	<b>29.386</b>	<b>37.754</b>	<b>51.018</b>	<b>43.318</b>	<b>30.400</b>	<b>19.898</b>	<b>211.774</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This program, P-3A Mod 602148, MMC and Display Generator Upgrade, is a new start.

This modification upgrades the current F-16 core mission computer to include increased high-speed data throughput, additional memory, and adds an Ethernet High Speed Data Network (HSDN) to realize the full capabilities provided by the Active Electronically Scanned Array (AESA) radar program. This modification also incorporates the installation of remote interface panels (RIP), which allows for the transfer of mission planning loaded data. The upgraded mission computer is required because the current 1553 mux data transfer path is nearing its throughput capacity. The new Program Display Generator (PDG) allows for a fully integrated Multi-Function Display Set (MFDS) solution including Hands-on Throttle and Stick (HOTAS) integration with Sensor of Interest (SOI), format swapping and high definition video on 4x4 displays. The new PDG also provides improved display formats during dynamic maneuvers; resolves symbol freezing issues due to throughput constraints; and provides a sustainable approach to address growing DMS concerns with the current PDG.

This funding request will support potential DMS and obsolescence solutions, to include, if optimal, life of type buys, or bridge buys limited to the program of record quantity.

**Milestone/Development Status**

FY20 begins SIL testing for MMC and Milestone C is February of FY21. TRR is July of FY20 with SIL testing immediately following for PDG.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.000	0.000	29.386	0.000	29.386	37.754	42.129	23.544	18.880
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	-	-	-	-	8.889	19.774	11.520
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>0.000</b>	<b>0.000</b>	<b>29.386</b>	<b>0.000</b>	<b>29.386</b>	<b>37.754</b>	<b>51.018</b>	<b>43.318</b>	<b>30.400</b>

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2					<b>P-1 Line Item Number / Title:</b> F01600 / F-16					<b>Modification Number / Title:</b> 602148 / MMC and Display Generator Upgrade			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> F-16				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207133F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0207133F	63 / 66.386	- / 14.298	- / 11.587	- / 5.846	- / -	- / 5.846	- / 2.893	- / 1.294	- / 0.999	- / -	- / -	63 / 103.303	
<b>Procurement</b>													
<b>Modification Item 1 of 2: MMC Kit</b>													
B Kits													
Recurring													
MMC Kit:EQUIPMENT Group B (Active)	- / -	- / -	- / -	78 / 9.594	- / -	78 / 9.594	156 / 19.775	88 / 11.313	50 / 6.150	54 / 6.642	26 / 3.198	452 / 56.672	
MMC Kit:EQUIPMENT Group B (Guard)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	68 / 8.889	90 / 11.070	- / -	- / -	158 / 19.959	
<b>Subtotal: Recurring</b>	- / -	- / -	- / -	- / 9.594	- / -	- / 9.594	- / 19.775	- / 20.202	- / 17.220	- / 6.642	- / 3.198	- / 76.631	
<b>Subtotal: MMC Kit</b>	- / -	- / -	- / -	- / 9.594	- / -	- / 9.594	- / 19.775	- / 20.202	- / 17.220	- / 6.642	- / 3.198	- / 76.631	
<b>Modification Item 2 of 2: PDG Kit</b>													
B Kits													
Recurring													
PDG Kit:EQUIPMENT Group B (Active)	- / -	- / -	- / -	- / -	- / -	- / -	125 / 10.500	216 / 18.144	90 / 7.560	5 / 0.420	16 / 1.344	452 / 37.968	
PDG Kit:EQUIPMENT Group B (Guard)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	68 / 5.712	90 / 7.560	- / -	158 / 13.272	
<b>Subtotal: Recurring</b>	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.500	- / 18.144	- / 13.272	- / 7.980	- / 1.344	- / 51.240	
<b>Subtotal: PDG Kit</b>	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.500	- / 18.144	- / 13.272	- / 7.980	- / 1.344	- / 51.240	
<b>Subtotal: Procurement, All Modification Items</b>	- / -	- / -	- / -	- / 9.594	- / -	- / 9.594	- / 30.275	- / 38.346	- / 30.492	- / 14.622	- / 4.542	- / 127.871	
<b>Support (All Modification Items)</b>													
GROUP B: TOTAL NONRECURRING	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / -	- / 0.000	- / 0.000	
ICS-Material	- / -	- / -	- / -	- / 2.189	- / -	- / 2.189	- / 0.917	- / -	- / -	- / -	- / -	- / 3.106	
Change Orders	- / -	- / -	- / -	- / 6.466	- / -	- / 6.466	- / 1.330	- / 1.913	- / 0.112	- / 0.114	- / -	- / 9.935	
SUPPORT-EQUIP	- / -	- / -	- / -	- / 5.114	- / -	- / 5.114	- / 0.900	- / 1.900	- / 0.200	- / -	- / -	- / 8.114	
OTHER GOVT	- / -	- / -	- / -	- / 6.023	- / -	- / 6.023	- / 0.900	- / 1.995	- / 0.150	- / -	- / -	- / 9.068	
<b>Subtotal: Support</b>	- / 0.000	- / 0.000	- / 0.000	- / 19.792	- / 0.000	- / 19.792	- / 4.047	- / 5.808	- / 0.462	- / 0.114	- / 0.000	- / 30.223	
<b>Installation</b>													
<b>Modification Item 1 of 2: MMC Kit</b>	- / -	- / -	- / -	- / -	- / -	- / -	78 / 3.432	156 / 6.864	156 / 6.864	140 / 6.160	80 / 3.520	610 / 26.840	
<b>Modification Item 2 of 2: PDG Kit</b>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	125 / 5.500	216 / 9.504	269 / 11.836	610 / 26.840	
<b>Subtotal: Installation</b>	- / -	- / -	- / -	- / -	- / -	- / -	78 / 3.432	156 / 6.864	281 / 12.364	356 / 15.664	349 / 15.356	1,220 / 53.680	
<b>Total</b>													

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01600 / F-16	<b>Modification Number / Title:</b> 602148 / MMC and Display Generator Upgrade

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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<b>Models of Systems Affected:</b> F-16	<b>Modification Type:</b> Capability Improvement	<b>Related RDT&amp;E PEs:</b> 0207133F
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Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Total Cost (Procurement + Support + Installation)</b>	0.000	0.000	0.000	29.386	0.000	29.386	37.754	51.018	43.318	30.400	19.898	211.774

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01600 / F-16	<b>Modification Number / Title:</b> 602148 / MMC and Display Generator Upgrade

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 2:** MMC Kit

**Manufacturer Information**

Manufacturer Name: Raytheon	Manufacturer Location: McKinney, TX
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 14

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Jul 2021	Jul 2022	Jul 2023	Jul 2024	Jul 2025
Delivery Dates			Sep 2022	Sep 2023	Sep 2024	Sep 2025	Sep 2026

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	78 / 3.432	- / -	- / -	- / -	- / -	78 / 3.432
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	156 / 6.864	- / -	- / -	- / -	156 / 6.864
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	156 / 6.864	- / -	- / -	156 / 6.864
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	140 / 6.160	- / -	140 / 6.160
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	54 / 2.376	54 / 2.376
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 1.144	26 / 1.144
Total	- / -	- / -	- / -	- / -	- / -	- / -	78 / 3.432	156 / 6.864	156 / 6.864	140 / 6.160	80 / 3.520	610 / 26.840

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39	39	39	39	39	39	39	39	39	39	35	35	35	35	80	610
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39	39	39	39	39	39	39	39	39	39	35	35	35	115	610

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01600 / F-16	<b>Modification Number / Title:</b> 602148 / MMC and Display Generator Upgrade

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 2 of 2:** PDG Kit

**Manufacturer Information**

Manufacturer Name: General Dynamics	Manufacturer Location: Minneapolis, MN
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 14

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Jul 2021	Jul 2022	Jul 2023	Jul 2024	Jul 2025
Delivery Dates			Sep 2022	Sep 2023	Sep 2024	Sep 2025	Sep 2026

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	125 / 5.500	- / -	- / -	125 / 5.500
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	216 / 9.504	- / -	216 / 9.504
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	158 / 6.952	158 / 6.952
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	95 / 4.180	95 / 4.180
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 0.704	16 / 0.704
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	125 / 5.500	216 / 9.504	269 / 11.836	610 / 26.840

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31	31	31	32	54	54	54	54	269	610
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31	31	31	32	54	54	54	323	610

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01600 / F-16	<b>Modification Number / Title:</b> 602600 / F-16 LEGACY STRUCTURAL SLEP

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	13.353	37.173	45.050	85.751	0.000	85.751	100.120	114.970	117.580	120.840	451.753	1,086.590
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	13.353	37.173	45.050	85.751	0.000	85.751	100.120	114.970	117.580	120.840	451.753	1,086.590
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>13.353</b>	<b>37.173</b>	<b>45.050</b>	<b>85.751</b>	<b>0.000</b>	<b>85.751</b>	<b>100.120</b>	<b>114.970</b>	<b>117.580</b>	<b>120.840</b>	<b>451.753</b>	<b>1,086.590</b>

*(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 Millions)	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The goal of this program is to extend the service life of up to all F-16 Blk 40-52 beyond 8000 Equivalent Flying Hours (EFH) to ensure a continually viable fighter force. F-16 aircraft need modifications and structural enhancements to extend the service life of these fighters. The F-16 Structural Service Life Extension Program (SLEP) is intended to be a depot-level upgrade program to replace or rework known life-limited structure to preclude the onset of widespread fatigue damage, maintain safety of flight and enhance aircraft availability. Life-limited components and required installation dates will vary by aircraft block and will be determined via the F-16 Full Scale Durability Test (FSDT) and Engineering and Manufacturing Development (EMD) phase. Without modification of life-limited structures, the F-16 will experience continued structural degradation, which will adversely affect future mission capable rates and become increasingly costly to correct. Because of potential variation in modification requirements and installation schedules among aircraft blocks, the quantity and unit cost of kit procurement and hardware installation will differ from year to year, depending on the mix of aircraft involved.

Of the current 300 required SLEP kits, four kits were procured with RDT&E funds (FY15-18).

This funding request will support potential DMS and obsolescence solutions, to include, if optimal, life of type buys or bridge buys limited to the program of record quantity.

**Milestone/Development Status**

The FSDT contract was awarded April 28, 2011, while the EMD was awarded Nov 13, 2013. Development efforts run through 2019. The program successfully completed and returned 3 of the 4 kit proof aircraft to the field (May 18, Jun 19, Aug 19). EDD for the 4th Kit Proof aircraft is Dec 19. The SLEP modification kits for production aircraft was competitively awarded July 18 and kit deliveries have begun to arrive. The 1st of 4 LRIP aircraft arrived Sep 19 with transition to full rate production will in Jul 20. OCONUS depot contracts are expected to be awarded in FY20 with working beginning in FY21. The major cost drivers for FY20 are increased depot labor rates, modification tooling and Engineering Change Orders. For FY21 major cost driver is increased depot labor rates. The major cost driver for FY22-FY25 is increased depot labor rates.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	33.804	38.510	75.576	0.000	75.576	89.362	101.119	107.665	108.927
AFNG									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	3.369	6.540	10.175	-	10.175	10.758	13.851	9.915	11.913



**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2			<b>P-1 Line Item Number / Title:</b> F01600 / F-16			<b>Modification Number / Title:</b> 602600 / F-16 LEGACY STRUCTURAL SLEP				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B					<b>MDAP/MAIS Code:</b>					
<b>Secondary Distribution</b>		<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	37.173	45.050	85.751	0.000	85.751	100.120	114.970	117.580	120.840

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2					<b>P-1 Line Item Number / Title:</b> F01600 / F-16					<b>Modification Number / Title:</b> 602600 / F-16 LEGACY STRUCTURAL SLEP			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> F-16			<b>Modification Type:</b> Service Life Extension				<b>Related RDT&amp;E PEs:</b> 0207133F						
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0207133F	4 / 80.846	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 80.846	
<b>Procurement</b>													
<b>Modification Item 1 of 1:</b> Legacy SLEP Kit													
A Kits													
Recurring													
Legacy SLEP Kit:INSTALL KITS Group A (Active)	7 / 2.879	10 / 3.890	21 / 8.814	28 / 12.381	- / -	28 / 12.381	30 / 14.027	28 / 12.259	29 / 13.970	31 / 15.317	63 / 30.595	247 / 114.132	
Legacy SLEP Kit:INSTALL KITS Group A (Guard)	1 / 0.417	3 / 1.167	5 / 2.003	5 / 1.651	- / -	5 / 1.651	4 / 0.850	7 / 2.189	6 / 2.255	5 / 1.393	13 / 5.468	49 / 17.393	
<b>Subtotal: Recurring</b>	- / 3.296	- / 5.057	- / 10.817	- / 14.032	- / -	- / 14.032	- / 14.877	- / 14.448	- / 16.225	- / 16.710	- / 36.063	- / 131.525	
<b>Subtotal: Legacy SLEP Kit</b>	- / 3.296	- / 5.057	- / 10.817	- / 14.032	- / -	- / 14.032	- / 14.877	- / 14.448	- / 16.225	- / 16.710	- / 36.063	- / 131.525	
<b>Subtotal: Procurement, All Modification Items</b>	- / 3.296	- / 5.057	- / 10.817	- / 14.032	- / -	- / 14.032	- / 14.877	- / 14.448	- / 16.225	- / 16.710	- / 36.063	- / 131.525	
<b>Support (All Modification Items)</b>													
GROUP A: TOTAL NONRECURRING	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	
Change Orders	- / 0.400	- / 1.317	- / 2.330	- / 2.050	- / -	- / 2.050	- / 2.219	- / 0.000	- / 6.971	- / 4.568	- / 3.620	- / 23.475	
Data	- / -	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	
SUPPORT-EQUIP	- / 6.970	- / -	- / 8.290	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 15.260	
OTHER GOVT	- / 2.687	- / 26.394	- / 17.733	- / 22.805	- / -	- / 22.805	- / 3.760	- / 10.000	- / 10.190	- / 7.630	- / 46.096	- / 127.295	
<b>Subtotal: Support</b>	- / 10.057	- / 27.711	- / 18.353	- / 24.855	- / 0.000	- / 24.855	- / 5.979	- / 0.000	- / 17.161	- / 12.198	- / 49.716	- / 166.030	
<b>Installation</b>													
<b>Modification Item 1 of 1:</b> Legacy SLEP Kit	- / -	2 / 4.405	7 / 15.880	22 / 46.864	- / -	22 / 46.864	32 / 79.264	34 / 100.522	32 / 84.194	35 / 91.932	132 / 365.974	296 / 789.035	
<b>Subtotal: Installation</b>	- / -	2 / 4.405	7 / 15.880	22 / 46.864	- / -	22 / 46.864	32 / 79.264	34 / 100.522	32 / 84.194	35 / 91.932	132 / 365.974	296 / 789.035	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>13.353</b>	<b>37.173</b>	<b>45.050</b>	<b>85.751</b>	<b>0.000</b>	<b>85.751</b>	<b>100.120</b>	<b>114.970</b>	<b>117.580</b>	<b>120.840</b>	<b>451.753</b>	<b>1,086.590</b>	

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01600 / F-16	<b>Modification Number / Title:</b> 602600 / F-16 LEGACY STRUCTURAL SLEP

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** Legacy SLEP Kit

**Manufacturer Information**

Manufacturer Name: Multiple	Manufacturer Location: Fort Worth, TX
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Apr 2019	Apr 2020	Apr 2021	Apr 2022	Apr 2023	Apr 2024	Apr 2025
Delivery Dates	Apr 2020	Apr 2021	Apr 2022	Apr 2023	Apr 2024	Apr 2025	Apr 2026

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 / 4.405	3 / 6.806	1 / 2.131	- / -	1 / 2.131	1 / 2.477	1 / 2.931	- / -	- / -	- / -	8 / 18.750
FY 2019	- / -	- / -	4 / 9.074	9 / 19.177	- / -	9 / 19.177	- / -	- / -	- / -	- / -	- / -	13 / 28.251
FY 2020	- / -	- / -	- / -	12 / 25.556	- / -	12 / 25.556	14 / 37.155	- / -	- / -	- / -	- / -	26 / 62.711
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	17 / 39.632	16 / 52.757	- / -	- / -	- / -	33 / 92.389
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 44.834	17 / 48.448	- / -	- / -	34 / 93.282
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 35.746	20 / 49.908	- / -	35 / 85.654
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 42.024	20 / 54.076	35 / 96.100
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	36 / 97.571	36 / 97.571
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	76 / 214.327	76 / 214.327
Total	- / -	2 / 4.405	7 / 15.880	22 / 46.864	- / -	22 / 46.864	32 / 79.264	34 / 100.522	32 / 84.194	35 / 91.932	132 / 365.974	296 / 789.035

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	0	2	1	2	0	4	7	3	6	6	7	11	6	8	11	6	7	10	8	8	11	5	10	10	6	9	132	296
Out	0	-	-	-	-	0	2	1	-	2	0	4	7	3	6	6	7	11	6	8	11	6	7	10	8	8	11	5	10	157	296

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01600 / F-16	<b>Modification Number / Title:</b> 618250 / Comm Suite Upgrade

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	9.890	20.968	29.171	115.544	0.000	115.544	70.021	66.681	125.973	90.430	151.174	679.852
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	9.890	20.968	29.171	115.544	0.000	115.544	70.021	66.681	125.973	90.430	151.174	679.852
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>9.890</b>	<b>20.968</b>	<b>29.171</b>	<b>115.544</b>	<b>0.000</b>	<b>115.544</b>	<b>70.021</b>	<b>66.681</b>	<b>125.973</b>	<b>90.430</b>	<b>151.174</b>	<b>679.852</b>

*(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 Millions)	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The Chairman, Joint Chiefs of Staff directed a modernization effort based on the recommendation of the National Security Agency (NSA) to modernize equipment and provide enhanced security for tactical networks (Cryptographic Modernization (CM)). The F-16 Comm Suite Upgrade addresses these mandates by including CM, Mobile User Objective System (MUOS), second generation Anti-Jam Tactical UHF Radio for NATO (SATURN), a Cockpit Communication Control Panel (C3PO) and a Digital Comm Matrix (DCM). The Communication Suite Upgrade provides crypto modernization for MUOS tactical networks that enables increased interoperable communications and more secure command and control. Delaying procurement of the ARC-210 Gen 6 radio degrades secure communications and will not meet NSA mandates. Also, rebuilding military readiness and a more lethal force; impacts ability to field sufficient, capable forces to defeat enemies and achieve sustainable outcomes that protect the American people and our vital interests.

This funding request will support potential DMS and obsolescence solutions, to include, if optimal, life of type buys, or bridge buys limited to the program of record quantity. This funding request also supports flight testing and technical data updates, as required.

**Milestone/Development Status**

Continue NRE efforts. Milestone C completed December FY20. Procure Group B long-lead items and test assets. Pre-block installs start in FY21.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	20.968	16.796	75.389	-	75.389	24.016	41.777	104.888	61.800
AFNG									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	-	12.375	40.155	-	40.155	25.756	16.264	21.085	28.630
AFR									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	-	-	-	-	-	20.249	8.640	-	-
<b>Total: Secondary Distribution</b>									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	20.968	29.171	115.544	0.000	115.544	70.021	66.681	125.973	90.430

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>											<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2				<b>P-1 Line Item Number / Title:</b> F01600 / F-16				<b>Modification Number / Title:</b> 618250 / Comm Suite Upgrade				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B						<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> F-16				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207133F				
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>												
0207133F	- / 8.126	1 / 0.000	1 / 3.899	- / 0.171	- / -	- / 0.171	- / -	- / -	- / -	- / -	- / -	2 / 12.196
<b>Procurement</b>												
<b>Modification Item 1 of 1: Comm Suite MUOS</b>												
A Kits												
Recurring												
Comm Suite MUOS:INSTALL KITS Group A (Active)	- / -	- / -	- / -	6 / 0.256	- / -	6 / 0.256	35 / 1.496	93 / 3.977	127 / 5.429	52 / 2.223	208 / 8.892	521 / 22.273
Comm Suite MUOS:INSTALL KITS Group A (Guard)	- / -	- / -	33 / 1.410	93 / 3.976	- / -	93 / 3.976	29 / 1.240	31 / 1.325	43 / 1.838	58 / 2.480	34 / 1.453	321 / 13.722
Comm Suite MUOS:INSTALL KITS Group A (Reserve)	- / -	- / -	- / -	- / -	- / -	- / -	54 / 2.308	- / -	- / -	- / -	- / -	54 / 2.308
<b>Subtotal: Recurring</b>	- / -	- / -	- / 1.410	- / 4.232	- / -	- / 4.232	- / 5.044	- / 5.302	- / 7.267	- / 4.703	- / 10.345	- / 38.303
B Kits												
Recurring												
Comm Suite MUOS:EQUIPMENT Group B (Active)	- / -	- / -	- / -	6 / 1.994	- / -	6 / 1.994	35 / 11.629	93 / 30.899	127 / 42.196	52 / 17.277	208 / 69.108	521 / 173.103
Comm Suite MUOS:EQUIPMENT Group B (Guard)	- / -	- / -	33 / 10.965	93 / 30.899	- / -	93 / 30.899	29 / 9.636	31 / 10.299	43 / 14.287	58 / 19.270	34 / 11.297	321 / 106.653
Comm Suite MUOS:EQUIPMENT Group B (Reserve)	- / -	- / -	- / -	- / -	- / -	- / -	54 / 17.941	- / -	- / -	- / -	- / -	54 / 17.941
<b>Subtotal: Recurring</b>	- / -	- / -	- / 10.965	- / 32.893	- / -	- / 32.893	- / 39.206	- / 41.198	- / 56.483	- / 36.547	- / 80.405	- / 297.697
<b>Subtotal: Comm Suite MUOS</b>	- / -	- / -	- / 12.375	- / 37.125	- / -	- / 37.125	- / 44.250	- / 46.500	- / 63.750	- / 41.250	- / 90.750	- / 336.000
<b>Subtotal: Procurement, All Modification Items</b>	- / -	- / -	- / 12.375	- / 37.125	- / -	- / 37.125	- / 44.250	- / 46.500	- / 63.750	- / 41.250	- / 90.750	- / 336.000
<b>Support (All Modification Items)</b>												
OTHER GOVT	- / -	- / -	- / 16.796	- / 38.519	- / -	- / 38.519	- / 1.011	- / 0.500	- / 10.983	- / 14.150	- / 0.264	- / 82.223
SUPPORT-EQUIP	- / 9.890	- / 20.968	- / -	- / 34.620	- / -	- / 34.620	- / 8.920	- / 0.801	- / 31.400	- / 7.830	- / -	- / 114.429
<b>Subtotal: Support</b>	- / 9.890	- / 20.968	- / 16.796	- / 73.139	- / -	- / 73.139	- / 9.931	- / 1.301	- / 42.383	- / 21.980	- / 0.264	- / 196.652
<b>Installation</b>												
<b>Modification Item 1 of 1: Comm Suite MUOS</b>	- / -	- / -	- / -	33 / 5.280	- / -	33 / 5.280	99 / 15.840	118 / 18.880	124 / 19.840	170 / 27.200	352 / 60.160	896 / 147.200
<b>Subtotal: Installation</b>	- / -	- / -	- / -	33 / 5.280	- / -	33 / 5.280	99 / 15.840	118 / 18.880	124 / 19.840	170 / 27.200	352 / 60.160	896 / 147.200
<b>Total</b>												
<b>Total Cost (Procurement + Support + Installation)</b>	<b>9.890</b>	<b>20.968</b>	<b>29.171</b>	<b>115.544</b>	<b>0.000</b>	<b>115.544</b>	<b>70.021</b>	<b>66.681</b>	<b>125.973</b>	<b>90.430</b>	<b>151.174</b>	<b>679.852</b>

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01600 / F-16	<b>Modification Number / Title:</b> 618250 / Comm Suite Upgrade

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** Comm Suite MUOS

**Manufacturer Information**

Manufacturer Name: tbd	Manufacturer Location: tbd
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025
Delivery Dates		Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025	Mar 2026

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	33 / 5.280	- / -	33 / 5.280	- / -	- / -	- / -	- / -	- / -	33 / 5.280
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	99 / 15.840	- / -	- / -	- / -	- / -	99 / 15.840
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	118 / 18.880	- / -	- / -	- / -	118 / 18.880
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	124 / 19.840	- / -	- / -	124 / 19.840
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	170 / 27.200	- / -	170 / 27.200
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	110 / 17.600	110 / 17.600
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	242 / 42.560	242 / 42.560
Total	- / -	- / -	- / -	33 / 5.280	- / -	33 / 5.280	99 / 15.840	118 / 18.880	124 / 19.840	170 / 27.200	352 / 60.160	896 / 147.200

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	-	-	16	17	25	25	25	24	30	30	30	28	31	31	31	31	43	43	43	41	352	896
Out	0	-	-	-	-	-	-	-	-	-	-	-	16	17	25	25	25	24	30	30	30	28	31	31	31	31	43	43	43	393	896

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01600 / F-16	<b>Modification Number / Title:</b> 633031 / HFLCC AGCAS

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	13.118	14.060	18.153	20.807	0.000	20.807	17.577	1.906	0.000	0.000	-	85.621
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	13.118	14.060	18.153	20.807	0.000	20.807	17.577	1.906	0.000	0.000	-	85.621
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>13.118</b>	<b>14.060</b>	<b>18.153</b>	<b>20.807</b>	<b>0.000</b>	<b>20.807</b>	<b>17.577</b>	<b>1.906</b>	<b>0.000</b>	<b>0.000</b>	-	<b>85.621</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Hybrid Flight Control Computer (HFLCC) Auto Ground Collision Avoidance System (AGCAS) development and integration for aircraft prevents most controlled flight into terrain (CFIT) accidents using terrain database and prediction algorithms for aircraft trajectory recovery and executes an automated fly up maneuver to avoid collision.

This program also provides upgrades to F-16 aircraft to bring the entire fleet to a SCU 10 configuration. This SCU 10 baseline configuration enables each aircraft's flight control interoperability ensuring the proper functionality of the HFLCC when auto generating an aircraft fly-up.

This funding request will support potential DMS and obsolescence solutions, to include, if optimal, life of type buys, or bridge buys limited to the program of record quantity. This funding request also supports flight testing and technical data updates, as required. This safety modification directly supports the NDS through increasing warfighter readiness by safeguarding against aircrew losses.

**Milestone/Development Status:**

AFRL has completed HFLCC development with a fully qualified HFLCC still pending for the System Program Office to integrate hardware onto the platform. Milestone C has been approved. Major milestones in FY20 include beginning full rate production on Group B. Group B will field FY21.

**Milestone/Development Status**

AFRL has been funded to complete HFLCC development. HFLCC Development completion slipped by 1 year resulting in SPO program being forward funded. SPO program is executable with existing funding plan.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	7.249	11.432	10.962	-	10.962	6.674	1.444	-	-
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	5.273	4.840	7.898	-	7.898	8.881	0.462	-	-
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	1.538	1.881	1.947	-	1.947	2.022	-	-	-

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2			<b>P-1 Line Item Number / Title:</b> F01600 / F-16			<b>Modification Number / Title:</b> 633031 / HFLCC AGCAS				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B					<b>MDAP/MAIS Code:</b>					
<b>Secondary Distribution</b>		<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	14.060	18.153	20.807	0.000	20.807	17.577	1.906	0.000	0.000



**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date: February 2020</b>			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2					<b>P-1 Line Item Number / Title:</b> F01600 / F-16					<b>Modification Number / Title:</b> 633031 / HFLCC AGCAS			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> F-16				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207133F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0207133F	- / 1.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.200	
<b>Procurement</b>													
<b>Modification Item 1 of 2: COMMON: SCU upgrade</b>													
B Kits													
Recurring													
COMMON: SCU upgrade:EQUIPMENT Group B (Active)	12 / 3.867	11 / 1.131	11 / 1.039	15 / 1.575	- / -	15 / 1.575	30 / 2.315	- / -	- / -	- / -	- / -	79 / 9.927	
COMMON: SCU upgrade:EQUIPMENT Group B (Guard)	0 / 0.000	40 / 4.000	40 / 3.780	33 / 3.465	- / -	33 / 3.465	79 / 5.810	- / -	- / -	- / -	- / -	192 / 17.055	
COMMON: SCU upgrade:EQUIPMENT Group B (Reserve)	0 / 0.000	13 / 1.250	12 / 1.181	10 / 0.998	- / -	10 / 0.998	19 / 1.494	- / -	- / -	- / -	- / -	54 / 4.923	
<b>Subtotal: Recurring</b>	- / 3.867	- / 6.381	- / 6.000	- / 6.038	- / -	- / 6.038	- / 9.619	- / -	- / -	- / -	- / -	- / 31.905	
<b>Subtotal: COMMON: SCU upgrade</b>	- / 3.867	- / 6.381	- / 6.000	- / 6.038	- / -	- / 6.038	- / 9.619	- / -	- / -	- / -	- / -	- / 31.905	
<b>Modification Item 2 of 2: Install Kits Group A</b>													
A Kits													
Recurring													
Install Kits Group A:INSTALL KITS Group A (Active)	4 / 0.060	22 / 0.350	0 / 0.000	40 / 0.655	- / -	40 / 0.655	13 / 0.219	- / -	- / -	- / -	- / -	79 / 1.284	
Install Kits Group A:INSTALL KITS Group A (Guard)	36 / 0.556	80 / 1.273	0 / 0.000	66 / 1.082	- / -	66 / 1.082	10 / 0.168	- / -	- / -	- / -	- / -	192 / 3.079	
Install Kits Group A:INSTALL KITS Group A (Reserve)	24 / 0.370	18 / 0.288	0 / 0.000	12 / 0.196	- / -	12 / 0.196	- / -	- / -	- / -	- / -	- / -	54 / 0.854	
<b>Subtotal: Recurring</b>	- / 0.986	- / 1.911	- / 0.000	- / 1.933	- / -	- / 1.933	- / 0.387	- / -	- / -	- / -	- / -	- / 5.217	
<b>Subtotal: Install Kits Group A</b>	- / 0.986	- / 1.911	- / 0.000	- / 1.933	- / -	- / 1.933	- / 0.387	- / -	- / -	- / -	- / -	- / 5.217	
<b>Subtotal: Procurement, All Modification Items</b>	- / 4.853	- / 8.292	- / 6.000	- / 7.971	- / -	- / 7.971	- / 10.006	- / -	- / -	- / -	- / -	- / 37.122	
<b>Support (All Modification Items)</b>													
GROUP A: TOTAL NONRECURRING	- / -	- / -	- / 0.310	- / 0.412	- / -	- / 0.412	- / -	- / -	- / -	- / -	- / -	- / 0.722	
GROUP B: TOTAL NONRECURRING	- / 5.576	- / 4.952	- / 3.816	- / 0.519	- / -	- / 0.519	- / -	- / -	- / -	- / -	- / -	- / 14.863	
Change Orders	- / 0.952	- / 0.240	- / 5.459	- / 0.463	- / -	- / 0.463	- / 1.500	- / 0.844	- / -	- / -	- / -	- / 9.458	
OTHER GOVT	- / 1.737	- / 0.436	- / 0.808	- / 5.871	- / -	- / 5.871	- / 0.155	- / -	- / -	- / -	- / -	- / 9.007	
<b>Subtotal: Support</b>	- / 8.265	- / 5.628	- / 10.393	- / 7.265	- / -	- / 7.265	- / 1.655	- / 0.844	- / -	- / -	- / -	- / 34.050	
<b>Installation</b>													
<b>Modification Item 2 of 2: Install Kits Group A</b>	- / -	4 / 0.140	60 / 1.760	120 / 5.571	- / -	120 / 5.571	118 / 5.916	23 / 1.062	- / -	- / -	- / -	325 / 14.449	
<b>Subtotal: Installation</b>	- / -	4 / 0.140	60 / 1.760	120 / 5.571	- / -	120 / 5.571	118 / 5.916	23 / 1.062	- / -	- / -	- / -	325 / 14.449	
<b>Total</b>													

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force										<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2				<b>P-1 Line Item Number / Title:</b> F01600 / F-16						<b>Modification Number / Title:</b> 633031 / HFLCC AGCAS		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> F-16				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207133F				
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Total Cost (Procurement + Support + Installation)</b>	13.118	14.060	18.153	20.807	0.000	20.807	17.577	1.906	0.000	0.000	-	85.621

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2			<b>P-1 Line Item Number / Title:</b> F01600 / F-16			<b>Modification Number / Title:</b> 633031 / HFLCC AGCAS	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 1 of 2:</b> COMMON: SCU upgrade							
<b>Manufacturer Information</b>							
Manufacturer Name: N/A				Manufacturer Location: N/A			
Administrative Leadtime (in Months):				Production Leadtime (in Months):			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate						<b>Installation Quantity:</b> 0	

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01600 / F-16	<b>Modification Number / Title:</b> 633031 / HFLCC AGCAS
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 2 of 2:** Install Kits Group A

**Manufacturer Information**

Manufacturer Name: TBD	Manufacturer Location: Hill AFB
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Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 3
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Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	May 2019		May 2021	May 2022			
Delivery Dates	Aug 2019		Aug 2021	Aug 2022			

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	- / -	4 / 0.140	60 / 1.760	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	64 / 1.900
FY 2019	- / -	- / -	- / -	120 / 5.571	- / -	120 / 5.571	- / -	- / -	- / -	- / -	- / -	120 / 5.571
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	118 / 5.916	- / -	- / -	- / -	- / -	118 / 5.916
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	23 / 1.062	- / -	- / -	- / -	23 / 1.062
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	- / -	4 / 0.140	60 / 1.760	120 / 5.571	- / -	120 / 5.571	118 / 5.916	23 / 1.062	- / -	- / -	- / -	325 / 14.449

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	4	-	-	-	-	-	30	30	30	30	30	30	30	30	30	28	14	9	-	-	-	-	-	-	-	-	-	-	0	325
Out	0	-	4	-	-	-	-	-	30	30	30	30	30	30	30	30	30	28	14	9	-	-	-	-	-	-	-	-	-	0	325

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01600 / F-16	<b>Modification Number / Title:</b> 633032 / AIFF MODE 5

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	5.031	36.381	0.000	9.868	0.000	9.868	13.088	40.989	0.000	0.000	-	105.357
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	5.031	36.381	0.000	9.868	0.000	9.868	13.088	40.989	0.000	0.000	-	105.357
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>5.031</b>	<b>36.381</b>	<b>0.000</b>	<b>9.868</b>	<b>0.000</b>	<b>9.868</b>	<b>13.088</b>	<b>40.989</b>	<b>0.000</b>	<b>0.000</b>	-	<b>105.357</b>

*(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 Millions)	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Project 633032, F-16 AIFF Mode 5, changed from F-16 ADS-B Out.

AIFF/Mode 5 provides hardware and software/firmware update required to comply with DoD mandate for Advanced Identify Friend or Foe (IFF) Mode 5. Transponder upgrade program replaces/upgrades existing hardware with an AIFF Mode 5 capable system.

Advanced Identify Friend or Foe system (AIFF) provides positive identification for Air Traffic Control reporting, combat targeting, and fratricide prevention.

This program maps to the NDS by providing more secure command and control, which enable increased interoperable communications across the joint force. This critical communications capability generates a more lethal force to defeat enemies and achieve sustainable outcomes that protect the American people and vital US interests.

Milestone/Development Status: AIFF/Mode 5 development is RDT&E Contract award: Mar 2020; SDR: Jul 2020; PDR: Apr 2021

This funding request will support potential DMS and obsolescence solutions, to include, if optimal, life of type buys, or bridge buys limited to the program of record quantity. This funding request also supports flight testing and technical data updates, as required. Additionally, this funding will utilize existing hardware/software/firmware from the developed APX-125/APX-126 and re-host or integrate into the APX-12X.

Milestone/Development Status

AIFF/Mode 5 development is RDT&E. Development will begin Mar 2020.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	36.381	-	9.868	0.000	9.868	10.862	30.786	-	-
AFNG									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	-	-	-	-	-	1.113	10.203	-	-
AFR									
Quantity	-	-	-	-	-	-	-	-	-

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01600 / F-16	<b>Modification Number / Title:</b> 633032 / AIFF MODE 5
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**ID Code** (A=Service Ready, B=Not Service Ready) : B **MDAP/MAIS Code:**

<b>Secondary Distribution</b>	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Total Obligation Authority	-	-	-	-	-	1.113	-	-	-
<b>Total:</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	-	-	-	-	-	-	-	-	-
Total Obligation Authority	36.381	0.000	9.868	0.000	9.868	13.088	40.989	0.000	0.000

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2					<b>P-1 Line Item Number / Title:</b> F01600 / F-16					<b>Modification Number / Title:</b> 633032 / AIFF MODE 5			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> F-16				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207133F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> SCU 10 and APX-12X													
A Kits													
Recurring													
SCU 10 and APX-12X:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.587	30 / 12.204	- / -	- / -	- / -	34 / 13.791	
SCU 10 and APX-12X:INSTALL KITS Group A (Guard)	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.793	18 / 7.323	- / -	- / -	- / -	20 / 8.116	
SCU 10 and APX-12X:INSTALL KITS Group A (Reserve)	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.793	- / -	- / -	- / -	- / -	2 / 0.793	
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.173	- / 19.527	- / -	- / -	- / -	- / 22.700	
<i>Subtotal: SCU 10 and APX-12X</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.173	- / 19.527	- / -	- / -	- / -	- / 22.700	
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.173	- / 19.527	- / -	- / -	- / -	- / 22.700	
<b>Support (All Modification Items)</b>													
GROUP A: TOTAL NONRECURRING	- / 5.031	- / 36.381	- / -	- / 9.548	- / 0.000	- / 9.548	- / 8.635	- / 11.082	- / -	- / -	- / -	- / 70.677	
SUPPORT-EQUIP	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.180	- / -	- / -	- / -	- / 1.180	
OTHER GOVT	- / -	- / -	- / -	- / 0.320	- / -	- / 0.320	- / -	- / 1.520	- / -	- / -	- / -	- / 1.840	
<i>Subtotal: Support</i>	- / 5.031	- / 36.381	- / -	- / 9.868	- / 0.000	- / 9.868	- / 8.635	- / 13.782	- / -	- / -	- / -	- / 73.697	
<b>Installation</b>													
<i>Modification Item 1 of 1:</i> SCU 10 and APX-12X	- / -	- / -	- / -	- / -	- / -	- / -	8 / 1.280	48 / 7.680	- / -	- / -	- / -	56 / 8.960	
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	8 / 1.280	48 / 7.680	- / -	- / -	- / -	56 / 8.960	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>5.031</b>	<b>36.381</b>	<b>0.000</b>	<b>9.868</b>	<b>0.000</b>	<b>9.868</b>	<b>13.088</b>	<b>40.989</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>105.357</b>	

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01600 / F-16	<b>Modification Number / Title:</b> 633032 / AIFF MODE 5
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**ID Code** (A=Service Ready, B=Not Service Ready) : B **MDAP/MAIS Code:**

**Modification Item 1 of 1:** SCU 10 and APX-12X

**Manufacturer Information**

Manufacturer Name: BAE	Manufacturer Location: NewYork
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates				Oct 2021	Oct 2022		
Delivery Dates				Oct 2022	Oct 2023		

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	8 / 1.280	- / -	- / -	- / -	- / -	8 / 1.280
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	48 / 7.680	- / -	- / -	- / -	48 / 7.680
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	- / -	- / -	- / -	- / -	- / -	- / -	8 / 1.280	48 / 7.680	- / -	- / -	- / -	56 / 8.960

**Installation Schedule**

PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	16	16	16	-	-	-	-	-	-	-	-	0	56	
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	16	16	16	-	-	-	-	-	-	-	0	56	



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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01600 / F-16	<b>Modification Number / Title:</b> 661653 / MIDS-JTRS

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	120.454	176.661	1.469	11.093	0.000	11.093	0.000	0.000	-	-	-	309.677
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	120.454	176.661	1.469	11.093	0.000	11.093	0.000	0.000	-	-	-	309.677
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>120.454</b>	<b>176.661</b>	<b>1.469</b>	<b>11.093</b>	<b>0.000</b>	<b>11.093</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>309.677</b>

*(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 Millions)	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The Chairman, Joint Chiefs of Staff directed a modernization effort at the recommendation of the National Security Agency (NSA) to modernize equipment and provide enhanced security for Link 16 tactical networks (Cryptographic Modernization (CM)). Likewise, a radio frequency spectrum memorandum of agreement between the DoD and the Department of Transportation mandated the internal frequency remapping for our Link 16 family of terminals to avoid conflict with next generation Federal Aviation Administration radio aids to navigation. These two mandates will be satisfied by replacing existing Link 16 Multi- functional Information Distribution System (MIDS) Low Volume Terminals (LVT) with MIDS-Joint Tactical Radio System (JTRS) 4-channel concurrent multi-netting (CMN-4) terminals. MIDS-JTRS terminals will also improve the F-16 capability by providing higher data bandwidth, lower latency, and growth capability to ultimately incorporate secure, jam-resistant J-Voice and three growth slots which could host additional waveforms (Mobile User Objective System (MUOS), Integrated Broadcast Service (IBS), etc.). Also, the terminals will include Concurrent Contention Receive (CCR) capabilities, which are ACC requirements and critical to F-16 Link 16 network sustainability and capability. To fully enable MIDS-JTRS, a subset of Pre-Block F-16 aircraft require installation of Center Display Units.

This funding request will support potential DMS and obsolescence solutions, to include, if optimal, life of type buys, or bridge buys limited to the program of record quantity. This funding request also supports flight testing and technical data updates, as required.

**Milestone/Development Status**

The F-16 MIDS program has purchased the majority of required terminals and group-A kits. The remaining terminals and group-A will be purchased in the FY 2020. MIDS-J requires a fielding recommendation from the post block Combined Test Force (CTF) and fielding approval from System Program Manager (SPM), both actions scheduled to occur in 2QTR, FY20. The F-16 program is still on-track to meet the crypto modernization mandate.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	124.817	1.469	0.800	0.000	0.800	0.000	0.000	-	-
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	40.800	0.000	9.189	0.000	9.189	0.000	0.000	-	-
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	11.044	0.000	1.104	0.000	1.104	0.000	0.000	-	-
<b>Total:</b>	<b>Quantity</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force	<b>Date:</b> February 2020
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<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01600 / F-16	<b>Modification Number / Title:</b> 661653 / MIDS-JTRS
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Secondary Distribution	Total Obligation Authority	176.661	1.469	11.093	0.000	11.093	0.000	0.000	-	-

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2					<b>P-1 Line Item Number / Title:</b> F01600 / F-16					<b>Modification Number / Title:</b> 661653 / MIDS-JTRS			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> F-16				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207445F, 0207133F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0207133F	- / 10.000	- / 3.728	- / 2.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 16.228	
<b>Procurement</b>													
<b>Modification Item 1 of 2: MIDS</b>													
B Kits													
Recurring													
MIDS:EQUIPMENT Group B (Active)	- / -	48 / 10.864	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	48 / 10.864	
MIDS:EQUIPMENT Group B (Guard)	72 / 17.280	110 / 26.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	182 / 43.680	
MIDS:EQUIPMENT Group B (Reserve)	48 / 11.520	6 / 1.444	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	54 / 12.964	
<b>Subtotal: Recurring</b>	<b>- / 28.800</b>	<b>- / 38.708</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 67.508</b>	
<b>Subtotal: MIDS</b>	<b>- / 28.800</b>	<b>- / 38.708</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 67.508</b>	
<b>Modification Item 2 of 2: MIDS Terminals</b>													
B Kits													
Recurring													
MIDS Terminals:EQUIPMENT Group B (Active)	246 / 59.212	366 / 88.560	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	612 / 147.772	
MIDS Terminals:EQUIPMENT Group B (Guard)	- / -	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / 0.000	
MIDS Terminals:EQUIPMENT Group B (Reserve)	- / -	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / 0.000	
<b>Subtotal: Recurring</b>	<b>- / 59.212</b>	<b>- / 88.560</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 147.772</b>	
<b>Subtotal: MIDS Terminals</b>	<b>- / 59.212</b>	<b>- / 88.560</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 147.772</b>	
<b>Subtotal: Procurement, All Modification Items</b>	<b>- / 88.012</b>	<b>- / 127.268</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 215.280</b>	
<b>Support (All Modification Items)</b>													
GROUP A: TOTAL NONRECURRING	- / -	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / 0.000	
GROUP B: TOTAL NONRECURRING	- / -	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / 0.000	
SUPPORT-EQUIP	- / 30.527	- / 24.372	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 54.899	
Change Orders	- / 0.000	- / 0.000	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.000	
OTHER GOVT	- / 11.915	- / 11.021	- / 1.469	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / 14.405	
<b>Subtotal: Support</b>	<b>- / 32.442</b>	<b>- / 25.393</b>	<b>- / 1.469</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 59.304</b>	
<b>Installation</b>													
<b>Modification Item 1 of 2: MIDS</b>	<b>- / -</b>	<b>120 / 24.000</b>	<b>0 / 0.000</b>	<b>120 / 11.093</b>	<b>- / -</b>	<b>120 / 11.093</b>	<b>44 / 0.000</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>284 / 35.093</b>	
<b>Subtotal: Installation</b>	<b>- / -</b>	<b>120 / 24.000</b>	<b>0 / 0.000</b>	<b>120 / 11.093</b>	<b>- / -</b>	<b>120 / 11.093</b>	<b>44 / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>284 / 35.093</b>	
<b>Total</b>													

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01600 / F-16	<b>Modification Number / Title:</b> 661653 / MIDS-JTRS
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**ID Code** (A=Service Ready, B=Not Service Ready) : B **MDAP/MAIS Code:**

**Models of Systems Affected:** F-16 **Modification Type:** Capability Improvement **Related RDT&E PEs:** 0207445F, 0207133F

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Total Cost (Procurement + Support + Installation)</b>	120.454	176.661	1.469	11.093	0.000	11.093	0.000	0.000	-	-	-	309.677

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01600 / F-16	<b>Modification Number / Title:</b> 661653 / MIDS-JTRS

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 2:** MIDS

**Manufacturer Information**

Manufacturer Name: ViaSat and DLS	Manufacturer Location: Navy MPO, San Diego CA
Administrative Leadtime (in Months): 12	Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Mar 2020						
Delivery Dates	Mar 2021						

**Installation Information**

**Method of Implementation:** Depot Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	- / -	120 / 24.000	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	120 / 24.000
FY 2019	- / -	- / -	- / -	120 / 11.093	- / -	120 / 11.093	44 / 0.000	- / -	- / -	- / -	- / -	164 / 11.093
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	120 / 24.000	0 / 0.000	120 / 11.093	- / -	120 / 11.093	44 / 0.000	- / -	- / -	- / -	- / -	284 / 35.093

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	120	-	-	-	-	30	30	30	30	30	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	284
Out	0	-	-	-	-	-	30	30	30	30	30	30	30	30	30	14	-	-	-	-	-	-	-	-	-	-	-	-	-	0	284

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2			<b>P-1 Line Item Number / Title:</b> F01600 / F-16			<b>Modification Number / Title:</b> 661653 / MIDS-JTRS	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 2 of 2:</b> MIDS Terminals							
<b>Manufacturer Information</b>							
Manufacturer Name: ViaSat and DLS				Manufacturer Location: Navy MPO, San Diego CA			
Administrative Leadtime (in Months): 12				Production Leadtime (in Months): 12			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates	Mar 2020						
Delivery Dates	Mar 2021						
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 612		

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01600 / F-16	<b>Modification Number / Title:</b> 694050 / AESA Radars

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	270.638	0.000	175.890	269.893	0.000	269.893	317.629	286.141	173.049	178.221	0.000	1,671.461
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	270.638	0.000	175.890	269.893	0.000	269.893	317.629	286.141	173.049	178.221	0.000	1,671.461
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>270.638</b>	<b>0.000</b>	<b>175.890</b>	<b>269.893</b>	<b>0.000</b>	<b>269.893</b>	<b>317.629</b>	<b>286.141</b>	<b>173.049</b>	<b>178.221</b>	<b>0.000</b>	<b>1,671.461</b>

*(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 Millions)	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The purpose of the F-16 Active Electronically Scanned Array (AESA) Radar program is to procure, install and sustain AESA radars plus spares for the Air National Guard (ANG), Air Force Reserve, and the active duty Air Force F-16s, across all blocks of USAF F-16 aircraft (Block 30/32/40/42/40/50/52). The new AESA radar will replace the legacy mechanically-scanned AN/APG-68 radar. The key requirements are enhanced Air to Air capability and an expedited delivery schedule. It is imperative to operationally field the AESA radar in support of homeland defense against evolving threats.

The Joint Emergent Operational Need (JEON) requirement was issued in March 2015 and includes improved air-to-air detect and track in support of homeland defense performing the Aerospace Control Alert (ACA) mission. The initial acquisition of 72 radars and associated spares in FY17/18 reflects the JEON portion of this requirement. To facilitate the most expedient operational capability, the JEON integration will be accomplished via the 1553 legacy interface with minimal changes to the F-16 aircraft core Operational Flight Program (OFP) during Phase 1 of the F-16 AESA program. This also includes the purchase of Center Display Units (CDU), High-Speed Data Network (HSDN) components, Secure Transfer and Recording Systems (STaRS), and Remote Interface Panels (RIPs), which are derived requirements for full Phase III AESA functionality.

Subsequent AESA radar buys, beginning in 2QFY20 are to outfit 330 F-16's for the Combat Air Force (CAF) and ANG.

This funding request will support potential DMS and obsolescence solutions, to include, if optimal, life of type buys, or bridge buys limited to the program of record quantity. This funding request also supports flight testing and technical data updates, as required.

AESA Radar program will continue Phase III development efforts for full CDD radar development including flight testing and TO development

**Milestone/Development Status**

Fielding of the first 72 JEON radars commenced at Andrews AFB in 4QFY19 and Initial Operational Capability (IOC) readiness (8 APG-83 systems installed) was achieved 1QFY20. Milestone C/Full Rate

Production approval planned for 2QFY20 to support Phase III (330 radars) fielding beginning 3QFY21.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	-	-	-	-	-	-	-	-	-
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	-	103.459	267.646	-	267.646	317.629	203.648	143.443	177.204
AFNG	-	-	-	-	-	-	-	-	-
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	-	72.431	2.247	-	2.247	-	82.493	29.606	1.017
<b>Total:</b>	-	-	-	-	-	-	-	-	-

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force	<b>Date:</b> February 2020
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<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01600 / F-16	<b>Modification Number / Title:</b> 694050 / AESA Radars
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Secondary Distribution	Total Obligation Authority	0.000	175.890	269.893	0.000	269.893	317.629	286.141	173.049	178.221



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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2					<b>P-1 Line Item Number / Title:</b> F01600 / F-16					<b>Modification Number / Title:</b> 694050 / AESA Radars			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> F-16				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207133F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0207133F	12 / 95.960	- / 1.994	15 / 56.149	- / 38.842	- / -	- / 38.842	- / 41.982	- / 30.061	- / -	- / -	- / -	27 / 264.988	
<b>Procurement</b>													
<b>Modification Item 1 of 2: AESA JEON</b>													
B Kits													
Recurring													
AESA JEON:EQUIPMENT Group B (Guard)	72 / 166.658	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 166.658	
<i>Subtotal: Recurring</i>	- / 166.658	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 166.658	
<i>Subtotal: AESA JEON</i>	- / 166.658	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 166.658	
<b>Modification Item 2 of 2: AESA Radar</b>													
B Kits													
Recurring													
AESA Radar:EQUIPMENT Group B (Active)	- / -	- / -	26 / 63.873	71 / 171.421	- / -	71 / 171.421	83 / 200.431	41 / 99.477	34 / 81.696	- / -	- / -	255 / 616.898	
AESA Radar:EQUIPMENT Group B (Guard)	- / -	- / -	30 / 72.431	- / -	- / -	- / -	- / -	34 / 82.493	11 / 26.431	- / -	- / -	75 / 181.355	
<i>Subtotal: Recurring</i>	- / -	- / -	- / 136.304	- / 171.421	- / -	- / 171.421	- / 200.431	- / 181.970	- / 108.127	- / -	- / -	- / 798.253	
<i>Subtotal: AESA Radar</i>	- / -	- / -	- / 136.304	- / 171.421	- / -	- / 171.421	- / 200.431	- / 181.970	- / 108.127	- / -	- / -	- / 798.253	
<i>Subtotal: Procurement, All Modification Items</i>	- / 166.658	- / -	- / 136.304	- / 171.421	- / -	- / 171.421	- / 200.431	- / 181.970	- / 108.127	- / -	- / -	- / 964.911	
<b>Support (All Modification Items)</b>													
SUPPORT-EQUIP	273 / 42.864	- / -	- / 3.263	- / 3.353	- / -	- / 3.353	- / 3.444	- / -	- / -	- / 0.000	- / -	273 / 52.924	
Change Orders	- / 7.703	- / -	- / 2.998	- / 8.259	- / -	- / 8.259	- / 8.962	- / 4.837	- / 2.731	- / 2.500	- / -	- / 37.990	
OTHER GOVT	- / 123.200	- / -	- / 16.342	- / 36.342	- / -	- / 36.342	- / 45.448	- / 41.262	- / 24.518	- / 146.560	- / -	- / 333.672	
ICS-Labor	- / 5.372	- / -	- / -	- / 10.334	- / -	- / 10.334	- / 1.259	- / 1.955	- / 1.670	- / 1.500	- / -	- / 12.090	
Mod of Spares	- / 17.040	- / -	- / 16.983	- / 45.990	- / -	- / 45.990	- / 53.780	- / 48.820	- / 29.000	- / 23.500	- / -	- / 235.113	
<i>Subtotal: Support</i>	273 / 96.179	- / -	- / 39.586	- / 94.278	- / -	- / 94.278	- / 112.893	- / 96.874	- / 57.919	- / 174.060	- / -	273 / 671.789	
<b>Installation</b>													
<b>Modification Item 1 of 2: AESA JEON</b>	72 / 7.801	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 7.801	
<b>Modification Item 2 of 2: AESA Radar</b>	- / -	- / -	- / -	56 / 4.194	- / -	56 / 4.194	71 / 4.305	83 / 7.297	75 / 7.003	45 / 4.161	- / -	330 / 26.960	
<i>Subtotal: Installation</i>	72 / 7.801	- / -	- / -	56 / 4.194	- / -	56 / 4.194	71 / 4.305	83 / 7.297	75 / 7.003	45 / 4.161	- / -	402 / 34.761	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>270.638</b>	<b>0.000</b>	<b>175.890</b>	<b>269.893</b>	<b>0.000</b>	<b>269.893</b>	<b>317.629</b>	<b>286.141</b>	<b>173.049</b>	<b>178.221</b>	<b>0.000</b>	<b>1,671.461</b>	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01600 / F-16	<b>Modification Number / Title:</b> 694050 / AESA Radars

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 2:** AESA JEON

**Manufacturer Information**

Manufacturer Name: Northrup-Grumman	Manufacturer Location: Baltimore, Maryland
Administrative Leadtime (in Months): 1	Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024	
Delivery Dates		Jan 2021	Jan 2022	Jan 2023	Jan 2024	Jan 2025	

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	72 / 7.801	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 7.801
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	72 / 7.801	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 7.801

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	3	9	9	9	9	9	9	9	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	72
Out	0	-	-	-	-	3	9	9	9	9	9	9	9	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	72

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**Exhibit P-3a, Individual Modification: PB 2021 Air Force** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01600 / F-16	<b>Modification Number / Title:</b> 694050 / AESA Radars
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**ID Code** (A=Service Ready, B=Not Service Ready) : B **MDAP/MAIS Code:**

**Modification Item 2 of 2:** AESA Radar

**Manufacturer Information**

Manufacturer Name: Northrup-Grumman Manufacturer Location: Baltimore, Maryland

Administrative Leadtime (in Months): 1 Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Jun 2020	Jun 2021	Jun 2022	Jun 2023	Jun 2024	
Delivery Dates		Jun 2021	Jun 2022	Jun 2023	Jun 2024	Jun 2025	

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	56 / 4.194	- / -	56 / 4.194	- / -	- / -	- / -	- / -	- / -	56 / 4.194
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	71 / 4.305	- / -	- / -	- / -	- / -	71 / 4.305
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	83 / 7.297	- / -	- / -	- / -	83 / 7.297
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	75 / 7.003	- / -	- / -	75 / 7.003
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	45 / 4.161	- / -	45 / 4.161
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	- / -	- / -	- / -	56 / 4.194	- / -	56 / 4.194	71 / 4.305	83 / 7.297	75 / 7.003	45 / 4.161	- / -	330 / 26.960

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	-	-	27	29	18	18	18	17	21	21	21	20	18	18	18	21	12	12	12	9	0	330
Out	0	-	-	-	-	-	-	-	-	-	-	-	27	29	18	18	18	17	21	21	21	20	18	18	18	21	12	12	12	9	330

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01600 / F-16	<b>Modification Number / Title:</b> 704050 / Digital Radar Warning Receiver (RWR)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	0.000	0.000	0.000	28.187	0.000	28.187	61.709	74.235	96.875	203.798	77.908	542.712
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	0.000	0.000	0.000	28.187	0.000	28.187	61.709	74.235	96.875	203.798	77.908	542.712
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>28.187</b>	<b>0.000</b>	<b>28.187</b>	<b>61.709</b>	<b>74.235</b>	<b>96.875</b>	<b>203.798</b>	<b>77.908</b>	<b>542.712</b>
<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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This program, P-3A Mod 704050, Digital Radar Warning Receiver (RWR), is a new start. This program replaces legacy analog radar warning receivers (RWR: ALR-69 and ALR-56M) on the fleet of F-16 aircraft. Installation of the Digital RWR will improve threat detection fidelity resulting in increased F-16 aircraft survivability and integration with future F-16 modifications (i.e. AESA). The DRWR modification will be a depot-level modification/installation. Group A and Group B kit procurement will vary to accommodate an ALR-69, ALR-56M and potentially other aircraft configurations. Initial spares will be required for Group A and Group B kits. All Group A and Group B includes the necessary components for millimeter wave (mmW) capability. Support equipment software updates and hardware will be required, including a new Fiber Maintenance Cleaning and Inspection Kit. Contractor support is required throughout the effort. Because of potential variation in Group A modification requirements and installation schedules among C and D-models across 8 aircraft block configurations, the quantity and unit cost of kit procurement and hardware installation will differ from year to year depending on the mix of aircraft involved.

This program includes execution of RF compatibility (RFC) effort with associated systems.

This program includes a risk mitigation effort which is executing a Section 804 Rapid Fielding effort to evaluate next-gen electronic warfare options that meet the DRWR requirements.

This funding request will support potential DMS and obsolescence solutions, to include, if optimal, life of type buys, or bridge buys limited to the program of record quantity. This funding request also supports flight testing and technical data updates, as required.

**Milestone/Development Status**

Milestone C approval planned for FY21. Plan to initiate integration efforts for Digital Radar Warning Receiver in FY18 (through FY23) for Group A Hardware, Group B Hardware and software updates. A total of 20 Group A and B kits will be procured and installed in the EMD phase to complete all integration activities through Kit Proof. Six (6) Trial Verification/Vehicle Installations (TVI) and 14 Kit Proofs. Once each Kit Proof configuration is successfully completed, production buys and installs will commence for each configuration.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	
AF	Quantity	-	-	-	-	-	-	-	-	
	Total Obligation Authority	-	0.000	2.980	0.000	2.980	8.306	27.448	31.055	25.590
AFNG	Quantity	-	-	-	-	-	-	-	-	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01600 / F-16	<b>Modification Number / Title:</b> 704050 / Digital Radar Warning Receiver (RWR)

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

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
	Total Obligation Authority	-	-	25.207	-	25.207	53.403	46.787	65.820	178.208
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>0.000</b>	<b>0.000</b>	<b>28.187</b>	<b>0.000</b>	<b>28.187</b>	<b>61.709</b>	<b>74.235</b>	<b>96.875</b>	<b>203.798</b>

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2					<b>P-1 Line Item Number / Title:</b> F01600 / F-16					<b>Modification Number / Title:</b> 704050 / Digital Radar Warning Receiver (RWR)				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>							
<b>Models of Systems Affected:</b> F-16				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207133F						
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>														
0207133F	6 / 43.563	14 / 32.719	- / 0.001	- / 75.481	- / -	- / 75.481	- / 63.348	- / -	- / -	- / -	- / -	20 / 215.112		
<b>Procurement</b>														
<b>Modification Item 1 of 1:</b> Digital RWR														
A Kits														
Recurring														
Digital RWR:INSTALL KITS Group A (Guard)	- / -	- / -	- / -	29 / 8.057	- / -	29 / 8.057	45 / 15.746	41 / 12.085	56 / 17.001	120 / 51.343	9 / 2.901	300 / 107.133		
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / 8.057	- / -	- / 8.057	- / 15.746	- / 12.085	- / 17.001	- / 51.343	- / 2.901	- / 107.133		
B Kits														
Recurring														
Digital RWR:EQUIPMENT Group B (Guard)	- / -	- / -	- / -	29 / 17.150	- / -	29 / 17.150	45 / 31.492	41 / 25.723	56 / 36.187	120 / 106.886	9 / 2.901	300 / 220.339		
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / 17.150	- / -	- / 17.150	- / 31.492	- / 25.723	- / 36.187	- / 106.886	- / 2.901	- / 220.339		
<i>Subtotal: Digital RWR</i>	- / -	- / -	- / -	- / 25.207	- / -	- / 25.207	- / 47.238	- / 37.808	- / 53.188	- / 158.229	- / 5.802	- / 327.472		
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / -	- / -	- / 25.207	- / -	- / 25.207	- / 47.238	- / 37.808	- / 53.188	- / 158.229	- / 5.802	- / 327.472		
<b>Support (All Modification Items)</b>														
GROUP A: TOTAL NONRECURRING	- / -	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000		
GROUP B: TOTAL NONRECURRING	- / -	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000		
Change Orders	- / -	- / -	- / -	- / 0.464	- / -	- / 0.464	- / 2.025	- / 19.111	- / 23.031	- / 23.715	- / 33.348	- / 101.694		
OTHER GOVT	- / -	- / -	- / -	- / 2.516	- / -	- / 2.516	- / 6.281	- / 8.337	- / 8.024	- / 11.875	- / 15.908	- / 42.941		
<i>Subtotal: Support</i>	- / -	- / -	- / 0.000	- / 2.980	- / 0.000	- / 2.980	- / 8.306	- / 27.448	- / 31.055	- / 25.590	- / 49.256	- / 144.635		
<b>Installation</b>														
<b>Modification Item 1 of 1:</b> Digital RWR	- / -	- / -	- / -	- / -	- / -	- / -	29 / 6.165	45 / 8.979	41 / 12.632	56 / 19.979	129 / 22.850	300 / 70.605		
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	29 / 6.165	45 / 8.979	41 / 12.632	56 / 19.979	129 / 22.850	300 / 70.605		
<b>Total</b>														
<b>Total Cost (Procurement + Support + Installation)</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>28.187</b>	<b>0.000</b>	<b>28.187</b>	<b>61.709</b>	<b>74.235</b>	<b>96.875</b>	<b>203.798</b>	<b>77.908</b>	<b>542.712</b>		

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01600 / F-16	<b>Modification Number / Title:</b> 704050 / Digital Radar Warning Receiver (RWR)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** Digital RWR

**Manufacturer Information**

Manufacturer Name: Raytheon	Manufacturer Location: Mississippi
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 14

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025
Delivery Dates			May 2022	May 2023	May 2024	May 2025	May 2026

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	29 / 6.165	- / -	- / -	- / -	- / -	29 / 6.165
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	45 / 8.979	- / -	- / -	- / -	45 / 8.979
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	41 / 12.632	- / -	- / -	41 / 12.632
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	56 / 19.979	- / -	56 / 19.979
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	120 / 20.579	120 / 20.579
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 2.271	9 / 2.271
Total	- / -	- / -	- / -	- / -	- / -	- / -	29 / 6.165	45 / 8.979	41 / 12.632	56 / 19.979	129 / 22.850	300 / 70.605

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	-	-	-	-	7	7	7	8	11	11	11	12	10	10	10	11	14	14	14	14	129	300
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	7	7	7	8	11	11	11	12	10	10	10	11	14	14	14	143	300

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01600 / F-16	<b>Modification Number / Title:</b> 866250 / F-16 TRAINING SYSTEMS

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	11.649	4.320	6.302	42.746	0.000	42.746	6.492	3.091	5.007	7.132	0.000	86.739
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	11.649	4.320	6.302	42.746	0.000	42.746	6.492	3.091	5.007	7.132	0.000	86.739
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>11.649</b>	<b>4.320</b>	<b>6.302</b>	<b>42.746</b>	<b>0.000</b>	<b>42.746</b>	<b>6.492</b>	<b>3.091</b>	<b>5.007</b>	<b>7.132</b>	<b>0.000</b>	<b>86.739</b>

*(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 Millions)	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The F-16 Simulators Training Program (STP) simulators, which includes Weapon Systems Trainers (WST) and Unit Training Devices (UTD), Mission Training Centers (MTC), and Consolidated Unit-level Trainer (CUT). Which enable the USAF to exercise and train using the latest available F-16 Fighting Falcon capabilities available to all block configurations, while reducing the overall cost of training Armed Forces in support of the warfighter mission. In order to maintain concurrency with the F-16 Fighting Falcon, this funding supports the fielding and installation of simulator modifications (i.e. trainer unique/specific modifications such as Image Generators, upgraded visual projectors enhancing the out-the-window visual acuity, and hardware modifications supporting future Operational Flight Program (OFP) upgrades). Distributed Mission Systems (DMS) efforts to include removal of end-of-life software/hardware within simulators systems and move to a modular, common open system architecture that is sustainable and cyber-resilient. Implement requirements and standards defined under the Simulator Common Architecture Requirements and Standards (SCARS) initiative. This funding also includes other government costs and PMA.

CUTs are medium-high fidelity training systems that facilitate F-16 CCIP Block 40/42 and 50/52 personnel training at all levels. A CUT consolidates the Weapons and Tactics Trainer (WTT) Advanced Sustainment Program (WASP) & Aircrew Training Device (ATD) requirements while utilizing the MTC software baseline, so we are not duplicating upgrades; therefore, it shall have high-fidelity software. The CUT shall be capable of operating in a distributed training environment. This includes accurately modeling all F-16 weapon systems, subsystems, and ordnance. The Program will further acquire Contractor Logistic Support (CLS) to maintain the CUTs in a fully operational status and concurrent configuration. The CUT shall be capable of operating in a distributed training environment. This includes accurately modeling all F-16 weapon systems, subsystems, and ordnance. The Program will further acquire CLS to maintain the CUTs in a fully operational status and concurrent configuration.

This funding request will support potential DMS and obsolescence solutions, to include, if optimal, life of type buys or bridge buys limited to the program of record quantity.

Continue to provide funding for M Series OFP updates to the MTC which includes support from the 40th Test Evaluation Squadron.

**Milestone/Development Status**

The development of F-16 simulators upgrades will be a continual process based on the needs of each effort. Some efforts require RDT&E funding for development, testing and integration; while other efforts require funding for only testing and integration.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	4.320	6.302	42.746	-	42.746	6.492	3.091	5.007	7.132
<b>Total:</b>	-	-	-	-	-	-	-	-	-



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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force	<b>Date:</b> February 2020
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<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01600 / F-16	<b>Modification Number / Title:</b> 866250 / F-16 TRAINING SYSTEMS
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Secondary Distribution	Total Obligation Authority	4.320	6.302	42.746	0.000	42.746	6.492	3.091	5.007	7.132

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2					<b>P-1 Line Item Number / Title:</b> F01600 / F-16					<b>Modification Number / Title:</b> 866250 / F-16 TRAINING SYSTEMS			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> F-16				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207133F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0207133F	- / 6.574	- / 2.030	- / 14.594	- / 4.475	- / -	- / 4.475	- / 17.809	- / 18.039	- / 18.343	- / 17.416	- / -	- / 99.280	
<b>Procurement</b>													
<b>Modification Item 1 of 2: Consolidated Unit Trainer (CUT)</b>													
B Kits													
Recurring													
Consolidated Unit Trainer (CUT):EQUIPMENT Group B (Active)	- / -	- / -	- / -	39 / 39.946	- / -	39 / 39.946	- / -	- / -	- / -	- / -	- / -	39 / 39.946	
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / 39.946	- / -	- / 39.946	- / -	- / -	- / -	- / -	- / -	- / 39.946	
<i>Subtotal: Consolidated Unit Trainer (CUT)</i>	- / -	- / -	- / -	- / 39.946	- / -	- / 39.946	- / -	- / -	- / -	- / -	- / -	- / 39.946	
<b>Modification Item 2 of 2: Trainer/Simulator kits</b>													
B Kits													
Recurring													
Trainer/Simulator kits:EQUIPMENT Group B (Active)	21 / 11.649	5 / 4.320	5 / 6.302	5 / 2.800	- / -	5 / 2.800	5 / 6.492	5 / 3.091	5 / 5.007	5 / 7.132	- / -	56 / 46.793	
<i>Subtotal: Recurring</i>	- / 11.649	- / 4.320	- / 6.302	- / 2.800	- / -	- / 2.800	- / 6.492	- / 3.091	- / 5.007	- / 7.132	- / -	- / 46.793	
<i>Subtotal: Trainer/Simulator kits</i>	- / 11.649	- / 4.320	- / 6.302	- / 2.800	- / -	- / 2.800	- / 6.492	- / 3.091	- / 5.007	- / 7.132	- / -	- / 46.793	
<i>Subtotal: Procurement, All Modification Items</i>	- / 11.649	- / 4.320	- / 6.302	- / 42.746	- / -	- / 42.746	- / 6.492	- / 3.091	- / 5.007	- / 7.132	- / -	- / 86.739	
<b>Installation</b>													
<b>Modification Item 1 of 2: Consolidated Unit Trainer (CUT)</b>													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	39 / 0.000	- / -	39 / 0.000	- / -	- / -	- / -	- / -	- / -	39 / 0.000	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	11.649	4.320	6.302	42.746	0.000	42.746	6.492	3.091	5.007	7.132	0.000	86.739	

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F01600 / F-16	<b>Modification Number / Title:</b> 866250 / F-16 TRAINING SYSTEMS
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**ID Code** (A=Service Ready, B=Not Service Ready) : B **MDAP/MAIS Code:**

**Modification Item 1 of 2:** Consolidated Unit Trainer (CUT)

**Manufacturer Information**

Manufacturer Name: L3 Communications	Manufacturer Location: Arlington, TX
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 7

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jan 2019	Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024	Jan 2025
Delivery Dates	Aug 2019	Aug 2020	Aug 2021	Aug 2022	Aug 2023	Aug 2024	Aug 2025

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	39 / 0.000	- / -	39 / 0.000	- / -	- / -	- / -	- / -	- / -	39 / 0.000
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	39 / 0.000	- / -	39 / 0.000	- / -	- / -	- / -	- / -	- / -	39 / 0.000

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	39
Out	0	-	-	-	-	-	-	-	-	-	-	39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	39

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2			<b>P-1 Line Item Number / Title:</b> F01600 / F-16			<b>Modification Number / Title:</b> 866250 / F-16 TRAINING SYSTEMS	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 2 of 2:</b> Trainer/Simulator kits							
<b>Manufacturer Information</b>							
Manufacturer Name: L3 Communications				Manufacturer Location: Arlington, Tx			
Administrative Leadtime (in Months): 3				Production Leadtime (in Months): 12			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates	Jun 2019	Jun 2020	Jun 2021	Jun 2022	Jun 2023	Jun 2024	Jan 2025
Delivery Dates	Jun 2020	Jun 2021	Jun 2022	Jun 2023	Jun 2024	Jun 2025	Jan 2026
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 56		

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	<b>P-1 Line Item Number / Title:</b> F0160P / F-16
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ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0207133F	Other Related Program Elements: N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	0.000	0.011	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	0.011
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	0.000	0.011	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	0.011
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>0.000</b>	<b>0.011</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>0.011</b>

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

**Description:**

F-16 Support

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	<b>P-1 Line Item Number / Title:</b> F02200 / F-22A
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0207138F	Other Related Program Elements: 0207138F
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	2,731.323	264.135	323.597	387.905	-	387.905	534.315	598.508	602.063	659.924	4,495.937	10,597.707
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	7.500	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	7.500
Net Procurement (P-1) ( <i>\$ in Millions</i> )	2,731.323	256.635	323.597	387.905	-	387.905	534.315	598.508	602.063	659.924	4,495.937	10,590.207
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	7.500	-	-	-	-	-	-	-	-	-	-	7.500
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>2,738.823</b>	<b>256.635</b>	<b>323.597</b>	<b>387.905</b>	<b>-</b>	<b>387.905</b>	<b>534.315</b>	<b>598.508</b>	<b>602.063</b>	<b>659.924</b>	<b>4,495.937</b>	<b>10,597.707</b>

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

**Description:**

The F-22 Raptor provides air superiority to the Joint Force; access in the highly contested operational environment; as well as, homeland and cruise missile defense for the next 40+ years. The F-22 is the first operational multi-mission fighter aircraft that combines stealth, supercruise, maneuverability and integrated avionics to make it the world's most capable combat aircraft. The F-22 is currently in the post-production operations phase of its acquisition lifecycle and therefore utilizes an acquisition strategy of balanced modernization and sustainment to maintain its asymmetric war fighting advantage. F-22 modernization and sustainment programs invest in upgrades to the air vehicle, engine, and training systems to improve F-22 weapons, communications, and Intelligence Surveillance Reconnaissance (ISR) capabilities.

The F-22 Raptor's Modernization Development is conducted using a rapid acquisition construct leveraging commercial best practices such as Agile and Lean. This allows the F-22 Raptor program to develop, test, and field software/hardware from multiple programs (product lines) using a scheduled cadence for capabilities as they mature. The F-22 Raptor program's utilization of these commercial best practices during production activities will allow for concurrent installations of mature Group A and Group B hardware of multiple product lines, delivering warfighter capabilities to the field earlier than under historical acquisition practices.

Funds may be used to resolve emerging safety of flight and diminishing manufacturing sources issues, accommodate technology insertion and fulfill Federal Aviation Administration (FAA) or other mandates necessary to ensure continued aircrew safety and mission effectiveness.

Funding for the exhibit contained in Program (PE) 0207138F.

The FY 2021 funding request was reduced by \$32.203M million to account for the availability of prior year execution balances.

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 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF Quantity	-	-	-	-	-	-	-	-	-

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Air Force							<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft					<b>P-1 Line Item Number / Title:</b> F02200 / F-22A					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A			<b>Program Elements for Code B Items:</b> 0207138F			<b>Other Related Program Elements:</b> 0207138F				
<b>Line Item MDAP/MAIS Code:</b> N/A										

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
	Total Obligation Authority	247.488	311.111	377.744	-	377.744	524.168	588.774	587.896	648.643
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	16.647	12.486	10.161	-	10.161	10.147	9.734	14.167	11.281
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>264.135</b>	<b>323.597</b>	<b>387.905</b>	-	<b>387.905</b>	<b>534.315</b>	<b>598.508</b>	<b>602.063</b>	<b>659.924</b>



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**Exhibit P-40, Budget Line Item Justification: PB 2021 Air Force** **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft

**P-1 Line Item Number / Title:**  
F02200 / F-22A

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0207138F **Other Related Program Elements:** 0207138F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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***	F22001 / COMMON CONFIGURATION (Capability Improvement)				- / 669.208	- / -	- / -	- / -	- / -	- / -
P-40a***	F22003 / INCREMENT 3.1 (Capability Improvement)				- / 252.649	- / 7.500	- / -	- / -	- / -	- / -
P-40a***	F22014 / F119 Engine Modifications (Other)				- / 82.092	- / 1.186	- / 2.541	- / 4.971	- / -	- / 4.971
P-40a***	F22022 / Structures Retrofit Plan (Service Life Extension)				- / 272.398	- / 2.836	- / 0.000	- / -	- / -	- / -
P-40a***	F22024 / Trainers Modernization (Safety)				- / 90.346	- / 3.455	- / 13.724	- / 2.489	- / -	- / 2.489
P-40a***	F22030 / Mode 5 Identification Friend or Foe (IFF) (Capability Improvement)				- / -	- / 13.713	- / -	- / -	- / -	- / -
P-40a***	F22031 / Mid-Life Updates (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	F22034 / Navigation Systems Hardware (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	F22035 / Pylon (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / Reliability and Maintainability Program (Reliability & Maintainability)		A		- / 1,360.926	- / 123.329	- / 74.547	- / 89.446	- / 0.000	- / 89.446
P-3a	2 / Link 16 (Capability Improvement)		A		- / 0.000	- / 103.700	- / 77.600	- / 147.340	- / 0.000	- / 147.340
P-3a	3 / Crypto Modernization (Capability Improvement)		A		- / 3.704	- / 8.416	- / 3.305	- / 6.069	- / 0.000	- / 6.069
P-3a	4 / Sensor Enhancement (Capability Improvement)		B		- / -	- / -	- / 151.880	- / 137.590	- / 0.000	- / 137.590
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 2,731.323</b>	<b>- / 264.135</b>	<b>- / 323.597</b>	<b>- / 387.905</b>	<b>- / -</b>	<b>- / 387.905</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	F22001 / COMMON CONFIGURATION (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 669.208
P-40a***	F22003 / INCREMENT 3.1 (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 260.149
P-40a***	F22014 / F119 Engine Modifications (Other)				- / 4.755	- / 1.516	- / 14.508	- / 25.311	- / -	- / 136.880
P-40a***	F22022 / Structures Retrofit Plan (Service Life Extension)				- / -	- / -	- / -	- / -	- / -	- / 275.234
P-40a***	F22024 / Trainers Modernization (Safety)				- / 2.681	- / 2.481	- / 2.481	- / 3.426	- / -	- / 121.083
P-40a***	F22030 / Mode 5 Identification Friend or Foe (IFF) (Capability Improvement)				- / 0.000	- / 28.037	- / 29.462	- / 43.603	- / 44.182	- / 158.997
P-40a***	F22031 / Mid-Life Updates (Capability Improvement)				- / -	- / -	- / -	- / -	- / 3,755.420	- / 3,755.420
P-40a***	F22034 / Navigation Systems Hardware (Capability Improvement)				- / -	- / 27.388	- / 30.100	- / 54.436	- / 0.000	- / 111.924
P-40a***	F22035 / Pylon (Capability Improvement)				- / -	- / -	- / 30.630	- / 55.210	- / -	- / 85.840
P-3a	1 / Reliability and Maintainability Program (Reliability & Maintainability)		A		- / 89.807	- / 87.180	- / 92.015	- / 97.238	- / -	- / 2,014.488
P-3a	2 / Link 16 (Capability Improvement)		A		- / 139.900	- / 28.023	- / 9.100	- / -	- / -	- / 505.663
P-3a	3 / Crypto Modernization (Capability Improvement)		A		- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / 21.494
P-3a	4 / Sensor Enhancement (Capability Improvement)		B		- / 297.172	- / 423.883	- / 393.767	- / 380.700	- / 696.335	- / 2,481.327
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 534.315</b>	<b>- / 598.508</b>	<b>- / 602.063</b>	<b>- / 659.924</b>	<b>- / 4,495.937</b>	<b>- / 10,597.707</b>

\*\*\* Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft		<b>P-1 Line Item Number / Title:</b> F02200 / F-22A
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> 0207138F	<b>Other Related Program Elements:</b> 0207138F
<b>Line Item MDAP/MAIS Code:</b> N/A		
*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:**

Where applicable, justification for individual modifications is provided in the P-3a exhibits.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F02200 / F-22A	<b>Modification Number / Title:</b> 1 / Reliability and Maintainability Program

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	1,360.926	123.329	74.547	89.446	0.000	89.446	89.807	87.180	92.015	97.238	-	2,014.488
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	1,360.926	123.329	74.547	89.446	0.000	89.446	89.807	87.180	92.015	97.238	-	2,014.488
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>1,360.926</b>	<b>123.329</b>	<b>74.547</b>	<b>89.446</b>	<b>0.000</b>	<b>89.446</b>	<b>89.807</b>	<b>87.180</b>	<b>92.015</b>	<b>97.238</b>	-	<b>2,014.488</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Reliability, Availability, and Maintainability Program (RAMP) provides solution identification and integration of modifications to improve reliability, availability and maintainability (RAM) for the F-22 fleet. The associated RAMP efforts (O&S funded) develop candidate initiatives, which are down-selected by Air Combat Command, for implementation based on development maturity and impact on the F-22 life cycle costs.

The RAMP program includes funding for retrofit installation labor, modifications to address corrosion, reduce maintenance hours, increase safety and provide urgent response requirements identified by the user to the F-22 fleet. Urgent response requirements are quick demand requirements addressing safety or air superiority, ensuring the warfighter and the weapon system are operating as intended. RAMP funds may be used to resolve emerging safety of flight and diminishing manufacturing sources issues, accommodate technology insertion and fulfill Federal Aviation Administration requirements or other mandates necessary to ensure continued aircrew safety and mission effectiveness. RAMP modifications currently include individual projects, totaling over 9,600 kits, which are retrofitted onto aircraft based on aircraft downtime opportunities.

In FY 2021, RAMP kit procurement and installation will continue on projects such as: Core Processing Software (CORE32) which replaces 1st generation fiber optic segments per CIP backplane, improving backplane fiber reliability; Low Observable (LO) Mighty Tough Boot, which replaces less durable boot material and leads to an estimated 3% increase in aircraft reliability; replacement of CNI AAI Cables, eliminating all direct maintenance on cable assembly; Very High Frequency (VHF) Antenna which includes a updated antenna design allowing for the retrofit of a updated antenna core, modified spar design, and leading edge. All RAMP retrofit kits, to include those not listed, have a component level improvement metric and contributes to the overall reliability, availability, maintainability and safety improvements of the F-22.

Kit installations are completed at either the depot or by a contractor field team depending on the complexity of the installation effort and scheduled aircraft downtime opportunities. Quantities are based on an assumed maturity of the solution identification and are subject to change over time. The average cost per kit varies based on planned retrofit kits in a given year and the complexity of the materials and labor required to integrate and install on the fleet. Funding levels for the RAMP program from FY 2019 to FY 2020+ have declined in an effort to support increased flying hours, allow for the integrations of new capabilities (Increment 3.2B, Link 16, Update 6, etc.) on the F-22 fleet, while minimizing aircraft down-time.

RAMP Mod funds may be used for mission support costs to include, but not limited to, travel, computer costs, and other miscellaneous contract support.

**Milestone/Development Status**

The solution identification effort provides for the non-recurring engineering efforts associated with future retrofit projects that increase Reliability, Availability, and Maintainability of the aircraft through the FYDP. As these projects are tested and qualified, they are implemented via the retrofit program.

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F02200 / F-22A	<b>Modification Number / Title:</b> 1 / Reliability and Maintainability Program
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**ID Code** (A=Service Ready, B=Not Service Ready) : A **MDAP/MAIS Code:**

	<b>Secondary Distribution</b>	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	107.613	62.348	80.678	-	80.678	80.819	77.618	80.417	86.177
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	15.716	12.199	8.768	-	8.768	8.988	9.562	11.598	11.061
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>123.329</b>	<b>74.547</b>	<b>89.446</b>	<b>0.000</b>	<b>89.446</b>	<b>89.807</b>	<b>87.180</b>	<b>92.015</b>	<b>97.238</b>

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>											<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2				<b>P-1 Line Item Number / Title:</b> F02200 / F-22A				<b>Modification Number / Title:</b> 1 / Reliability and Maintainability Program				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A						<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> F-22			<b>Modification Type:</b> Reliability & Maintainability				<b>Related RDT&amp;E PEs:</b> 0207138F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>												
<i>Modification Item 1 of 1:</i> RAMP Kits												
B Kits												
Recurring												
RAMP Kits:EQUIPMENT Group B (Active)	7,743 / 700.380	900 / 41.625	527 / 21.552	691 / 30.530	- / -	691 / 30.530	712 / 28.558	853 / 31.135	1,203 / 39.686	1,045 / 51.737	- / -	13,674 / 945.203
RAMP Kits:EQUIPMENT Group B (Guard)	1,157 / 66.745	141 / 5.158	76 / 2.773	98 / 3.579	- / -	98 / 3.579	101 / 3.678	109 / 3.991	165 / 6.042	143 / 7.153	- / -	1,990 / 99.119
<i>Subtotal: Recurring</i>	- / 767.125	- / 46.783	- / 24.325	- / 34.109	- / -	- / 34.109	- / 32.236	- / 35.126	- / 45.728	- / 58.890	- / -	- / 1,044.322
<i>Subtotal: RAMP Kits</i>	- / 767.125	- / 46.783	- / 24.325	- / 34.109	- / -	- / 34.109	- / 32.236	- / 35.126	- / 45.728	- / 58.890	- / -	- / 1,044.322
<i>Subtotal: Procurement, All Modification Items</i>	- / 767.125	- / 46.783	- / 24.325	- / 34.109	- / -	- / 34.109	- / 32.236	- / 35.126	- / 45.728	- / 58.890	- / -	- / 1,044.322
<b>Support (All Modification Items)</b>												
OTHER GOVT	- / 35.755	- / 6.626	- / 5.733	- / 5.468	- / -	- / 5.468	- / 6.589	- / 5.927	- / 5.974	- / 6.021	- / -	- / 78.093
<i>Subtotal: Support</i>	- / 35.755	- / 6.626	- / 5.733	- / 5.468	- / -	- / 5.468	- / 6.589	- / 5.927	- / 5.974	- / 6.021	- / -	- / 78.093
<b>Installation</b>												
<i>Modification Item 1 of 1:</i> RAMP Kits	8,900 / 558.046	1,041 / 69.920	603 / 44.489	789 / 49.869	- / -	789 / 49.869	813 / 50.982	962 / 46.127	1,368 / 40.313	1,188 / 32.327	- / -	15,664 / 892.073
<i>Subtotal: Installation</i>	8,900 / 558.046	1,041 / 69.920	603 / 44.489	789 / 49.869	- / -	789 / 49.869	813 / 50.982	962 / 46.127	1,368 / 40.313	1,188 / 32.327	- / -	15,664 / 892.073
<b>Total</b>												
<b>Total Cost (Procurement + Support + Installation)</b>	<b>1,360.926</b>	<b>123.329</b>	<b>74.547</b>	<b>89.446</b>	<b>0.000</b>	<b>89.446</b>	<b>89.807</b>	<b>87.180</b>	<b>92.015</b>	<b>97.238</b>	<b>-</b>	<b>2,014.488</b>

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification: PB 2021 Air Force** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F02200 / F-22A	<b>Modification Number / Title:</b> 1 / Reliability and Maintainability Program
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** RAMP Kits

**Manufacturer Information**

Manufacturer Name: Lockheed Martin	Manufacturer Location: Hill AFB
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 0

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jan 2019	Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024	Jan 2025
Delivery Dates	Jan 2019	Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024	Jan 2025

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	1,367 / 68.347	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1,367 / 68.347
FY 2019	- / -	360 / 24.070	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	360 / 24.070
FY 2020	- / -	- / -	211 / 6.640	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	211 / 6.640
FY 2021	- / -	- / -	- / -	276 / 16.377	- / -	276 / 16.377	- / -	- / -	- / -	- / -	- / -	276 / 16.377
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	285 / 13.783	- / -	- / -	- / -	- / -	285 / 13.783
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	341 / 12.687	- / -	- / -	- / -	341 / 12.687
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	481 / 14.089	- / -	- / -	481 / 14.089
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	416 / 11.370	- / -	416 / 11.370
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1,367 / 68.347	360 / 24.070	211 / 6.640	276 / 16.377	- / -	276 / 16.377	285 / 13.783	341 / 12.687	481 / 14.089	416 / 11.370	- / -	3,737 / 167.363

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	1,367	90	90	90	90	52	52	52	55	69	69	69	69	71	71	71	72	85	85	85	86	120	120	120	121	104	104	104	104	0	3,737
Out	1,367	90	90	90	90	52	52	52	55	69	69	69	69	71	71	71	72	85	85	85	86	120	120	120	121	104	104	104	104	0	3,737

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	7,533 / 489.699	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7,533 / 489.699

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2		<b>P-1 Line Item Number / Title:</b> F02200 / F-22A
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A		<b>MDAP/MAIS Code:</b>

**Modification Item 1 of 1:** RAMP Kits

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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)
FY 2019	- / -	681 / 45.850	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	681 / 45.850
FY 2020	- / -	- / -	392 / 37.849	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	392 / 37.849
FY 2021	- / -	- / -	- / -	513 / 33.492	- / -	513 / 33.492	- / -	- / -	- / -	- / -	- / -	513 / 33.492
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	528 / 37.199	- / -	- / -	- / -	- / -	528 / 37.199
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	621 / 33.440	- / -	- / -	- / -	621 / 33.440
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	887 / 26.224	- / -	- / -	887 / 26.224
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	772 / 20.957	- / -	772 / 20.957
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	7,533 / 489.699	681 / 45.850	392 / 37.849	513 / 33.492	- / -	513 / 33.492	528 / 37.199	621 / 33.440	887 / 26.224	772 / 20.957	- / -	11,927 / 724.710

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	7,533	170	170	170	171	98	98	98	98	128	128	128	129	132	132	132	132	155	155	155	156	221	221	221	224	193	193	193	193	0	11,927
Out	7,533	170	170	170	171	98	98	98	98	128	128	128	129	132	132	132	132	155	155	155	156	221	221	221	224	193	193	193	193	0	11,927

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F02200 / F-22A	<b>Modification Number / Title:</b> 2 / Link 16

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	103.700	77.600	147.340	0.000	147.340	139.900	28.023	9.100	-	-	505.663
Less PY Advance Procurement (\$ in Millions)	-	0.000	-	-	-	-	-	-	-	-	-	0.000
Net Procurement (P-1) (\$ in Millions)	0.000	103.700	77.600	147.340	0.000	147.340	139.900	28.023	9.100	-	-	505.663
Plus CY Advance Procurement (\$ in Millions)	0.000	-	-	-	-	-	-	-	-	-	-	0.000
<b>Total Obligation Authority (\$ in Millions)</b>	<b>0.000</b>	<b>103.700</b>	<b>77.600</b>	<b>147.340</b>	<b>0.000</b>	<b>147.340</b>	<b>139.900</b>	<b>28.023</b>	<b>9.100</b>	<b>-</b>	<b>-</b>	<b>505.663</b>

*(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 Millions)	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The Link 16 modification was formally known as TACLink 16.

As a part of the F-22 Capability Pipeline and through Section 804 Middle Tier Acquisition authority, this effort will procure the hardware and installation necessary to field Link 16 Transmit capability on the F-22 Raptor. Link 16 capabilities will be fielded on all Block 30 /35 F-22 aircraft. Link 16 transmit will be fielded via Multi-functional Information Distribution Service Joint Tactical Radio System (MIDS JTRS). Legacy Link 16 receive capabilities will be re-hosted to the MIDS JTRS. Link 16 capabilities will be enabled by Open System Architecture (OSA). Procurement of an OSA system, MIDS JTRS, L-band antennas, and other supporting hardware are required to enable Link 16 capabilities.

Link 16 will begin fielding installs in Q1 FY 2022 and continue through FY 2024. This hardware delivery includes mission support requirements and other government costs to include, but not limited to, support equipment, specialized test equipment, long-lead sets, and initial spares. Funds may be used to resolve emerging safety of flight and diminishing manufacturing sources issues, accommodate technology insertion and fulfill FAA or other mandates necessary to ensure continued aircrew safety and mission effectiveness.

The F-22 Raptor's Modernization Development is conducted using a rapid acquisition construct leveraging commercial best practices such as Agile and Lean. This allows the F-22 Raptor program to develop, test, and field software/hardware from multiple programs (product lines) using a scheduled cadence for capabilities as they mature. The F-22 Raptor program's utilization of these commercial best practices during production activities will allow for concurrent installations of mature Group A and Group B hardware of multiple product lines, delivering war fighter capabilities to the field earlier than under historical acquisition practices.

FY20 \$14.3M mark against Link 16 is not captured. Planned FY20 execution is \$63.3M for Link 16.

**Milestone/Development Status**

Development is continuing. Software has been integrated onto production representative hardware and testing is in progress in system-level labs. Developmental flight test will begin in 2nd quarter FY 2020. A production decision was approved in 4th quarter FY 2019.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	103.700	77.600	147.340	-	147.340	139.900	28.023	9.100	-



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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F02200 / F-22A	<b>Modification Number / Title:</b> 2 / Link 16
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**ID Code** (A=Service Ready, B=Not Service Ready) : A **MDAP/MAIS Code:**

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
<b>Total:</b>	Quantity	-	-	-	-	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	103.700	77.600	147.340	0.000	147.340	139.900	28.023	9.100	-

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F02200 / F-22A	<b>Modification Number / Title:</b> 2 / Link 16

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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<b>Models of Systems Affected:</b> F-22	<b>Modification Type:</b> Capability Improvement	<b>Related RDT&amp;E PEs:</b> 0207138F
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Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>												
<i>Modification Item 1 of 1:</i> Link 16												
B Kits												
Recurring												
Link 16:EQUIPMENT Group B (Active)	- / -	24 / 97.610	15 / 63.300	50 / 126.800	- / -	50 / 126.800	53 / 117.640	0 / 0.000	- / -	- / -	- / -	142 / 405.350
<i>Subtotal: Recurring</i>	- / -	- / 97.610	- / 63.300	- / 126.800	- / -	- / 126.800	- / 117.640	- / 0.000	- / -	- / -	- / -	- / 405.350
<i>Subtotal: Link 16</i>	- / -	- / 97.610	- / 63.300	- / 126.800	- / -	- / 126.800	- / 117.640	- / 0.000	- / -	- / -	- / -	- / 405.350
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / 97.610	- / 63.300	- / 126.800	- / -	- / 126.800	- / 117.640	- / 0.000	- / -	- / -	- / -	- / 405.350

<b>Support (All Modification Items)</b>												
Change Orders	- / -	- / 0.000	- / 14.300 <sup>(1)</sup>	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / -	- / -	- / 14.300
OTHER GOVT	- / -	- / 6.090	- / -	- / 17.340	- / -	- / 17.340	- / 17.860	- / 13.123	- / 6.650	- / -	- / -	- / 41.063
<i>Subtotal: Support</i>	- / -	- / 6.090	- / 14.300	- / 17.340	- / -	- / 17.340	- / 17.860	- / 13.123	- / 6.650	- / -	- / -	- / 55.363

<b>Installation</b>												
<i>Modification Item 1 of 1:</i> Link 16	- / -	- / -	- / -	39 / 13.200	- / -	39 / 13.200	50 / 14.400	46 / 14.900	7 / 2.450	- / -	- / -	142 / 44.950
<i>Subtotal: Installation</i>	- / -	- / -	- / -	39 / 13.200	- / -	39 / 13.200	50 / 14.400	46 / 14.900	7 / 2.450	- / -	- / -	142 / 44.950

<b>Total</b>												
<b>Total Cost (Procurement + Support + Installation)</b>	<b>0.000</b>	<b>103.700</b>	<b>77.600</b>	<b>147.340</b>	<b>0.000</b>	<b>147.340</b>	<b>139.900</b>	<b>28.023</b>	<b>9.100</b>	<b>-</b>	<b>-</b>	<b>505.663</b>

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F02200 / F-22A	<b>Modification Number / Title:</b> 2 / Link 16

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** Link 16

**Manufacturer Information**

Manufacturer Name: Lockheed Martin	Manufacturer Location: Ft. Worth, TX
Administrative Leadtime (in Months): 8	Production Leadtime (in Months): 13

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jun 2019	Jun 2020	Jun 2021	Jun 2022	Jun 2023		
Delivery Dates	Jul 2020	Jul 2021	Jul 2022	Jul 2023	Jul 2024		

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	- / -	- / -	- / -	- / -	- / -	0 / 0.000
FY 2019	- / -	- / -	- / -	24 / 8.160	- / -	24 / 8.160	- / -	- / -	- / -	- / -	- / -	24 / 8.160
FY 2020	- / -	- / -	- / -	15 / 5.040	- / -	15 / 5.040	- / -	- / -	- / -	- / -	- / -	15 / 5.040
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	50 / 14.400	- / -	- / -	- / -	- / -	50 / 14.400
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 14.900	7 / 2.450	- / -	- / -	53 / 17.350
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	39 / 13.200	- / -	39 / 13.200	50 / 14.400	46 / 14.900	7 / 2.450	- / -	- / -	142 / 44.950

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	0	0	0	0	9	10	10	10	10	13	13	14	12	12	15	14	-	-	-	-	0	142
Out	0	-	-	-	-	-	-	-	-	0	0	0	0	9	10	10	10	10	13	13	14	12	12	15	14	-	-	-	-	0	142

**Footnotes:**  
<sup>(1)</sup> \$14.3M mark against Link 16 in FY20 is not captured. Mark funding allocated as "ECO" to balance. Planned FY20 execution for Link 16 is \$63.3M.

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F02200 / F-22A	<b>Modification Number / Title:</b> 3 / Crypto Modernization
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**ID Code** (A=Service Ready, B=Not Service Ready) : A **MDAP/MAIS Code:**

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	3.704	8.416	3.305	6.069	0.000	6.069	0.000	0.000	0.000	-	-	21.494
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	3.704	8.416	3.305	6.069	0.000	6.069	0.000	0.000	0.000	-	-	21.494
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>3.704</b>	<b>8.416</b>	<b>3.305</b>	<b>6.069</b>	<b>0.000</b>	<b>6.069</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	-	-	<b>21.494</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Funding for the Crypto Modernization procurement will upgrade and install KOV-20/KSR-60 cryptographic module firmware on the F-22 fleet. Kit installation will be performed by contract field teams beginning in FY 2020.

Quantities include seven (7) kits per aircraft and the necessary modifications to the existing rotatable pool of spares in inventory.

Crypto Modernization funds may be used for mission support costs to include, but not limited to, travel, computer costs, and other miscellaneous contract support.

**Milestone/Development Status**

Development of the KOV-20/KSR module is ongoing and will complete as part of Update 6 interoperability.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	8.416	3.305	6.069	-	6.069	-	-	-
<b>Total: Secondary Distribution</b>	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	8.416	3.305	6.069	0.000	6.069	0.000	0.000	0.000

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2					<b>P-1 Line Item Number / Title:</b> F02200 / F-22A					<b>Modification Number / Title:</b> 3 / Crypto Modernization			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> F-22				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207138F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1: Crypto Modification</i>													
A Kits													
Recurring													
Crypto Modification:INSTALL KITS Group A (Active)	720 / 0.753	243 / 1.019	341 / 1.428	634 / 2.654	- / -	634 / 2.654	- / -	- / -	- / -	- / -	- / -	1,938 / 5.854	
Crypto Modification:INSTALL KITS Group A (Guard)	100 / 0.029	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	100 / 0.029	
<i>Subtotal: Recurring</i>	- / 0.782	- / 1.019	- / 1.428	- / 2.654	- / -	- / 2.654	- / -	- / -	- / -	- / -	- / -	- / 5.883	
<i>Subtotal: Crypto Modification</i>	- / 0.782	- / 1.019	- / 1.428	- / 2.654	- / -	- / 2.654	- / -	- / -	- / -	- / -	- / -	- / 5.883	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.782	- / 1.019	- / 1.428	- / 2.654	- / -	- / 2.654	- / -	- / -	- / -	- / -	- / -	- / 5.883	
<b>Support (All Modification Items)</b>													
GROUP A: TOTAL NONRECURRING	- / -	- / 1.149	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.149	
Mod of Spares	- / -	207 / 0.748	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	207 / 0.748	
OTHER GOVT	- / 0.048	- / 0.200	- / 0.200	- / 0.300	- / -	- / 0.300	- / -	- / -	- / -	- / -	- / -	- / 0.748	
<i>Subtotal: Support</i>	- / 0.048	207 / 2.097	- / 0.200	- / 0.300	- / -	- / 0.300	- / -	- / -	- / -	- / -	- / -	207 / 2.645	
<b>Installation</b>													
<i>Modification Item 1 of 1: Crypto Modification</i>	820 / 2.874	243 / 5.300	341 / 1.677	634 / 3.115	- / -	634 / 3.115	- / -	- / -	- / -	- / -	- / -	2,038 / 12.966	
<i>Subtotal: Installation</i>	820 / 2.874	243 / 5.300	341 / 1.677	634 / 3.115	- / -	634 / 3.115	- / -	- / -	- / -	- / -	- / -	2,038 / 12.966	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>3.704</b>	<b>8.416</b>	<b>3.305</b>	<b>6.069</b>	<b>0.000</b>	<b>6.069</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>21.494</b>	

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F02200 / F-22A	<b>Modification Number / Title:</b> 3 / Crypto Modernization
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**ID Code** (A=Service Ready, B=Not Service Ready) : A **MDAP/MAIS Code:**

**Modification Item 1 of 1:** Crypto Modification

**Manufacturer Information**

Manufacturer Name: Undetermined	Manufacturer Location: Undetermined
Administrative Leadtime (in Months): 4	Production Leadtime (in Months): 2

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Feb 2020	Feb 2020	Oct 2020				
Delivery Dates	Apr 2020	Apr 2020	Dec 2020				

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	820 / 2.874	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	820 / 2.874
FY 2019	- / -	243 / 5.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	243 / 5.300
FY 2020	- / -	- / -	341 / 1.677	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	341 / 1.677
FY 2021	- / -	- / -	- / -	634 / 3.115	- / -	634 / 3.115	- / -	- / -	- / -	- / -	- / -	634 / 3.115
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	820 / 2.874	243 / 5.300	341 / 1.677	634 / 3.115	- / -	634 / 3.115	- / -	- / -	- / -	- / -	- / -	2,038 / 12.966

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	820	0	0	0	0	0	0	252	252	182	203	154	175	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	2,038
Out	820	0	0	0	0	0	0	252	252	182	203	154	175	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	2,038

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F02200 / F-22A	<b>Modification Number / Title:</b> 4 / Sensor Enhancement

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	-	-	151.880	137.590	0.000	137.590	297.172	423.883	393.767	380.700	696.335	2,481.327
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	-	151.880	137.590	0.000	137.590	297.172	423.883	393.767	380.700	696.335	2,481.327
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	-	-	<b>151.880</b>	<b>137.590</b>	<b>0.000</b>	<b>137.590</b>	<b>297.172</b>	<b>423.883</b>	<b>393.767</b>	<b>380.700</b>	<b>696.335</b>	<b>2,481.327</b>

*(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 Millions)	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

As a part of the F-22 Capability Pipeline and through Section 804 Middle Tier Acquisition authority, Sensor Enhancements provides improved sensor capabilities to Block 30/35 F-22 aircraft to maintain air dominance and preserve first shot, first kill capability. Funding includes 143 kits, installation, and spares.

The F-22 Raptor's Modernization Development is conducted using a rapid acquisition construct leveraging commercial best practices such as Agile and Lean. This allows the F-22 Raptor program to develop, test, and field software/hardware from multiple programs (product lines) using a scheduled cadence for capabilities as they mature. The F-22 Raptor program's utilization of these commercial best practices during production activities will allow for concurrent installations of mature Group A and Group B hardware of multiple product lines, delivering warfighter capabilities to the field earlier than under historical acquisition practices.

Sensor Enhancement Mod funds may be used for mission support costs to include, but not limited to, travel, computer costs, and other miscellaneous contract support.

FY20 \$50M mark and \$50M transfer were not captured. Planned FY20 execution is \$51.7M for Sensor's Enhancements.

**Milestone/Development Status**

Technology development and demonstration efforts continue for Sensor Enhancements. Enabling Group A kits purchased in FY 2020 to deliver in Q4 FY 2021, while Sensor Enhancements Group B development will mature through FY 2021 culminating in a flight test demonstration late in the FY. A subsequent production decision for Group B hardware will occur in FY 2021.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	-	151.880	137.590	-	137.590	297.172	423.883	393.767	380.700
<b>Total:</b>									
<b>Secondary Distribution</b>									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	-	151.880	137.590	0.000	137.590	297.172	423.883	393.767	380.700

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>											<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2				<b>P-1 Line Item Number / Title:</b> F02200 / F-22A				<b>Modification Number / Title:</b> 4 / Sensor Enhancement				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B						<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> F-22			<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207138F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>												
0207138F	- / -	- / -	- / 69.000	- / 248.823	- / -	- / 248.823	- / -	- / -	- / -	- / -	- / -	- / 1317.823
<b>Procurement</b>												
<b>Modification Item 1 of 1: Sensor Enhancements</b>												
A Kits												
Recurring												
Sensor Enhancements:INSTALL KITS Group A (Active)	- / -	- / -	12 / 47.972	12 / 42.180	- / -	12 / 42.180	24 / 86.250	24 / 89.090	24 / 91.590	24 / 94.090	23 / 92.640	143 / 543.812
<i>Subtotal: Recurring</i>	- / -	- / -	- / 47.972	- / 42.180	- / -	- / 42.180	- / 86.250	- / 89.090	- / 91.590	- / 94.090	- / 92.640	- / 543.812
B Kits												
Recurring												
Sensor Enhancements:EQUIPMENT Group B (Active)	- / -	- / -	- / -	6 / 88.810	- / -	6 / 88.810	18 / 205.340	24 / 309.760	24 / 286.570	24 / 274.780	47 / 558.900	143 / 1,724.160
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / 88.810	- / -	- / 88.810	- / 205.340	- / 309.760	- / 286.570	- / 274.780	- / 558.900	- / 1,724.160
<i>Subtotal: Sensor Enhancements</i>	- / -	- / -	- / 47.972	- / 130.990	- / -	- / 130.990	- / 291.590	- / 398.850	- / 378.160	- / 368.870	- / 651.540	- / 2,267.972
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / -	- / 47.972	- / 130.990	- / -	- / 130.990	- / 291.590	- / 398.850	- / 378.160	- / 368.870	- / 651.540	- / 2,267.972
<b>Support (All Modification Items)</b>												
OTHER GOVT	- / -	- / -	- / 3.908	- / 6.600	- / -	- / 6.600	- / -	- / 8.000	- / -	- / -	- / -	- / 18.508
Data	- / -	- / -	- / -	- / -	- / -	- / -	- / 12.312	- / 13.683	- / 8.707	- / 4.740	- / 22.395	- / 51.837
Change Orders	- / -	- / -	- / 100.000 (2)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 100.000
<i>Subtotal: Support</i>	- / -	- / -	- / 103.908	- / 6.600	- / -	- / 6.600	- / 12.312	- / 21.683	- / 8.707	- / 4.740	- / 22.395	- / 170.345
<b>Installation</b>												
<b>Modification Item 1 of 1: Sensor Enhancements</b>	- / -	- / -	- / -	- / -	- / -	- / -	12 / 3.270	12 / 3.350	24 / 6.900	24 / 7.090	71 / 22.400	143 / 43.010
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	12 / 3.270	12 / 3.350	24 / 6.900	24 / 7.090	71 / 22.400	143 / 43.010
<b>Total</b>												
<b>Total Cost (Procurement + Support + Installation)</b>	-	-	151.880	137.590	0.000	137.590	297.172	423.883	393.767	380.700	696.335	2,481.327



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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F02200 / F-22A	<b>Modification Number / Title:</b> 4 / Sensor Enhancement
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** Sensor Enhancements

**Manufacturer Information**

Manufacturer Name: Lockheed Martin	Manufacturer Location: Ft. Worth, TX
Administrative Leadtime (in Months): 9	Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Jul 2020	Jul 2021	Jul 2022	Jul 2023	Jul 2024	Jul 2025
Delivery Dates		Jul 2021	Jul 2022	Jul 2023	Jul 2024	Jul 2025	Jul 2026

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	12 / 3.270	- / -	- / -	- / -	- / -	12 / 3.270
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 3.350	- / -	- / -	- / -	12 / 3.350
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 6.900	- / -	- / -	24 / 6.900
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 7.090	- / -	24 / 7.090
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 7.290	24 / 7.290
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 7.570	24 / 7.570
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	23 / 7.540	23 / 7.540
Total	- / -	- / -	- / -	- / -	- / -	- / -	12 / 3.270	12 / 3.350	24 / 6.900	24 / 7.090	71 / 22.400	143 / 43.010

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	0	0	0	0	0	0	0	0	3	3	3	3	3	3	3	3	6	6	6	6	6	6	6	6	71	143
Out	0	-	-	-	-	0	0	0	0	0	0	0	0	3	3	3	3	3	3	3	3	6	6	6	6	6	6	6	6	71	143

**Footnotes:**  
<sup>(2)</sup> FY20 \$50M mark and \$50M transfer to RDT&E (\$100M total) were not captured. \$100M allocated as "ECO" to balance. FY20 planned execution is \$51.7M for Sensor Enhancements.

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	<b>P-1 Line Item Number / Title:</b> F03500 / F-35 Modifications
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B	<b>Program Elements for Code B Items:</b> 0207142F	<b>Other Related Program Elements:</b> 0604800F, 0604840F
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**Line Item MDAP/MAIS Code:** 198

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	594.204	237.271	329.590	322.185	-	322.185	160.759	163.997	167.241	170.652	0.000	2,145.899
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	594.204	237.271	329.590	322.185	-	322.185	160.759	163.997	167.241	170.652	0.000	2,145.899
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>594.204</b>	<b>237.271</b>	<b>329.590</b>	<b>322.185</b>	<b>-</b>	<b>322.185</b>	<b>160.759</b>	<b>163.997</b>	<b>167.241</b>	<b>170.652</b>	<b>0.000</b>	<b>2,145.899</b>

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

**Description:**

The F-35 Joint Strike Fighter (JSF) Program will develop and deploy a family of highly common, affordable, next generation, stealthy, multi-role strike fighters that meet the needs of multiple services and countries. The United States Air Force F-35A Conventional Take Off and Landing (CTOL) line item funds modifications and retrofits to the F-35A aircraft and integrated air systems. The overall effort provides correction of deficiencies, near and long term improvements to the fleet, focusing on documented deficiencies related to safety, maintainability, and aircraft systems. These modifications and selected component changes are accomplished by field and depot retrofit.

In order to meet emerging deficiencies and capability upgrades, the airframe and integrated air systems must be modified as critical corrections/changes are identified. Funds will be used to manage, prepare, process and incorporate modifications to sustain and improve F-35A system operations. Concurrency changes are implemented to coincide with resources and aircraft availability.

Block upgrades provide more robust performance in navigation, weapons, avionics, survivability, maneuverability, maintainability, and mission deployment of the F-35A platform. This modification program will bring early production aircraft and integrated systems to a common fleet configuration as fielded capabilities evolve over the course of the F-35 program.

The modification funding requested in FY21 enables several distinct efforts pertaining to the USAF F-35A aircraft to include post aircraft delivery concurrency retrofits, to correct deficiencies, the Block 4 upgrade of hardware and software to a Lot 17 production configuration, and Structural Life Limited Group 2 (SLLP2) upgrades.

**DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES**

The Block 3F modifications and retrofits program will complete its final aircraft inductions by September 2020.

2021 will begin Non-recurring engineering retrofit efforts to implement Lot 15 and 16 Block 4 capabilities.

The overlap of development with production and operations results in the need to manage a correction of deficiencies program and conduct retrofits on aircraft with life-limited parts or impacts to capabilities.

Funding for this exhibit contained in PE 0207142F.

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**Exhibit P-40, Budget Line Item Justification: PB 2021 Air Force** **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft

**P-1 Line Item Number / Title:**  
F03500 / F-35 Modifications

**ID Code** (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** 0207142F **Other Related Program Elements:** 0604800F, 0604840F

**Line Item MDAP/MAIS Code:** 198

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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	1 / Block 3i LRIP 2-5 Upgrade (Capability Improvement)		B		- / 206.518	- / 2.117	- / 8.171	- / 0.000	- / 0.000	- / 0.000
P-3a	2 / Block 3F LRIP 2-5 Upgrade (Capability Improvement)		B		- / 7.336	- / 2.005	- / 0.250	- / 0.000	- / 0.000	- / 0.000
P-3a	3 / Block 3F LRIP 6-8 Upgrade (Capability Improvement)		B		- / 0.056	- / 0.000	- / 2.800	- / 0.000	- / 0.000	- / 0.000
P-3a	4 / Concurrency (Other)		B		- / 380.294	- / 233.149	- / 206.324	- / 154.330	- / 0.000	- / 154.330
P-3a	5 / Correction of Deficiencies (Reliability & Maintainability)		B		- / 0.000	- / 0.000	- / 98.045	- / 126.855	- / 0.000	- / 126.855
P-3a	6 / Block 4 Modifications (Capability Improvement)		B		- / -	- / -	- / 14.000	- / 41.000	- / 0.000	- / 41.000
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 594.204</b>	<b>- / 237.271</b>	<b>- / 329.590</b>	<b>- / 322.185</b>	<b>- / -</b>	<b>- / 322.185</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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	1 / Block 3i LRIP 2-5 Upgrade (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 216.806
P-3a	2 / Block 3F LRIP 2-5 Upgrade (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 9.591
P-3a	3 / Block 3F LRIP 6-8 Upgrade (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 2.856
P-3a	4 / Concurrency (Other)		B		- / 35.880	- / 0.000	- / 0.000	- / 0.000	- / -	- / 1,009.977
P-3a	5 / Correction of Deficiencies (Reliability & Maintainability)		B		- / 121.639	- / 163.997	- / 167.241	- / 170.652	- / 0.000	- / 848.429
P-3a	6 / Block 4 Modifications (Capability Improvement)		B		- / 3.240	- / 0.000	- / 0.000	- / 0.000	- / -	- / 58.240
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 160.759</b>	<b>- / 163.997</b>	<b>- / 167.241</b>	<b>- / 170.652</b>	<b>- / 0.000</b>	<b>- / 2,145.899</b>

\*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:**  
Basis for FY 2021 budget request. F-35A Total Active Inventory is 282 aircraft based on production lots 1-12. FY 2021 funding increases across the FYDP for kits to support Structural Life Limited Parts Group 2 (SLLP2) start of incremental modification efforts to a Block 4 configuration, correction of deficiencies, propulsion, reliability and maintainability modifications in support of global F-35A operations.

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force	<b>Date:</b> February 2020
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<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F03500 / F-35 Modifications	<b>Modification Number / Title:</b> 1 / Block 3i LRIP 2-5 Upgrade
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	206.518	2.117	8.171	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	216.806
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	206.518	2.117	8.171	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	216.806
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority <i>(\$ in Millions)</i></b>	<b>206.518</b>	<b>2.117</b>	<b>8.171</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>216.806</b>

*(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 Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The block upgrade program retrofits United States Air Force F-35A aircraft and integrated systems procured under the LRIP contracts to a final Block 3F configuration. The retrofits to enable the final Block 3F configuration are comprised of hardware and software. The hardware per aircraft includes new radar modules, new Integrated Core Processor modules and rack, and new electronic warfare modules. Aircraft need to be updated to a final Block 3F configuration to avoid cost associated with maintaining multiple configurations of aircraft at operating locations. Some will require multiple modifications to reach the final Block 3F configuration.

These modifications focus on upgrading Blocks 1B, 2A, and 2B aircraft from LRIPs 2-5 to a Block 3i configuration. Block 3i is a stepping stone to the Block 3F configuration. It includes the procurement of hardware for the current Block 3i configuration. The parts include new radar modules, new Integrated Core Processor (ICP) modules and rack, and new Electronic Warfare (EW) modules. The Gen III Helmet will also be introduced as part of the Block 3i upgrade. This effort includes tooling and test equipment for Military Service Depots to support the execution of the Block Upgrade program.

**Milestone/Development Status**

Not Applicable - No funding requested in FY21

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2					<b>P-1 Line Item Number / Title:</b> F03500 / F-35 Modifications					<b>Modification Number / Title:</b> 1 / Block 3i LRIP 2-5 Upgrade			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> F-35A				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0604800F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> Block 3i													
B Kits													
Recurring													
Block 3i:EQUIPMENT Group B (Active)	46 / 158.409	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 158.409	
<i>Subtotal: Recurring</i>	- / 158.409	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 158.409	
<i>Subtotal: Block 3i</i>	- / 158.409	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 158.409	
<i>Subtotal: Procurement, All Modification Items</i>	- / 158.409	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 158.409	
<b>Support (All Modification Items)</b>													
GROUP B: TOTAL NONRECURRING	- / 0.000	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	
SIM/TRAINER	24 / 12.984	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 12.984	
Mod of Spares	- / 130.027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 130.027	
<i>Subtotal: Support</i>	24 / 43.011	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 43.011	
<b>Installation</b>													
<i>Modification Item 1 of 1:</i> Block 3i	24 / 5.098	9 / 2.117	13 / 8.171	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 15.386	
<i>Subtotal: Installation</i>	24 / 5.098	9 / 2.117	13 / 8.171	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 15.386	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>206.518</b>	<b>2.117</b>	<b>8.171</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>216.806</b>	

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F03500 / F-35 Modifications	<b>Modification Number / Title:</b> 1 / Block 3i LRIP 2-5 Upgrade
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**ID Code** (A=Service Ready, B=Not Service Ready) : B **MDAP/MAIS Code:**

**Modification Item 1 of 1:** Block 3i

**Manufacturer Information**

Manufacturer Name: Lockheed Martin	Manufacturer Location: Fort Worth
Administrative Leadtime (in Months): 10	Production Leadtime (in Months): 27

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	24 / 5.098	9 / 2.117	13 / 8.171	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 15.386
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	24 / 5.098	9 / 2.117	13 / 8.171	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 15.386

**Installation Schedule**

PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	24	3	2	2	2	4	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	46
Out	24	3	2	2	2	4	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	46

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F03500 / F-35 Modifications	<b>Modification Number / Title:</b> 2 / Block 3F LRIP 2-5 Upgrade

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

<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	7.336	2.005	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	9.591
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	7.336	2.005	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	9.591
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>7.336</b>	<b>2.005</b>	<b>0.250</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>9.591</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The block upgrade program retrofits United States Air Force F-35A aircraft and integrated systems procured under the LRIP contracts to a final Block 3F configuration. The retrofits to enable the final Block 3F configuration are comprised of hardware and software. The hardware per aircraft includes new radar modules, new Integrated Core Processor modules and rack, and new electronic warfare modules. Aircraft need to be updated to a final Block 3F configuration to avoid cost associated with maintaining multiple configurations of aircraft at operating locations. Some will require multiple modifications to reach the final Block 3F configuration.

This effort (MN-F3514) focuses on the Block 3F configuration upgrade effort for 46 LRIP 2-5 aircraft and integrated systems. All of the LRIP 2-5 F-35A aircraft receiving the Block 3F software under this modification will have already received the Block 3i hardware under MNF3513. This effort purchases all necessary software and installation labor to ensure LRIP 2-5 F-35A aircraft are upgraded to a Block 3F baseline for full warfighting capability.

**Milestone/Development Status**

The Block 3F modifications and retrofits program will complete its final aircraft inductions by September 2020



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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2					<b>P-1 Line Item Number / Title:</b> F03500 / F-35 Modifications					<b>Modification Number / Title:</b> 2 / Block 3F LRIP 2-5 Upgrade			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> F-35A				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0604800F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> Block 3F													
B Kits													
Recurring													
Block 3F:EQUIPMENT Group B (Active)	33 / 7.332	13 / 2.005	- / 0.250	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 9.587	
<i>Subtotal: Recurring</i>	- / 7.332	- / 2.005	- / 0.250	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.587	
<i>Subtotal: Block 3F</i>	- / 7.332	- / 2.005	- / 0.250	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.587	
<i>Subtotal: Procurement, All Modification Items</i>	- / 7.332	- / 2.005	- / 0.250	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.587	
<b>Support (All Modification Items)</b>													
SIM/TRAINER	4 / 0.004	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.004	
<i>Subtotal: Support</i>	4 / 0.004	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.004	
<b>Installation</b>													
<i>Modification Item 1 of 1:</i> Block 3F	10 / 0.000	23 / 0.000	13 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 0.000	
<i>Subtotal: Installation</i>	10 / 0.000	23 / 0.000	13 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 0.000	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>7.336</b>	<b>2.005</b>	<b>0.250</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>9.591</b>

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 3010F / 05 / 2 **P-1 Line Item Number / Title:** F03500 / F-35 Modifications **Modification Number / Title:** 2 / Block 3F LRIP 2-5 Upgrade

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

**Modification Item 1 of 1:** Block 3F

**Manufacturer Information**

Manufacturer Name: Lockheed Martin Manufacturer Location: Fort Worth

Administrative Leadtime (in Months): 10 Production Leadtime (in Months): 3

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Aug 2019						
Delivery Dates	Nov 2019						

**Installation Information**

**Method of Implementation:** Depot Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	10 / 0.000	23 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	33 / 0.000
FY 2019	- / -	- / -	13 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 0.000
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	10 / 0.000	23 / 0.000	13 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 0.000

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	10	6	6	6	5	4	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	46
Out	10	6	6	6	5	4	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	46

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force	<b>Date:</b> February 2020
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<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F03500 / F-35 Modifications	<b>Modification Number / Title:</b> 3 / Block 3F LRIP 6-8 Upgrade
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	0.056	0.000	2.800	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	2.856
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	0.056	0.000	2.800	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	2.856
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>0.056</b>	<b>0.000</b>	<b>2.800</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>2.856</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The block upgrade program retrofits United States Air Force F-35A aircraft and integrated systems procured under the LRIP contracts to a final Block 3F configuration. The retrofits to enable the final Block 3F configuration are comprised of hardware and software. The hardware per aircraft includes new radar modules, new Integrated Core Processor modules and rack, and new electronic warfare modules. Aircraft need to be updated to a final Block 3F configuration to avoid cost associated with maintaining multiple configurations of aircraft at operating locations. Some will require multiple modifications to reach the final Block 3F configuration.

These modifications focus on the Block 3F configuration upgrade effort for 56 LRIP 6-8 F-35A aircraft and integrated systems. All of the LRIP 6-8 F-35A aircraft receiving the Block 3F software under this modification will have already received the Block 3i hardware under MN-F3513. This effort purchases all necessary software and installation labor to ensure LRIP 6-8 F-35A aircraft are upgraded to a Block 3F baseline for full warfighting capability.

**Milestone/Development Status**

The Block 3F modifications and retrofits program will complete its final aircraft inductions by September 2020

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2					<b>P-1 Line Item Number / Title:</b> F03500 / F-35 Modifications					<b>Modification Number / Title:</b> 3 / Block 3F LRIP 6-8 Upgrade			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> F-35A				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0604800F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> Block 3F (2)													
B Kits													
Recurring													
Block 3F:EQUIPMENT Group B (Active)	0 / 0.056	- / -	56 / 2.800	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	56 / 2.856	
<i>Subtotal: Recurring</i>	- / 0.056	- / -	- / 2.800	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.856	
<i>Subtotal: Block 3F (2)</i>	- / 0.056	- / -	- / 2.800	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.856	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.056	- / -	- / 2.800	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.856	
<b>Support (All Modification Items)</b>													
SUPPORT-EQUIP	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	
<i>Subtotal: Support</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	
<b>Installation</b>													
<i>Modification Item 1 of 1:</i> Block 3F (2)	- / -	- / -	56 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	56 / 0.000	
<i>Subtotal: Installation</i>	- / -	- / -	56 / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	56 / -	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>0.056</b>	<b>0.000</b>	<b>2.800</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>2.856</b>	

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 3010F / 05 / 2 **P-1 Line Item Number / Title:** F03500 / F-35 Modifications **Modification Number / Title:** 3 / Block 3F LRIP 6-8 Upgrade

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

**Modification Item 1 of 1:** Block 3F (2)

**Manufacturer Information**

Manufacturer Name: Lockheed Martin Manufacturer Location: Fort Worth

Administrative Leadtime (in Months): 0 Production Leadtime (in Months): 27

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Oct 2019					
Delivery Dates		Jan 2022					

**Installation Information**

**Method of Implementation:** Depot Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	56 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	56 / 0.000
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	- / -	- / -	56 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	56 / 0.000

**Installation Schedule**

PYS	FY 2019	FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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						
In	0	-	-	-	-	15	15	15	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	56
Out	0	-	-	-	-	15	15	15	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	56

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F03500 / F-35 Modifications	<b>Modification Number / Title:</b> 4 / Concurrency

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

<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	380.294	233.149	206.324	154.330	0.000	154.330	35.880	0.000	0.000	0.000	-	1,009.977
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	380.294	233.149	206.324	154.330	0.000	154.330	35.880	0.000	0.000	0.000	-	1,009.977
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>380.294</b>	<b>233.149</b>	<b>206.324</b>	<b>154.330</b>	<b>0.000</b>	<b>154.330</b>	<b>35.880</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>1,009.977</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This effort funds retrofits due to concurrency changes to correct deficiencies tied to the Joint Contract Specification and discovered after formal acceptance (DD-250) of the last aircraft in a given production lot. This includes modifications required to extend aircraft service life currently limited by low-life parts and relieve capability limitations driven by concurrency of production with development.

The concurrency funding line will procure concurrency modifications approved at the Joint Configuration Control Board (JCCB) and prioritized within the Modifications Requirements Planning Document (MRPD). The MRPD is vetted and approved by the Services and Partners every six months to ensure that the list accurately reflects existing requirements as well as emerging issues. Per-kit costs will vary for each modification being implemented, and in some cases, will also vary by aircraft from different LRIP lots to implement an individual modification.

Total cost reflects procurement and installation costs in each fiscal year. Support costs include overall modification program planning, scheduling, and management and support of Military and Service Depots and Depot Field Teams for incorporation of modifications.

FY2021 is the transition from Concurrency to Correction of Deficiencies with the exception of the Digital Tuner Insertion Program (DTIP) modification. The DTIP program modifies 148 aircraft consisting of Lots 5-10 to a Lot 11 configuration. Currently, Lot 5-10 aircraft are equipped with Digital Radio Frequency Memory, which is not compatible with the Technical Refresh 3 (TR-3) upgrade program as part of Block 4. Lot 11 DTIP is required to transition aircraft to TR-3 and Lot 15 configuration and directly enables the training fleet to be standardized with the combat coded aircraft fleet.

**Milestone/Development Status**

For the F-35 program, the emergence of new concurrency issues is expected to phase out with the completion of SDD. FY2021 is the transition point from Concurrency to Correction of Deficiencies.

FY20 started the Non-Recurring engineering for Digital Tuner Insertion Program with material procurement in 3rd Quarter FY2020.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date: February 2020</b>			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2					<b>P-1 Line Item Number / Title:</b> F03500 / F-35 Modifications					<b>Modification Number / Title:</b> 4 / Concurrency			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> F-35A				<b>Modification Type:</b> Other				<b>Related RDT&amp;E PEs:</b> 0604800F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 2: Concurrency</i>													
A Kits													
Recurring													
Concurrency:INSTALL KITS Group A (Active)													
	- / 354.035	- / 206.625	- / 15.000	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / 575.660	
<i>Subtotal: Recurring</i>													
	- / 354.035	- / 206.625	- / 15.000	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / 575.660	
<i>Subtotal: Concurrency</i>													
	- / 354.035	- / 206.625	- / 15.000	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / 575.660	
<i>Modification Item 2 of 2: Digital Tuner Insertion Program (DTIP)</i>													
A Kits													
Recurring													
Digital Tuner Insertion Program (DTIP):INSTALL KITS Group A (Active)													
	- / -	- / -	78 / 156.000	70 / 140.000	- / -	70 / 140.000	- / -	- / -	- / -	- / -	- / -	148 / 296.000	
<i>Subtotal: Recurring</i>													
	- / -	- / -	- / 156.000	- / 140.000	- / -	- / 140.000	- / -	- / -	- / -	- / -	- / -	- / 296.000	
<i>Subtotal: Digital Tuner Insertion Program (DTIP)</i>													
	- / -	- / -	- / 156.000	- / 140.000	- / -	- / 140.000	- / -	- / -	- / -	- / -	- / -	- / 296.000	
<i>Subtotal: Procurement, All Modification Items</i>													
	- / 354.035	- / 206.625	- / 171.000	- / 140.000	- / -	- / 140.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / 871.660	
<b>Support (All Modification Items)</b>													
GROUP A: TOTAL NONRECURRING													
	- / -	- / -	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.000	
ICS-Labor													
	- / 18.264	- / 20.427	- / 28.539	- / 3.000	- / -	- / 3.000	- / 3.060	- / -	- / -	- / -	- / -	- / 73.290	
OTHER GOVT													
	- / 17.995	- / 16.097	- / 16.785	- / 0.000	- / -	- / 0.000	- / 0.000	- / -	- / -	- / -	- / -	- / 20.877	
<i>Subtotal: Support</i>													
	- / 26.259	- / 26.524	- / 35.324	- / 3.000	- / -	- / 3.000	- / 3.060	- / -	- / -	- / -	- / -	- / 94.167	
<b>Installation</b>													
<i>Modification Item 2 of 2: Digital Tuner Insertion Program (DTIP)</i>													
	- / -	- / -	- / -	39 / 11.330	- / -	39 / 11.330	109 / 32.820	- / -	- / -	- / -	- / -	148 / 44.150	
<i>Subtotal: Installation</i>													
	- / -	- / -	- / -	39 / 11.330	- / -	39 / 11.330	109 / 32.820	- / -	- / -	- / -	- / -	148 / 44.150	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>													
	380.294	233.149	206.324	154.330	0.000	154.330	35.880	0.000	0.000	0.000	-	1,009.977	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2			<b>P-1 Line Item Number / Title:</b> F03500 / F-35 Modifications			<b>Modification Number / Title:</b> 4 / Concurrency	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 1 of 2:</b> Concurrency							
<b>Manufacturer Information</b>							
Manufacturer Name: Lockheed Martin				Manufacturer Location: Fort Worth			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 0			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates		Dec 2019	Dec 2020				
Delivery Dates		Dec 2019	Dec 2020				
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 0		



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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F03500 / F-35 Modifications	<b>Modification Number / Title:</b> 4 / Concurrency
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**ID Code** (A=Service Ready, B=Not Service Ready) : B **MDAP/MAIS Code:**

**Modification Item 2 of 2:** Digital Tuner Insertion Program (DTIP)

**Manufacturer Information**

Manufacturer Name: Lockheed Martin	Manufacturer Location: Fort Worth
Administrative Leadtime (in Months): 7	Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		May 2020	May 2021				
Delivery Dates		May 2021	May 2022				

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	39 / 11.330	- / -	39 / 11.330	39 / 11.330	- / -	- / -	- / -	- / -	78 / 22.660
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	70 / 21.490	- / -	- / -	- / -	- / -	70 / 21.490
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	- / -	- / -	- / -	39 / 11.330	- / -	39 / 11.330	109 / 32.820	- / -	- / -	- / -	- / -	148 / 44.150

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	-	-	20	19	28	27	27	27	-	-	-	-	-	-	-	-	-	-	-	-	0	148
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	19	28	27	27	27	-	-	-	-	-	-	-	-	0	148

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F03500 / F-35 Modifications	<b>Modification Number / Title:</b> 5 / Correction of Deficiencies

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	0.000	98.045	126.855	0.000	126.855	121.639	163.997	167.241	170.652	0.000	848.429
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	0.000	98.045	126.855	0.000	126.855	121.639	163.997	167.241	170.652	0.000	848.429
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>0.000</b>	<b>0.000</b>	<b>98.045</b>	<b>126.855</b>	<b>0.000</b>	<b>126.855</b>	<b>121.639</b>	<b>163.997</b>	<b>167.241</b>	<b>170.652</b>	<b>0.000</b>	<b>848.429</b>

*(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 Millions)	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

F-35A (CTOL) Correction of Deficiencies provides near and long term improvements to fielded F-35 jets and focuses on correcting documented deficiencies related to safety, maintainability, life limits, and aircraft systems. Funds are required to manage, prepare, process and incorporate Engineering Change Proposals (ECP) to sustain and improve F-35A system operations. Artisans at the organic depot and contractor field teams perform the installation of these modifications and selected component changes into the Air System. In order to meet emerging deficiencies, the airframe and integrated systems require modifications to resolve the identified deficiencies.

This major thrust under this OSIP is structural life limited parts 2 (SLLP) deficiencies. The SLLP2 program focuses on resolving identified life limits between 2,000 and 4,000 flight hours. Currently, 13 ECPs make up the SLLP2 program scope, requiring a retrofit solution to remove the life limit constraint. The program is still establishing the full scope of modifications for both SLLP2 and SLLP3. Teardown of full-scale durability test assets completed in July 2019 with analysis continuing through Q2 of calendar year 2020. The program expects to identify additional Engineering Change Proposals during analysis and through continued fleet operations that will require additional non-recurring engineering and tooling.

Prior to the transition to the Correction of Deficiencies OSIP in FY20, previous years SLLP2 ECP Non-Recurring Engineering and material procurements completed under the USAF concurrency budget line. Eight of the seventeen engineering change proposals have completed engineering and initial material procurement for FY21 installs. Material procurement for SLLP 2 will continue throughout the Future Years Defense Program (FYDP).

SLLP2 inductions will start in Fiscal Year 2021 with 84 USAF F-35 A inductions and will continue through the FYDP. The retrofit ECP effectivity of SLLP modification deficiencies vary, ranging from Lot 1 through Lot 12 USAF aircraft that will undergo installations.

Additionally, this OSIP covers the SLLP2 follow-on program known as SLLP3. SLLP3 is the follow on effort to resolve life limits from 4,000 to 8,000 hours, enabling the aircraft to meet full life of 8,000 flight hours. The SLLP3 program starts Non-Recurring Engineering and Material buys in FY23 - FY25.

Beyond SLLP 2 and 3, there are currently over 428 identified modifications throughout the CTOL fleet using funds from this OSIP to complete non-recurring engineering, material procurement, and installation.

Significant increase in funding under this OSIP in FY21 in required to support Structural Life Limited Mods material, installation labor and associated support costs across two US organic Depots for F-35A inductions. This includes modifications management, depot site support and depot over and above activities.

Milestone/Development Status

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F03500 / F-35 Modifications	<b>Modification Number / Title:</b> 5 / Correction of Deficiencies
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>	
<b>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:</b> The establishment of this Modification is concurrent with the phase out of SDD in FY18 and after the declaration of IOC for the USAF in FY16. This Modification will fund the incorporation of ECPs that are not associated with the concurrency program.		

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>											<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2				<b>P-1 Line Item Number / Title:</b> F03500 / F-35 Modifications				<b>Modification Number / Title:</b> 5 / Correction of Deficiencies					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> F-35A				<b>Modification Type:</b> Reliability & Maintainability				<b>Related RDT&amp;E PEs:</b> 0604800F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 2: COMMON: Correction of Deficiencies: Equipment Group B</i>													
B Kits													
Recurring													
COMMON: Correction of Deficiencies: Equipment Group B: EQUIPMENT Group B (Active)	- / -	- / -	- / 28.889	- / 13.000	- / -	- / 13.000	- / 14.090	- / 27.027	- / 27.715	- / 28.422	- / -	- / 139.143	
<i>Subtotal: Recurring</i>	- / -	- / -	- / 28.889	- / 13.000	- / -	- / 13.000	- / 14.090	- / 27.027	- / 27.715	- / 28.422	- / -	- / 139.143	
<i>Subtotal: COMMON: Correction of Deficiencies: Equipment Group B</i>	- / -	- / -	- / 28.889	- / 13.000	- / -	- / 13.000	- / 14.090	- / 27.027	- / 27.715	- / 28.422	- / -	- / 139.143	
<i>Modification Item 2 of 2: Structures A Kits</i>													
A Kits													
Recurring													
Structures A Kits: INSTALL KITS Group A (Active)	- / -	- / -	84 / 41.000	75 / 35.855	- / -	75 / 35.855	83 / 29.500	56 / 51.610	80 / 41.381	75 / 40.100	- / -	453 / 239.446	
<i>Subtotal: Recurring</i>	- / -	- / -	- / 41.000	- / 35.855	- / -	- / 35.855	- / 29.500	- / 51.610	- / 41.381	- / 40.100	- / -	- / 239.446	
<i>Subtotal: Structures A Kits</i>	- / -	- / -	- / 41.000	- / 35.855	- / -	- / 35.855	- / 29.500	- / 51.610	- / 41.381	- / 40.100	- / -	- / 239.446	
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / -	- / 69.889	- / 48.855	- / -	- / 48.855	- / 43.590	- / 78.637	- / 69.096	- / 68.522	- / -	- / 378.589	
<b>Support (All Modification Items)</b>													
ICS-Labor	- / -	- / -	- / 16.536	- / 32.900	- / -	- / 32.900	- / 32.800	- / 34.900	- / 35.900	- / 37.000	- / -	- / 190.036	
OTHER GOVT	- / -	- / -	- / 11.620	- / 19.000	- / -	- / 19.000	- / 18.649	- / 19.360	- / 19.550	- / 19.740	- / -	- / 57.919	
<i>Subtotal: Support</i>	- / -	- / -	- / 28.156	- / 51.900	- / -	- / 51.900	- / 51.449	- / 54.260	- / 55.450	- / 56.740	- / -	- / 247.955	
<b>Installation</b>													
<i>Modification Item 2 of 2: Structures A Kits</i>	- / -	- / -	- / -	84 / 36.100	- / -	84 / 36.100	75 / 36.600	83 / 41.100	56 / 52.695	80 / 55.390	- / -	378 / 221.885	
<i>Subtotal: Installation</i>	- / -	- / -	- / -	84 / 36.100	- / -	84 / 36.100	75 / 36.600	83 / 41.100	56 / 52.695	80 / 55.390	- / -	378 / 221.885	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>0.000</b>	<b>0.000</b>	<b>98.045</b>	<b>126.855</b>	<b>0.000</b>	<b>126.855</b>	<b>121.639</b>	<b>163.997</b>	<b>167.241</b>	<b>170.652</b>	<b>0.000</b>	<b>848.429</b>	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2			<b>P-1 Line Item Number / Title:</b> F03500 / F-35 Modifications			<b>Modification Number / Title:</b> 5 / Correction of Deficiencies	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B						<b>MDAP/MAIS Code:</b>	
<b>Modification Item 1 of 2:</b> COMMON: Correction of Deficiencies: Equipment Group B							
<b>Manufacturer Information</b>							
Manufacturer Name: N/A				Manufacturer Location: N/A			
Administrative Leadtime (in Months):				Production Leadtime (in Months):			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate						<b>Installation Quantity:</b> 0	

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F03500 / F-35 Modifications	<b>Modification Number / Title:</b> 5 / Correction of Deficiencies
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**ID Code** (A=Service Ready, B=Not Service Ready) : B **MDAP/MAIS Code:**

**Modification Item 2 of 2:** Structures A Kits

**Manufacturer Information**

Manufacturer Name: Lockheed Martin Manufacturer Location: Fort Worth

Administrative Leadtime (in Months): 5 Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024	
Delivery Dates		Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025	

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	84 / 36.100	- / -	84 / 36.100	- / -	- / -	- / -	- / -	- / -	84 / 36.100
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	75 / 36.600	- / -	- / -	- / -	- / -	75 / 36.600
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	83 / 41.100	- / -	- / -	- / -	83 / 41.100
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	56 / 52.695	- / -	- / -	56 / 52.695
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	80 / 55.390	- / -	80 / 55.390
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	- / -	- / -	- / -	84 / 36.100	- / -	84 / 36.100	75 / 36.600	83 / 41.100	56 / 52.695	80 / 55.390	- / -	378 / 221.885

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	-	28	28	28	-	25	25	25	-	28	28	27	-	19	19	18	-	27	27	26	0	378
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	28	28	28	-	25	25	25	-	28	28	27	-	19	19	18	80	378

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F03500 / F-35 Modifications	<b>Modification Number / Title:</b> 6 / Block 4 Modifications

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	-	14.000	41.000	0.000	41.000	3.240	0.000	0.000	0.000	-	58.240
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	-	14.000	41.000	0.000	41.000	3.240	0.000	0.000	0.000	-	58.240
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	-	-	<b>14.000</b>	<b>41.000</b>	<b>0.000</b>	<b>41.000</b>	<b>3.240</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	-	<b>58.240</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The F-35 Block 4 Program is established to retrofit advanced capabilities on the F-35As to increase the capability and lethality of the weapon system to meet current and future threats. Funding is required to upgrade Low Rate Initial Production (LRIP) Lots 5-16, totaling 457. 148 aircraft of the 457 will only retrofit to a Lot 15 Block 4 configuration. The remaining 309 aircraft will upgrade to a Lot 17 Production configuration.

Block 4 incorporation will not follow the traditional Block upgrade approach; instead, modifications will be performed through a Continuous Capability Development and Delivery Concept that entails upgrades to both hardware and software on fielded aircraft on a yearly base. The current modification incorporation schedule synchronizes with planned production cut-in below, except planned installs for Lot 15 capabilities in 2024. This effort includes, but not limited to the below capabilities and associated modification install timelines:

2021 (Lot 13) - Magazine Retainer Plate

- Chaff and Flare Magazine Retainer Plate - provides the capability for programmable expendables, programmable magazine load-outs, programmable emergency jettison and quicker inventory

2022 (Lot 14) - High-efficiency low voltage power supply (HE-LVPS) and Digital Channelized Receiver / Techniques Generator (DCRTG). And Dual Capable Aircraft (DCA)

- Adds high efficiency-low voltage power and a second DCRTG to the Electronic Warfare system

- Achieves the DCA weapon load-out requirement on Lot 13 production aircraft by the operational need date of Jan 2024

2023 (Lot 15 - Mods start in 2024) - Technical Refresh 3 (TR3), Next Generation Distributed Aperture System (Next Gen DAS), Cooling Mod, and Advanced Communication, Navigation, Identification Processor

- TR3 - integrates new integrated core processor, panoramic cockpit display, and aircraft memory system to meet Block 4 processing, memory, and throughput requirements

- Next Gen DAS - replaces current DAS due to sensor reliability while increasing performance to provide larger pixel focal plane array and higher operating temperatures

- Cooling Mod - increases cooling capacity to support electronic warfare growth and addition of Full Motion Video (FMV)

2024 (Lot 16) - Full Motion Video, Embedded GPS and Inertial Navigation System (EGI), Modernized Electronic Warfare Controller(M-EWC), and Modernized Electronic Warfare Processor (M-EWP)

- Full Motion Video - adds the capability to receive encrypted and unencrypted full motion video and still imagery from Operational Facilities and Remote Video Terminals

- EGI - hardware enabler for M-Code/Automatic Dependent Surveillance-Broadcast/Required Navigation Performance/area navigation capabilities

- EWC/EWP - Increases 8 core processors (SDD) to 32 providing more than 3 times the processing performance for running advance algorithms and supporting the transition from 12 Receivers (SDD) to 20 receivers

2025 (Lot 17) - Advanced Multi Channel Transceiver Receiver (AMCTR), Band 2/3/4/5 Electronic Warfare (EW) Hardware (HW) and EW Group 2

- AMCTR - Provides MIDS Modernization Increment 1 (MMI) Concurrent Multi-Netting (CMN) and Concurrent Contention Receive (CCR) capabilities

- Band 2/3/4/5 EW HW - provides Band 2&5 RWR functionality by adding Band 2 Nose Landing Gear Door (NLGD) Aperture, Band 3/4 NLGD Aperture, Band 2/3/4 Array Electronic Module (AEM), Band

- 3/4/5 AEM, Band 5 Apertures, and Band 5 AEM

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F03500 / F-35 Modifications	<b>Modification Number / Title:</b> 6 / Block 4 Modifications
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>	
<ul style="list-style-type: none"><li>- EW Group 2 - adds technology to address the Advancing Threats, to detect and counter the LPI Emitter while providing Band 5 RWR functionality; includes Wideband Receiver, Wideband Notch Filter, Band 2/5 Switch Matrix Module, Aircraft Interface Module (ACIF), M-Quad Upconverter (M-QUC), M-Quad Tuner (M-QTM), M-Digital Channelized Receiver (DCR), M-DCR and Techniques Receiver</li><li>- (DCRTG), M-Analog-to-Digital Converter (ADC), M-Radio Frequency Converter, High Voltage Power Supply (HVPS)</li></ul>		
Unit, organic depot, or contractor field teams will complete the modification installs to coincide with resources and aircraft availability.		



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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date: February 2020</b>			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2					<b>P-1 Line Item Number / Title:</b> F03500 / F-35 Modifications					<b>Modification Number / Title:</b> 6 / Block 4 Modifications			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> F-35A				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0604840F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<b>Modification Item 1 of 3: COMMON: Block 4 B Kits</b>													
B Kits													
Recurring													
COMMON: Block 4 B Kits:EQUIPMENT Group B (Active)	- / -	- / -	- / 17.210	- / 19.730	- / -	- / 19.730	- / -	- / -	- / -	- / -	- / -	- / 16.940	
<b>Subtotal: Recurring</b>	- / -	- / -	- / 17.210	- / 19.730	- / -	- / 19.730	- / -	- / -	- / -	- / -	- / -	- / 16.940	
<b>Subtotal: COMMON: Block 4 B Kits</b>	- / -	- / -	- / 17.210	- / 19.730	- / -	- / 19.730	- / -	- / -	- / -	- / -	- / -	- / 16.940	
<b>Modification Item 2 of 3: Mag Retainer Plate</b>													
A Kits													
Recurring													
Mag Retainer Plate:INSTALL KITS Group A (Active)	- / -	- / -	82 / 0.630	104 / 0.800	- / -	104 / 0.800	- / -	- / -	- / -	- / -	- / -	186 / 1.430	
<b>Subtotal: Recurring</b>	- / -	- / -	- / 0.630	- / 0.800	- / -	- / 0.800	- / -	- / -	- / -	- / -	- / -	- / 1.430	
<b>Subtotal: Mag Retainer Plate</b>	- / -	- / -	- / 0.630	- / 0.800	- / -	- / 0.800	- / -	- / -	- / -	- / -	- / -	- / 1.430	
<b>Modification Item 3 of 3: Rack 2 IBA</b>													
A Kits													
Recurring													
Rack 2 IBA:INSTALL KITS Group A (Active)	- / -	- / -	47 / 0.520	62 / 0.680	- / -	62 / 0.680	- / -	- / -	- / -	- / -	- / -	109 / 1.200	
<b>Subtotal: Recurring</b>	- / -	- / -	- / 0.520	- / 0.680	- / -	- / 0.680	- / -	- / -	- / -	- / -	- / -	- / 1.200	
<b>Subtotal: Rack 2 IBA</b>	- / -	- / -	- / 0.520	- / 0.680	- / -	- / 0.680	- / -	- / -	- / -	- / -	- / -	- / 1.200	
<b>Subtotal: Procurement, All Modification Items</b>	- / -	- / -	- / 18.360	- / 21.210	- / -	- / 21.210	- / -	- / -	- / -	- / -	- / -	- / 19.570	
<b>Support (All Modification Items)</b>													
GROUP B: TOTAL NONRECURRING	- / -	- / -	- / 12.407	- / 14.485	- / -	- / 14.485	- / -	- / -	- / -	- / -	- / -	- / 16.892	
OTHER GOVT	- / -	- / -	- / -	- / 18.483	- / -	- / 18.483	- / -	- / -	- / -	- / -	- / -	- / 18.483	
ICS-Labor	- / -	- / -	- / 13.233	- / 16.002	- / -	- / 16.002	- / -	- / -	- / -	- / -	- / -	- / 19.235	
<b>Subtotal: Support</b>	- / -	- / -	- / 15.640	- / 28.970	- / -	- / 28.970	- / -	- / -	- / -	- / -	- / -	- / 34.610	
<b>Installation</b>													
<b>Modification Item 2 of 3: Mag Retainer Plate</b>	- / -	- / -	- / -	82 / 0.620	- / -	82 / 0.620	104 / 2.740	- / -	- / -	- / -	- / -	186 / 3.360	
<b>Modification Item 3 of 3: Rack 2 IBA</b>	- / -	- / -	- / -	47 / 0.200	- / -	47 / 0.200	62 / 0.500	- / -	- / -	- / -	- / -	109 / 0.700	
<b>Subtotal: Installation</b>	- / -	- / -	- / -	129 / 0.820	- / -	129 / 0.820	166 / 3.240	- / -	- / -	- / -	- / -	295 / 4.060	
<b>Total</b>													

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2				<b>P-1 Line Item Number / Title:</b> F03500 / F-35 Modifications						<b>Modification Number / Title:</b> 6 / Block 4 Modifications			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> F-35A				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0604840F					
<b>Financial Plan</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>	
	<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>	
<b>Total Cost (Procurement + Support + Installation)</b>	-	-	14.000	41.000	0.000	41.000	3.240	0.000	0.000	0.000	-	58.240	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2			<b>P-1 Line Item Number / Title:</b> F03500 / F-35 Modifications			<b>Modification Number / Title:</b> 6 / Block 4 Modifications	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 1 of 3:</b> COMMON: Block 4 B Kits							
<b>Manufacturer Information</b>							
Manufacturer Name: N/A				Manufacturer Location: N/A			
Administrative Leadtime (in Months):				Production Leadtime (in Months):			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate						<b>Installation Quantity:</b> 0	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F03500 / F-35 Modifications	<b>Modification Number / Title:</b> 6 / Block 4 Modifications

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 2 of 3:** Mag Retainer Plate

**Manufacturer Information**

Manufacturer Name: Lockheed Martin	Manufacturer Location: Fort Worth
Administrative Leadtime (in Months): 5	Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Mar 2020	Mar 2021				
Delivery Dates		Mar 2021	Mar 2022				

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	82 / 0.620	- / -	82 / 0.620	- / -	- / -	- / -	- / -	- / -	82 / 0.620
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	104 / 2.740	- / -	- / -	- / -	- / -	104 / 2.740
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	82 / 0.620	- / -	82 / 0.620	104 / 2.740	- / -	- / -	- / -	- / -	186 / 3.360

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	-	28	27	27	-	35	35	34	-	-	-	-	-	-	-	-	-	-	-	-	0	186
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	28	27	27	-	35	35	34	-	-	-	-	-	-	-	-	0	186

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F03500 / F-35 Modifications	<b>Modification Number / Title:</b> 6 / Block 4 Modifications
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**ID Code** (A=Service Ready, B=Not Service Ready) : B **MDAP/MAIS Code:**

**Modification Item 3 of 3:** Rack 2 IBA

**Manufacturer Information**

Manufacturer Name: Lockheed Martin	Manufacturer Location: Fort Worth
Administrative Leadtime (in Months): 5	Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Mar 2020	Mar 2021				
Delivery Dates		Mar 2021	Mar 2022				

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	47 / 0.200	- / -	47 / 0.200	- / -	- / -	- / -	- / -	- / -	47 / 0.200
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	62 / 0.500	- / -	- / -	- / -	- / -	62 / 0.500
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	- / -	- / -	- / -	47 / 0.200	- / -	47 / 0.200	62 / 0.500	- / -	- / -	- / -	- / -	109 / 0.700

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	-	16	16	15	-	21	21	20	-	-	-	-	-	-	-	-	-	-	-	-	0	109
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	16	16	15	-	21	21	20	-	-	-	-	-	-	-	-	0	109

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	<b>P-1 Line Item Number / Title:</b> F15EWS / F-15 EPAW
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ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0207171F	Other Related Program Elements: 0207146F
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**Line Item MDAP/MAIS Code:** 485

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	214.885	125.417	31.995	-	31.995	308.509	337.335	265.765	270.625	1,188.910	2,743.441
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	214.885	125.417	31.995	-	31.995	308.509	337.335	265.765	270.625	1,188.910	2,743.441
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	-	<b>214.885</b>	<b>125.417</b>	<b>31.995</b>	-	<b>31.995</b>	<b>308.509</b>	<b>337.335</b>	<b>265.765</b>	<b>270.625</b>	<b>1,188.910</b>	<b>2,743.441</b>

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

Initial Spares ( <i>\$ in Millions</i> )	-	-	4.185	8.046	-	8.046	10.214	19.605	11.100	-	11.679	64.829
Flyaway Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

F-15 EPAWSS is an advanced digital electronic warfare system capable of detecting, identifying, locating, denying, degrading, disrupting, and defeating modern and emerging threat systems in up to contested environments. This upgrade will significantly improve the F-15's capability to autonomously and automatically detect, identify and locate radio frequency (RF) threats as well as provide the ability to deny, degrade, deceive, disrupt and defeat RF and electro-optical / infrared (EO / IR) threat systems in contested and unplanned operations within highly contested environments through 2040. F-15 EPAWSS will provide indication, type and position of ground-based RF threats as well as the indication, type and bearing of airborne threats with the situational awareness needed to avoid, engage or negate the threat. It will also prevent RF and IR threat systems from detecting or acquiring accurate targeting information prior to threat engagement to complicate and / or negate an enemy threat targeting solution--and effectively counter enemy missiles / weapons if adversary threat systems engage and employ weapons against friendly forces--through components such as chaff, flares, decoys / angle countermeasures and jamming.

Funding may be used to resolve Diminishing Manufacturing Sources/Material Shortages (DMSMS) and/or obsolescence issues. DMSMS activities may include, but are not limited to, bridge buys, life of type buys, buys to protect production schedule, and minor engineering efforts. DMSMS costs are included in Group B NRE; SE/PM costs are included in Group B recurring.

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft

**P-1 Line Item Number / Title:**  
F15EWS / F-15 EPAW

**ID Code** (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** 0207171F **Other Related Program Elements:** 0207146F

**Line Item MDAP/MAIS Code:** 485

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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	8796 / EPAWSS F-15E (Capability Improvement)		B		- / -	- / 214.885	- / 125.417	- / 31.995	- / 0.000	- / 31.995
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / -</b>	<b>- / 214.885</b>	<b>- / 125.417</b>	<b>- / 31.995</b>	<b>- / -</b>	<b>- / 31.995</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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	8796 / EPAWSS F-15E (Capability Improvement)		B		- / 308.509	- / 337.335	- / 265.765	- / 270.625	- / 1,188.910	- / 2,743.441
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 308.509</b>	<b>- / 337.335</b>	<b>- / 265.765</b>	<b>- / 270.625</b>	<b>- / 1,188.910</b>	<b>- / 2,743.441</b>

\*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 current F-15's self-protection suite called the Tactical Electronic Warfare System (TEWS) is functionally obsolete. It uses 1970's analog technology designed for combat operations in environments defended by 1980s-era radar-based ground and air threats. In addition, this aging system is becoming more difficult and expensive to support. As a result, Air Force is replacing TEWS with the F-15 Eagle Passive / Active Warning and Survivability System (EPAWSS). Congressionally added funding of FY19 \$67.2M for four F-15C kits in mod number 8795 was rescinded in the FY20 HR1158 Appropriations Bill and is not reflected in this document.



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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F15EWS / F-15 EPAW	<b>Modification Number / Title:</b> 8796 / EPAWSS F-15E

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	214.885	125.417	31.995	0.000	31.995	308.509	337.335	265.765	270.625	1,188.910	2,743.441
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	214.885	125.417	31.995	0.000	31.995	308.509	337.335	265.765	270.625	1,188.910	2,743.441
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	-	<b>214.885</b>	<b>125.417</b>	<b>31.995</b>	<b>0.000</b>	<b>31.995</b>	<b>308.509</b>	<b>337.335</b>	<b>265.765</b>	<b>270.625</b>	<b>1,188.910</b>	<b>2,743.441</b>

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

Initial Spares ( <i>\$ in Millions</i> )	-	0.000	4.185	8.046	-	8.046	10.214	19.605	11.100	-	11.679	64.829
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Due to the AF plans to divest the F-15C/D fleet between FY21-26, 196 C/D quantities were removed from the original acquisition baseline. This resulted in a Significant Nunn-McCurdy breach that was reported to Congress in June 2019. Per the Rapid Fielding Requirement Document, the AF plans to execute a minimum purchase of 144 F-15EXs that begins with a buy of 8 in FY20. The F-15EX will refresh the aging F-15C/D fleet and has been added to the Eagle Passive/Active Warning Survivability System (EPAWSS) program baseline.

The current F-15's self-protection suite called the Tactical Electronic Warfare System (TEWS) is functionally obsolete. It uses 1970's analog technology designed for combat operations in environments defended by 1980s-era radar-based ground and air threats. In addition, this aging system is becoming more difficult and expensive to support. As a result, Air Force is replacing TEWS with the F-15 EPAWSS. F-15 EPAWSS is an advanced digital electronic warfare system capable of detecting, identifying, locating, denying, degrading, disrupting, and defeating modern and emerging threat systems in up to contested environments. This upgrade will significantly improve the F-15's capability to autonomously and automatically detect, identify and locate radio frequency (RF) threats as well as provide the ability to deny, degrade, deceive, disrupt and defeat RF and electro-optical / infrared (EO / IR) threat systems in contested and unplanned operations within highly contested environments through 2040. F-15 EPAWSS will provide indication, type and position of ground-based RF threats as well as the indication, type and bearing of airborne threats with the situational awareness needed to avoid, engage or negate the threat. It will also prevent RF and IR threat systems from detecting or acquiring accurate targeting information prior to threat engagement to complicate and / or negate an enemy threat targeting solution--and effectively counter enemy missiles / weapons if adversary threat systems engage and employ weapons against friendly forces--through components such as chaff, flares, decoys / angle countermeasures and jamming.

Funding may be used to resolve Diminishing Manufacturing Sources/Material Shortages (DMSMS) and/or obsolescence issues. DMSMS activities may include, but are not limited to, bridge buys, life of type buys, buys to protect production schedule, and minor engineering efforts. DMSMS costs are included in Group B Non Recurring Engineering; Sustaining Engineering/Program Management costs are included in Group B recurring.

**Milestone/Development Status**

F-15 EPAWSS hardware delays have driven the program beyond the acquisition program baseline for Decision Point 1 (Milestone C) and into early Fiscal Year 2021. Tailored acquisition strategy will enable earlier initiation of Low Rate Initial Production.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2					<b>P-1 Line Item Number / Title:</b> F15EWS / F-15 EPAW					<b>Modification Number / Title:</b> 8796 / EPAWSS F-15E			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> F-15E				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207146F, 0207171F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0207171F	- / -	- / 133.382	- / 47.322	- / 170.679	- / -	- / 170.679	- / 12.251	- / -	- / -	- / -	- / -	- / 363.634	
<b>Procurement</b>													
<b>Modification Item 1 of 1: F-15E EPAWSS</b>													
A Kits													
Recurring													
F-15E EPAWSS:INSTALL KITS Group A (Active)	- / -	6 / 74.049	15 / 23.007	- / -	- / -	- / -	21 / 119.777	25 / 104.148	30 / 47.180	37 / 4.694	83 / 206.858	217 / 579.713	
<i>Subtotal: Recurring</i>	- / -	- / 74.049	- / 23.007	- / -	- / -	- / -	- / 119.777	- / 104.148	- / 47.180	- / 4.694	- / 206.858	- / 579.713	
B Kits													
Recurring													
F-15E EPAWSS:EQUIPMENT Group B (Active)	- / -	6 / 25.324	15 / 102.410	- / -	- / -	- / -	21 / 96.830	25 / 115.977	30 / 124.670	37 / 148.512	83 / 329.439	217 / 943.162	
<i>Subtotal: Recurring</i>	- / -	- / 25.324	- / 102.410	- / -	- / -	- / -	- / 96.830	- / 115.977	- / 124.670	- / 148.512	- / 329.439	- / 943.162	
<i>Subtotal: F-15E EPAWSS</i>	- / -	- / 99.373	- / 125.417	- / -	- / -	- / -	- / 216.607	- / 220.125	- / 171.850	- / 153.206	- / 536.297	- / 1,522.875	
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / 99.373	- / 125.417	- / -	- / -	- / -	- / 216.607	- / 220.125	- / 171.850	- / 153.206	- / 536.297	- / 1,522.875	
<b>Support (All Modification Items)</b>													
OTHER GOVT	- / -	- / 67.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 67.200	
ICS-Labor	- / -	- / -	- / -	- / 17.233	- / -	- / 17.233	- / 16.983	- / 9.334	- / 9.139	- / 7.936	- / 5.052	- / 45.677	
Type 1 Training	- / -	- / 0.337	- / -	- / 0.043	- / -	- / 0.043	- / 0.137	- / 0.012	- / 0.020	- / 0.022	- / 0.080	- / 0.651	
PMA - Other Gov't Costs	- / -	- / 3.634	- / -	- / 6.006	- / -	- / 6.006	- / 9.995	- / 11.059	- / 11.155	- / 12.710	- / 58.319	- / 112.878	
SUPPORT-EQUIP	- / -	- / 40.432	- / -	- / 10.499	- / -	- / 10.499	- / 25.777	- / 15.412	- / 5.320	- / -	- / -	- / 97.440	
Data	- / -	- / 0.298	- / -	- / 1.064	- / -	- / 1.064	- / 2.453	- / 2.828	- / 2.962	- / 3.375	- / 13.445	- / 26.425	
Change Orders	- / -	- / 3.611	- / -	- / 17.150	- / -	- / 17.150	- / 11.899	- / 13.165	- / 13.280	- / 15.131	- / 69.428	- / 133.664	
<i>Subtotal: Support</i>	- / -	- / 115.512	- / -	- / 31.995	- / -	- / 31.995	- / 57.244	- / 51.810	- / 41.876	- / 39.174	- / 146.324	- / 483.935	
<b>Installation</b>													
<b>Modification Item 1 of 1: F-15E EPAWSS</b>													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	2 / 34.658	8 / 65.400	14 / 52.039	21 / 78.245	172 / 506.289	217 / 736.631	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	-	214.885	125.417	31.995	0.000	31.995	308.509	337.335	265.765	270.625	1,188.910	2,743.441	

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F15EWS / F-15 EPAW	<b>Modification Number / Title:</b> 8796 / EPAWSS F-15E
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** F-15E EPAWSS

**Manufacturer Information**

Manufacturer Name: Boeing	Manufacturer Location: St. Louis
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Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 14
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Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Oct 2020	May 2022		May 2023	May 2024	May 2025	May 2026
Delivery Dates	Dec 2021	Jul 2023		Jul 2024	Jul 2025	Jul 2026	Jul 2027

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	2 / 34.658	4 / 32.700	- / -	- / -	- / -	6 / 67.358
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 32.700	11 / 40.888	- / -	- / -	15 / 73.588
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 11.151	18 / 67.067	- / -	21 / 78.218
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 11.178	22 / 81.195	25 / 92.373
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 92.462	30 / 92.462
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	37 / 106.733	37 / 106.733
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	83 / 225.899	83 / 225.899
Total	- / -	- / -	- / -	- / -	- / -	- / -	2 / 34.658	8 / 65.400	14 / 52.039	21 / 78.245	172 / 506.289	217 / 736.631

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	4	3	3	4	4	4	6	5	6	172	217
Out	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2	4	3	3	4	4	4	6	183	217

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	<b>P-1 Line Item Number / Title:</b> F2232B / Increment 3.2b
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B	<b>Program Elements for Code B Items:</b> 0207138F	<b>Other Related Program Elements:</b> 0605213F
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**Line Item MDAP/MAIS Code:** 474

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	273.739	2.007	20.213	5.889	-	5.889	0.000	0.000	0.000	0.000	-	301.848
Less PY Advance Procurement ( <i>\$ in Millions</i> )	30.500	-	-	-	-	-	-	-	-	-	-	30.500
Net Procurement (P-1) ( <i>\$ in Millions</i> )	243.239	2.007	20.213	5.889	-	5.889	0.000	0.000	0.000	0.000	-	271.348
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	30.500	-	-	-	-	-	-	-	-	-	-	30.500
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>273.739</b>	<b>2.007</b>	<b>20.213</b>	<b>5.889</b>	<b>-</b>	<b>5.889</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>301.848</b>

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

**Description:**

Increment 3.2B retrofits Block 30 and 35 aircraft with hardware and software to host Increment 3.2B capabilities including the Enhanced Stores Management System (ESMS) Common Split Bus, AIM-120D, AIM-9X, Electronic Protection enhancements, Intra-Flight Datalink (IFDL) improvements, and Geolocate 2.0. Increment 3.2B is the user's highest priority for F-22.

The F-22 Raptor's Modernization Development is conducted using a rapid acquisition construct leveraging commercial best practices such as Agile and Lean. This allows the F-22 Raptor program to develop, test, and field software/hardware from multiple programs (product lines) using a scheduled cadence for capabilities as they mature. The F-22 Raptor program's utilization of these commercial best practices during production activities will allow for concurrent installations of mature Group A and Group B hardware and software of multiple product lines, delivering war fighter capabilities to the field earlier than under historical acquisition practices.

F-22 Increment 3.2B procurement and installation is scheduled to complete prior to FY 2025; therefore, there is no cost to complete.

FY 2021 Increment 3.2B funding excludes dollars for OCO - Direct War Costs and OCO - Enduring Requirements.

Funding for this exhibit is contained in PE 0207138F.

The RDT&E funding for this effort is contained in PE 0605213F (FY 2004 - FY 2018); PE 0207163F (FY 2010 - FY 2013); PE 0207445F (FY 2007 - FY 2010); and PE 020001F (FY 2007).

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	2.007	20.213	1.561	-	1.561	0.000	-	-
AFNG	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	4.328	-	4.328	-	-	-
<b>Total:</b>	<b>Quantity</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	<b>P-1 Line Item Number / Title:</b> F2232B / Increment 3.2b
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B	<b>Program Elements for Code B Items:</b> 0207138F	<b>Other Related Program Elements:</b> 0605213F
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**Line Item MDAP/MAIS Code:** 474

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Secondary Distribution	Total Obligation Authority	2.007	20.213	5.889	-	5.889	0.000	-	-	-

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft

**P-1 Line Item Number / Title:**  
F2232B / Increment 3.2b

**ID Code** (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** 0207138F **Other Related Program Elements:** 0605213F

**Line Item MDAP/MAIS Code:** 474

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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	11100 / INCREMENT 3.2B (Capability Improvement)		B		- / 273.739	- / 2.007	- / 20.213	- / 5.889	- / 0.000	- / 5.889
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 273.739</b>	<b>- / 2.007</b>	<b>- / 20.213</b>	<b>- / 5.889</b>	<b>- / -</b>	<b>- / 5.889</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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	11100 / INCREMENT 3.2B (Capability Improvement)		B		- / 0.000	- / -	- / -	- / -	- / -	- / 301.848
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / -</b>	<b>- / 301.848</b>

\*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:**  
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F2232B / Increment 3.2b	<b>Modification Number / Title:</b> 11100 / INCREMENT 3.2B

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	273.739	2.007	20.213	5.889	0.000	5.889	0.000	-	-	-	-	301.848
Less PY Advance Procurement (\$ in Millions)	30.500	-	-	-	-	-	-	-	-	-	-	30.500
Net Procurement (P-1) (\$ in Millions)	243.239	2.007	20.213	5.889	0.000	5.889	0.000	-	-	-	-	271.348
Plus CY Advance Procurement (\$ in Millions)	30.500	-	-	-	-	-	-	-	-	-	-	30.500
<b>Total Obligation Authority (\$ in Millions)</b>	<b>273.739</b>	<b>2.007</b>	<b>20.213</b>	<b>5.889</b>	<b>0.000</b>	<b>5.889</b>	<b>0.000</b>	-	-	-	-	<b>301.848</b>

*(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 Millions)	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Increment 3.2B retrofits Block 30 and 35 aircraft with hardware and software to host Increment 3.2B Enhanced Stores Management System (ESMS) Common Split Bus, AIM-120D, AIM-9X, Electronic Protection enhancements, IFDL improvements, Geolocate 2.0 capability and installs display upgrades, more capable memory and improved computer processors. Increment 3.2B will retrofit 143 of the 186 aircraft in the fleet. Along with Update 6, Increment 3.2B is the user's highest priority for F-22. Retrofit installations started at Langley AFB in FY19 and will increase to include retrofit installations at Hickam AB and Elmendorf AB in FY20. FY20 includes the initial retrofit contractor field team setup for Elmendorf AB and Hickam AB. Increment 3.2B installation costs vary by specific aircraft block and location.

**Milestone/Development Status**

LRIP installs began in May 2019. The last milestone of Required Assets Available was reached on 27 Aug 2019 (prior to the 30 Sep 2019 threshold).

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	2.007	20.213	1.561	-	1.561	0.000	-	-	-
AFNG									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	-	-	4.328	-	4.328	-	-	-	-
<b>Total:</b>									
<b>Secondary Distribution</b>									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	2.007	20.213	5.889	0.000	5.889	0.000	-	-	-



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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2					<b>P-1 Line Item Number / Title:</b> F2232B / Increment 3.2b					<b>Modification Number / Title:</b> 11100 / INCREMENT 3.2B			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> F-22				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0605213F, 0207138F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0207138F	- / 977.829	- / 0.000	- / 0.000	- / 0.000	- / -	- / 0.000	- / 0.000	- / -	- / -	- / -	- / -	- / 977.829	
<b>Procurement</b>													
<b>Modification Item 1 of 1:</b> Inc 3.2B Kits													
A Kits													
Recurring													
Inc 3.2B Kits:INSTALL KITS Group A (Active)	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	
<b>Subtotal: Recurring</b>	<b>- / 0.000</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 0.000</b>	
B Kits													
Recurring													
Inc 3.2B Kits:EQUIPMENT Group B (Active)	123 / 128.024	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -	- / -	- / -	- / -	123 / 128.024	
Inc 3.2B Kits:EQUIPMENT Group B (Guard)	20 / 23.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 23.200	
<b>Subtotal: Recurring</b>	<b>- / 151.224</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 0.000</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 151.224</b>	
<b>Subtotal: Inc 3.2B Kits</b>	<b>- / 151.224</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 0.000</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 151.224</b>	
<b>Subtotal: Procurement, All Modification Items</b>	<b>- / 151.224</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 0.000</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 151.224</b>	
<b>Support (All Modification Items)</b>													
GROUP A: TOTAL NONRECURRING	- / 178.425	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 178.425	
Data	- / 6.180	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.180	
SUPPORT-EQUIP	- / 17.098	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 17.098	
PMA - Other Gov't Costs	- / 12.150	- / 2.007	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 14.157	
<b>Subtotal: Support</b>	<b>- / 113.853</b>	<b>- / 2.007</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 115.860</b>	
<b>Installation</b>													
<b>Modification Item 1 of 1:</b> Inc 3.2B Kits	35 / 8.662	- / -	81 / 20.213	27 / 5.889	- / -	27 / 5.889	- / -	- / -	- / -	- / -	- / -	143 / 34.764	
<b>Subtotal: Installation</b>	<b>35 / 8.662</b>	<b>- / -</b>	<b>81 / 20.213</b>	<b>27 / 5.889</b>	<b>- / -</b>	<b>27 / 5.889</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>143 / 34.764</b>	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>273.739</b>	<b>2.007</b>	<b>20.213</b>	<b>5.889</b>	<b>0.000</b>	<b>5.889</b>	<b>0.000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>301.848</b>	

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> F2232B / Increment 3.2b	<b>Modification Number / Title:</b> 11100 / INCREMENT 3.2B
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** Inc 3.2B Kits

**Manufacturer Information**

Manufacturer Name: Lockheed Martin	Manufacturer Location: Fort Worth, TX
Administrative Leadtime (in Months): 1	Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	35 / 8.662	- / -	81 / 20.213	27 / 5.889	- / -	27 / 5.889	- / -	- / -	- / -	- / -	- / -	143 / 34.764
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	35 / 8.662	- / -	81 / 20.213	27 / 5.889	- / -	27 / 5.889	- / -	- / -	- / -	- / -	- / -	143 / 34.764

**Installation Schedule**

PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	0	5	6	12	16	18	17	16	20	17	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	143
Out	0	0	2	7	9	18	20	18	16	20	17	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	143

**UNCLASSIFIED**

**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	<b>P-1 Line Item Number / Title:</b> KC046A / KC-46A MDAP
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B	<b>Program Elements for Code B Items:</b> 0401221F	<b>Other Related Program Elements:</b> 0401221F
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	0.000	8.547	5.213	24.085	-	24.085	70.189	56.652	0.000	0.000	7,201.159	7,365.845
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	0.000	8.547	5.213	24.085	-	24.085	70.189	56.652	0.000	0.000	7,201.159	7,365.845
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>0.000</b>	<b>8.547</b>	<b>5.213</b>	<b>24.085</b>	<b>-</b>	<b>24.085</b>	<b>70.189</b>	<b>56.652</b>	<b>0.000</b>	<b>0.000</b>	<b>7,201.159</b>	<b>7,365.845</b>

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

**Description:**

The KC-46 will provide the capability to fuel joint and coalition receivers via a boom or drogue system on every mission and will also augment the airlift fleet with cargo, passenger, and aeromedical evacuation capabilities. The KC-46 will operate in day/night and adverse weather conditions to enable deployment, employment, sustainment, and redeployment of U.S. joint, allied, and coalition forces. The KC-46 will have communication, navigation, and surveillance equipment for world-wide operations; the capability to perform missions in chemical and biological environments; the ability to operate in up to medium threat environments with self-defense/protection (both active and passive) capabilities; and the necessary battle space awareness to mitigate survivability threats. The dynamics and mission urgency of the post-production environment requires the program to maintain flexible and responsive posture to support a broad range of mission support needs. The KC-46 will continue to identify, design, develop, integrate, verify, certify, produce, install, field, and sustain a comprehensive range of non-recurring and recurring post-production, air vehicle enhancements and field support needs. These needs may originate from programmed Mobility Air Force (MAF) requirements, Combatant Commander Joint or Urgent Operational Needs (JUON/UON), non-programmed Federal Aviation Administration (FAA) directives, or correction of deficiency reports.

The KC-46 will continue to develop, field, and sustain warfighter capabilities to meet evolving threats and mission support requirements through Block or discrete modification or modernization programs depending on mission urgency, available funding, and programmatic and technical risks. Post-production requirements can include, but will not be limited to, avionics and structural systems/architecture and subsystem updates, general mission equipment updates and procurement, general sustainment support, studies and analyses, and correction of deficiency reports.

Other modifications to the KC-46 through the FYDP include, but are not limited to, R&M, Safety Mods, Avionics and Flight Systems enhancements (described as the Pegasus Advanced Communications Suite (PACS) modification), efforts executed under the auspices of Pegasus Combat Capability (PC2) (M-Code Global Positioning System (GPS), Multifunctional Information Distribution Systems (MIDS) Enhancements, Advanced Communication Systems, Survivability and Mission Performance), requirements identified and supported by Major Command (MAJCOM)-approved 1067s, Higher Headquarters (HHQ) Enterprise Capability Collaboration Teams (i.e., High Value Airborne Asset [HVAA], Air Superiority 2030, and Multi-Domain Command and Control [MDC2]), ADs/SBs and LCMs. Funding for this exhibit contained in PE 0401221F.

This requirement (or modification) supports performance of a full financial audit as required by title 10 U.S.C. Chapter 9A, Sec 240-D.

**UNCLASSIFIED**

**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft

**P-1 Line Item Number / Title:**  
KC046A / KC-46A MDAP

**ID Code** (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** 0401221F **Other Related Program Elements:** 0401221F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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***	4601 / R&M Safety Mods (Safety)				- / -	- / -	- / -	- / 0.000	- / -	- / 0.000
P-40a***	4602 / Pegasus Advanced Communications Suite (PACS) (Capability Improvement)				- / -	- / -	- / -	- / 0.000	- / -	- / 0.000
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / -	- / 0.039	- / 2.000	- / 2.000	- / -	- / 2.000
P-3a	1 / Airworthiness Directives (Service Life Extension)		B		- / 0.000	- / 8.508	- / 3.213	- / 22.085	- / 0.000	- / 22.085
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 0.000</b>	<b>- / 8.547</b>	<b>- / 5.213</b>	<b>- / 24.085</b>	<b>- / -</b>	<b>- / 24.085</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	4601 / R&M Safety Mods (Safety)				- / 16.253	- / 19.919	- / 0.000	- / 0.000	- / 2,835.896	- / 2,872.068
P-40a***	4602 / Pegasus Advanced Communications Suite (PACS) (Capability Improvement)				- / -	- / 0.000	- / 0.000	- / 0.000	- / 394.130	- / 394.130
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 2.000	- / 2.000	- / 0.000	- / 0.000	- / 122.000	- / 130.039
P-3a	1 / Airworthiness Directives (Service Life Extension)		B		- / 51.936	- / 34.733	- / 0.000	- / 0.000	- / 3,849.133	- / 3,969.608
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 70.189</b>	<b>- / 56.652</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 7,201.159</b>	<b>- / 7,365.845</b>

\*\*\* Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

\*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 2021 funding consists of the integration of Airworthiness Directives (ADs)/Service Bulletins (SBs) and other reported issues to correct identified deficiencies, provide product improvements, and maintain Federal Aviation Administration (FAA) certification compliance for the aircraft. FY 2021 funding will also support Low Cost Mods (LCMs).

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2	<b>P-1 Line Item Number / Title:</b> KC046A / KC-46A MDAP	<b>Modification Number / Title:</b> 1 / Airworthiness Directives

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

<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	0.000	8.508	3.213	22.085	0.000	22.085	51.936	34.733	0.000	0.000	3,849.133	3,969.608
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	0.000	8.508	3.213	22.085	0.000	22.085	51.936	34.733	0.000	0.000	3,849.133	3,969.608
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>0.000</b>	<b>8.508</b>	<b>3.213</b>	<b>22.085</b>	<b>0.000</b>	<b>22.085</b>	<b>51.936</b>	<b>34.733</b>	<b>0.000</b>	<b>0.000</b>	<b>3,849.133</b>	<b>3,969.608</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Airworthiness Directives (ADs), Service Bulletins (SBs), Service Letters (SLs), and Maintenance Tips (MTs)

This effort contains no pre-planned kit purchase or installs due to the on-demand nature of ADs, SBs, SLs, and MTs. Funding is in support of production, installation, and fielding of emerging ADs, SBs, SLs, and MTs as issued, or mandated by the FAA and/or the original equipment manufacturer, to correct identified deficiencies, provide product improvements, and extend service life. Responsive execution of ADs, SBs, SLs, and MTs maintains FAA certification requirements and safety of flight for the KC-46 aircraft.

Complexity of modification required by Airworthiness Directive, Service Bulletin, Service Letter, or Maintenance Tip will dictate organic field-level, contractor field team, or depot level of implementation.

This funding request will support potential DMS and obsolescence solutions, to include if optimal, life-of-type buys or bridge buys limited to the program of record quantity.

Funding for this exhibit contained in PE 0401221F.

Milestone/Development Status

N/A

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2					<b>P-1 Line Item Number / Title:</b> KC046A / KC-46A MDAP					<b>Modification Number / Title:</b> 1 / Airworthiness Directives			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> KC-46				<b>Modification Type:</b> Service Life Extension				<b>Related RDT&amp;E PEs:</b> 0401221F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> KC-46 Airworthiness Directives													
A Kits													
Recurring													
KC-46 Airworthiness Directives:INSTALL KITS Group A (Active)	0 / 0.000	0 / 8.508	- / 3.213	0 / 22.085	- / -	0 / 22.085	0 / 51.936	0 / 34.733	- / 0.000	- / 0.000	- / 3,849.133	0 / 3,969.608	
<i>Subtotal: Recurring</i>	- / 0.000	- / 8.508	- / 3.213	- / 22.085	- / -	- / 22.085	- / 51.936	- / 34.733	- / 0.000	- / 0.000	- / 3,849.133	- / 3,969.608	
<i>Subtotal: KC-46 Airworthiness Directives</i>	- / 0.000	- / 8.508	- / 3.213	- / 22.085	- / -	- / 22.085	- / 51.936	- / 34.733	- / 0.000	- / 0.000	- / 3,849.133	- / 3,969.608	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / 8.508	- / 3.213	- / 22.085	- / -	- / 22.085	- / 51.936	- / 34.733	- / 0.000	- / 0.000	- / 3,849.133	- / 3,969.608	
<b>Installation</b>													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>0.000</b>	<b>8.508</b>	<b>3.213</b>	<b>22.085</b>	<b>0.000</b>	<b>22.085</b>	<b>51.936</b>	<b>34.733</b>	<b>0.000</b>	<b>0.000</b>	<b>3,849.133</b>	<b>3,969.608</b>	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 2			<b>P-1 Line Item Number / Title:</b> KC046A / KC-46A MDAP			<b>Modification Number / Title:</b> 1 / Airworthiness Directives	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B				<b>MDAP/MAIS Code:</b>			
<b>Modification Item 1 of 1:</b> KC-46 Airworthiness Directives							
<b>Manufacturer Information</b>							
Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 0			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 0		

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 3: Airlift Aircraft	<b>P-1 Line Item Number / Title:</b> C00500 / C-5
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B	<b>Program Elements for Code B Items:</b> 0401119F, 0401897F	<b>Other Related Program Elements:</b> 0401119F, 0401897F
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	58.991	59.779	57.937	62.108	-	62.108	25.677	31.211	24.045	0.000	36.294	356.042
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	58.991	59.779	57.937	62.108	-	62.108	25.677	31.211	24.045	0.000	36.294	356.042
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>58.991</b>	<b>59.779</b>	<b>57.937</b>	<b>62.108</b>	<b>-</b>	<b>62.108</b>	<b>25.677</b>	<b>31.211</b>	<b>24.045</b>	<b>0.000</b>	<b>36.294</b>	<b>356.042</b>

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

Initial Spares ( <i>\$ in Millions</i> )	-	5.033	2.053	0.409	-	0.409	-	-	-	-	-	7.495
Flyaway Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This line item funds modifications to the C-5 aircraft. The C-5 carries outsized and heavy cargo (tanks, helicopters, etc.) between main operating bases. Additionally, the aircraft is capable of carrying 73 troops and 36 standard 463-L pallets. Modifications increase operational capability while improving flight safety, reliability, and maintainability.

There are 52 C-5M aircraft in the Air Force fleet. The C-5 fleet was delivered to the Air Force from 1969 to 1989. Initial service life for the aircraft was 30,000 flight hours. Service life is extended out to 2040 as a result of the reliability enhancement and re-engining program (RERP) modification.

Available funds will be used for Low Cost Modifications (Capability Improvement), C-5 Mission Systems Equipment- Lavatory, and Mission Computer and Weather Radar along with program management administration, studies and analysis, risk reduction efforts, Advisory and Assistance Services, change orders, and other government costs such as travel, directorate support, government furnished equipment (GFE), and over and above costs. Funding may also be used to address Diminishing Manufacturing Sources (DMS) through studies and analysis, bridge buys, life-of-type buys, etc.

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.

Funding for this exhibit is contained in PE 0401119F.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	47.687	47.251	49.867	-	49.867	24.564	29.709	22.738
AFR	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	12.092	10.686	12.241	-	12.241	1.113	1.502	1.307
<b>Total:</b>	<b>Quantity</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 3: Airlift Aircraft	<b>P-1 Line Item Number / Title:</b> C00500 / C-5
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B	<b>Program Elements for Code B Items:</b> 0401119F, 0401897F	<b>Other Related Program Elements:</b> 0401119F, 0401897F
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**Line Item MDAP/MAIS Code:** N/A

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Secondary Distribution	Total Obligation Authority	59.779	57.937	62.108	-	62.108	25.677	31.211	24.045	0.000

**UNCLASSIFIED**

**Exhibit P-40, Budget Line Item Justification: PB 2021 Air Force** **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 3: Airlift Aircraft

**P-1 Line Item Number / Title:**  
C00500 / C-5

**ID Code** (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** 0401119F, 0401897F **Other Related Program Elements:** 0401119F, 0401897F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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***	8964 / C-5 Replace Multifunctional Co (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	8965 / C-5 Fleet Blk Upgrade 01 (Other)				- / 13.093	- / -	- / -	- / -	- / -	- / -
P-40a***	8969 / C-5 Training Systems (Training Mods) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	8966 / C-5 Mission Systems Equipment- Lavatory (Other)		B		- / 9.461	- / 10.943	- / 8.742	- / 12.866	- / 0.000	- / 12.866
P-3a	8967 / Mission Computer and Weather Radar (Other)		B		- / 36.437	- / 28.353	- / 16.809	- / 15.365	- / 0.000	- / 15.365
P-3a	8968 / C-5M Communication Navigation Surveillance/Air Traffic Management (CNS/ATM) (Capability Improvement)		B		- / 0.000	- / 20.483	- / 32.386	- / 33.877	- / 0.000	- / 33.877
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 58.991</b>	<b>- / 59.779</b>	<b>- / 57.937</b>	<b>- / 62.108</b>	<b>- / -</b>	<b>- / 62.108</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	8964 / C-5 Replace Multifunctional Co (Reliability & Maintainability)				- / -	- / 17.879	- / 19.266	- / -	- / 36.294	- / 73.439
P-40a***	8965 / C-5 Fleet Blk Upgrade 01 (Other)				- / -	- / -	- / -	- / -	- / -	- / 13.093
P-40a***	8969 / C-5 Training Systems (Training Mods) (Capability Improvement)				- / -	- / 2.635	- / -	- / -	- / -	- / 2.635
P-3a	8966 / C-5 Mission Systems Equipment- Lavatory (Other)		B		- / 3.838	- / 0.000	- / -	- / -	- / -	- / 45.850
P-3a	8967 / Mission Computer and Weather Radar (Other)		B		- / 6.928	- / 3.036	- / 4.779	- / 0.000	- / 0.000	- / 111.707
P-3a	8968 / C-5M Communication Navigation Surveillance/Air Traffic Management (CNS/ATM) (Capability Improvement)		B		- / 14.911	- / 7.661	- / 0.000	- / 0.000	- / 0.000	- / 109.318
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 25.677</b>	<b>- / 31.211</b>	<b>- / 24.045</b>	<b>- / 0.000</b>	<b>- / 36.294</b>	<b>- / 356.042</b>

\*\*\* Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

\*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:**  
This program, P-3A Mod 8964, C-5 Replace Multifunctional Co, is a new start.

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 3	<b>P-1 Line Item Number / Title:</b> C00500 / C-5	<b>Modification Number / Title:</b> 8966 / C-5 Mission Systems Equipment-Lavatory

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	9.461	10.943	8.742	12.866	0.000	12.866	3.838	0.000	-	-	-	45.850
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	9.461	10.943	8.742	12.866	0.000	12.866	3.838	0.000	-	-	-	45.850
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>9.461</b>	<b>10.943</b>	<b>8.742</b>	<b>12.866</b>	<b>0.000</b>	<b>12.866</b>	<b>3.838</b>	<b>0.000</b>	-	-	-	<b>45.850</b>

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

Initial Spares (\$ in Millions)	0.959	-	-	-	-	-	-	-	-	-	-	0.959
Gross/Weapon System Unit Cost (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The C-5M (P-3A Mod 8966), Mission System Equipment(MSE)Lavatory program replaces the three lavatories and their associated systems in each aircraft with a commercial off-the-shelf (COTS) solution, which improves aircraft availability for the C-5M fleet. The current lavatory is the original design dating back to the inception of the C-5 in the 1960s. The existing fiberglass tanks are old and have exceeded their useful life. The lavatory requires extensive maintenance personnel hours to maintain. Parts obsolescence limits the purchase of spare parts such as pump motors, drain valves, etc. Structural corrosion due to leaks (Sodium Hypochlorite/blue water), continues to put a strain on maintenance resources in terms of labor hours and cost of repairs. The updated COTS lavatory will improve aircraft availability while providing the war-fighter with a reliable system that will last the projected remaining life of the C-5M. This production program mitigates parts obsolescence of the existing system and corrects malfunctions currently occurring to the main landing gear system and avionics system components. Poor design and age of existing component parts have enabled sodium hypochlorite to leak into the aircraft structure, which in turn cause extensive structural and avionics corrosion. Corrosion of the avionics components has led to burnt wires and circuit cards in the main landing gear sequence panel, which has resulted in shorted wires to the system. Program office implementation of stop-gap measures to fix the major causes of leaks and implementation of preventive measures to protect the surrounding structures have not alleviated the issues. Diminishing manufacturing source (DMS) issues, as a result of parts obsolescence and data right issues, are preventing the procurement of replacement parts for the current system. System degradation and extra maintenance are causing increased aircraft downtime. A COTS solution to the problem will be implemented for a long-term, sustainable mission system equipment lavatory. The Lavatory requirement has been validated with the approved AMC 1067 11-206.

Available funds will be used for program management administration, studies and analysis, risk reduction efforts, Advisory and Assistance Services, change orders, and other government costs such as travel, directorate support, government furnished equipment (GFE), and over and above costs. Funding may also be used to address Diminishing Manufacturing Sources (DMS) through studies and analysis, bridge buys, life-of-type buys, etc.

Milestone/Development Status

N/A

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	8.201	6.721	7.815	-	7.815	3.361	-	-	-
AFR	Quantity	-	-	-	-	-	-	-	-	-

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 3	<b>P-1 Line Item Number / Title:</b> C00500 / C-5	<b>Modification Number / Title:</b> 8966 / C-5 Mission Systems Equipment-Lavatory

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

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
	Total Obligation Authority	2.742	2.021	5.051	-	5.051	0.477	-	-	-
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>10.943</b>	<b>8.742</b>	<b>12.866</b>	<b>0.000</b>	<b>12.866</b>	<b>3.838</b>	<b>0.000</b>	-	-

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>											<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 3				<b>P-1 Line Item Number / Title:</b> C00500 / C-5				<b>Modification Number / Title:</b> 8966 / C-5 Mission Systems Equipment-Lavatory					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> C-5M				<b>Modification Type:</b> Other				<b>Related RDT&amp;E PEs:</b> 0401119F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> Lavatory Kit													
B Kits													
Recurring													
Lavatory Kit:EQUIPMENT Group B (Active)	13 / 5.147	8 / 3.008	4 / 1.496	9 / 3.451	- / -	9 / 3.451	0 / 0.000	- / -	- / -	- / -	- / -	34 / 13.102	
Lavatory Kit:EQUIPMENT Group B (Reserve)	5 / 1.968	4 / 1.504	2 / 0.748	5 / 1.917	- / -	5 / 1.917	0 / 0.000	- / -	- / -	- / -	- / -	16 / 6.137	
<i>Subtotal: Recurring</i>	- / 7.115	- / 4.512	- / 2.244	- / 5.368	- / -	- / 5.368	- / 0.000	- / -	- / -	- / -	- / -	- / 19.239	
<i>Subtotal: Lavatory Kit</i>	- / 7.115	- / 4.512	- / 2.244	- / 5.368	- / -	- / 5.368	- / 0.000	- / -	- / -	- / -	- / -	- / 19.239	
<i>Subtotal: Procurement, All Modification Items</i>	- / 7.115	- / 4.512	- / 2.244	- / 5.368	- / -	- / 5.368	- / 0.000	- / -	- / -	- / -	- / -	- / 19.239	
<b>Support (All Modification Items)</b>													
PMA - Other Gov't Costs	- / 0.507	- / 1.067	- / 0.981	- / 1.230	- / -	- / 1.230	- / 0.496	- / -	- / -	- / -	- / -	- / 4.281	
<i>Subtotal: Support</i>	- / 0.507	- / 1.067	- / 0.981	- / 1.230	- / -	- / 1.230	- / 0.496	- / -	- / -	- / -	- / -	- / 4.281	
<b>Installation</b>													
<i>Modification Item 1 of 1:</i> Lavatory Kit	3 / 1.839	13 / 5.364	13 / 5.517	14 / 6.268	- / -	14 / 6.268	7 / 3.342	- / -	- / -	- / -	- / -	50 / 22.330	
<i>Subtotal: Installation</i>	3 / 1.839	13 / 5.364	13 / 5.517	14 / 6.268	- / -	14 / 6.268	7 / 3.342	- / -	- / -	- / -	- / -	50 / 22.330	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>9.461</b>	<b>10.943</b>	<b>8.742</b>	<b>12.866</b>	<b>0.000</b>	<b>12.866</b>	<b>3.838</b>	<b>0.000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>45.850</b>	

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 3	<b>P-1 Line Item Number / Title:</b> C00500 / C-5	<b>Modification Number / Title:</b> 8966 / C-5 Mission Systems Equipment-Lavatory

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** Lavatory Kit

**Manufacturer Information**

Manufacturer Name: Small Business (Kit Build)	Manufacturer Location: WRALC/Unit
Administrative Leadtime (in Months): 1	Production Leadtime (in Months): 10

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Nov 2018	Nov 2019	Nov 2020				
Delivery Dates	Sep 2019	Sep 2020	Sep 2021				

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	3 / 1.839	13 / 5.364	2 / 0.849	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 8.052
FY 2019	- / -	- / -	11 / 4.668	1 / 0.448	- / -	1 / 0.448	- / -	- / -	- / -	- / -	- / -	12 / 5.116
FY 2020	- / -	- / -	- / -	5 / 2.239	- / -	5 / 2.239	1 / 0.477	- / -	- / -	- / -	- / -	6 / 2.716
FY 2021	- / -	- / -	- / -	8 / 3.581	- / -	8 / 3.581	6 / 2.865	- / -	- / -	- / -	- / -	14 / 6.446
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	3 / 1.839	13 / 5.364	13 / 5.517	14 / 6.268	- / -	14 / 6.268	7 / 3.342	- / -	- / -	- / -	- / -	50 / 22.330

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	3	3	4	3	3	6	2	2	6	4	3	1	4	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	50
Out	3	3	3	4	3	3	6	2	2	6	4	3	1	4	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	50

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 3	<b>P-1 Line Item Number / Title:</b> C00500 / C-5	<b>Modification Number / Title:</b> 8967 / Mission Computer and Weather Radar

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	36.437	28.353	16.809	15.365	0.000	15.365	6.928	3.036	4.779	0.000	0.000	111.707
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	36.437	28.353	16.809	15.365	0.000	15.365	6.928	3.036	4.779	0.000	0.000	111.707
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>36.437</b>	<b>28.353</b>	<b>16.809</b>	<b>15.365</b>	<b>0.000</b>	<b>15.365</b>	<b>6.928</b>	<b>3.036</b>	<b>4.779</b>	<b>0.000</b>	<b>0.000</b>	<b>111.707</b>

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

Initial Spares ( <i>\$ in Millions</i> )	3.390	0.647	-	0.000	-	0.000	-	-	-	-	-	4.037
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The C-5M core mission computer (CMC) and weather radar (WxRadar) requirement is for the modification of 50 C-5M aircraft. The CMC/WxRadar replacement program is a comprehensive permanent sustainment modification, as described in validated requirements per AMC AF Form 1067s 11-152 and 11-153, to mitigate the obsolescence of the current CMC and WxRadar. This effort centers around modifying the current CMC, to obtain sufficient capability/capability to support integration of the WxRadar with margin for growth to accommodate future requirements. This includes requirements to meet calendar year 2020 FAA Automatic Dependent Surveillance-Broadcast (ADS-B) Out and Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM) requirements. The program will modify a total of 52 aircraft; 2 during Engineering and Manufacturing Development and 50 during Production.

The CMC/WxRadar modification is necessary to keep the C-5M worldwide deployable. This effort replaces the APS-133 WxRadar, resolving severe diminishing manufacturing source (DMS) issues, using the Rockwell Collins WXR-2100 commercial off-the-shelf WxRadar, which is common to other aircraft platforms, and provides the same capability as the APS-133. The effort also replaces the current core processing module (CPM) cards in the CMC with new Honeywell CPM II cards, providing additional processing speed and throughput capacity.

The CMC/WxRadar program is the baseline for all future modifications to the C-5M. The modification helps to maintain aircraft availability as the current APS-133 WxRadar and current CPM cards are both facing severe diminishing manufacturing source (DMS) issues. Failure to upgrade the WxRadar and CMC to support calendar year 2020 CNS/ATM mandates will create a significant operational impact. Available funds will be used for program management administration, studies and analysis, risk reduction efforts, Advisory and Assistance Services, change orders, and other government costs such as travel, directorate support, government furnished equipment (GFE), and over and above costs. Funding may also be used to address Diminishing Manufacturing Sources (DMS) through studies and analysis, bridge buys, life-of-type buys, etc.

There are a total of 8 trainers to be updated; 6 weapon systems trainers (WST) and 2 aircrew maintenance system trainers (AMST).

**Milestone/Development Status**

The Production strategy is to award a competitive contract for the kitting of Group A components (wiring harnesses, brackets, etc.) and award sole-source contracts for the Group B components such as Core Mission Computer (CMC) Versatile Integrated Avionics (VIAs) and Avionics Interface Units (AIUs), Radar components, etc. The current modification install strategy is to have the modification accomplished at a contractor facility.

**Production Milestones**



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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 3	<b>P-1 Line Item Number / Title:</b> C00500 / C-5	<b>Modification Number / Title:</b> 8967 / Mission Computer and Weather Radar

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

Milestone C Decision: 2Q FY19  
 First Modification started: 1Q FY21  
 Last Modification complete: 1Q FY24

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	23.283	11.247	12.456	-	12.456	6.928	1.729	3.472	0.000
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	5.070	5.562	2.909	-	2.909	0.000	1.307	1.307	0.000
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>28.353</b>	<b>16.809</b>	<b>15.365</b>	<b>0.000</b>	<b>15.365</b>	<b>6.928</b>	<b>3.036</b>	<b>4.779</b>	<b>0.000</b>

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 3					<b>P-1 Line Item Number / Title:</b> C00500 / C-5					<b>Modification Number / Title:</b> 8967 / Mission Computer and Weather Radar			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> C-5M				<b>Modification Type:</b> Other				<b>Related RDT&amp;E PEs:</b> 0401119F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0401119F	2 / 97.080	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 97.080	
<b>Procurement</b>													
<i>Modification Item 1 of 1: CMC/WxRadar</i>													
A Kits													
Recurring													
CMC/WxRadar:INSTALL KITS Group A (Active)	7 / 1.041	14 / 1.544	12 / 1.406	1 / 0.159	- / -	1 / 0.159	- / -	- / -	- / -	- / -	- / -	34 / 4.150	
CMC/WxRadar:INSTALL KITS Group A (Reserve)	2 / 0.297	6 / 0.662	6 / 0.703	2 / 0.319	- / -	2 / 0.319	- / 0.000	- / -	- / -	- / -	- / -	16 / 1.981	
<b>Subtotal: Recurring</b>	<b>- / 1.338</b>	<b>- / 2.206</b>	<b>- / 2.109</b>	<b>- / 0.478</b>	<b>- / -</b>	<b>- / 0.478</b>	<b>- / 0.000</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 6.131</b>	
B Kits													
Recurring													
CMC/WxRadar:EQUIPMENT Group B (Active)	7 / 4.919	14 / 8.253	12 / 7.105	1 / 0.642	- / -	1 / 0.642	- / -	- / -	- / -	- / -	- / -	34 / 20.919	
CMC/WxRadar:EQUIPMENT Group B (Guard)	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	
CMC/WxRadar:EQUIPMENT Group B (Reserve)	2 / 1.472	6 / 3.537	6 / 3.552	2 / 1.283	- / -	2 / 1.283	- / -	- / -	- / -	- / -	- / -	16 / 9.844	
<b>Subtotal: Recurring</b>	<b>- / 6.391</b>	<b>- / 11.790</b>	<b>- / 10.657</b>	<b>- / 1.925</b>	<b>- / -</b>	<b>- / 1.925</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 30.763</b>	
<b>Subtotal: CMC/WxRadar</b>	<b>- / 7.729</b>	<b>- / 13.996</b>	<b>- / 12.766</b>	<b>- / 2.403</b>	<b>- / -</b>	<b>- / 2.403</b>	<b>- / 0.000</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 36.894</b>	
<b>Subtotal: Procurement, All Modification Items</b>	<b>- / 7.729</b>	<b>- / 13.996</b>	<b>- / 12.766</b>	<b>- / 2.403</b>	<b>- / -</b>	<b>- / 2.403</b>	<b>- / 0.000</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 36.894</b>	
<b>Support (All Modification Items)</b>													
GROUP A: TOTAL NONRECURRING	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	
GROUP B: TOTAL NONRECURRING	- / 0.434	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.434	
Change Orders	- / -	- / -	- / 0.571	- / 0.663	- / -	- / 0.663	- / 0.322	- / 0.042	- / 0.042	- / 0.000	- / -	- / 1.640	
Mod of Spares	- / 14.629	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 14.629	
SIM/TRAINER	0 / 0.593	6 / 8.944	- / -	2 / 3.885	- / -	2 / 3.885	2 / 6.090	- / -	- / -	- / -	- / -	10 / 19.512	
SUPPORT-EQUIP	- / 0.653	- / 0.000	- / 0.289	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.942	
PMA - Other Gov't Costs	- / 1.348	- / 1.057	- / 0.134	- / 0.171	- / -	- / 0.171	- / 0.141	- / 0.036	- / 0.036	- / 0.000	- / -	- / 2.923	
PMA - Contractor Services	- / 4.155	- / 0.000	- / -	- / 1.818	- / -	- / 1.818	- / 0.157	- / 0.126	- / 0.127	- / 0.000	- / -	- / 6.383	
A&AS	- / 5.486	- / 0.000	- / -	- / -	- / -	- / -	- / 0.000	- / 0.000	- / -	- / -	- / -	- / 5.486	
OTHER GOVT	- / -	- / -	- / -	- / 0.327	- / -	- / 0.327	- / 0.218	- / 0.218	- / 0.218	- / 0.000	- / -	- / 0.981	
ICS-Material	- / 0.122	- / 0.000	- / -	- / -	- / -	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / 0.122	
ICS-Labor	- / 0.488	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.488	
<b>Subtotal: Support</b>	<b>0 / 27.908</b>	<b>6 / 10.001</b>	<b>- / 0.994</b>	<b>2 / 6.864</b>	<b>- / -</b>	<b>2 / 6.864</b>	<b>2 / 6.928</b>	<b>- / 0.422</b>	<b>- / 0.423</b>	<b>- / 0.000</b>	<b>- / -</b>	<b>10 / 53.540</b>	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 3	<b>P-1 Line Item Number / Title:</b> C00500 / C-5	<b>Modification Number / Title:</b> 8967 / Mission Computer and Weather Radar

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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<b>Models of Systems Affected:</b> C-5M	<b>Modification Type:</b> Other	<b>Related RDT&amp;E PEs:</b> 0401119F
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Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Installation</b>												
<i>Modification Item 1 of 1:</i> CMC/WxRadar	0 / 0.800	0 / 4.356	0 / 3.049	9 / 6.098	- / -	9 / 6.098	10 / 0.000	10 / 2.614	10 / 4.356	10 / 0.000	1 / 0.000	50 / 21.273
<i>Subtotal: Installation</i>	- / 0.800	- / 4.356	- / 3.049	9 / 6.098	- / -	9 / 6.098	10 / -	10 / 2.614	10 / 4.356	10 / 0.000	1 / -	50 / 21.273
<b>Total</b>												
<b>Total Cost (Procurement + Support + Installation)</b>	<b>36.437</b>	<b>28.353</b>	<b>16.809</b>	<b>15.365</b>	<b>0.000</b>	<b>15.365</b>	<b>6.928</b>	<b>3.036</b>	<b>4.779</b>	<b>0.000</b>	<b>0.000</b>	<b>111.707</b>

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 3	<b>P-1 Line Item Number / Title:</b> C00500 / C-5	<b>Modification Number / Title:</b> 8967 / Mission Computer and Weather Radar

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** CMC/WxRadar

**Manufacturer Information**

Manufacturer Name: Source Selection	Manufacturer Location: TBD
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 10

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Apr 2019	Apr 2020	Apr 2021				
Delivery Dates	Feb 2020	Feb 2021	Feb 2022				

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 / 0.800	0 / 3.920	- / -	9 / 0.000	- / -	9 / 0.000	- / -	- / -	- / -	- / -	- / -	9 / 4.720
FY 2019	- / -	0 / 0.436	0 / 3.049	0 / 5.227	- / -	0 / 5.227	10 / 0.000	10 / 0.000	- / -	- / -	- / -	20 / 8.712
FY 2020	- / -	- / -	- / -	0 / 0.871	- / -	0 / 0.871	- / -	0 / 2.614	10 / 4.356	8 / 0.000	- / -	18 / 7.841
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.000	1 / 0.000	3 / 0.000
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 0.800	0 / 4.356	0 / 3.049	9 / 6.098	- / -	9 / 6.098	10 / 0.000	10 / 2.614	10 / 4.356	10 / 0.000	1 / 0.000	50 / 21.273

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	1	3	3	2	3	3	2	2	2	3	3	2	2	3	3	2	2	3	2	3	1	50
Out	0	-	-	-	-	-	-	-	-	-	2	3	2	2	4	2	3	2	2	2	3	2	2	4	2	2	3	3	2	3	50

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 3	<b>P-1 Line Item Number / Title:</b> C00500 / C-5	<b>Modification Number / Title:</b> 8968 / C-5M Communication Navigation Surveillance/Air Traffic Management (CNS/ATM)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>					
<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	0.000	20.483	32.386	33.877	0.000	33.877	14.911	7.661	0.000	0.000	0.000	109.318
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	0.000	20.483	32.386	33.877	0.000	33.877	14.911	7.661	0.000	0.000	0.000	109.318
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>0.000</b>	<b>20.483</b>	<b>32.386</b>	<b>33.877</b>	<b>0.000</b>	<b>33.877</b>	<b>14.911</b>	<b>7.661</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>109.318</b>
<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> )	-	4.386	2.053	0.409	-	0.409	0.000	0.000	0.000	0.000	-	6.848
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The C-5 communication, navigation, surveillance/air traffic management (CNS/ATM) program is a comprehensive effort to ensure appropriate system design architectures are developed and installed on the C-5 to allow aircraft operation in accordance with civil airspace access mandates for the US national airspace system (NAS) and international civil airspace. Also, the program will add equipment to meet outstanding National Security Agency (NSA) mandates for encryption of voice communications. The CNS/ATM program ensures system standardization and interoperability with other DoD systems to the maximum extent possible and directly supports airworthiness certification of the C-5. CNS/ATM requirements include, but are not limited to, capabilities such as automatic dependent surveillance-broadcast out (ADS-B Out), identification friend or foe (IFF) mode 5, satellite communication equipment replacement, and beyond line-of-sight voice radio replacement. It is anticipated equipment will be predominately commercial off-the-shelf or non-developmental items. The current ARC-210 radio for very high frequency (VHF) voice communications is facing diminishing manufacturing source (DMS) issues and will no longer be capable of providing secure voice communications due to the development of new crypto algorithms. The addition of next generation ARC-210 radios and associated cryptologic equipment will enable the C-5 to meet NSA mandates for secure communications and allow aircrews to continue to communicate securely over VHF, ultra high frequency (UHF), high frequency (HF), or MILSATCOM. The current generation of satellites support services used on the C-5 to provide oceanic controller/pilot data link communications (CPDLCs) to air traffic control and aircraft communications addressing and reporting system (ACARS) beyond-line-of-sight command and control messages will no longer be functional after 2016. The next generation of satellites will accommodate legacy C-5 SATCOM equipment for an interim period of time to allow for integration of upgraded SATCOM equipment compatible with this satellite constellation. Without this modification, the C-5 will not be able to fly oceanic tracks and will not be able to meet aircraft separation distance requirements for civil airspace access. ADS-B Out is a next generation surveillance technology that transitions key aspects of air traffic control from terrestrial based technologies to satellite enabled technologies to provide controllers a more accurate picture of aircraft positioning. ADS-B Out will allow aircraft to provide continuous broadcast of aircraft position to both controllers and other aircraft equipped with ADS-B In capable avionics. International and US NAS mandates for ADS-B Out for civil airspace access call for equipage by calendar year 2020. Fifty-two (52) C-5M aircraft will receive this modification. The following requirement documents for C-5M CNS/ATM upgrade components were approved by HAF/A5 on 7 Nov 14: AMC AF Form 1067s 14-067, 12-067, 10-034, and 09-015. There is a total of 7 trainers, 5 are weapon systems trainers (WST) and 2 are aircrew maintenance system trainers (AMST). Change Orders also include SE/PM and O&A. OGC's also include DMS. Funding may be used to address DMS issues through analysis, bridge buys, life-of-type buys, etc. All installations planned to be performed at contractor facilities.

Available funds will be used for program management administration, studies and analysis, risk reduction efforts, Advisory and Assistance Services, change orders, and other government costs such as travel, directorate support, government furnished equipment (GFE), and over and above costs. Funding may also be used to address Diminishing Manufacturing Sources (DMS) through studies and analysis, bridge buys, life-of-type buys, etc.

ADS-B Out software and hardware upgrade modifications met the FY20 mandates.

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 3	<b>P-1 Line Item Number / Title:</b> C00500 / C-5	<b>Modification Number / Title:</b> 8968 / C-5M Communication Navigation Surveillance/Air Traffic Management (CNS/ATM)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Milestone/Development Status

- Preliminary design review (PDR) July 2017
- Critical design review (CDR) September 2017
- DT&E July 2018 (Start Date)
- OT&E December 2019 (Start Date)
- MS-C July 2019
- Production contract to be awarded in July of 2020

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	16.203	29.283	29.596	-	29.596	14.275	7.466	0.000	0.000
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	4.280	3.103	4.281	-	4.281	0.636	0.195	0.000	0.000
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>20.483</b>	<b>32.386</b>	<b>33.877</b>	<b>0.000</b>	<b>33.877</b>	<b>14.911</b>	<b>7.661</b>	<b>0.000</b>	<b>0.000</b>

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 3					<b>P-1 Line Item Number / Title:</b> C00500 / C-5					<b>Modification Number / Title:</b> 8968 / C-5M Communication Navigation Surveillance/Air Traffic Management (CNS/ATM)			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> C-5M				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0401119F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0401119F	2 / 84.868	- / 28.245	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 113.113	
<b>Procurement</b>													
<b>Modification Item 1 of 1: CNS/ATM</b>													
A Kits													
Recurring													
CNS/ATM:INSTALL KITS Group A (Active)	- / -	14 / 0.733	14 / 0.857	6 / 0.418	- / -	6 / 0.418	- / -	- / -	- / -	- / -	- / -	34 / 2.008	
CNS/ATM:INSTALL KITS Group A (Reserve)	- / -	7 / 0.366	5 / 0.306	4 / 0.278	- / -	4 / 0.278	- / -	- / -	- / -	- / -	- / -	16 / 0.950	
<b>Subtotal: Recurring</b>	- / -	- / 1.099	- / 1.163	- / 0.696	- / -	- / 0.696	- / -	- / -	- / -	- / -	- / -	- / 2.958	
B Kits													
Recurring													
CNS/ATM:EQUIPMENT Group B (Active)	- / -	14 / 7.829	14 / 7.832	6 / 5.318	- / -	6 / 5.318	- / -	- / -	- / -	- / -	- / -	34 / 20.979	
CNS/ATM:EQUIPMENT Group B (Reserve)	- / -	7 / 3.914	5 / 2.797	4 / 3.545	- / -	4 / 3.545	- / -	- / -	- / -	- / -	- / -	16 / 10.256	
<b>Subtotal: Recurring</b>	- / -	- / 11.743	- / 10.629	- / 8.863	- / -	- / 8.863	- / -	- / -	- / -	- / -	- / -	- / 31.235	
<b>Subtotal: CNS/ATM</b>	- / -	- / 12.842	- / 11.792	- / 9.559	- / -	- / 9.559	- / -	- / -	- / -	- / -	- / -	- / 34.193	
<b>Subtotal: Procurement, All Modification Items</b>	- / -	- / 12.842	- / 11.792	- / 9.559	- / -	- / 9.559	- / -	- / -	- / -	- / -	- / -	- / 34.193	
<b>Support (All Modification Items)</b>													
SUPPORT-EQUIP	- / -	- / 0.121	- / 0.152	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / 0.273	
ICS-Labor	- / -	- / 0.173	- / 0.302	- / 0.549	- / -	- / 0.549	- / 0.940	- / 0.000	- / 0.000	- / -	- / -	- / 1.964	
ICS-Material	- / -	- / 0.011	- / 0.019	- / 0.034	- / -	- / 0.034	- / 0.059	- / 0.000	- / 0.000	- / -	- / -	- / 0.123	
SIM/TRAINER	- / -	0 / 0.000	6 / 8.568	2 / 3.867	- / -	2 / 3.867	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	8 / 12.435	
Data	- / -	- / 0.000	- / 0.000	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / 0.000	
Change Orders	- / -	- / 0.000	- / 4.481	- / 4.941	- / -	- / 4.941	- / 4.735	- / 1.685	- / 0.000	- / -	- / -	- / 15.842	
A&AS	- / -	- / 0.000	- / 0.481	- / 4.600	- / -	- / 4.600	- / 2.969	- / 0.000	- / 0.000	- / -	- / -	- / 8.050	
OTHER GOVT	- / -	- / 0.000	- / 1.073	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / 1.073	
PMA - Other Gov't Costs	- / -	- / 6.693	- / 0.000	- / 3.613	- / -	- / 3.613	- / 3.845	- / 5.076	- / 0.000	- / -	- / -	- / 19.227	
PMA - Contractor Services	- / -	- / 0.250	- / 0.000	- / 4.407	- / -	- / 4.407	- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / 4.657	
Type 1 Training	- / -	- / 0.393	- / 0.230	- / 0.250	- / -	- / 0.250	- / 0.250	- / 0.250	- / 0.000	- / -	- / -	- / 1.373	
<b>Subtotal: Support</b>	- / -	0 / 7.641	6 / 15.306	2 / 22.261	- / -	2 / 22.261	0 / 12.798	0 / 7.011	0 / 0.000	- / -	- / -	8 / 65.017	
<b>Installation</b>													

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 3	<b>P-1 Line Item Number / Title:</b> C00500 / C-5	<b>Modification Number / Title:</b> 8968 / C-5M Communication Navigation Surveillance/Air Traffic Management (CNS/ATM)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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<b>Models of Systems Affected:</b> C-5M	<b>Modification Type:</b> Capability Improvement	<b>Related RDT&amp;E PEs:</b> 0401119F
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Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Modification Item 1 of 1:</b> CNS/ATM	- / -	- / -	0 / 5.288	9 / 2.057	- / -	9 / 2.057	10 / 2.113	10 / 0.650	10 / 0.000	10 / 0.000	1 / 0.000	50 / 10.108
<i>Subtotal: Installation</i>	- / -	- / -	0 / 5.288	9 / 2.057	- / -	9 / 2.057	10 / 2.113	10 / 0.650	10 / 0.000	10 / 0.000	1 / 0.000	50 / 10.108
<b>Total</b>												
<b>Total Cost (Procurement + Support + Installation)</b>	<b>0.000</b>	<b>20.483</b>	<b>32.386</b>	<b>33.877</b>	<b>0.000</b>	<b>33.877</b>	<b>14.911</b>	<b>7.661</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>109.318</b>



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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 3	<b>P-1 Line Item Number / Title:</b> C00500 / C-5	<b>Modification Number / Title:</b> 8968 / C-5M Communication Navigation Surveillance/Air Traffic Management (CNS/ATM)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** CNS/ATM

**Manufacturer Information**

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 11

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Apr 2019	Apr 2020	Apr 2021				
Delivery Dates	Mar 2020	Mar 2021	Mar 2022				

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	0 / 5.288	9 / 2.057	- / -	9 / 2.057	10 / 2.113	2 / 0.130	- / -	- / -	- / -	21 / 9.588
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 0.520	10 / 0.000	1 / 0.000	- / -	19 / 0.520
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 0.000	1 / 0.000	10 / 0.000
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	0 / 5.288	9 / 2.057	- / -	9 / 2.057	10 / 2.113	10 / 0.650	10 / 0.000	10 / 0.000	1 / 0.000	50 / 10.108

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	1	3	3	2	3	3	2	2	2	3	3	2	2	3	3	2	2	3	2	3	1	50
Out	0	-	-	-	-	-	-	-	-	-	2	3	2	2	4	2	3	2	2	2	3	2	2	4	2	2	3	3	2	3	50

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 3: Airlift Aircraft

**P-1 Line Item Number / Title:**  
C01700 / C-17A

**ID Code** (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** 0401130F **Other Related Program Elements:** 0401130F

**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	343.468	77.221	60.244	66.798	-	66.798	85.441	84.326	48.254	102.612	90.151	958.515
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	343.468	77.221	60.244	66.798	-	66.798	85.441	84.326	48.254	102.612	90.151	958.515
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>343.468</b>	<b>77.221</b>	<b>60.244</b>	<b>66.798</b>	-	<b>66.798</b>	<b>85.441</b>	<b>84.326</b>	<b>48.254</b>	<b>102.612</b>	<b>90.151</b>	<b>958.515</b>

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

**Description:**

This line item funds modifications to the C-17 aircraft and Training Systems. The United States Air Force (USAF) C-17 inventory is 222 aircraft. The four engine C-17 is the only aircraft capable of routine delivery of outsize cargo (tanks, helicopters, etc.) to short, austere airfields. The aircraft can carry up to 102 troops, 36 litter patients, or 18 standard 463-L pallets.

This funding includes Rapid Global Mobility platform-related rapid prototyping and fielding activities executed under the authority of National Defense Authorization Act 2016, Section 804, as amended. Such activities include, but are not limited to, roll-on/roll-off, carry-on/carry-off, pod-based, aircraft-integrated support equipment, and other technical solutions supporting the full spectrum of the platform's Rapid Global Mobility missions.

Funding may also be used to address Diminishing Manufacturing Sources (DMS) issues, obsolescence resolution for multi-functional displays, fuel efficiency & drag reduction improvements, aircraft data bus maintenance initiatives, and cockpit situational awareness.

In accordance with Section 1815 of the FY08 National Defense Authorization Act (P.L.110-181), these items are 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.

Funding for this exhibit is contained in PE 0401130F and 0401897F.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	70.221	53.244	55.484	-	55.484	65.849	65.894	35.905	76.405
AFNG									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	5.000	5.000	7.966	-	7.966	12.919	11.792	7.991	18.563
AFR									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	2.000	2.000	3.348	-	3.348	6.673	6.640	4.358	7.644

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 3: Airlift Aircraft	<b>P-1 Line Item Number / Title:</b> C01700 / C-17A
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ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0401130F	Other Related Program Elements: 0401130F
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Line Item MDAP/MAIS Code: N/A

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
<b>Total:</b>	Quantity	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	Total Obligation Authority	77.221	60.244	66.798	-	66.798	85.441	84.326	48.254	102.612

**UNCLASSIFIED**

**Exhibit P-40, Budget Line Item Justification: PB 2021 Air Force** **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 3: Airlift Aircraft

**P-1 Line Item Number / Title:**  
C01700 / C-17A

**ID Code** (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** 0401130F **Other Related Program Elements:** 0401130F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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***	_2000 / Pylon Stub FFLZ, FF, Translating Fairing (Safety)				- / 93.956	- / -	- / -	- / 1.618	- / -	- / 1.618
P-40a***	_2590 / ELT Frequency Change (Capability Improvement)				- / 5.182	- / -	- / -	- / -	- / -	- / -
P-40a***	_2633 / MFOQA (Capability Improvement)				- / 14.070	- / -	- / -	- / -	- / -	- / -
P-40a***	1508 / IFF GATM (Capability Improvement)				- / 123.454	- / 1.109	- / -	- / 0.050	- / -	- / 0.050
P-40a***	2901 / Automatic Dependent Surveillance - Broadcast Out (ADS-B Out) (Capability Improvement)				- / 83.245	- / -	- / -	- / 0.050	- / -	- / 0.050
P-40a***	6403 / Filter Fire Mitigation (Capability Improvement)				- / -	- / -	- / 0.440	- / 1.320	- / -	- / 1.320
P-40a***	9740 / Fixed Installation Satellite Antenna (FISA) (Capability Improvement)				- / -	- / 17.160	- / 8.088	- / 4.900	- / -	- / 4.900
P-40a***	9742 / C-17 Simulator Lateral Motion Maneuver Enhancement (Other)				- / -	- / 1.438	- / -	- / -	- / -	- / -
P-40a***	9744 / C-17 Visual System Field of View (Other)				- / -	- / 1.008	- / -	- / -	- / -	- / -
P-40a***	9747 / C-17 Training System (Other Mods) (Other)				- / -	- / 4.178	- / 1.479	- / 1.009	- / -	- / 1.009
P-40a***	9748 / C-17 Training System (Training Mods) (Other)				- / -	- / -	- / 11.370	- / -	- / -	- / -
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 3.246	- / 0.061	- / 0.100	- / 0.066	- / -	- / 0.066
P-3a	3080 / Replacement Heads Up Display (RHUD) (Capability Improvement)		B		- / 20.315	- / 51.754	- / 37.567	- / 34.418	- / 0.000	- / 34.418
P-3a	9741 / Beyond Line of Sight (BLOS) (Capability Improvement)		B		- / -	- / 0.513	- / 1.200	- / 23.367	- / 0.000	- / 23.367
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 343.468</b>	<b>- / 77.221</b>	<b>- / 60.244</b>	<b>- / 66.798</b>	<b>- / -</b>	<b>- / 66.798</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	_2000 / Pylon Stub FFLZ, FF, Translating Fairing (Safety)				- / 0.050	- / 0.050	- / 0.050	- / 0.050	- / -	- / 95.774
P-40a***	_2590 / ELT Frequency Change (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 5.182
P-40a***	_2633 / MFOQA (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 14.070
P-40a***	1508 / IFF GATM (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 124.613
P-40a***	2901 / Automatic Dependent Surveillance - Broadcast Out (ADS-B Out) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 83.295
P-40a***	6403 / Filter Fire Mitigation (Capability Improvement)				- / 1.830	- / 1.940	- / 1.980	- / 2.030	- / 1.799	- / 11.339
P-40a***	9740 / Fixed Installation Satellite Antenna (FISA) (Capability Improvement)				- / 0.100	- / 0.100	- / 0.100	- / 0.100	- / -	- / 30.548
P-40a***	9742 / C-17 Simulator Lateral Motion Maneuver Enhancement (Other)				- / -	- / -	- / -	- / -	- / -	- / 1.438
P-40a***	9744 / C-17 Visual System Field of View (Other)				- / -	- / -	- / -	- / -	- / -	- / 1.008
P-40a***	9747 / C-17 Training System (Other Mods) (Other)				- / 1.009	- / 1.097	- / 1.183	- / -	- / -	- / 9.955
P-40a***	9748 / C-17 Training System (Training Mods) (Other)				- / -	- / 10.553	- / -	- / -	- / -	- / 21.923
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 0.051	- / 0.053	- / 0.050	- / 0.051	- / -	- / 3.678

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 3: Airlift Aircraft

**P-1 Line Item Number / Title:**  
C01700 / C-17A

**ID Code** (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** 0401130F **Other Related Program Elements:** 0401130F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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	3080 / Replacement Heads Up Display (RHUD) (Capability Improvement)		B		- / 37.961	- / 39.280	- / 33.739	- / 35.065	- / 78.295	- / 368.394
P-3a	9741 / Beyond Line of Sight (BLOS) (Capability Improvement)		B		- / 44.440	- / 31.253	- / 11.152	- / 65.316	- / 10.057	- / 187.298
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 85.441</b>	<b>- / 84.326</b>	<b>- / 48.254</b>	<b>- / 102.612</b>	<b>- / 90.151</b>	<b>- / 958.515</b>

\*\*\* Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

\*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:**  
Major C-17 modifications in FY21 include Pylon Stub Flammable Fluid Leakage Zone (FFLZ) Fixed Fairing (FF) Translating Fairing, Replacement Heads Up Display (RHUD), Filter Fire Mitigation, and Beyond Line of Sight (BLOS).

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 3	<b>P-1 Line Item Number / Title:</b> C01700 / C-17A	<b>Modification Number / Title:</b> 3080 / Replacement Heads Up Display (RHUD)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	20.315	51.754	37.567	34.418	0.000	34.418	37.961	39.280	33.739	35.065	78.295	368.394
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	20.315	51.754	37.567	34.418	0.000	34.418	37.961	39.280	33.739	35.065	78.295	368.394
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>20.315</b>	<b>51.754</b>	<b>37.567</b>	<b>34.418</b>	<b>0.000</b>	<b>34.418</b>	<b>37.961</b>	<b>39.280</b>	<b>33.739</b>	<b>35.065</b>	<b>78.295</b>	<b>368.394</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This modification effort is an ACAT III program for modernization of the C-17 on the Air Force Acquisition Master List (AML). This effort is for development, integration and installation of a Replacement Heads-Up Display (RHUD) onto the C-17 aircraft. Analysis indicates the current HUD, which is required to fly the C-17, is becoming unsupportable due to obsolescence. This effort will retrofit the C-17 fleet with an RHUD that is supportable and provides improved reliability, maintainability, and supportability, while providing growth to support future planned capability improvements. The total of 222 units at a cost of \$362.4M will be sustainable for the planned life of the C-17 fleet. The RHUD retrofit will start and complete installs from FY21 through FY28 under the current Globemaster III Integrated Sustainment Program (GISP) and follow on contract G3.

Projected allocations by component are subject to total force mission priorities and aircraft availability.

Funding may be used to address Diminishing Manufacturing Sources (DMS) issues.

**Milestone/Development Status**

The first RHUD was tested with RDT&E funding in FY18. The first production kitproof kits were purchased in FY19 for FY20 installation.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	44.754	30.567	27.418	-	27.418	26.593	29.096	23.814	24.985
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	5.000	5.000	5.000	-	5.000	8.120	6.560	6.375	6.300
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	2.000	2.000	2.000	-	2.000	3.248	3.624	3.550	3.780
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>51.754</b>	<b>37.567</b>	<b>34.418</b>	<b>0.000</b>	<b>34.418</b>	<b>37.961</b>	<b>39.280</b>	<b>33.739</b>	<b>35.065</b>

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 3					<b>P-1 Line Item Number / Title:</b> C01700 / C-17A					<b>Modification Number / Title:</b> 3080 / Replacement Heads Up Display (RHUD)			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> C-17				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0401130F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0401130F	- / 117.210	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 117.210	
<b>Procurement</b>													
<i>Modification Item 1 of 1:</i> RHUD													
A Kits													
Recurring													
RHUD:INSTALL KITS Group A (Active)	15 / 15.701	3 / 3.000	19 / 19.000	19 / 19.000	- / -	19 / 19.000	14 / 14.000	19 / 19.000	16 / 16.000	16 / 16.000	25 / 25.000	146 / 146.701	
RHUD:INSTALL KITS Group A (Guard)	- / -	5 / 5.000	5 / 5.000	5 / 5.000	- / -	5 / 5.000	5 / 5.000	5 / 5.000	5 / 5.000	5 / 5.000	15 / 15.000	50 / 50.000	
RHUD:INSTALL KITS Group A (Reserve)	- / -	2 / 2.000	2 / 2.000	2 / 2.000	- / -	2 / 2.000	2 / 2.000	3 / 3.000	3 / 3.000	3 / 3.000	9 / 9.000	26 / 26.000	
<i>Subtotal: Recurring</i>	- / 15.701	- / 10.000	- / 26.000	- / 26.000	- / -	- / 26.000	- / 21.000	- / 27.000	- / 24.000	- / 24.000	- / 49.000	- / 222.701	
<i>Subtotal: RHUD</i>	- / 15.701	- / 10.000	- / 26.000	- / 26.000	- / -	- / 26.000	- / 21.000	- / 27.000	- / 24.000	- / 24.000	- / 49.000	- / 222.701	
<i>Subtotal: Procurement, All Modification Items</i>	- / 15.701	- / 10.000	- / 26.000	- / 26.000	- / -	- / 26.000	- / 21.000	- / 27.000	- / 24.000	- / 24.000	- / 49.000	- / 222.701	
<b>Support (All Modification Items)</b>													
OTHER GOVT	- / -	- / 32.709	- / 10.045	- / 10.258	- / -	- / 10.258	- / 1.729	- / 0.168	- / 0.045	- / 0.045	- / 0.045	- / 35.044	
SUPPORT-EQUIP	- / -	- / -	- / 10.522	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.522	
SIM/TRAINER	0 / 4.614	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 4.614	
PMA - Other Gov't Costs	- / -	- / 9.045	- / 10.000	- / 14.000	- / -	- / 14.000	- / 14.000	- / 14.000	- / 14.000	- / 14.000	- / 10.000	- / 149.045	
<i>Subtotal: Support</i>	0 / 4.614	- / 41.754	- / 10.567	- / 14.258	- / -	- / 14.258	- / 5.729	- / 4.168	- / 4.045	- / 4.045	- / 10.045	0 / 89.225	
<b>Installation</b>													
<i>Modification Item 1 of 1:</i> RHUD	- / -	- / -	2 / 1.000	13 / 4.160	- / -	13 / 4.160	36 / 11.232	26 / 8.112	21 / 5.694	27 / 7.020	97 / 19.250	222 / 56.468	
<i>Subtotal: Installation</i>	- / -	- / -	2 / 1.000	13 / 4.160	- / -	13 / 4.160	36 / 11.232	26 / 8.112	21 / 5.694	27 / 7.020	97 / 19.250	222 / 56.468	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>20.315</b>	<b>51.754</b>	<b>37.567</b>	<b>34.418</b>	<b>0.000</b>	<b>34.418</b>	<b>37.961</b>	<b>39.280</b>	<b>33.739</b>	<b>35.065</b>	<b>78.295</b>	<b>368.394</b>	



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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 3	<b>P-1 Line Item Number / Title:</b> C01700 / C-17A	<b>Modification Number / Title:</b> 3080 / Replacement Heads Up Display (RHUD)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** RHUD

**Manufacturer Information**

Manufacturer Name: The Boeing Company	Manufacturer Location: Long Beach, Ca
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 17

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Dec 2019	May 2020	Oct 2020	Oct 2021	Oct 2022	Oct 2023	Oct 2024
Delivery Dates	May 2021	Oct 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025	Mar 2026

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 / 0.500	7 / 2.240	- / -	7 / 2.240	- / -	- / -	- / -	- / -	- / -	8 / 2.740
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	6 / 1.872	- / -	- / -	- / -	- / -	6 / 1.872
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	14 / 4.368	- / -	- / -	- / -	- / -	14 / 4.368
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 4.056	- / -	- / -	- / -	13 / 4.056
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 2.710	- / -	- / -	10 / 2.710
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 3.640	- / -	14 / 3.640
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 3.250	13 / 3.250
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 3.250	13 / 3.250
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 0.000	20 / 0.000
Total	- / -	- / -	1 / 0.500	7 / 2.240	- / -	7 / 2.240	20 / 6.240	13 / 4.056	10 / 2.710	14 / 3.640	46 / 6.500	111 / 25.886

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	1	-	-	1	2	2	2	5	5	5	5	3	3	3	4	2	2	3	3	4	4	4	2	46	111
Out	0	-	-	-	-	-	-	1	-	-	1	2	2	2	5	5	5	5	3	3	3	4	2	2	3	3	4	4	4	48	111

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 3	<b>P-1 Line Item Number / Title:</b> C01700 / C-17A	<b>Modification Number / Title:</b> 3080 / Replacement Heads Up Display (RHUD)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** RHUD

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 / 0.500	6 / 1.920	- / -	6 / 1.920	- / -	- / -	- / -	- / -	- / -	7 / 2.420
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.248	- / -	- / -	- / -	- / -	4 / 1.248
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	12 / 3.744	- / -	- / -	- / -	- / -	12 / 3.744
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 4.056	- / -	- / -	- / -	13 / 4.056
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 2.984	- / -	- / -	11 / 2.984
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 3.380	- / -	13 / 3.380
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 2.750	11 / 2.750
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 2.750	11 / 2.750
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	29 / 7.250	29 / 7.250
Total	- / -	- / -	1 / 0.500	6 / 1.920	- / -	6 / 1.920	16 / 4.992	13 / 4.056	11 / 2.984	13 / 3.380	51 / 12.750	111 / 30.582

**Installation Schedule**

PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	1	-	-	-	2	2	2	4	4	4	4	3	3	3	4	2	3	3	3	3	3	3	4	51	111
Out	0	-	-	-	-	-	-	1	-	-	-	2	2	2	4	4	4	4	3	3	3	4	2	3	3	3	3	3	3	55	111

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 3	<b>P-1 Line Item Number / Title:</b> C01700 / C-17A	<b>Modification Number / Title:</b> 9741 / Beyond Line of Sight (BLOS)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	-	0.513	1.200	23.367	0.000	23.367	44.440	31.253	11.152	65.316	10.057	187.298
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	0.513	1.200	23.367	0.000	23.367	44.440	31.253	11.152	65.316	10.057	187.298
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	-	<b>0.513</b>	<b>1.200</b>	<b>23.367</b>	<b>0.000</b>	<b>23.367</b>	<b>44.440</b>	<b>31.253</b>	<b>11.152</b>	<b>65.316</b>	<b>10.057</b>	<b>187.298</b>

*(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 Millions)	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Beyond Line-Of-Sight (BLOS) modernization modification is a development, integration, and retrofit program for C-17 communications. BLOS modifies and modernizes hardware and software for voice and data communications on the C-17.

The program will modify both integrated aircraft avionics as well as back-end mission communications and will utilize both military and commercial satellite systems to extend communication ranges. The current ACAT III program includes (1) replacement of the hardware/software used for commercial L-Band SATCOM communications utilized for Federal Aviation Administration (FAA) safety services (Controller Pilot Data Link Communications (CPDLC), Future Air Navigation System (FANS-1/A), Automatic Dependent Surveillance - Contract (ADS-C)), (2) modernization of ARC-210 radio to meet NSA cryptologic mandates and integrate new waveforms (Mobile User Objective System (MUOS), Second generation Anti-jam Tactical UHF Radio for NATO (SATURN), Integrated Waveform (IW)), and (3) modernization of the C-17 HF encryption device used for secure HF communications (KYV-5 replaced with KYV-5M).

The BLOS program includes support for program management, system engineering, on-going flight test, software labs, and engineering/acquisition studies not related to requirements generation.

Funding may be used to address Diminishing Manufacturing Sources (DMS) issues. Project allocations by component are subject to total force mission priorities and aircraft availability.

**Milestone/Development Status**

BLOS completed Milestone B in FY18Q4; Acquisition Program Baseline (APB) was approved on 21 Dec 19. Procured long-lead material (ARC-210 radios) in FY19 for planned FY20 low rate production (kitproof).

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	0.513	1.200	20.671	-	20.671	36.216	23.005	8.728	49.860
AFNG									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	-	-	1.348	-	1.348	4.799	5.232	1.616	11.592
AFR									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	-	-	1.348	-	1.348	3.425	3.016	0.808	3.864
<b>Total:</b>									
<b>Quantity</b>	-	-	-	-	-	-	-	-	-

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 3			<b>P-1 Line Item Number / Title:</b> C01700 / C-17A			<b>Modification Number / Title:</b> 9741 / Beyond Line of Sight (BLOS)				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B					<b>MDAP/MAIS Code:</b>					
<b>Secondary Distribution</b>		<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Secondary Distribution	Total Obligation Authority	0.513	1.200	23.367	0.000	23.367	44.440	31.253	11.152	65.316

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**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 3				<b>P-1 Line Item Number / Title:</b> C01700 / C-17A						<b>Modification Number / Title:</b> 9741 / Beyond Line of Sight (BLOS)		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> C-17				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0401130F				
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>												
<b>Modification Item 1 of 2: Contractor</b>												
B Kits												
Recurring												
Contractor:EQUIPMENT Group B (Active)	- / -	1 / 0.513	- / -	18 / 7.511	- / -	18 / 7.511	23 / 7.991	7 / 2.478	- / -	26 / 10.143	- / -	75 / 28.636
Contractor:EQUIPMENT Group B (Guard)	- / -	- / -	- / -	2 / 0.674	- / -	2 / 0.674	6 / 2.102	4 / 1.416	- / -	13 / 5.796	- / -	25 / 9.988
Contractor:EQUIPMENT Group B (Reserve)	- / -	- / -	- / -	2 / 0.674	- / -	2 / 0.674	4 / 1.416	2 / 0.708	- / -	5 / 1.932	- / -	13 / 4.730
<b>Subtotal: Recurring</b>	- / -	- / 0.513	- / -	- / 8.859	- / -	- / 8.859	- / 11.509	- / 4.602	- / -	- / 17.871	- / -	- / 43.354
<b>Subtotal: Contractor</b>	- / -	- / 0.513	- / -	- / 8.859	- / -	- / 8.859	- / 11.509	- / 4.602	- / -	- / 17.871	- / -	- / 43.354
<b>Modification Item 2 of 2: Depot</b>												
B Kits												
Recurring												
Depot:EQUIPMENT Group B (Active)	- / -	- / -	- / -	17 / 7.160	- / -	17 / 7.160	23 / 7.912	6 / 2.124	- / -	25 / 9.660	- / -	71 / 26.856
Depot:EQUIPMENT Group B (Guard)	- / -	- / -	- / -	2 / 0.674	- / -	2 / 0.674	6 / 2.104	4 / 1.416	- / -	13 / 5.796	- / -	25 / 9.990
Depot:EQUIPMENT Group B (Reserve)	- / -	- / -	- / -	2 / 0.674	- / -	2 / 0.674	4 / 1.416	2 / 0.708	- / -	5 / 1.932	- / -	13 / 4.730
<b>Subtotal: Recurring</b>	- / -	- / -	- / -	- / 8.508	- / -	- / 8.508	- / 11.432	- / 4.248	- / -	- / 17.388	- / -	- / 41.576
<b>Subtotal: Depot</b>	- / -	- / -	- / -	- / 8.508	- / -	- / 8.508	- / 11.432	- / 4.248	- / -	- / 17.388	- / -	- / 41.576
<b>Subtotal: Procurement, All Modification Items</b>	- / -	- / 0.513	- / -	- / 17.367	- / -	- / 17.367	- / 22.941	- / 8.850	- / -	- / 35.259	- / -	- / 84.930
<b>Support (All Modification Items)</b>												
PMA - Other Gov't Costs	- / -	- / -	- / -	- / 6.000	- / -	- / 6.000	- / 6.000	- / 6.000	- / 6.000	- / 6.000	- / -	- / 30.000
SUPPORT-EQUIP	- / -	- / -	- / 1.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.000
SIM/TRAINER	- / -	- / -	- / -	- / -	- / -	- / -	0 / 6.985	- / -	- / -	- / -	- / -	0 / 6.985
OTHER GOVT	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.321	- / 3.203	- / -	- / 24.057	- / -	- / 27.581
<b>Subtotal: Support</b>	- / -	- / -	- / 1.000	- / 6.000	- / -	- / 6.000	0 / 13.306	- / 9.203	- / 6.000	- / 30.057	- / -	0 / 65.566
<b>Installation</b>												
<b>Modification Item 1 of 2: Contractor</b>	- / -	- / -	1 / 0.200	- / -	- / -	- / -	22 / 4.395	33 / 6.600	13 / 2.677	- / -	44 / 2.677	113 / 16.549
<b>Modification Item 2 of 2: Depot</b>	- / -	- / -	- / -	- / -	- / -	- / -	21 / 3.798	33 / 6.600	12 / 2.475	- / -	43 / 7.380	109 / 20.253
<b>Subtotal: Installation</b>	- / -	- / -	1 / 0.200	- / -	- / -	- / -	43 / 8.193	66 / 13.200	25 / 5.152	- / -	87 / 10.057	222 / 36.802
<b>Total</b>												
<b>Total Cost (Procurement + Support + Installation)</b>	-	0.513	1.200	23.367	0.000	23.367	44.440	31.253	11.152	65.316	10.057	187.298

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 3	<b>P-1 Line Item Number / Title:</b> C01700 / C-17A	<b>Modification Number / Title:</b> 9741 / Beyond Line of Sight (BLOS)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 2:** Contractor

**Manufacturer Information**

Manufacturer Name: Boeing	Manufacturer Location: Long Beach, CA
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Administrative Leadtime (in Months): 8	Production Leadtime (in Months): 12
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Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jun 2019		Jun 2021	Jun 2022	Jun 2023		Nov 2024
Delivery Dates	Jun 2020		Jun 2022	Jun 2023	Jun 2024		Nov 2025

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	1 / 0.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.200
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	22 / 4.395	- / -	- / -	- / -	- / -	22 / 4.395
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	33 / 6.600	- / -	- / -	- / -	33 / 6.600
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 2.677	- / -	- / -	13 / 2.677
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	44 / 2.677	44 / 2.677
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	1 / 0.200	- / -	- / -	- / -	22 / 4.395	33 / 6.600	13 / 2.677	- / -	44 / 2.677	113 / 16.549

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	1	-	-	-	-	-	-	8	8	6	-	11	11	11	-	5	5	3	-	-	-	-	-	44	113
Out	0	-	-	-	-	-	-	-	1	-	-	-	-	-	-	8	8	6	-	11	11	11	-	5	5	3	-	-	-	-	44	113

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 3	<b>P-1 Line Item Number / Title:</b> C01700 / C-17A	<b>Modification Number / Title:</b> 9741 / Beyond Line of Sight (BLOS)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 2 of 2:** Depot

**Manufacturer Information**

Manufacturer Name: Boeing	Manufacturer Location: Long Beach, CA
Administrative Leadtime (in Months): 8	Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jun 2019		Feb 2021	Feb 2022	Feb 2023		Nov 2024
Delivery Dates	Jun 2020		Feb 2022	Feb 2023	Feb 2024		Nov 2025

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	21 / 3.798	- / -	- / -	- / -	- / -	21 / 3.798
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	33 / 6.600	- / -	- / -	- / -	33 / 6.600
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 2.475	- / -	- / -	12 / 2.475
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	43 / 7.380	43 / 7.380
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	- / -	- / -	- / -	- / -	- / -	- / -	21 / 3.798	33 / 6.600	12 / 2.475	- / -	43 / 7.380	109 / 20.253

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	-	-	-	-	-	7	7	7	-	12	12	9	-	4	4	4	-	-	-	-	43	109
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	7	7	-	12	12	9	-	4	4	4	-	-	-	43	109

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 3: Airlift Aircraft	<b>P-1 Line Item Number / Title:</b> C02100 / C-21
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B	<b>Program Elements for Code B Items:</b> 0401314F	<b>Other Related Program Elements:</b> 0401314F
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	24.209	17.516	0.216	0.000	-	0.000	0.000	0.000	0.000	0.000	-	41.941
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	24.209	17.516	0.216	0.000	-	0.000	0.000	0.000	0.000	0.000	-	41.941
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>24.209</b>	<b>17.516</b>	<b>0.216</b>	<b>0.000</b>	<b>-</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>41.941</b>

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

Initial Spares ( <i>\$ in Millions</i> )	-	-	1.638	-	-	-	-	-	-	-	-	1.638
Flyaway Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This line item funds low-cost modifications and service bulletins for nineteen (19) nineteen C-21A aircraft, commercial equivalent to the Learjet 35. The C-21A aircraft is a twin-turbofan engine aircraft used for cargo and passenger airlift over medium ranges. The design service life is 50 years with an average of 10 years remaining. Service bulletins and low cost modifications are necessary for continuing Federal Aviation Administration certification while improving flight safety, reliability, and maintainability. This funding may include emerging modification requirements to support Program Management Administration (PMA), Advisory and Assistant Service (A&AS), system integration lab, trainers, equipment and other government cost.

Funding may be used to address Diminishing Manufacturing Sources Material Solutions (DMSMS) issues.

No FY 21 Funding requested.

Funding for this exhibit contained in PE 0401314F.

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 3: Airlift Aircraft	<b>P-1 Line Item Number / Title:</b> C03200 / C-32A
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0401314F	Other Related Program Elements: 0401314F
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	216.016	4.537	11.511	2.947	-	2.947	1.988	2.023	0.010	0.010	-	239.042
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	216.016	4.537	11.511	2.947	-	2.947	1.988	2.023	0.010	0.010	-	239.042
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>216.016</b>	<b>4.537</b>	<b>11.511</b>	<b>2.947</b>	<b>-</b>	<b>2.947</b>	<b>1.988</b>	<b>2.023</b>	<b>0.010</b>	<b>0.010</b>	<b>-</b>	<b>239.042</b>

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

**Description:**

This line item funds all aircraft modifications for four (4) C-32A aircraft, a commercial derivative of the Boeing 757-200. The C-32A is a twin-engine, turboprop aircraft used to transport high-ranking United States government officials worldwide. The design service life is 30 years with an average of 9 years remaining. This funding may include emerging modification requirements to support PMA, A&AS, systems integration lab, trainers, equipment, other government costs, and Senior Leader Communications System modernization efforts.

Service bulletins and low cost modifications are necessary for continuing Federal Aviation Administration certification while improving flight safety, reliability, and maintainability.

Starting in FY21 C-32 will begin a modification to the Senior Leader Command Control Communication System (SLC3S).

Funding may be used to address Diminishing Manufacturing Sources and Material Shortages (DMSMS) issues.

Funding for this exhibit is contained in PE 0401314F.

**Justification:**

This program, P-3A Mod 1116, WIDEBAND SATCOM, is a new start.

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 3: Airlift Aircraft	<b>P-1 Line Item Number / Title:</b> C03700 / C-37A
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0401314F	Other Related Program Elements: 0401314F
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	17.636	0.419	0.435	12.985	-	12.985	0.000	0.000	0.000	0.000	-	31.475
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	17.636	0.419	0.435	12.985	-	12.985	0.000	0.000	0.000	0.000	-	31.475
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>17.636</b>	<b>0.419</b>	<b>0.435</b>	<b>12.985</b>	<b>-</b>	<b>12.985</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>31.475</b>

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

**Description:**

This line item funds modifications to nine (9) C-37A and six (6) C-37B aircraft, commercial equivalent Gulfstream 5 and Gulfstream 550. The C-37A/B is a twin-engine jet transport designed to transport high-ranking United States government officials worldwide. The designed service life is 40,000 hours with an average of 28,000 hours remaining. This funding may include emerging modification requirements to support Program Management Administration (PMA), Advisory & Assistance Services (A&AS), systems integration lab, trainers, equipment, other government costs, and Senior Leader Communications System modernization efforts.

Service bulletins and low cost modifications are necessary for continuing Federal Aviation Administration (FAA) certification while improving flight safety, reliability, and maintainability.

Wideband Satellite Communications modifications are necessary to ensure national senior leaders have redundant protected, survivable and secure satellite air-to-air communication pathways for modern business enterprise system and Command and Control functions globally while airborne.

Funding may be used to address Diminishing Manufacturing Sources and Material Shortages (DMSMS) issues.

Funding for this exhibit is contained in PE 0401314F.

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 3: Airlift Aircraft

**P-1 Line Item Number / Title:**  
C03700 / C-37A

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0401314F **Other Related Program Elements:** 0401314F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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***	1118 / CNS/ATM Compliance (Capability Improvement)				- / 17.606	- / 0.000	- / -	- / -	- / -	- / -
P-40a***	99999S / SERVICE BULLETINS (Capability Improvement)				- / -	- / -	- / 0.100	- / 0.000	- / 0.000	- / 0.000
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 0.030	- / 0.419	- / 0.335	- / -	- / -	- / -
P-3a	1117 / WIDEBAND SATCOM (Capability Improvement)		A		- / -	- / 0.000	- / 0.000	- / 12.985	- / 0.000	- / 12.985
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 17.636</b>	<b>- / 0.419</b>	<b>- / 0.435</b>	<b>- / 12.985</b>	<b>- / -</b>	<b>- / 12.985</b>

  

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	1118 / CNS/ATM Compliance (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 17.606
P-40a***	99999S / SERVICE BULLETINS (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 0.100
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 0.784
P-3a	1117 / WIDEBAND SATCOM (Capability Improvement)		A		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 12.985
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / -</b>	<b>- / 31.475</b>

\*\*\* Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

\*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:**  
This program, P-3A Mod 1117, WIDEBAND SATCOM, is a new start.

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 3	<b>P-1 Line Item Number / Title:</b> C03700 / C-37A	<b>Modification Number / Title:</b> 1117 / WIDEBAND SATCOM

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	0.000	0.000	12.985	0.000	12.985	0.000	0.000	0.000	0.000	-	12.985
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	0.000	0.000	12.985	0.000	12.985	0.000	0.000	0.000	0.000	-	12.985
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	-	<b>0.000</b>	<b>0.000</b>	<b>12.985</b>	<b>0.000</b>	<b>12.985</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	-	<b>12.985</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This program, P-3A Mod 1117, WIDEBAND SATCOM, is a new start.

This modification modernizes and corrects communications system obsolescence issues on fifteen (15) C-37A/B Air Force aircraft. The C-37A/B is a commercial equivalent Gulfstream 5 and Gulfstream 550 supporting the White House, Cabinet, Congress, Department of Defense, and United States Senior government officials. Air Force C-37A/B's maintain Federal Aviation Administration Certification. This modification upgrades and standardizes existing Senior Leader Communications systems to baseline 3 capability across the Executive Airlift fleet. Baseline 3 system upgrades consist of, but are not limited to, Top Secret /Sensitive Compartmented Information (TS/SCI) voice/data/video networks (Crisis Management System/Joint Worldwide Intelligence Communications System) and Unclassified, Secret, and TS/SCI voice/data/video networks enabling them to be able to conduct time critical targeting of high value targets, as required, and crisis actions while airborne. This modification ensures national senior leaders have redundant protected, survivable, and secure satellite, air-to-air, and air-to-ground communications pathways for modern business enterprise systems and Command and Control functions globally while airborne. In addition to the aforementioned modifications, this funding implements National Leadership Command Capability Senior Leader Communications Council actions to correct mission communication system failures or address imminent capability gaps. The Senior Leader Communication Modernization effort provides the capability to rapidly acquire, integrate, modify, install and test new airborne communications technologies for the Executive Airlift fleet.

**Milestone/Development Status**

Commercial-off-the-shelf item with non-recurring engineering for integration.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 3					<b>P-1 Line Item Number / Title:</b> C03700 / C-37A					<b>Modification Number / Title:</b> 1117 / WIDEBAND SATCOM			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> C-37				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b>					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> WIDEBAND													
A Kits													
Recurring													
WIDEBAND:INSTALL KITS Group A (Active)	- / -	- / -	- / -	2 / 3.000	- / -	2 / 3.000	- / -	- / -	- / -	- / -	- / -	2 / 3.000	
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / 3.000	- / -	- / 3.000	- / -	- / -	- / -	- / -	- / -	- / 3.000	
<i>Subtotal: WIDEBAND</i>	- / -	- / -	- / -	- / 3.000	- / -	- / 3.000	- / -	- / -	- / -	- / -	- / -	- / 3.000	
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / -	- / -	- / 3.000	- / -	- / 3.000	- / -	- / -	- / -	- / -	- / -	- / 3.000	
<b>Support (All Modification Items)</b>													
GROUP A: TOTAL NONRECURRING	- / -	- / -	- / -	- / 2.000	- / -	- / 2.000	- / -	- / -	- / -	- / -	- / -	- / 2.000	
PMA - Other Gov't Costs	- / -	- / -	- / -	- / 0.985	- / -	- / 0.985	- / -	- / -	- / -	- / -	- / -	- / 0.985	
<i>Subtotal: Support</i>	- / -	- / -	- / -	- / 2.985	- / -	- / 2.985	- / -	- / -	- / -	- / -	- / -	- / 2.985	
<b>Installation</b>													
<i>Modification Item 1 of 1:</i> WIDEBAND													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	2 / 7.000	- / -	2 / 7.000	- / -	- / -	- / -	- / -	- / -	2 / 7.000	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	-	0.000	0.000	12.985	0.000	12.985	0.000	0.000	0.000	0.000	-	12.985	



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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 3	<b>P-1 Line Item Number / Title:</b> C03700 / C-37A	<b>Modification Number / Title:</b> 1117 / WIDEBAND SATCOM
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**ID Code** (A=Service Ready, B=Not Service Ready) : A **MDAP/MAIS Code:**

**Modification Item 1 of 1:** WIDEBAND

**Manufacturer Information**

Manufacturer Name: L3 Communications Manufacturer Location: Greenville, TX

Administrative Leadtime (in Months): 4 Production Leadtime (in Months): 11

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Feb 2021				
Delivery Dates			Jan 2022				

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	2 / 7.000	- / -	2 / 7.000	- / -	- / -	- / -	- / -	- / -	2 / 7.000
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	- / -	- / -	- / -	2 / 7.000	- / -	2 / 7.000	- / -	- / -	- / -	- / -	- / -	2 / 7.000

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	0	2
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	0	2

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 4: Trainer Aircraft	<b>P-1 Line Item Number / Title:</b> GLID00 / Glider Mods
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B	<b>Program Elements for Code B Items:</b> 0804748F	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	4.860	0.137	0.138	0.977	-	0.977	0.144	0.147	0.252	0.153	-	6.808
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	4.860	0.137	0.138	0.977	-	0.977	0.144	0.147	0.252	0.153	-	6.808
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>4.860</b>	<b>0.137</b>	<b>0.138</b>	<b>0.977</b>	<b>-</b>	<b>0.977</b>	<b>0.144</b>	<b>0.147</b>	<b>0.252</b>	<b>0.153</b>	<b>-</b>	<b>6.808</b>

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

**Description:**

This line item funds modifications to the TG-15 and TG-16 gliders, T-41, T-51, T-53 and UV-18 aircraft used at the United States Air Force Academy. Among gliders there are two TG-15A aircraft with a design service life of 6,000 hours, three TG-15B aircraft with a design service life of 6,000 hours, and 18 TG-16A aircraft with a design service life of 12,000 hours. Powered flight consists of four T-41D aircraft with a design service life of 60,000 hours, three T-51A aircraft with a design service life of 60,000 hours and 24 T-53A aircraft with a design service life of 12,000 hours. To support parachute jumping there are three UV-18B aircraft with a design service life of 40,000 hours. The primary effort in FY21 is Low Cost Modifications, which includes UV-18B avionics modification, TG-15A/B avionics modification, various AF Academy simulator system procurements, FAA Service Bulletins, Air Worthiness Directives, Program Management and Administration, studies, and civilian pay and CMEs in support of program activities.

Funding for this exhibit contained in PE 0804748F.

**Justification:**

Funding is required to ensure airworthiness of U.S. Air Force Academy aircraft and for low-cost modifications to extend service life, improve performance, and modernize the weapon systems. The Academy Airmanship Program introduces all Air Force Cadets to flight training and operations and is an essential component to provide future pilots to meet future Air Force pilot production objectives.

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 4: Trainer Aircraft	<b>P-1 Line Item Number / Title:</b> JPAT00 / T-6
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0604233F, 0804740F	Other Related Program Elements: 0604233F
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	42.328	53.150	11.826	26.829	-	26.829	14.147	6.148	3.210	30.298	-	187.936
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	42.328	53.150	11.826	26.829	-	26.829	14.147	6.148	3.210	30.298	-	187.936
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>42.328</b>	<b>53.150</b>	<b>11.826</b>	<b>26.829</b>	<b>-</b>	<b>26.829</b>	<b>14.147</b>	<b>6.148</b>	<b>3.210</b>	<b>30.298</b>	<b>-</b>	<b>187.936</b>

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

**Description:**

The Joint Primary Aircraft Training System (JPATS) T-6 replaces the USAF T-37B and USN T-34C training aircraft and their associated ground based training systems. The JPATS T-6 aircraft provides significant improvements over the aircraft it replaced, including a 0/0 ejection seat which accommodates a larger anthropometric pilot population, a pressurized cockpit, gravitational-force (g-force) strain reduction capabilities, and increased birdstrike protection. There are currently 443 T-6A aircraft in the Air Force inventory. Remaining service life is up to 39 years from the final delivery in May 2010. The primary modifications in FY 2021 include Aircrew Training Device (ATD) Modernization, Avionics Upgrades FAA Compliance, Reliability & Maintainability (R&M) Safety Mods, Crew System Modernization Program, and Service Bulletins. Funding may be used to address Diminishing Manufacturing Sources (DMS) issues.

Funding contained in this platform's documentation directly aids Air Education Training Command (AETC) flying training enterprise to continue its overall pilot production increase starting in FY 2021 thus reducing the USAF Pilot Shortage.

Funding for this exhibit contained in PE 0804740F.

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 4: Trainer Aircraft

**P-1 Line Item Number / Title:**  
JPAT00 / T-6

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0604233F, 0804740F **Other Related Program Elements:** 0604233F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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***	9873 / Canopy Fracture Initiation System (Reliability & Maintainability)				- / 1.131	- / -	- / -	- / -	- / -	- / -
P-40a***	9877 / Avionics Upgrades FAA Compliance (Reliability & Maintainability)				- / 3.825	- / 19.149	- / 6.225	- / -	- / -	- / -
P-40a***	9878 / Aircrew Training Device (ATD) Modernization (Capability Improvement)				- / 35.331	- / 2.210	- / 3.601	- / 4.323	- / -	- / 4.323
P-40a***	9890 / Controlled Flight Into Terrain Avoidance (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	9892 / Reliability & Maintainability (R&M) Safety Mods (Safety)				- / -	- / -	- / 0.100	- / 0.071	- / -	- / 0.071
P-40a***	9893 / Crew System Modernization Program (Capability Improvement)				- / -	- / 30.600	- / 0.100	- / 0.100	- / -	- / 0.100
P-40a***	9894 / Avionics Modernization (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	99999S / SERVICE BULLETINS (Service Life Extension)				- / -	- / -	- / 0.100	- / 0.100	- / -	- / 0.100
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 2.041	- / 1.191	- / 1.700	- / 1.700	- / -	- / 1.700
P-3a	9871 / T-6A Crash Survivable Recorder (Capability Improvement)		B		- / -	- / 0.000	- / 0.000	- / 20.535	- / 0.000	- / 20.535
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 42.328</b>	<b>- / 53.150</b>	<b>- / 11.826</b>	<b>- / 26.829</b>	<b>- / -</b>	<b>- / 26.829</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	9873 / Canopy Fracture Initiation System (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / 1.131
P-40a***	9877 / Avionics Upgrades FAA Compliance (Reliability & Maintainability)				- / -	- / -	- / -	- / 0.000	- / -	- / 29.199
P-40a***	9878 / Aircrew Training Device (ATD) Modernization (Capability Improvement)				- / 3.200	- / 2.920	- / 2.910	- / -	- / -	- / 54.495
P-40a***	9890 / Controlled Flight Into Terrain Avoidance (Capability Improvement)				- / 3.205	- / 2.828	- / -	- / -	- / -	- / 6.033
P-40a***	9892 / Reliability & Maintainability (R&M) Safety Mods (Safety)				- / 0.100	- / 0.100	- / 0.100	- / -	- / -	- / 0.471
P-40a***	9893 / Crew System Modernization Program (Capability Improvement)				- / 0.100	- / 0.100	- / 0.100	- / -	- / -	- / 31.100
P-40a***	9894 / Avionics Modernization (Capability Improvement)				- / -	- / -	- / -	- / 30.198	- / -	- / 30.198
P-40a***	99999S / SERVICE BULLETINS (Service Life Extension)				- / 0.100	- / 0.100	- / 0.100	- / 0.100	- / -	- / 0.600
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 0.100	- / 0.100	- / 0.000	- / -	- / -	- / 6.832
P-3a	9871 / T-6A Crash Survivable Recorder (Capability Improvement)		B		- / 7.342	- / 0.000	- / 0.000	- / 0.000	- / -	- / 27.877
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 14.147</b>	<b>- / 6.148</b>	<b>- / 3.210</b>	<b>- / 30.298</b>	<b>- / -</b>	<b>- / 187.936</b>

\*\*\* Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

\*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.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 4: Trainer Aircraft		<b>P-1 Line Item Number / Title:</b> JPAT00 / T-6
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> 0604233F, 0804740F	<b>Other Related Program Elements:</b> 0604233F
<b>Line Item MDAP/MAIS Code:</b> N/A		
<b>Justification:</b> This program, P-3A Mod 9871, T-6A Crash Survivable Recorder, is a new start.		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 4	<b>P-1 Line Item Number / Title:</b> JPAT00 / T-6	<b>Modification Number / Title:</b> 9871 / T-6A Crash Survivable Recorder

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

<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	0.000	0.000	20.535	0.000	20.535	7.342	0.000	0.000	0.000	-	27.877
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	0.000	0.000	20.535	0.000	20.535	7.342	0.000	0.000	0.000	-	27.877
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	-	<b>0.000</b>	<b>0.000</b>	<b>20.535</b>	<b>0.000</b>	<b>20.535</b>	<b>7.342</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	-	<b>27.877</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This program, P-3A Mod 9871, T-6A Crash Survivable Recorder, is a new start.

The justification/approval for the T-6A Crash Survivable Recorder (CSR) is documented on an Air Force Form 1067 signed by the Chief of Capability Requirements for Air Education and Training Command. The CSR modification corrects various deficiencies with the cockpit which impact the effectiveness and efficiency of the aircraft's training capability in flight. The goal of the CSR is to provide the aircraft with a system that will meet the minimum crash survivable data collection capability as outlined in Air Force Instruction 63-133 Aircraft Information Program (Change 1, 4 November 2010) and Secretary of Defense Memorandum of 22 June 2006, Reducing Preventable Accidents. This effort includes engineering and contractor support/services and Program Management & Administrative (PMA) costs. All 443 Air Force T-6As will receive this modification. 372 units are included in the budget year, and the remaining 71 units will be procured in subsequent years.

**Milestone/Development Status**

Development effort to begin in FY20.



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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 4					<b>P-1 Line Item Number / Title:</b> JPAT00 / T-6					<b>Modification Number / Title:</b> 9871 / T-6A Crash Survivable Recorder			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> T-6A				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0604233F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0604233F	- / -	- / 0.200	1 / 0.380	- / 1.616	- / -	- / 1.616	- / -	- / -	- / -	- / -	- / -	1 / 2.196	
<b>Procurement</b>													
<i>Modification Item 1 of 1: Model A Kits</i>													
A Kits													
Recurring													
Model A Kits:INSTALL KITS Group A (Active)	- / -	- / -	- / -	372 / 5.146	- / -	372 / 5.146	71 / 0.982	- / -	- / -	- / 0.000	- / -	443 / 6.128	
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / 5.146	- / -	- / 5.146	- / 0.982	- / -	- / -	- / 0.000	- / -	- / 6.128	
<i>Subtotal: Model A Kits</i>	- / -	- / -	- / -	- / 5.146	- / -	- / 5.146	- / 0.982	- / -	- / -	- / 0.000	- / -	- / 6.128	
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / -	- / -	- / 5.146	- / -	- / 5.146	- / 0.982	- / -	- / -	- / 0.000	- / -	- / 6.128	
<b>Support (All Modification Items)</b>													
GROUP B: TOTAL NONRECURRING	- / -	- / -	- / -	- / 1.486	- / -	- / 1.486	- / 0.100	- / -	- / -	- / -	- / -	- / 1.586	
SIM/TRAINER	- / -	- / -	- / -	74 / 2.000	- / -	74 / 2.000	- / -	- / -	- / -	0 / 0.000	- / -	74 / 2.000	
OTHER GOVT	- / -	- / -	- / -	- / 17.903	- / -	- / 17.903	- / 15.497	- / -	- / -	- / 0.000	- / -	- / 13.400	
<i>Subtotal: Support</i>	- / -	- / -	- / -	74 / 11.389	- / -	74 / 11.389	- / 15.597	- / -	- / -	0 / 0.000	- / -	74 / 16.986	
<b>Installation</b>													
<i>Modification Item 1 of 1: Model A Kits</i>	- / -	- / -	- / -	372 / 4.000	- / -	372 / 4.000	71 / 0.763	- / -	- / -	- / -	- / -	443 / 4.763	
<i>Subtotal: Installation</i>	- / -	- / -	- / -	372 / 4.000	- / -	372 / 4.000	71 / 0.763	- / -	- / -	- / -	- / -	443 / 4.763	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	-	0.000	0.000	20.535	0.000	20.535	7.342	0.000	0.000	0.000	-	27.877	

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 4	<b>P-1 Line Item Number / Title:</b> JPAT00 / T-6	<b>Modification Number / Title:</b> 9871 / T-6A Crash Survivable Recorder
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** Model A Kits

**Manufacturer Information**

Manufacturer Name: To be determined	Manufacturer Location: TBD
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 1

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Oct 2020	Oct 2021			
Delivery Dates			Nov 2020	Nov 2021			

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	372 / 4.000	- / -	372 / 4.000	- / -	- / -	- / -	- / -	- / -	372 / 4.000
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	71 / 0.763	- / -	- / -	- / -	- / -	71 / 0.763
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	- / -	- / -	- / -	372 / 4.000	- / -	372 / 4.000	71 / 0.763	- / -	- / -	- / -	- / -	443 / 4.763

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	84	96	96	96	71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	443
Out	0	-	-	-	-	-	-	-	-	84	96	96	96	-	71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	443

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 4: Trainer Aircraft	<b>P-1 Line Item Number / Title:</b> T00100 / T-1
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0804741F	Other Related Program Elements: N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	37.251	21.852	26.787	4.465	-	4.465	4.214	5.332	0.000	0.131	-	100.032
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	37.251	21.852	26.787	4.465	-	4.465	4.214	5.332	0.000	0.131	-	100.032
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>37.251</b>	<b>21.852</b>	<b>26.787</b>	<b>4.465</b>	<b>-</b>	<b>4.465</b>	<b>4.214</b>	<b>5.332</b>	<b>0.000</b>	<b>0.131</b>	<b>-</b>	<b>100.032</b>

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

Initial Spares ( <i>\$ in Millions</i> )	-	0.920	1.317	-	-	-	-	-	-	-	-	2.237
Flyaway Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The T-1A is a missionized Beech 400A used in the Airlift/Tanker track of the USAF Specialized Undergraduate Pilot Training (SUPT) and in Combat Systems Officer (CSO) training for Air Education and Training Command (AETC). It is powered by two Pratt and Whitney JT15D-5 turbofan engines mounted on the aft fuselage producing 2,900 pounds of thrust each. Avionics include Ultra High Frequency (UHF) and Very High Frequency (VHF) radios, Inertial Navigation System (INS), Tactical Air Navigation (TACAN), Airborne Direction Finder (ADF), and two Very High Frequency Omni Range/Instrument Landing System (VOR/ILS). Aircraft modified for CSO training include a Global Positioning System (GPS)-driven synthetic radar and simulated Radar Warning Receiver (RWR) in the right seat flight deck position to be utilized by the student CSO. A second student station and a second instructor station have also been added in the rear of the aircraft. The primary effort in FY2021 is the Avionics Modification. Funding contained in this platform's documentation directly aids Air Education and Training Command (AETC) flying training enterprise.

This line item funds avionics modifications to the T-1A aircraft and simulators. This effort will install the 55 previously acquired modification kits in to T-1A trainer aircraft, 16 Operational Flight Trainers (OFT's) and 14 Part Task Trainers (PTT's). All 21 CSO training-configured aircraft will receive the modification as well as 34 SUPT aircraft. The remaining 122 T-1A aircraft will not be modified due to the planned divestiture of the aircraft.

Funding request reduced from FY20 budget for planned divestment of T-1A airlift/tanker Undergraduate Pilot Training fleet (156 aircraft) beginning in FY23. USAF plans to maintain 21 CSO training-configured T-1A aircraft.

Divest T-1 Undergraduate Pilot Training Fleet saved \$31.2M in BY. Divest T-1 Undergraduate Pilot Training Fleet description: Pilot Training Next (PTN) offers a more effective approach to pilot training. New training technologies allow for the retirement of the T-1 as a training platform this divestment contributes to making PTN available to the enterprise creating an opportunity to increase pilot production.

Funding may be used to address Diminishing Manufacturing Sources (DMS) issues. Funding for this exhibit contained in PE 0804741F.

**Justification:**

FY21 funding will install 23 avionics modification kits on T-1 aircraft. These kits were procured with FY20 funds. Additionally FY21 funding will provide funding for low cost mods.

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 4: Trainer Aircraft	<b>P-1 Line Item Number / Title:</b> T03800 / T-38
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> 0804741F	<b>Other Related Program Elements:</b> 0604233F
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	254.694	70.623	37.341	36.806	-	36.806	52.146	65.334	73.261	59.608	166.625	816.438
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	254.694	70.623	37.341	36.806	-	36.806	52.146	65.334	73.261	59.608	166.625	816.438
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>254.694</b>	<b>70.623</b>	<b>37.341</b>	<b>36.806</b>	<b>-</b>	<b>36.806</b>	<b>52.146</b>	<b>65.334</b>	<b>73.261</b>	<b>59.608</b>	<b>166.625</b>	<b>816.438</b>

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

**Description:**

The T-38 is a twin engine, two seat (tandem), supersonic jet trainer used by Air Education Training Command as an advanced trainer in Specialized Undergraduate Pilot Training. Modifications are budgeted to enhance operational capability while improving flight safety, reliability, and maintainability. There are currently 503 T-38's in the Air Force inventory (53 T-38A, 6 AT-38B and 444 T-38C) with 5 T-38C's pending removal. The T-38 first entered service in 1960 and the average age is over 50 years old. The T-38 was designed with a 7,000 hour service life. Aircraft are now in their third service life and are sustained by upgrades and service life extensions.

Funding may be used to address Diminishing Manufacturing Sources (DMS) issues.

Funding for this exhibit contained in PE 0804741F.

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**Exhibit P-40, Budget Line Item Justification: PB 2021 Air Force** **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 4: Trainer Aircraft

**P-1 Line Item Number / Title:**  
T03800 / T-38

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0804741F **Other Related Program Elements:** 0604233F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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***	6090 / T-38 Avionics (Reliability & Maintainability)				- / 68.777	- / 27.470	- / 0.126	- / 0.000	- / -	- / 0.000
P-40a***	6091 / Talon Repair, Inspection and Maintenance (Reliability & Maintainability)				- / -	- / 2.700	- / 3.660	- / 2.685	- / -	- / 2.685
P-40a***	6092 / T-38 A/B ADS-B Out (Reliability & Maintainability)				- / 4.193	- / 4.076	- / -	- / 0.000	- / -	- / 0.000
P-40a***	6093 / T-38 Canopy (Safety)				- / -	- / 0.000	- / 0.181	- / 1.573	- / -	- / 1.573
P-40a***	99999A / LOW COST SAFETY MODIFICATIONS (Safety)				- / 0.034	- / 0.005	- / 0.005	- / 0.005	- / -	- / 0.005
P-40a***	99999X / Low Cost Modifications (Service Life Extension)				- / 0.037	- / 0.006	- / 0.006	- / 0.006	- / -	- / 0.006
P-3a	6088 / Pacer Classic III (Service Life Extension)		A		- / 181.653	- / 36.366	- / 33.363	- / 32.537	- / 0.000	- / 32.537
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 254.694</b>	<b>- / 70.623</b>	<b>- / 37.341</b>	<b>- / 36.806</b>	<b>- / -</b>	<b>- / 36.806</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	6090 / T-38 Avionics (Reliability & Maintainability)				- / 1.585	- / 2.372	- / 6.944	- / 1.634	- / -	- / 108.908
P-40a***	6091 / Talon Repair, Inspection and Maintenance (Reliability & Maintainability)				- / 12.562	- / 26.101	- / 33.089	- / 28.855	- / 166.625	- / 276.277
P-40a***	6092 / T-38 A/B ADS-B Out (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / 8.269
P-40a***	6093 / T-38 Canopy (Safety)				- / 1.574	- / 1.573	- / 1.602	- / 1.631	- / -	- / 8.134
P-40a***	99999A / LOW COST SAFETY MODIFICATIONS (Safety)				- / 0.005	- / 0.005	- / 0.005	- / 0.005	- / -	- / 0.069
P-40a***	99999X / Low Cost Modifications (Service Life Extension)				- / 0.006	- / 0.006	- / 0.006	- / 0.006	- / -	- / 0.079
P-3a	6088 / Pacer Classic III (Service Life Extension)		A		- / 36.414	- / 35.277	- / 31.615	- / 27.477	- / 0.000	- / 414.702
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 52.146</b>	<b>- / 65.334</b>	<b>- / 73.261</b>	<b>- / 59.608</b>	<b>- / 166.625</b>	<b>- / 816.438</b>

\*\*\* Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

\*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.

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 4	<b>P-1 Line Item Number / Title:</b> T03800 / T-38	<b>Modification Number / Title:</b> 6088 / Pacer Classic III
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**ID Code** (A=Service Ready, B=Not Service Ready) : A **MDAP/MAIS Code:**

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	181.653	36.366	33.363	32.537	0.000	32.537	36.414	35.277	31.615	27.477	0.000	414.702
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	181.653	36.366	33.363	32.537	0.000	32.537	36.414	35.277	31.615	27.477	0.000	414.702
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority <i>(\$ in Millions)</i></b>	<b>181.653</b>	<b>36.366</b>	<b>33.363</b>	<b>32.537</b>	<b>0.000</b>	<b>32.537</b>	<b>36.414</b>	<b>35.277</b>	<b>31.615</b>	<b>27.477</b>	<b>0.000</b>	<b>414.702</b>

*(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 Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Pacer Classic III (PCIII) is a depot-level modification program which replaces known life-limited components and ensures structural sustainment of 180 T-38C aircraft which are at high risk of grounding. Timely modifications will ensure continued execution of the Air Education and Training Command (AETC) advanced undergraduate pilot training mission. PCIII will replace major structural components within the aircraft fuselage including major longerons, bulkhead/formers, internal skins and structural floors. These modifications have been categorized as Safety of Flight and determined by HQ Air Force Materiel Command (AFMC) to be required to correct material deficiencies to ensure safety of personnel, systems or equipment. If uncorrected, the hazard will ground the system or equipment, restrict flight or ground operations, or result in unacceptable risk to personnel. PCIII program requirements are documented in Air Force Form 1067: AETC 2016-037. PCIII installations will be performed by the 309 Maintenance Wing geographically separated unit at Randolph Air Force Base, Texas.

Milestone/Development Status

Production and deployment underway.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 4				<b>P-1 Line Item Number / Title:</b> T03800 / T-38				<b>Modification Number / Title:</b> 6088 / Pacer Classic III				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> T-38			<b>Modification Type:</b> Service Life Extension				<b>Related RDT&amp;E PEs:</b>					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>												
<i>Modification Item 1 of 1:</i> Aircraft Modification Kits												
A Kits												
Recurring												
Aircraft Modification Kits:INSTALL KITS Group A (Active)	101 / 39.347	22 / 4.653	32 / 12.410	18 / 4.445	- / -	18 / 4.445	7 / 3.647	- / -	- / -	- / -	- / -	180 / 64.502
<i>Subtotal: Recurring</i>	- / 39.347	- / 4.653	- / 12.410	- / 4.445	- / -	- / 4.445	- / 3.647	- / -	- / -	- / -	- / -	- / 64.502
<i>Subtotal: Aircraft Modification Kits</i>	- / 39.347	- / 4.653	- / 12.410	- / 4.445	- / -	- / 4.445	- / 3.647	- / -	- / -	- / -	- / -	- / 64.502
<i>Subtotal: Procurement, All Modification Items</i>	- / 39.347	- / 4.653	- / 12.410	- / 4.445	- / -	- / 4.445	- / 3.647	- / -	- / -	- / -	- / -	- / 64.502
<b>Support (All Modification Items)</b>												
GROUP A: TOTAL NONRECURRING	0 / 17.791	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 17.791
SUPPORT-EQUIP	- / -	- / 0.031	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.031
OTHER GOVT	- / 12.688	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 12.688
PMA - Contractor Services	- / 3.269	- / 0.471	- / 1.365	- / 0.400	- / -	- / 0.400	- / 0.400	- / 0.300	- / 0.300	- / 0.300	- / -	- / 6.805
PMA - Other Gov't Costs	- / 1.134	- / 0.050	- / 0.050	- / 0.050	- / -	- / 0.050	- / 0.050	- / 0.050	- / 0.050	- / 0.050	- / -	- / 1.484
<i>Subtotal: Support</i>	0 / 34.882	- / 0.552	- / 1.415	- / 0.450	- / -	- / 0.450	- / 0.450	- / 0.350	- / 0.350	- / 0.350	- / -	0 / 38.799
<b>Installation</b>												
<i>Modification Item 1 of 1:</i> Aircraft Modification Kits	64 / 107.424	16 / 31.161	18 / 19.538	18 / 27.642	- / -	18 / 27.642	18 / 32.317	18 / 34.927	18 / 31.265	10 / 27.127	- / -	180 / 311.401
<i>Subtotal: Installation</i>	64 / 107.424	16 / 31.161	18 / 19.538	18 / 27.642	- / -	18 / 27.642	18 / 32.317	18 / 34.927	18 / 31.265	10 / 27.127	- / -	180 / 311.401
<b>Total</b>												
<b>Total Cost (Procurement + Support + Installation)</b>	<b>181.653</b>	<b>36.366</b>	<b>33.363</b>	<b>32.537</b>	<b>0.000</b>	<b>32.537</b>	<b>36.414</b>	<b>35.277</b>	<b>31.615</b>	<b>27.477</b>	<b>0.000</b>	<b>414.702</b>



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**Exhibit P-3a, Individual Modification: PB 2021 Air Force** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 4	<b>P-1 Line Item Number / Title:</b> T03800 / T-38	<b>Modification Number / Title:</b> 6088 / Pacer Classic III
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**ID Code** (A=Service Ready, B=Not Service Ready) : A **MDAP/MAIS Code:**

**Modification Item 1 of 1:** Aircraft Modification Kits

**Manufacturer Information**

Manufacturer Name: CPI Aero Manufacturer Location: Edgewood, NY

Administrative Leadtime (in Months): 5 Production Leadtime (in Months): 30

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Mar 2019	Mar 2020	Mar 2021	Mar 2022			
Delivery Dates	Sep 2020	Sep 2022	Sep 2023	Sep 2024			

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	64 / 107.424	16 / 31.161	18 / 19.538	3 / 4.602	- / -	3 / 4.602	- / -	- / -	- / -	- / -	- / -	101 / 162.725
FY 2019	- / -	- / -	- / -	15 / 23.040	- / -	15 / 23.040	7 / 12.568	- / -	- / -	- / -	- / -	22 / 35.608
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	11 / 19.749	18 / 34.927	3 / 5.211	- / -	- / -	32 / 59.887
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 26.054	3 / 7.398	- / -	18 / 33.452
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 19.729	- / -	7 / 19.729
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	64 / 107.424	16 / 31.161	18 / 19.538	18 / 27.642	- / -	18 / 27.642	18 / 32.317	18 / 34.927	18 / 31.265	10 / 27.127	- / -	180 / 311.401

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	64	4	4	4	4	3	5	5	5	4	5	4	5	5	4	5	4	5	4	5	4	5	4	5	4	3	4	2	1	0	180
Out	39	4	5	5	4	4	5	5	3	5	5	5	4	5	4	5	5	4	5	4	5	4	5	4	5	4	5	4	5	14	180

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

**P-1 Line Item Number / Title:**  
11U200 / U-2 Mods

**ID Code** (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** 0305202F, 0305206F **Other Related Program Elements:** 0305202F, 0604257F

**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	90.346	67.365	58.563	110.618	9.600	120.218	129.338	81.909	70.669	68.438	112.000	798.846
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	90.346	67.365	58.563	110.618	9.600	120.218	129.338	81.909	70.669	68.438	112.000	798.846
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>90.346</b>	<b>67.365</b>	<b>58.563</b>	<b>110.618</b>	<b>9.600</b>	<b>120.218</b>	<b>129.338</b>	<b>81.909</b>	<b>70.669</b>	<b>68.438</b>	<b>112.000</b>	<b>798.846</b>
<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> )	-	-	28.097	43.103	-	43.103	7.854	2.082	2.119	2.628	-	85.883
Flyaway Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The U-2S Dragon Lady platform is a high-demand/low-density aircraft equipped with state-of-the-art sensor and data link systems providing mission essential Intelligence, Surveillance, and Reconnaissance (ISR) to the Combatant Commands, Joint and Combined forces, and the IC community in peacetime and wartime. The program supports core missions such as Sensitive Reconnaissance Operations (outlined in CJCSI 3250.01) in addition to other missions that include execution of CCMD OPLANs and CONPLANs, Humanitarian Assistance/Disaster Response (HADR), Counter-Insurgency (COIN) operations and third party treaty verification/monitoring via the OLIVE HARVEST mission.

The Air Force has restored the U-2, and will maintain & improve operational capability of the platform. In order to meet NDAA mandated capability and capacity, the Air Force continues to invest and modernize the U-2 program in the 2021 President's Budget. These investments will address reliability, maintainability, supportability, diminishing manufacturing sources/ material shortages (DMS/MS), flight test, safety issues, and integration of capability development activities in support of the broader ISR portfolio. During this time, procurement efforts will address sustainment, modification, and modernization of sensors and associated mission equipment, and focus on integrating/expanding platform capabilities within the larger ISR portfolio; these efforts include (but are not limited to) ASARS 2B/C, avionics and navigation tech refresh, mission planning software and infrastructure upgrades, modernization of aircraft data links, next generation SIGINT, and developing a quick reaction capability (QRC), enabling improved collection against emerging threats and capabilities.

Additionally, the U-2 program will continue to prioritize emergent and/or experimental efforts in support of JADC2 & ABMS, and support additional efforts designed to mitigate the rapidly evolving combat environment (e.g. electromagnetic requirements) in order to maintain safety and operational relevance through current and future U-2 operating locations.

Currently, the U-2 Program provides funding for an Advanced Synthetic Aperture Radar System (ASARS) acquisition effort. This effort will design, fabricate, integrate, and field system capability enhancements for a high altitude deep look SAR system. This mitigates a Diminishing Manufacturing Supply and Material Shortages (DMSMS) issue with the current U-2 SAR sensor and processor.

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

**P-1 Line Item Number / Title:**  
11U200 / U-2 Mods

**ID Code** (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** 0305202F, 0305206F **Other Related Program Elements:** 0305202F, 0604257F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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	4494 / U-2 Mod (Other)		B		- / 90.346	- / 67.365	- / 58.563	- / 62.480	- / 9.600	- / 72.080
P-3a	4496 / ASARS-2B Procurement for U-2 (Other)		B		- / -	- / -	- / 0.000	- / 48.138	- / 0.000	- / 48.138
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 90.346</b>	<b>- / 67.365</b>	<b>- / 58.563</b>	<b>- / 110.618</b>	<b>- / 9.600</b>	<b>- / 120.218</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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	4494 / U-2 Mod (Other)		B		- / 57.070	- / 53.838	- / 54.809	- / 55.845	- / -	- / 509.916
P-3a	4496 / ASARS-2B Procurement for U-2 (Other)		B		- / 72.268	- / 28.071	- / 15.860	- / 12.593	- / 112.000	- / 288.930
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 129.338</b>	<b>- / 81.909</b>	<b>- / 70.669</b>	<b>- / 68.438</b>	<b>- / 112.000</b>	<b>- / 798.846</b>

\*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, FY20 number reflect retention of the U-2. Addresses prudent acquisition efforts to address safety-of-flight and DMSMS issues; +17M Congressional add for EO/IR upgrade in FY19

Investment dollars remain in place to address DMS items are funded with current profile, and must remain funded in order to continue operations into FY25.

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> 11U200 / U-2 Mods	<b>Modification Number / Title:</b> 4494 / U-2 Mod

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	90.346	67.365	58.563	62.480	9.600	72.080	57.070	53.838	54.809	55.845	-	509.916
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	90.346	67.365	58.563	62.480	9.600	72.080	57.070	53.838	54.809	55.845	-	509.916
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>90.346</b>	<b>67.365</b>	<b>58.563</b>	<b>62.480</b>	<b>9.600</b>	<b>72.080</b>	<b>57.070</b>	<b>53.838</b>	<b>54.809</b>	<b>55.845</b>	-	<b>509.916</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The U-2 Program will continue to address reliability, maintainability, sustainability, and safety issues and support U-2 integration of payloads and capabilities. Aircraft and sensor sustainment or enhancements include activities such as, but not limited to the following current programs:

- Advanced Synthetic Aperture Radar System (ASARS) procurement, sustainment, and enhancements to support collection capability and capacity requirements to meet global ISR requirements.
- Multi-Spectral Sensor sustainment and enhancements to optics and focal planes in support of operational requirements.
- Electronic Warfare System (EWS) sustainment and enhancements to mitigate DMS and to defend against current and emerging threat systems.
- Data Link sustainment and enhancement: Development, integration and test of beyond line of sight (BLOS) and tactical data links (L-16, IFDL, MADL, etc.) in support of operational requirements and to mitigate DMSMS.
- Modification programs in support safety of flight, DMSMS concerns, support of operational capability and capacity requirements to include: airframe sustainment, Egress System Sustainment and Suitability Effort, helmet and Full Pressure Suit technical refresh, avionics, mission planning, navigation system and stellar tracker initiatives, advanced and agile systems/payloads, Open Mission Systems and Unmanned Aerospace Systems Command and Control Standard Initiative (OMS/UCI) standards compliance, payload sensors, and associated ground support equipment.
- Signals Intelligence (SIGINT) system sustainment, modernization, enhancement, test and integration to meet new/emerging operational requirements.
- Navigation software/infrastructure, and avionics refresh and upgrades to address DMSMS issues while increase capability in the integrated intelligence environment. May include procurement for non-GPS precision, navigation, and timing (PNT) hardware and software.

**Milestone/Development Status**

Various efforts will continue to develop technologies and capabilities supporting U-2 operations, and will be fielded onto the U-2 platforms, on a schedule dependent on system requirements.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5				<b>P-1 Line Item Number / Title:</b> 11U200 / U-2 Mods						<b>Modification Number / Title:</b> 4494 / U-2 Mod		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> U-2				<b>Modification Type:</b> Other				<b>Related RDT&amp;E PEs:</b> 0305202F				
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>												
0305202F	- / 106.174	- / 87.618	- / 36.389	- / 18.660	- / -	- / 18.660	- / 18.319	- / 19.813	- / 20.206	- / 23.200	- / -	- / 130.379
<b>Procurement</b>												
<b>Modification Item 1 of 1:</b> U-2 Update Block 20-1												
A Kits												
Recurring												
U-2 Update Block 20-1:INSTALL KITS Group A (Active)	12 / 67.470	9 / 43.204	9 / 40.412	22 / 41.624	- / 9.600	22 / 51.224	12 / 38.024	12 / 37.666	12 / 41.439	12 / 55.845	- / -	100 / 375.284
<i>Subtotal: Recurring</i>	- / 67.470	- / 43.204	- / 40.412	- / 41.624	- / 9.600	- / 51.224	- / 38.024	- / 37.666	- / 41.439	- / 55.845	- / -	- / 375.284
<i>Subtotal: U-2 Update Block 20-1</i>	- / 67.470	- / 43.204	- / 40.412	- / 41.624	- / 9.600	- / 51.224	- / 38.024	- / 37.666	- / 41.439	- / 55.845	- / -	- / 375.284
<i>Subtotal: Procurement, All Modification Items</i>	- / 67.470	- / 43.204	- / 40.412	- / 41.624	- / 9.600	- / 51.224	- / 38.024	- / 37.666	- / 41.439	- / 55.845	- / -	- / 375.284
<b>Installation</b>												
<b>Modification Item 1 of 1:</b> U-2 Update Block 20-1	12 / 22.876	9 / 24.161	9 / 18.151	22 / 20.856	- / -	22 / 20.856	12 / 19.046	12 / 16.172	12 / 13.370	- / -	- / -	88 / 134.632
<i>Subtotal: Installation</i>	12 / 22.876	9 / 24.161	9 / 18.151	22 / 20.856	- / -	22 / 20.856	12 / 19.046	12 / 16.172	12 / 13.370	- / -	- / -	88 / 134.632
<b>Total</b>												
<b>Total Cost (Procurement + Support + Installation)</b>	<b>90.346</b>	<b>67.365</b>	<b>58.563</b>	<b>62.480</b>	<b>9.600</b>	<b>72.080</b>	<b>57.070</b>	<b>53.838</b>	<b>54.809</b>	<b>55.845</b>	<b>-</b>	<b>509.916</b>

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**Exhibit P-3a, Individual Modification: PB 2021 Air Force** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> 11U200 / U-2 Mods	<b>Modification Number / Title:</b> 4494 / U-2 Mod
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** U-2 Update Block 20-1

**Manufacturer Information**

Manufacturer Name: Details Classified	Manufacturer Location: Details Classified
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Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 6
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Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jan 2019	Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024	Jan 2025
Delivery Dates	Jul 2019	Jul 2020	Jul 2021	Jul 2022	Jul 2023	Jul 2024	Jul 2025

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	12 / 22.876	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 22.876
FY 2019	- / -	9 / 24.161	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 24.161
FY 2020	- / -	- / -	9 / 18.151	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 18.151
FY 2021	- / -	- / -	- / -	22 / 20.856	- / -	22 / 20.856	- / -	- / -	- / -	- / -	- / -	22 / 20.856
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	12 / 19.046	- / -	- / -	- / -	- / -	12 / 19.046
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 16.172	- / -	- / -	- / -	12 / 16.172
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 13.370	- / -	- / -	12 / 13.370
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	12 / 22.876	9 / 24.161	9 / 18.151	22 / 20.856	- / -	22 / 20.856	12 / 19.046	12 / 16.172	12 / 13.370	- / -	- / -	88 / 134.632

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	3	2	2	2	3	2	2	2	8	8	4	2	4	4	2	2	3	3	3	3	3	3	3	3	-	-	-	-	0	88
Out	12	3	2	2	2	3	2	2	2	8	8	4	2	4	4	2	2	3	3	3	3	3	3	3	3	-	-	-	-	0	88

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> 11U200 / U-2 Mods	<b>Modification Number / Title:</b> 4496 / ASARS-2B Procurement for U-2

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	-	0.000	48.138	0.000	48.138	72.268	28.071	15.860	12.593	112.000	288.930
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	-	0.000	48.138	0.000	48.138	72.268	28.071	15.860	12.593	112.000	288.930
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	-	-	<b>0.000</b>	<b>48.138</b>	<b>0.000</b>	<b>48.138</b>	<b>72.268</b>	<b>28.071</b>	<b>15.860</b>	<b>12.593</b>	<b>112.000</b>	<b>288.930</b>

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

Initial Spares ( <i>\$ in Millions</i> )	-	-	28.097	43.103	-	43.103	7.854	2.082	2.119	2.628	-	85.883
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The Advanced Synthetic Aperture Radar System (ASARS)-2B program replaces the front end components of the ASARS-2A airborne radar to alleviate reduction in current ASARS-2A capability starting in FY21 due to significant diminishing manufacturing sources and material shortages (DMSMS) issues. ASARS-2B fixes these front end DMSMS issues while advancing the AF high altitude long range ISR radar capabilities. ASARS-2B incorporates a new Active Electronically Scanned Array (AESA) antenna, Power Conditioning Unit (PCU), and Liquid Cooling System (LCS) while replacing the existing ASARS-2A Receiver Exciter Controller (REC) and radar data processing software on the Onboard Processor (OBP). The front-end (AESA, PCU, and LCS) together with the replaced/modified components (REC and OBP) significantly improve existing Synthetic Aperture Radar (SAR) and Ground Moving Target Indicator (GMTI) capabilities while adding new Maritime capabilities. These efforts will align with back end up grades, previously referred to as ASARS-2C.

Validated requirements consists of the "Improved Synthetic Aperture Radar for the U-2" Operational Requirement Document (Apr 1996) and approved AF Form 1067s. It also aligns with the USECAF/VCSAF "Interim Guidance on High Altitude ISR Transition Plan", dated 19 Oct 2017. Current efforts are collaborative in funding and scheduling with PE 0305206F & PE 0604257F. ASARS-2B (front-end) effort is NOT a new start, and has been previously planned for in PE 35202F.

**Milestone/Development Status**

The ASARS-2B program builds upon and operationalizes the ASARS-2B Technology Demonstration effort, funded under Advanced Technology and Sensors PE 0604257F, which concludes in early FY19 with flight demonstrations. ASARS-2B expects contract award in FY19 to complete non-recurring engineering and build/integrate of two systems for flight test activities expected early FY22. A production contract will be awarded by late FY21 to produce ASARS-2B operational systems and initial spares with an Initial Operational Capability expected in FY23. Efforts will be made to align procurement of ASARS-2B with ASARS-2C ("back-end"/processor) to the max extent possible IAW CSAF/SECAF rapid innovation initiatives.



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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 3010F / 05 / 5 **P-1 Line Item Number / Title:** 11U200 / U-2 Mods **Modification Number / Title:** 4496 / ASARS-2B Procurement for U-2

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

**Models of Systems Affected:** U-2 **Modification Type:** Other **Related RDT&E PEs:** 0305202F, 0604257F

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>												
<i>Modification Item 1 of 1: ASARS-2B</i>												
A Kits												
Recurring												
ASARS-2B:INSTALL KITS Group A (Active)	- / -	- / -	0 / 0.000	1 / 48.138	- / -	1 / 48.138	2 / 72.268	1 / 28.071	0 / 15.860	0 / 12.593	4 / 112.000	8 / 288.930
<i>Subtotal: Recurring</i>	- / -	- / -	- / 0.000	- / 48.138	- / -	- / 48.138	- / 72.268	- / 28.071	- / 15.860	- / 12.593	- / 112.000	- / 288.930
<i>Subtotal: ASARS-2B</i>	- / -	- / -	- / 0.000	- / 48.138	- / -	- / 48.138	- / 72.268	- / 28.071	- / 15.860	- / 12.593	- / 112.000	- / 288.930
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / -	- / 0.000	- / 48.138	- / -	- / 48.138	- / 72.268	- / 28.071	- / 15.860	- / 12.593	- / 112.000	- / 288.930
<b>Installation</b>												
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>												
<b>Total Cost (Procurement + Support + Installation)</b>	-	-	0.000	48.138	0.000	48.138	72.268	28.071	15.860	12.593	112.000	288.930

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> 11U200 / U-2 Mods			<b>Modification Number / Title:</b> 4496 / ASARS-2B Procurement for U-2	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B				<b>MDAP/MAIS Code:</b>			
<b>Modification Item 1 of 1:</b> ASARS-2B							
<b>Manufacturer Information</b>							
Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime (in Months): 1				Production Leadtime (in Months): 24			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates			Mar 2021	Jun 2022	Jun 2023		
Delivery Dates			Mar 2023	Jun 2024	Jun 2025		
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 8		

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	<b>P-1 Line Item Number / Title:</b> C01000 / KC-10A (ATCA)
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ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0401219F, 0401897F	Other Related Program Elements: 0401219F
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	50.977	11.104	2.108	0.117	-	0.117	3.440	3.501	0.000	0.000	-	71.247
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	50.977	11.104	2.108	0.117	-	0.117	3.440	3.501	0.000	0.000	-	71.247
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>50.977</b>	<b>11.104</b>	<b>2.108</b>	<b>0.117</b>	<b>-</b>	<b>0.117</b>	<b>3.440</b>	<b>3.501</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>71.247</b>

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

Initial Spares ( <i>\$ in Millions</i> )	-	-	-	0.600	-	0.600	-	-	-	-	-	0.600
Flyaway Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This line item funds modifications for the fleet of 59 KC-10 aircraft. The three engine KC-10 serves a dual role by providing both air refueling and strategic airlift support. The aircraft provides air refueling by using both the boom and the drogue methods and can carry up to 27 standard 463-L pallets. The primary modifications are Mode-5 Identification Friend or Foe (IFF) Surveillance in combination with an FAA mandated Automatic Dependent Surveillance-Broadcast (ADS-B) upgrade, and Service Bulletins (SBs) that address obsolescence issues, provide worldwide civil airspace accessibility, and incorporate aging aircraft and FAA certification requirements. In FY19 AMC updated the Mode 5 requirement to all 59 aircraft.

Funding for this exhibit is contained in PE 0401219F and PE 0401897F

**Justification:**

FY2021 funding for Service Bulletins, Airworthiness Directives, and All Operator Letters issued to correct deficiencies.

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	<b>P-1 Line Item Number / Title:</b> C01200 / C-12
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B	<b>Program Elements for Code B Items:</b> 0401314F	<b>Other Related Program Elements:</b> 0401314F
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	12.757	4.900	3.021	0.000	-	0.000	0.000	0.000	0.000	0.000	-	20.678
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	12.757	4.900	3.021	0.000	-	0.000	0.000	0.000	0.000	0.000	-	20.678
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>12.757</b>	<b>4.900</b>	<b>3.021</b>	<b>0.000</b>	<b>-</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>20.678</b>

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

**Description:**

This line item funds low-cost modifications and service bulletins for twenty-nine (29) C-12 C/D/F/J aircraft, commercial equivalent to the Beech Craft Super King Air. The C-12 is a twin-turboprop, support-airlift aircraft used to transport cargo and passengers over medium distances. The design service life is 30,000 hours with 16,700 remaining on the C (16), 19,800 hours remaining on the D (6), 8,100 on the F (3), 12,700 on the J (4). Service bulletins and low cost modifications are necessary for continuing Federal Aviation Administration certification while improving flight safety, reliability, and maintainability. Support funding for emerging modification requirements to support PMA, A&AS, system integration lab, trainers, equipment and other government costs.

Funding may be used to address Diminishing Manufacturing Sources Material Shortages (DMSMS) issues.

Funding for this exhibit contained in PE 0401314F.

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	<b>P-1 Line Item Number / Title:</b> C02500 / VC-25A Mod
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B	<b>Program Elements for Code B Items:</b> 0401314F	<b>Other Related Program Elements:</b> 0401314F
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	241.362	27.238	48.624	1.983	-	1.983	1.005	1.022	1.041	1.060	-	323.335
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	241.362	27.238	48.624	1.983	-	1.983	1.005	1.022	1.041	1.060	-	323.335
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>241.362</b>	<b>27.238</b>	<b>48.624</b>	<b>1.983</b>	<b>-</b>	<b>1.983</b>	<b>1.005</b>	<b>1.022</b>	<b>1.041</b>	<b>1.060</b>	<b>-</b>	<b>323.335</b>

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

**Description:**

This line item funds aircraft modernization efforts for two (2) VC-25A presidential support aircraft, a commercial derivative of the commercial Boeing 747-200. The aircraft are commonly referred to as "Air Force One." The aircraft were purchased in FY87, modified by Boeing to meet presidential requirements, and delivered in FY91. These on-going modifications are to extend the service life until the VC-25B aircraft are fielded in the 2024 timeframe.

VC-25 Block Upgrades ensure aircraft viability until the VC-25B program reaches full operational capability. The upgrades include installing protected satellite communications, weather radar, digital/voice data systems, and network capabilities. Service bulletins and low cost modifications are necessary for continuing Federal Aviation Administration (FAA) airworthiness certification while improving flight safety, reliability, and maintainability. This funding may include emerging modification requirements to support Program Management Advisors (PMA), Administrative and Advisory support (A&AS), system integration lab, trainers, equipment, other government costs (OGC), and Senior Leader Communications System modernization efforts.

Funding may be used to address Diminishing Manufacturing Sources and Material Solutions (DMSMS) issues.

Starting in FY21 VC-25A will begin a modification to the Senior Leader Command Control Communication System (SLC3S).

Congressional language established a VC-25A retirement date of 31 Dec 2025. Pursuant to the provisions of 10 U .S.C. 2244a, SecAF determined the following capabilities modifications are the national security interest of the United States:

(a) ADS-B Out/Mode 5 Identification Friend or Foe (IFF) FAA mandate (b) Diminishing Manufacturing Sources and Material Solutions (DMSMS), and (c) Communications Management System (CMS) Modernization - VIPSAM Protected SATCOM (VPS), Presidential Information Technology Communication (PITC) Wi-Fi and Commercial Internet, Bandwidth Aggregation, Multi-Role Tactical Common Data Link (MR-TCDL), Mobile User Objective System (MUOS) and High Definition Video Teleconference (HDVTC).

**Justification:**

This program, P-3A Mod 9714, WIDEBAND SATCOM, is a new start.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft		<b>P-1 Line Item Number / Title:</b> C02500 / VC-25A Mod
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B	<b>Program Elements for Code B Items:</b> 0401314F	<b>Other Related Program Elements:</b> 0401314F
<b>Line Item MDAP/MAIS Code:</b> N/A		
FY21 funding is for low cost mods, service bulletins and to initiate the Senior Leader Command Control Communication System (SLC3S).		



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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	<b>P-1 Line Item Number / Title:</b> C04000 / C-40
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ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0401314F	Other Related Program Elements: 0401314F
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	127.593	0.251	0.256	9.252	-	9.252	0.267	0.272	0.000	0.000	-	137.891
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	127.593	0.251	0.256	9.252	-	9.252	0.267	0.272	0.000	0.000	-	137.891
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>127.593</b>	<b>0.251</b>	<b>0.256</b>	<b>9.252</b>	<b>-</b>	<b>9.252</b>	<b>0.267</b>	<b>0.272</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>137.891</b>

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

**Description:**

This line item funds all modifications for four (4) C-40B and seven (7) C-40C aircraft, commercial-derivative Boeing 737 business jets. The C-40B/C is a twin-engine, turbo fan aircraft used to airlift DoD officials and United States government personnel worldwide. The design service life is 30 years with an average of 21 years remaining. This funding may include emerging modification requirements to support Program Management Administration (PMA), Advisory & Assistance Services (A&AS), systems integration lab, trainers, equipment, other government costs, and Senior Leader Communications System modernization efforts.

Service bulletins and low cost modifications are necessary for continuing Federal Aviation Administration (FAA) certification while improving flight safety, reliability, and maintainability.

Wideband Satellite Communications modifications are necessary to ensure national senior leaders have redundant protected, survivable and secure satellite air-to-air communication pathways for modern business enterprise system and Command and Control functions globally while airborne.

Funding may be used to address Diminishing Manufacturing Sources and Material Shortages (DMSMS) issues.

Funding for this exhibit contained in PEs 0401314F and 0504324F

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 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	0.251	0.256	9.252	-	9.252	0.267	0.272	-	-
<b>Total:</b>									
Quantity	-	-	-	-	-	-	-	-	-

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	<b>P-1 Line Item Number / Title:</b> C04000 / C-40
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B	<b>Program Elements for Code B Items:</b> 0401314F	<b>Other Related Program Elements:</b> 0401314F
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**Line Item MDAP/MAIS Code:** N/A

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Secondary Distribution	Total Obligation Authority	0.251	0.256	9.252	-	9.252	0.267	0.272	-	-

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

**P-1 Line Item Number / Title:**  
C04000 / C-40

**ID Code** (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** 0401314F **Other Related Program Elements:** 0401314F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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***	1110 / Nitrogen Generation System (Other)				- / 6.065	- / -	- / -	- / -	- / -	- / -
P-40a***	1119 / CNS/ATM Compliance (Capability Improvement)				- / 22.412	- / -	- / -	- / -	- / -	- / -
P-40a***	1120 / Crew Rest Seats (Capability Improvement)				- / 7.543	- / -	- / -	- / -	- / -	- / -
P-40a***	99999S / SERVICE BULLETINS (Capability Improvement)				- / 0.009	- / 0.151	- / 0.156	- / 0.161	- / -	- / 0.161
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 0.215	- / 0.100	- / 0.100	- / 0.100	- / -	- / 0.100
P-3a	1118 / WIDEBAND SATCOM (Capability Improvement)		B		- / 91.349	- / 0.000	- / 0.000	- / 8.991	- / 0.000	- / 8.991
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 127.593</b>	<b>- / 0.251</b>	<b>- / 0.256</b>	<b>- / 9.252</b>	<b>- / -</b>	<b>- / 9.252</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	1110 / Nitrogen Generation System (Other)				- / -	- / -	- / -	- / -	- / -	- / 6.065
P-40a***	1119 / CNS/ATM Compliance (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 22.412
P-40a***	1120 / Crew Rest Seats (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 7.543
P-40a***	99999S / SERVICE BULLETINS (Capability Improvement)				- / 0.167	- / 0.172	- / -	- / -	- / -	- / 0.816
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 0.100	- / 0.100	- / -	- / -	- / -	- / 0.715
P-3a	1118 / WIDEBAND SATCOM (Capability Improvement)		B		- / 0.000	- / 0.000	- / -	- / -	- / -	- / 100.340
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 0.267</b>	<b>- / 0.272</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / -</b>	<b>- / 137.891</b>

\*\*\* Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

\*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:**  
This program, P-3A Mod 1118, WIDEBAND SATCOM, is a new start.

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> C04000 / C-40	<b>Modification Number / Title:</b> 1118 / WIDEBAND SATCOM

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	91.349	0.000	0.000	8.991	0.000	8.991	0.000	0.000	-	-	-	100.340
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	91.349	0.000	0.000	8.991	0.000	8.991	0.000	0.000	-	-	-	100.340
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>91.349</b>	<b>0.000</b>	<b>0.000</b>	<b>8.991</b>	<b>0.000</b>	<b>8.991</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>100.340</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This program, P-3A Mod 1118, WIDEBAND SATCOM, is a new start.

This modification modernizes and corrects communications system obsolescence issues on eleven (11) C40B/C Air Force aircraft. The C40B/C is a commercial derivative of the Boeing 737 Business Jets supporting the White House, Cabinet, Congress, Department of Defense, and United States Senior government officials. Air Force C-40B/C's maintain Federal Aviation Administration Certification. This modification upgrades and standardizes existing Senior Leader Communications systems to baseline 3 capability across the Executive Airlift fleet. Baseline 3 system upgrades consist of, but are not limited to, Top Secret /Sensitive Compartmented Information (TS/SCI) voice/data/video networks (Crisis Management System/Joint Worldwide Intelligence Communications System) and Unclassified, Secret, and TS/SCI voice/data/video networks enabling them to be able to conduct time critical targeting of high value targets, as required, and crisis actions while airborne. This modification ensures national senior leaders have redundant protected, survivable, and secure satellite, air-to-air, and air-to-ground communications pathways for modern business enterprise systems and Command and Control functions globally while airborne. In addition to the aforementioned modifications, this funding implements National Leadership Command Capability Senior Leader Communications Council actions to correct mission communication system failures or address imminent capability gaps. The Senior Leader Communication Modernization effort provides the capability to rapidly acquire, integrate, modify, install and test new airborne communications technologies for the Executive Airlift fleet.

Milestone/Development Status

Commercial-off-the-shelf item with non-recurring engineering for integration

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	8.991	-	8.991	-	-	-	-
<b>Total:</b> Secondary Distribution	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>0.000</b>	<b>0.000</b>	<b>8.991</b>	<b>0.000</b>	<b>8.991</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>-</b>

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> C04000 / C-40					<b>Modification Number / Title:</b> 1118 / WIDEBAND SATCOM			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> C-40B, C-40C				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0401314F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> Wideband SATCOM													
A Kits													
Recurring													
Wideband SATCOM:INSTALL KITS Group A (Active)	4 / 20.859	- / -	- / -	2 / 2.500	- / -	2 / 2.500	- / -	- / -	- / -	- / -	- / -	6 / 23.359	
<i>Subtotal: Recurring</i>	- / 20.859	- / -	- / -	- / 2.500	- / -	- / 2.500	- / -	- / -	- / -	- / -	- / -	- / 23.359	
B Kits													
Recurring													
Wideband SATCOM:EQUIPMENT Group B (Active)	4 / 20.000	- / -	- / -	2 / 3.000	- / -	2 / 3.000	- / -	- / -	- / -	- / -	- / -	6 / 23.000	
<i>Subtotal: Recurring</i>	- / 20.000	- / -	- / -	- / 3.000	- / -	- / 3.000	- / -	- / -	- / -	- / -	- / -	- / 23.000	
<i>Subtotal: Wideband SATCOM</i>	- / 40.859	- / -	- / -	- / 5.500	- / -	- / 5.500	- / -	- / -	- / -	- / -	- / -	- / 46.359	
<i>Subtotal: Procurement, All Modification Items</i>	- / 40.859	- / -	- / -	- / 5.500	- / -	- / 5.500	- / -	- / -	- / -	- / -	- / -	- / 46.359	
<b>Support (All Modification Items)</b>													
GROUP A: TOTAL NONRECURRING	- / 33.485	- / -	- / -	- / 0.491	- / -	- / 0.491	- / -	- / -	- / -	- / -	- / -	- / 33.976	
PMA - Other Gov't Costs	- / 0.977	- / -	- / -	- / 0.500	- / -	- / 0.500	- / -	- / -	- / -	- / -	- / -	- / 1.477	
Data	- / 0.982	- / -	- / -	- / 0.500	- / -	- / 0.500	- / -	- / -	- / -	- / -	- / -	- / 1.482	
<i>Subtotal: Support</i>	- / 35.444	- / -	- / -	- / 1.491	- / -	- / 1.491	- / -	- / -	- / -	- / -	- / -	- / 36.935	
<b>Installation</b>													
<i>Modification Item 1 of 1:</i> Wideband SATCOM	4 / 15.046	- / -	- / -	2 / 2.000	- / -	2 / 2.000	- / -	- / -	- / -	- / -	- / -	6 / 17.046	
<i>Subtotal: Installation</i>	4 / 15.046	- / -	- / -	2 / 2.000	- / -	2 / 2.000	- / -	- / -	- / -	- / -	- / -	6 / 17.046	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>91.349</b>	<b>0.000</b>	<b>0.000</b>	<b>8.991</b>	<b>0.000</b>	<b>8.991</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>100.340</b>	

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> C04000 / C-40	<b>Modification Number / Title:</b> 1118 / WIDEBAND SATCOM
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**ID Code** (A=Service Ready, B=Not Service Ready) : B **MDAP/MAIS Code:**

**Modification Item 1 of 1:** Wideband SATCOM

**Manufacturer Information**

Manufacturer Name: L-3 Communications Manufacturer Location: Greenville, TX

Administrative Leadtime (in Months): 4 Production Leadtime (in Months): 11

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Feb 2021				
Delivery Dates			Jan 2022				

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	4 / 15.046	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 15.046
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	2 / 2.000	- / -	2 / 2.000	- / -	- / -	- / -	- / -	- / -	2 / 2.000
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	4 / 15.046	- / -	- / -	2 / 2.000	- / -	2 / 2.000	- / -	- / -	- / -	- / -	- / -	6 / 17.046

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	4	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	0	6
Out	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	0	6

**UNCLASSIFIED**

**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	<b>P-1 Line Item Number / Title:</b> C13000 / C-130
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> 0207224F, 0401115F, 0401897F, 0404011F	<b>Other Related Program Elements:</b> 0207224F, 0401115F
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	1,455.737	177.164	186.066	5.871	-	5.871	45.077	144.000	79.505	86.752	165.234	2,345.406
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	1,455.737	177.164	186.066	5.871	-	5.871	45.077	144.000	79.505	86.752	165.234	2,345.406
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>1,455.737</b>	<b>177.164</b>	<b>186.066</b>	<b>5.871</b>	<b>-</b>	<b>5.871</b>	<b>45.077</b>	<b>144.000</b>	<b>79.505</b>	<b>86.752</b>	<b>165.234</b>	<b>2,345.406</b>

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

**Description:**

This line item funds modifications to the legacy C-130 and Special Mission C-130 aircraft. The four engine legacy C-130 provides theater airlift and carries either 92 troops, 64 paratroopers, 74 litter patients, or 6 standard 463-L pallets.

The modifications budgeted in FY21 are the Systems/Structure (Center Wing Replacement) mod, the C-130H Avionics Modernization Program (AMP) Increment 1 mod, Simulators, the AFSOC C-130 Mods and low cost/safety/misc simulator mods.

C-130 AMP Inc 2 LRIP begins in FY22.

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.

Funding may be used to address Diminishing Manufacturing Sources (DMS) issues.

Funding for this exhibit is contained in PEs 0401115F, 0401897F, and 0404011F.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	-	-	-	-	-	-	-	-	-
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	72.154	66.594	5.871	-	5.871	28.649	53.119	19.382	25.878
AFNG	-	-	-	-	-	-	-	-	-
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	91.609	108.480	-	-	-	11.734	66.646	44.090	43.958
AFR	-	-	-	-	-	-	-	-	-
Quantity	-	-	-	-	-	-	-	-	-

**UNCLASSIFIED**

**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	<b>P-1 Line Item Number / Title:</b> C13000 / C-130
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> 0207224F, 0401115F, 0401897F, 0404011F	<b>Other Related Program Elements:</b> 0207224F, 0401115F
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**Line Item MDAP/MAIS Code:** N/A

	<b>Secondary Distribution</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
	Total Obligation Authority	13.401	10.992	-	-	-	4.694	24.235	16.033	16.916
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>177.164</b>	<b>186.066</b>	<b>5.871</b>	<b>-</b>	<b>5.871</b>	<b>45.077</b>	<b>144.000</b>	<b>79.505</b>	<b>86.752</b>



**UNCLASSIFIED**

**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

**P-1 Line Item Number / Title:**  
C13000 / C-130

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0207224F, 0401115F, 0401897F, 0404011F **Other Related Program Elements:** 0207224F, 0401115F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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***	3773 / C-130 8-Bladed Propeller Upgrade (Capability Improvement)				- / 141.004	- / 55.000	- / 55.000	- / -	- / -	- / -
P-40a***	8221 / C-130 ALR-69A Radar Warning Receiver (RWR) (Capability Improvement)				- / 36.000	- / -	- / -	- / -	- / -	- / -
P-40a***	8518 / C-130H Avionics Modernization Program (AMP) Increment 2 (Capability Improvement)				- / -	- / -	- / -	- / 0.050	- / -	- / 0.050
P-40a***	8578 / C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION) (Service Life Extension)				- / 673.070	- / 0.475	- / 14.512	- / -	- / -	- / -
P-40a***	9139 / MOD V IFF (Capability Improvement)				- / 40.773	- / 1.327	- / -	- / -	- / -	- / -
P-40a***	9141 / C-130 CRASHWORTHY LOADMASTER SEAT (No text provided.)				- / 1.853	- / -	- / -	- / -	- / -	- / -
P-40a***	9149 / C-130 Aux Hyd Pump (Capability Improvement)				- / 16.599	- / -	- / -	- / -	- / -	- / -
P-40a***	92302 / C-130H Avionics Modernization Program (AMP) Increment 1 (Capability Improvement)				- / 77.200	- / 6.541	- / 7.338	- / 3.841	- / -	- / 3.841
P-40a***	92308 / T-56 3.5 Engine Mod (Capability Improvement)				- / 187.000	- / 74.000	- / 79.000	- / -	- / -	- / -
P-40a***	92309 / Onboard Fire Incident Response Equipment (Capability Improvement)				- / 84.266	- / 36.116	- / 5.104	- / -	- / -	- / -
P-40a***	92310 / HC-130P/N Variable Speed Drogue (VSD) (Capability Improvement)				- / 1.410	- / -	- / -	- / -	- / -	- / -
P-40a***	92311 / Electronic Propeller Control System (EPCS) (Capability Improvement)				- / 141.770	- / -	- / -	- / -	- / -	- / -
P-40a***	92312 / In-Flight Propeller Balancing System (IPBS) (Reliability & Maintainability)				- / 1.500	- / -	- / -	- / -	- / -	- / -
P-40a***	92315 / C-130H Simulator (Other)				- / 25.000	- / -	- / 15.675	- / -	- / -	- / -
P-40a***	92316 / AFSOC C-130 Mods (Capability Improvement)				- / 11.000	- / 3.705	- / 7.937	- / -	- / -	- / -
P-40a***	92321 / C-130H MUOS (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	99999A / LOW COST SAFETY MODIFICATIONS (Safety)				- / 3.034	- / 0.000	- / -	- / -	- / -	- / -
P-40a***	99999C / HC-130 Low Cost Mods (Reliability & Maintainability)				- / 1.907	- / -	- / -	- / -	- / -	- / -
P-40a***	99999M / MISC SIMULATOR UPDATES (Capability Improvement)				- / 0.703	- / -	- / -	- / -	- / -	- / -
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 11.648	- / -	- / 1.500	- / 1.980	- / -	- / 1.980
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 1,455.737</b>	<b>- / 177.164</b>	<b>- / 186.066</b>	<b>- / 5.871</b>	<b>- / -</b>	<b>- / 5.871</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	3773 / C-130 8-Bladed Propeller Upgrade (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 251.004

**UNCLASSIFIED**

**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

**P-1 Line Item Number / Title:**  
C13000 / C-130

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0207224F, 0401115F, 0401897F, 0404011F **Other Related Program Elements:** 0207224F, 0401115F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	8221 / C-130 ALR-69A Radar Warning Receiver (RWR) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 36.000
P-40a***	8518 / C-130H Avionics Modernization Program (AMP) Increment 2 (Capability Improvement)				- / 20.403	- / 106.691	- / 77.575	- / 74.573	- / 165.234	- / 444.526
P-40a***	8578 / C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION) (Service Life Extension)				- / 0.000	- / 0.000	- / -	- / 0.001	- / -	- / 688.058
P-40a***	9139 / MOD V IFF (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 42.100
P-40a***	9141 / C-130 CRASHWORTHY LOADMASTER SEAT (No text provided.)				- / -	- / -	- / -	- / -	- / -	- / 1.853
P-40a***	9149 / C-130 Aux Hyd Pump (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 16.599
P-40a***	92302 / C-130H Avionics Modernization Program (AMP) Increment 1 (Capability Improvement)				- / 0.000	- / -	- / -	- / -	- / -	- / 94.920
P-40a***	92308 / T-56 3.5 Engine Mod (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 340.000
P-40a***	92309 / Onboard Fire Incident Response Equipment (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 125.486
P-40a***	92310 / HC-130P/N Variable Speed Drogue (VSD) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 1.410
P-40a***	92311 / Electronic Propeller Control System (EPCS) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 141.770
P-40a***	92312 / In-Flight Propeller Balancing System (IPBS) (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / 1.500
P-40a***	92315 / C-130H Simulator (Other)				- / 22.697	- / 35.415	- / 0.000	- / -	- / -	- / 98.787
P-40a***	92316 / AFSOC C-130 Mods (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 22.642
P-40a***	92321 / C-130H MUOS (Capability Improvement)				- / -	- / -	- / -	- / 10.179	- / -	- / 10.179
P-40a***	99999A / LOW COST SAFETY MODIFICATIONS (Safety)				- / -	- / -	- / -	- / -	- / -	- / 3.034
P-40a***	99999C / HC-130 Low Cost Mods (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / 1.907
P-40a***	99999M / MISC SIMULATOR UPDATES (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 0.703
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 1.977	- / 1.894	- / 1.930	- / 1.999	- / -	- / 22.928
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 45.077</b>	<b>- / 144.000</b>	<b>- / 79.505</b>	<b>- / 86.752</b>	<b>- / 165.234</b>	<b>- / 2,345.406</b>

\*\*\* Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

\*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:**  
This program, P-3A Mod 8518, C-130H Avionics Modernization Program (AMP) Increment 2, is a new start.

**UNCLASSIFIED**

**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	<b>P-1 Line Item Number / Title:</b> C1300J / C-130J Mods
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> 0401115F, 0401132F, 0401897F	<b>Other Related Program Elements:</b> 0401115F, 0401132F, 0401897F
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	425.972	101.080	128.399	140.032	-	140.032	113.127	176.751	77.076	44.270	919.560	2,126.267
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	425.972	101.080	128.399	140.032	-	140.032	113.127	176.751	77.076	44.270	919.560	2,126.267
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>425.972</b>	<b>101.080</b>	<b>128.399</b>	<b>140.032</b>	-	<b>140.032</b>	<b>113.127</b>	<b>176.751</b>	<b>77.076</b>	<b>44.270</b>	<b>919.560</b>	<b>2,126.267</b>

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

**Description:**

The C-130J is a medium-size transport aircraft capable of performing a variety of combat delivery (tactical airlift) operations across a broad range of mission environments. The C-130J aircraft, with its extended (by 15 ft) fuselage, provides additional cargo carrying capacity for the USAF combat delivery mission compared with legacy C-130E/Hs and the C-130J (short).

Other variants of the USAF C-130J fleet are all short-bodied aircraft and include the EC-130J (airborne psychological operations), WC-130J (weather reconnaissance), HC-130J (combat search and rescue), MC-130J (special operations), and the AC-130J (close air support and armed reconnaissance).

As of 1 Jan 2020, there have been 245 USAF C-130J aircraft deliveries: variants include C-130J - 123, C-130J (short) - 10, WC-130J - 10, EC-130J - 7, HC-130J - 31, MC/AC-130J - 64. The designed service life is 35 years and the average service life remaining is 26.6 years.

Funding for this exhibit is contained in PE 0401132F and PE 0401897F. Funding may be used to address Diminishing Manufacturing Sources (DMS) issues.

In FY21, the center wing box replacement program continues with the installation of enhanced service life (ESL) center wing kits and the procurement of ESL kits. Since Nov 2009, all production C-130Js have been delivered with the ESL center wing.

In order to better manage the fleet and avoid having to simultaneously support three separate aircraft configurations (Block 6, Block 7 and Block 8.1), Blocks 7.0 and 8.1 have been combined into one aircraft modification program. This way the aircraft and trainers will only have to be modified one time. The Block 8.1 mod includes Block 7.0 content.

The international C-130J Block 8.1 operational test & evaluation (OT&E) is complete.

Block 8.1 includes ADS-B Out and Mode V IFF as well as 34 additional capabilities. In order to meet the Federal Aviation Administration (FAA) 2020 mandate the USAF installed the Block 8.1 ADS-B Out/Mode V IFF solution on all C-130J variants not scheduled to receive Block 8.1 by January 2020. All C-130Js still require Block 8.1.

This funding includes Rapid Global Mobility (RGM) platform related activities including but not limited to fielding actions.

**UNCLASSIFIED**

<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft		<b>P-1 Line Item Number / Title:</b> C1300J / C-130J Mods
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> 0401115F, 0401132F, 0401897F	<b>Other Related Program Elements:</b> 0401115F, 0401132F, 0401897F
<b>Line Item MDAP/MAIS Code:</b> N/A		

NOTE: USMC KC-130Js and USCG HC-130Js are following USAF's lead and will also field combined Block 7/8.1 aircraft.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	101.080	128.399	140.032	-	140.032	113.127	176.751	77.076	44.270
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>101.080</b>	<b>128.399</b>	<b>140.032</b>	-	<b>140.032</b>	<b>113.127</b>	<b>176.751</b>	<b>77.076</b>	<b>44.270</b>

**UNCLASSIFIED**

**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

**P-1 Line Item Number / Title:**  
C1300J / C-130J Mods

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0401115F, 0401132F, 0401897F **Other Related Program Elements:** 0401115F, 0401132F, 0401897F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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***	_2612 / Avionics System and Structural Modifications (Capability Improvement)				- / 30.828	- / 1.000	- / -	- / 0.750	- / -	- / 0.750
P-40a***	_5296 / Wind Gust Brake (Reliability & Maintainability)				- / 39.499	- / 0.350	- / -	- / -	- / -	- / -
P-40a***	8668 / WST Threat Generators (Capability Improvement)				- / -	- / 1.567	- / -	- / 5.948	- / -	- / 5.948
P-40a***	8669 / MUOS (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	99999X / Low Cost Modifications (Safety)				- / 10.210	- / 0.000	- / 0.650	- / 0.750	- / -	- / 0.750
P-3a	5222 / BLOCK 8.1 (Capability Improvement)		B		- / 241.424	- / 93.695	- / 93.491	- / 119.190	- / 0.000	- / 119.190
P-3a	8646 / C-130J Center Wing Replacement (Service Life Extension)		A		- / 104.011	- / 4.468	- / 34.258	- / 13.394	- / 0.000	- / 13.394
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 425.972</b>	<b>- / 101.080</b>	<b>- / 128.399</b>	<b>- / 140.032</b>	<b>- / -</b>	<b>- / 140.032</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	_2612 / Avionics System and Structural Modifications (Capability Improvement)				- / 0.250	- / 0.230	- / -	- / 0.250	- / -	- / 33.308
P-40a***	_5296 / Wind Gust Brake (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / 39.849
P-40a***	8668 / WST Threat Generators (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 7.515
P-40a***	8669 / MUOS (Capability Improvement)				- / -	- / -	- / -	- / 20.000	- / 182.060	- / 202.060
P-40a***	99999X / Low Cost Modifications (Safety)				- / 0.250	- / 0.230	- / 0.000	- / 0.250	- / 1.500	- / 13.840
P-3a	5222 / BLOCK 8.1 (Capability Improvement)		B		- / 112.117	- / 165.774	- / 76.547	- / 23.231	- / 736.000	- / 1,661.469
P-3a	8646 / C-130J Center Wing Replacement (Service Life Extension)		A		- / 0.510	- / 10.517	- / 0.529	- / 0.539	- / -	- / 168.226
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 113.127</b>	<b>- / 176.751</b>	<b>- / 77.076</b>	<b>- / 44.270</b>	<b>- / 919.560</b>	<b>- / 2,126.267</b>

\*\*\* Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

\*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:**  
FY21 modification funding request includes: Block 8.1, Avionics Systems and Structures, Wind Gust Brake, Weapons System Trainer Threat Generators, Center Wing Replacement, and Low Cost mods.

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> C1300J / C-130J Mods	<b>Modification Number / Title:</b> 5222 / BLOCK 8.1

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	241.424	93.695	93.491	119.190	0.000	119.190	112.117	165.774	76.547	23.231	736.000	1,661.469
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	241.424	93.695	93.491	119.190	0.000	119.190	112.117	165.774	76.547	23.231	736.000	1,661.469
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>241.424</b>	<b>93.695</b>	<b>93.491</b>	<b>119.190</b>	<b>0.000</b>	<b>119.190</b>	<b>112.117</b>	<b>165.774</b>	<b>76.547</b>	<b>23.231</b>	<b>736.000</b>	<b>1,661.469</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The C-130J combined 7.0 and 8.1 Block Upgrades (BU) modification program funds the procurement and installation of Communication, Navigation and Surveillance / Air Traffic Management (CNS/ATM) navigation safety and other aircraft hardware and software improvements on USAF C-130J aircraft and associated training systems. The combined BU 7.0 and 8.1 (now called just Block 8.1) is being implemented to maintain access to global airspace, enhance aircraft navigational accuracy and aircrew situational awareness. It increases overall C-130J operational utility/effectiveness and reduces C-130J systems/parts obsolescence.

Block 8.1 provides 38 capabilities for the C-130J including: a new Flight Management System, civil GPS, Link-16 (MIDS LVT BU2 and JTRS), digital maps, Mission Computer - Operational Flight Program (MC-OPF), a modified control yoke, TEMPEST compliance, Identification Friend or Foe (IFF) Transponder Mode 5, Enhanced Inter-Communication System, CNS/ATM Civil Data Link and Automatic Dependent Surveillance Broadcast (ADS-B) out. HQ AMC procures the common Group B Kits only for the EC/HC Block 8.1 program. All variant unique hardware is procured by the applicable variant. HQ AMC is collaborating with AFRC and ANG units to provide funding in the out years to retrofit their respective units.

This funding request will support diminishing manufacturing sources and obsolescence solutions, to include if optimal, life of type buys or bridge buys limited to the program of record quantity.

Support equipment cost element includes initial spares.

This project contains procurement funding for related non-recurring engineering efforts, studies and risk reduction activities.

The number of kits procured is based on aircraft installations and available funding.

The ADS-B Out and Mode V IFF capability was accelerated ahead of the complete Block 8.1 mod in order to meet the Jan 2020 mandate and is included in this document.

This program includes costs for the following C-130J aircraft variants: C-130J stretch aircraft, C-130J short aircraft, WC-130J aircraft, HC-130J aircraft, and EC-130J aircraft.

This funding includes Rapid Global Mobility (RGM) platform related activities including but not limited to fielding actions such as kit buys, installation and support equipment.

The spares for the Block 8.1 program are on the "ICS - Material" line on this P3A.

Milestone/Development Status

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> C1300J / C-130J Mods	<b>Modification Number / Title:</b> 5222 / BLOCK 8.1
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B		<b>MDAP/MAIS Code:</b>

Successful full rate production decision 1 Oct 2019.

BU 8.1 operational testing occurred 9 Jul 18 to 28 Sep 18 with no reported CAT 1 deficiencies, formal out brief provided to AMC 22 Jul 19.

An adversarial assessment was performed second quarter FY19; no new risks were identified. Full rate production decision approval - 1 Oct 19.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	93.695	93.491	119.190	-	119.190	112.117	165.774	76.547	23.231
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>93.695</b>	<b>93.491</b>	<b>119.190</b>	<b>0.000</b>	<b>119.190</b>	<b>112.117</b>	<b>165.774</b>	<b>76.547</b>	<b>23.231</b>

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> C1300J / C-130J Mods					<b>Modification Number / Title:</b> 5222 / BLOCK 8.1			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> C-130J				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0401132F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0401132F	- / 28.654	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 28.654	
<b>Procurement</b>													
<b>Modification Item 1 of 2: ADS-B Out</b>													
A Kits													
Recurring													
ADS-B Out:INSTALL KITS Group A (Active)	242 / 25.893	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	242 / 25.893	
<i>Subtotal: Recurring</i>	- / 25.893	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 25.893	
B Kits													
Recurring													
ADS-B Out:EQUIPMENT Group B (Active)	242 / 38.163	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	242 / 38.163	
<i>Subtotal: Recurring</i>	- / 38.163	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 38.163	
<i>Subtotal: ADS-B Out</i>	- / 64.056	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 64.056	
<b>Modification Item 2 of 2: Block 81 LM Kit</b>													
A Kits													
Recurring													
Block 81 LM Kit:INSTALL KITS Group A (Active)	34 / 32.714	12 / 11.306	6 / 6.500	13 / 13.400	- / -	13 / 13.400	7 / 9.000	7 / 7.600	10 / 11.200	10 / 0.001	59 / 77.700	158 / 169.421	
<i>Subtotal: Recurring</i>	- / 32.714	- / 11.306	- / 6.500	- / 13.400	- / -	- / 13.400	- / 9.000	- / 7.600	- / 11.200	- / 0.001	- / 77.700	- / 169.421	
B Kits													
Recurring													
Block 81 LM Kit:EQUIPMENT Group B (Active)	34 / 53.182	12 / 17.375	6 / 10.800	13 / 23.000	- / -	13 / 23.000	7 / 13.200	7 / 12.800	10 / 18.700	10 / 0.001	59 / 217.300	158 / 366.358	
<i>Subtotal: Recurring</i>	- / 53.182	- / 17.375	- / 10.800	- / 23.000	- / -	- / 23.000	- / 13.200	- / 12.800	- / 18.700	- / 0.001	- / 217.300	- / 366.358	
<i>Subtotal: Block 81 LM Kit</i>	- / 85.896	- / 28.681	- / 17.300	- / 36.400	- / -	- / 36.400	- / 22.200	- / 20.400	- / 29.900	- / 0.002	- / 295.000	- / 535.779	
<i>Subtotal: Procurement, All Modification Items</i>	- / 149.952	- / 28.681	- / 17.300	- / 36.400	- / -	- / 36.400	- / 22.200	- / 20.400	- / 29.900	- / 0.002	- / 295.000	- / 599.835	
<b>Support (All Modification Items)</b>													
GROUP B: TOTAL NONRECURRING	- / 39.496	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 39.496	
OTHER GOVT	- / 30.907	- / 24.650	- / 8.691	- / 19.590	- / -	- / 19.590	- / 19.117	- / 55.324	- / 0.197	- / -	- / -	- / 148.476	
Data	- / 0.204	- / 0.221	- / 0.400	- / 0.200	- / -	- / 0.200	- / 0.200	- / 0.200	- / -	- / -	- / 9.400	- / 10.825	
GFP	- / 5.126	- / 3.159	- / 2.800	- / 19.200	- / -	- / 19.200	- / 4.200	- / 4.300	- / -	- / -	- / 48.200	- / 76.985	
SIM/TRAINER	- / 6.974	- / 4.394	- / 16.800	- / 2.900	- / -	- / 2.900	- / 14.500	- / 15.600	- / -	- / -	- / 9.500	- / 70.668	
SUPPORT-EQUIP	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.900	- / 0.900	- / 1.200	- / -	- / 10.000	- / 13.000	
ICS-Labor	- / -	- / -	- / 8.400	- / 15.600	- / -	- / 15.600	- / 17.000	- / 8.400	- / 11.000	- / -	- / 8.800	- / 39.200	



**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification: PB 2021 Air Force** **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 3010F / 05 / 5 **P-1 Line Item Number / Title:** C1300J / C-130J Mods **Modification Number / Title:** 5222 / BLOCK 8.1

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

**Models of Systems Affected:** C-130J **Modification Type:** Capability Improvement **Related RDT&E PEs:** 0401132F

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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)
ICS-Material	- / -	- / -	- / 18.900	- / 19.100	- / -	- / 19.100	- / 19.400	- / 19.200	- / -	- / -	- / 52.100	- / 88.700
PMA - Other Gov't Costs	- / 18.765	- / 10.591	- / 14.000	- / 18.000	- / -	- / 18.000	- / 18.600	- / 18.700	- / -	- / -	- / 39.300	- / 177.956
<i>Subtotal: Support</i>	- / 191.472	- / 33.015	- / 49.991	- / 54.590	- / -	- / 54.590	- / 53.917	- / 102.624	- / 2.397	- / -	- / 177.300	- / 565.306
<b>Installation</b>												
<i>Modification Item 1 of 2: ADS-B Out</i>	- / -	176 / 6.500	68 / 1.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	244 / 17.500
<i>Modification Item 2 of 2: Block 81 LM Kit</i>	- / -	8 / 25.499	10 / 25.200	10 / 28.200	- / -	10 / 28.200	13 / 36.000	15 / 42.750	15 / 44.250	8 / 23.229	79 / 263.700	158 / 488.828
<i>Subtotal: Installation</i>	- / -	184 / 31.999	78 / 26.200	10 / 28.200	- / -	10 / 28.200	13 / 36.000	15 / 42.750	15 / 44.250	8 / 23.229	79 / 263.700	402 / 496.328
<b>Total</b>												
<b>Total Cost (Procurement + Support + Installation)</b>	<b>241.424</b>	<b>93.695</b>	<b>93.491</b>	<b>119.190</b>	<b>0.000</b>	<b>119.190</b>	<b>112.117</b>	<b>165.774</b>	<b>76.547</b>	<b>23.231</b>	<b>736.000</b>	<b>1,661.469</b>

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> C1300J / C-130J Mods	<b>Modification Number / Title:</b> 5222 / BLOCK 8.1
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**ID Code** (A=Service Ready, B=Not Service Ready) : B **MDAP/MAIS Code:**

**Modification Item 1 of 2:** ADS-B Out

**Manufacturer Information**

Manufacturer Name: Lockheed Martin	Manufacturer Location: Marietta GA
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 7

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	- / -	176 / 6.500	68 / 1.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	244 / 7.500
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	- / -	176 / 6.500	68 / 1.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	244 / 7.500

**Installation Schedule**

PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	44	44	44	44	34	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	244	
Out	0	44	44	44	44	34	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	244	

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> C1300J / C-130J Mods	<b>Modification Number / Title:</b> 5222 / BLOCK 8.1
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 2 of 2:** Block 81 LM Kit

**Manufacturer Information**

Manufacturer Name: Lockheed Martin	Manufacturer Location: Marietta GA/Greenville SC
Administrative Leadtime (in Months): 1	Production Leadtime (in Months): 24

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Nov 2018	Nov 2019	Nov 2020	Nov 2021	Nov 2022	Nov 2023	Nov 2024
Delivery Dates	Nov 2020	Nov 2021	Nov 2022	Nov 2023	Nov 2024	Nov 2025	Nov 2026

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	- / -	8 / 25.499	10 / 25.200	10 / 28.200	- / -	10 / 28.200	6 / 16.400	- / -	- / -	- / -	- / -	34 / 95.299
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	7 / 19.600	5 / 14.250	- / -	- / -	- / -	12 / 33.850
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 17.100	- / -	- / -	- / -	6 / 17.100
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 11.400	9 / 26.550	- / -	- / -	13 / 37.950
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 17.700	1 / 3.025	- / -	7 / 20.725
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 20.204	- / -	7 / 20.204
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 31.400	10 / 31.400
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 31.400	10 / 31.400
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	59 / 200.900	59 / 200.900
<b>Total</b>	- / -	8 / 25.499	10 / 25.200	10 / 28.200	- / -	10 / 28.200	13 / 36.000	15 / 42.750	15 / 44.250	8 / 23.229	79 / 263.700	158 / 488.828

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	2	2	2	2	2	3	2	3	2	3	2	3	3	3	3	4	4	4	4	3	4	4	4	3	2	2	2	2	79	158
Out	0	2	2	2	2	2	3	2	3	2	3	2	3	3	3	3	4	4	4	4	3	4	4	4	3	2	2	2	2	79	158

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> C1300J / C-130J Mods	<b>Modification Number / Title:</b> 8646 / C-130J Center Wing Replacement

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

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	104.011	4.468	34.258	13.394	0.000	13.394	0.510	10.517	0.529	0.539	-	168.226
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	104.011	4.468	34.258	13.394	0.000	13.394	0.510	10.517	0.529	0.539	-	168.226
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>104.011</b>	<b>4.468</b>	<b>34.258</b>	<b>13.394</b>	<b>0.000</b>	<b>13.394</b>	<b>0.510</b>	<b>10.517</b>	<b>0.529</b>	<b>0.539</b>	-	<b>168.226</b>

*(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 Millions)	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This program replaces the Center Wing Box (CWB) on C-130J aircraft with an extended service life (ESL) center wing. The ESL wing has been the standard production wing since Nov 2009. The first 77 C-130Js were built with the legacy C-130H center wing. The legacy wing has a life of 38,500 equivalent flying hours (EFH) before flight restrictions are imposed. The severity of the flight environment dictates how rapidly a wing needs to be replaced. The planes at the C-130J schoolhouse require replacement first, as virtually all of their flight hours are tactical. Validated Requirements Document: AF IMT 1067 (Modification Proposal) AMC-11-115, dated 19 Sep 11.

This project contains procurement funding for studies and risk reduction activities

Milestone/Development Status

N/A

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	4.468	34.258	13.394	-	13.394	0.510	10.517	0.529	0.539
<b>Total: Secondary Distribution</b>	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	4.468	34.258	13.394	0.000	13.394	0.510	10.517	0.529	0.539

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> C1300J / C-130J Mods					<b>Modification Number / Title:</b> 8646 / C-130J Center Wing Replacement			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> C-130J				<b>Modification Type:</b> Service Life Extension				<b>Related RDT&amp;E PEs:</b>					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> Install Kit C-130J Contract 1 Group A													
A Kits													
Recurring													
Install Kit C-130J Contract 1 Group A:INSTALL KITS Group A (Active)	15 / 59.433	- / -	4 / 18.669	3 / 12.893	- / -	3 / 12.893	- / -	- / -	- / -	- / -	- / -	22 / 90.995	
Install Kit C-130J Contract 1 Group A:INSTALL KITS Group A (Reserve)	1 / 4.330	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 4.330	
<i>Subtotal: Recurring</i>	- / 63.763	- / -	- / 18.669	- / 12.893	- / -	- / 12.893	- / -	- / -	- / -	- / -	- / -	- / 95.325	
<i>Subtotal: Install Kit C-130J Contract 1 Group A</i>	- / 63.763	- / -	- / 18.669	- / 12.893	- / -	- / 12.893	- / -	- / -	- / -	- / -	- / -	- / 95.325	
<i>Subtotal: Procurement, All Modification Items</i>	- / 63.763	- / -	- / 18.669	- / 12.893	- / -	- / 12.893	- / -	- / -	- / -	- / -	- / -	- / 95.325	
<b>Support (All Modification Items)</b>													
GROUP A: TOTAL NONRECURRING	- / 8.240	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.240	
Data	- / 1.017	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.961	- / -	- / -	- / -	- / 10.978	
OCO INSTALLATIONS	- / 0.004	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.004	
PMA - Contractor Services	- / 1.664	- / 0.485	- / 0.494	- / 0.465	- / -	- / 0.465	- / 0.473	- / 0.518	- / 0.490	- / 0.500	- / -	- / 5.089	
PMA - Other Gov't Costs	- / 0.017	- / 0.012	- / 0.035	- / 0.036	- / -	- / 0.036	- / 0.037	- / 0.038	- / 0.039	- / 0.039	- / -	- / 0.253	
<i>Subtotal: Support</i>	- / 10.942	- / 0.497	- / 0.529	- / 0.501	- / -	- / 0.501	- / 0.510	- / 10.517	- / 0.529	- / 0.539	- / -	- / 24.564	
<b>Installation</b>													
<i>Modification Item 1 of 1:</i> Install Kit C-130J Contract 1 Group A	7 / 29.306	1 / 3.971	5 / 15.060	2 / 0.000	- / -	2 / 0.000	4 / 0.000	4 / 0.000	- / -	- / -	- / -	23 / 48.337	
<i>Subtotal: Installation</i>	7 / 29.306	1 / 3.971	5 / 15.060	2 / -	- / -	2 / -	4 / -	4 / -	- / -	- / -	- / -	23 / 48.337	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>104.011</b>	<b>4.468</b>	<b>34.258</b>	<b>13.394</b>	<b>0.000</b>	<b>13.394</b>	<b>0.510</b>	<b>10.517</b>	<b>0.529</b>	<b>0.539</b>	<b>-</b>	<b>168.226</b>	

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> C1300J / C-130J Mods	<b>Modification Number / Title:</b> 8646 / C-130J Center Wing Replacement

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** Install Kit C-130J Contract 1 Group A

**Manufacturer Information**

Manufacturer Name: Lockheed Martin Aero	Manufacturer Location: Marietta GA
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 27

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Jan 2020	Jan 2021				
Delivery Dates		Apr 2022	Apr 2023				

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	7 / 29.306	1 / 3.971	5 / 15.060	2 / 0.000	- / -	2 / 0.000	1 / 0.000	- / -	- / -	- / -	- / -	16 / 48.337
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.000	1 / 0.000	- / -	- / -	- / -	4 / 0.000
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.000	- / -	- / -	- / -	3 / 0.000
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	7 / 29.306	1 / 3.971	5 / 15.060	2 / 0.000	- / -	2 / 0.000	4 / 0.000	4 / 0.000	- / -	- / -	- / -	23 / 48.337

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	-	1	-	-	1	1	2	1	-	1	1	-	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	0	23
Out	4	-	1	1	1	-	1	-	-	1	1	2	1	-	1	1	-	1	1	1	1	1	1	1	1	-	-	-	-	0	23

**UNCLASSIFIED**

**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	<b>P-1 Line Item Number / Title:</b> C13500 / C-135
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0401218F	Other Related Program Elements: N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	285.127	91.410	113.351	88.250	-	88.250	108.083	110.014	66.656	94.493	91.998	1,049.382
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	285.127	91.410	113.351	88.250	-	88.250	108.083	110.014	66.656	94.493	91.998	1,049.382
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>285.127</b>	<b>91.410</b>	<b>113.351</b>	<b>88.250</b>	<b>-</b>	<b>88.250</b>	<b>108.083</b>	<b>110.014</b>	<b>66.656</b>	<b>94.493</b>	<b>91.998</b>	<b>1,049.382</b>

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

**Description:**

The C/KC-135 is a four engine aircraft used for long range cargo and passenger airlift and to support theater commanders. The C/KC-135 provides air refueling through either the refueling boom or drogue. As a cargo aircraft, the C/KC-135 can carry six standard 463-L pallets. There are 399 aircraft (396 KCs, 3 special purpose) in the C/KC-135 inventory. The average age is 58 years, with 22 years of service life remaining. The C/KC-135 has a retirement strategy through its projected service life of 2040.

FY2021 funding will be primarily used to continue KC-135 Block 45 Upgrades, Aero-I SATCOM upgrades, Rudder Position Indicator modifications, and conduct low cost modifications and low cost safety modifications as needed.

Funding may be used to address Diminishing Manufacturing Sources (DMS) issues.

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.

Funding for this exhibit is contained in PE 0401218F.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	60.171	76.682	37.224	-	37.224	51.316	54.080	23.528	65.703
AFNG									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	20.562	26.310	36.066	-	36.066	38.674	38.257	28.813	22.393
AFR									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	10.677	10.359	14.960	-	14.960	18.093	17.677	14.315	6.397
<b>Total:</b>									
<b>Quantity</b>	-	-	-	-	-	-	-	-	-

**UNCLASSIFIED**

**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	<b>P-1 Line Item Number / Title:</b> C13500 / C-135
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> 0401218F	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Secondary Distribution	Total Obligation Authority	91.410	113.351	88.250	-	88.250	108.083	110.014	66.656	94.493

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**UNCLASSIFIED**

**Exhibit P-40, Budget Line Item Justification: PB 2021 Air Force** **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

**P-1 Line Item Number / Title:**  
C13500 / C-135

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0401218F **Other Related Program Elements:** N/A

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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***	9818 / VOR/ILS ANTENNAE (Capability Improvement)				- / 9.284	- / 0.001	- / 0.001	- / 0.001	- / -	- / 0.001
P-40a***	9824 / ADS-B (Capability Improvement)				- / 13.843	- / 3.200	- / -	- / -	- / -	- / -
P-40a***	9828 / Real Time in the Cockpit (RTIC) (Capability Improvement)				- / -	- / 26.200	- / 18.200	- / -	- / -	- / -
P-40a***	9829 / MUOS Radios (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	99999A / LOW COST SAFETY MODIFICATIONS (Capability Improvement)				- / -	- / 0.025	- / 0.025	- / 0.025	- / -	- / 0.025
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 12.121	- / 1.995	- / 0.995	- / 1.995	- / -	- / 1.995
P-3a	8653 / BLOCK 45 (Capability Improvement)		A		- / 246.974	- / 53.865	- / 47.617	- / 60.185	- / 0.000	- / 60.185
P-3a	9826 / Rudder Position Indicator (RPI) (Capability Improvement)		B		- / 2.905	- / 6.124	- / 17.932	- / 9.770	- / 0.000	- / 9.770
P-3a	9827 / KC-135 AERO-I SATCOM replacement (Reliability & Maintainability)		B		- / -	- / 0.000	- / 28.581	- / 16.274	- / 0.000	- / 16.274
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 285.127</b>	<b>- / 91.410</b>	<b>- / 113.351</b>	<b>- / 88.250</b>	<b>- / -</b>	<b>- / 88.250</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	9818 / VOR/ILS ANTENNAE (Capability Improvement)				- / 0.001	- / 0.001	- / -	- / -	- / -	- / 9.289
P-40a***	9824 / ADS-B (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 17.043
P-40a***	9828 / Real Time in the Cockpit (RTIC) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 44.400
P-40a***	9829 / MUOS Radios (Capability Improvement)				- / -	- / -	- / -	- / 26.644	- / 67.957	- / 94.601
P-40a***	99999A / LOW COST SAFETY MODIFICATIONS (Capability Improvement)				- / 0.025	- / 0.025	- / 0.025	- / 0.025	- / 0.000	- / 0.175
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 1.995	- / 1.995	- / 1.995	- / 1.995	- / -	- / 25.086
P-3a	8653 / BLOCK 45 (Capability Improvement)		A		- / 73.601	- / 74.414	- / 55.187	- / 65.579	- / 24.041	- / 701.463
P-3a	9826 / Rudder Position Indicator (RPI) (Capability Improvement)		B		- / 8.779	- / 8.999	- / 8.119	- / 0.150	- / -	- / 62.778
P-3a	9827 / KC-135 AERO-I SATCOM replacement (Reliability & Maintainability)		B		- / 23.682	- / 24.580	- / 1.330	- / 0.100	- / 0.000	- / 94.547
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 108.083</b>	<b>- / 110.014</b>	<b>- / 66.656</b>	<b>- / 94.493</b>	<b>- / 91.998</b>	<b>- / 1,049.382</b>

\*\*\* Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

\*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:**  
This program, P-3A Mod 9829, MUOS Radios, is a new start.

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> C13500 / C-135	<b>Modification Number / Title:</b> 8653 / BLOCK 45

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	246.974	53.865	47.617	60.185	0.000	60.185	73.601	74.414	55.187	65.579	24.041	701.463
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	246.974	53.865	47.617	60.185	0.000	60.185	73.601	74.414	55.187	65.579	24.041	701.463
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>246.974</b>	<b>53.865</b>	<b>47.617</b>	<b>60.185</b>	<b>0.000</b>	<b>60.185</b>	<b>73.601</b>	<b>74.414</b>	<b>55.187</b>	<b>65.579</b>	<b>24.041</b>	<b>701.463</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The Block 45 program replaces legacy parts that are difficult to maintain, driving high sustainment costs, failing at high rates, and are no longer procurable. The modification includes a new Digital Flight Director (DFD), Digital Radio Altimeter (RA), Digital Autopilot (AP) and Electronic Engine Instrument Displays (EEID). Block 45 requirements are outlined in the Capability Production Document for C/KC-135 Communications, Navigation, and Surveillance / Air Traffic Management (CNS/ATM), dated 17 May 12. Program of record: 399 C/KC-135 aircraft, 19 pilot simulators and 5 cockpit simulators with Block 45. The Block 45 program's associated Research Development Test and Evaluation funding (PE 0401218F) modified two prototype aircraft. The remaining 397 aircraft will be funded with APAF.

Funding may be used to address Diminishing Manufacturing Sources (DMS) issues.

This modification supports performance of a full financial audit as required by title 10 U.S.C. Chapter 9A, Sec 240-D

**Milestone/Development Status**

Developmental Test & Evaluation completed March 2013. Milestone C approval received 25 July 2013. Currently in Full Rate Production.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	23.099	13.709	19.839	-	19.839	34.509	36.281	16.605	44.866
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	20.537	24.279	27.841	-	27.841	25.782	25.272	25.721	16.223
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	10.229	9.629	12.505	-	12.505	13.310	12.861	12.861	4.490
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>53.865</b>	<b>47.617</b>	<b>60.185</b>	<b>0.000</b>	<b>60.185</b>	<b>73.601</b>	<b>74.414</b>	<b>55.187</b>	<b>65.579</b>

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> C13500 / C-135					<b>Modification Number / Title:</b> 8653 / BLOCK 45			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> KC-135				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b>					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> Block 45													
A Kits													
Recurring													
Block 45:INSTALL KITS Group A (Active)	64 / 5.738	10 / 1.003	11 / 0.796	5 / 0.362	- / -	5 / 0.362	9 / 0.651	8 / 0.579	8 / 0.579	8 / 0.600	- / -	123 / 10.308	
Block 45:INSTALL KITS Group A (Guard)	63 / 5.353	18 / 1.147	20 / 1.447	22 / 1.593	- / -	22 / 1.593	19 / 1.375	20 / 1.448	20 / 1.448	7 / 0.600	0 / 0.000	189 / 14.411	
Block 45:INSTALL KITS Group A (Reserve)	27 / 2.221	10 / 0.573	7 / 0.507	11 / 0.796	- / -	11 / 0.796	10 / 0.724	10 / 0.724	10 / 0.724	- / -	- / -	85 / 6.269	
<i>Subtotal: Recurring</i>	- / 13.312	- / 2.723	- / 2.750	- / 2.751	- / -	- / 2.751	- / 2.750	- / 2.751	- / 2.751	- / 1.200	- / 0.000	- / 30.988	
B Kits													
Recurring													
Block 45:EQUIPMENT Group B (Active)	64 / 48.856	14 / 10.488	11 / 8.411	5 / 3.823	- / -	5 / 3.823	9 / 6.882	8 / 6.117	8 / 6.117	8 / 6.643	- / -	127 / 97.337	
Block 45:EQUIPMENT Group B (Guard)	63 / 43.007	16 / 12.521	20 / 15.293	22 / 16.823	- / -	22 / 16.823	19 / 14.529	20 / 15.293	20 / 15.293	7 / 6.643	0 / 0.000	187 / 139.402	
Block 45:EQUIPMENT Group B (Reserve)	27 / 20.789	8 / 5.993	7 / 5.352	11 / 8.411	- / -	11 / 8.411	10 / 7.647	10 / 7.647	10 / 7.647	0 / 0.000	- / -	83 / 63.486	
<i>Subtotal: Recurring</i>	- / 112.652	- / 29.002	- / 29.056	- / 29.057	- / -	- / 29.057	- / 29.058	- / 29.057	- / 29.057	- / 13.286	- / 0.000	- / 300.225	
<i>Subtotal: Block 45</i>	- / 125.964	- / 31.725	- / 31.806	- / 31.808	- / -	- / 31.808	- / 31.808	- / 31.808	- / 31.808	- / 14.486	- / 0.000	- / 331.213	
<i>Subtotal: Procurement, All Modification Items</i>	- / 125.964	- / 31.725	- / 31.806	- / 31.808	- / -	- / 31.808	- / 31.808	- / 31.808	- / 31.808	- / 14.486	- / 0.000	- / 331.213	
<b>Support (All Modification Items)</b>													
Change Orders	- / 8.002	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.655	- / -	- / 11.657	
Data	- / 1.295	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.000	- / -	- / 0.085	- / 2.662	- / 14.042	
SIM/TRAINER	16 / 30.221	1 / 3.100	0 / 0.200	0 / 2.500	- / -	0 / 2.500	1 / 8.990	1 / 8.650	- / -	1 / 14.563	- / -	20 / 68.224	
SUPPORT-EQUIP	- / 0.744	- / 0.228	- / -	- / 1.000	- / -	- / 1.000	- / -	- / -	- / -	- / 4.281	- / -	- / 16.253	
OTHER GOVT	- / 26.787	- / 1.819	- / 0.600	- / 4.771	- / -	- / 4.771	- / 15.344	- / 16.484	- / 5.918	- / 7.806	- / 8.636	- / 88.165	
PMA - Contractor Services	- / 3.224	- / 0.432	- / 1.500	- / 1.000	- / -	- / 1.000	- / 0.314	- / 0.323	- / 0.332	- / 1.454	- / 0.352	- / 8.931	
PMA - Other Gov't Costs	- / 0.421	- / 0.076	- / 0.362	- / 1.200	- / -	- / 1.200	- / 0.083	- / 0.087	- / 0.067	- / 1.997	- / 0.093	- / 14.386	
<i>Subtotal: Support</i>	16 / 70.694	1 / 5.655	0 / 2.662	0 / 10.471	- / -	0 / 10.471	1 / 24.731	1 / 25.544	- / 6.317	1 / 33.841	- / 11.743	20 / 191.658	
<b>Installation</b>													
<i>Modification Item 1 of 1:</i> Block 45	118 / 50.316	38 / 16.485	28 / 13.149	38 / 17.906	- / -	38 / 17.906	38 / 17.062	38 / 17.062	38 / 17.062	38 / 17.252	23 / 12.298	397 / 178.592	
<i>Subtotal: Installation</i>	118 / 50.316	38 / 16.485	28 / 13.149	38 / 17.906	- / -	38 / 17.906	38 / 17.062	38 / 17.062	38 / 17.062	38 / 17.252	23 / 12.298	397 / 178.592	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>246.974</b>	<b>53.865</b>	<b>47.617</b>	<b>60.185</b>	<b>0.000</b>	<b>60.185</b>	<b>73.601</b>	<b>74.414</b>	<b>55.187</b>	<b>65.579</b>	<b>24.041</b>	<b>701.463</b>	

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5		<b>P-1 Line Item Number / Title:</b> C13500 / C-135
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A		<b>MDAP/MAIS Code:</b>

**Modification Item 1 of 1:** Block 45

**Manufacturer Information**

Manufacturer Name: Rockwell Collins	Manufacturer Location: Cedar Rapids, IA
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 8

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jan 2019	Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024	Jan 2025
Delivery Dates	Sep 2019	Sep 2020	Sep 2021	Sep 2022	Sep 2023	Sep 2024	Sep 2025

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	15 / 8.434	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 8.434
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	15 / 8.434	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 8.434

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	15
Out	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	15

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	103 / 41.882	36 / 16.485	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	139 / 58.367

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> C13500 / C-135	<b>Modification Number / Title:</b> 8653 / BLOCK 45
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A		<b>MDAP/MAIS Code:</b>

**Modification Item 1 of 1:** Block 45

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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)
FY 2019	- / -	2 / 0.000	26 / 12.251	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	28 / 12.251
FY 2020	- / -	- / -	2 / 0.898	36 / 16.964	- / -	36 / 16.964	- / -	- / -	- / -	- / -	- / -	38 / 17.862
FY 2021	- / -	- / -	- / -	2 / 0.942	- / -	2 / 0.942	36 / 16.164	- / -	- / -	- / -	- / -	38 / 17.106
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.898	36 / 16.164	- / -	- / -	- / -	38 / 17.062
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.898	36 / 16.164	- / -	- / -	38 / 17.062
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.898	36 / 16.164	- / -	38 / 17.062
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.088	23 / 12.298	25 / 13.386
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	103 / 41.882	38 / 16.485	28 / 13.149	38 / 17.906	- / -	38 / 17.906	38 / 17.062	38 / 17.062	38 / 17.062	38 / 17.252	23 / 12.298	382 / 170.158

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	103	9	10	9	10	9	4	5	10	9	10	9	10	9	10	9	10	9	10	9	10	9	10	9	10	9	10	9	10	23	382
Out	93	10	9	10	9	10	9	4	5	10	9	10	9	10	9	10	9	10	9	10	9	10	9	10	9	10	9	10	9	33	382

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> C13500 / C-135	<b>Modification Number / Title:</b> 9826 / Rudder Position Indicator (RPI)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	2.905	6.124	17.932	9.770	0.000	9.770	8.779	8.999	8.119	0.150	-	62.778
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	2.905	6.124	17.932	9.770	0.000	9.770	8.779	8.999	8.119	0.150	-	62.778
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>2.905</b>	<b>6.124</b>	<b>17.932</b>	<b>9.770</b>	<b>0.000</b>	<b>9.770</b>	<b>8.779</b>	<b>8.999</b>	<b>8.119</b>	<b>0.150</b>	-	<b>62.778</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The Rudder Position Indicator (RPI) addresses crew situational awareness for the actual rudder position. Currently, there are no means to determine actual rudder position within the cockpit. The program provides the actual and commanded rudder position and will visually identify differences to the crew via their Multi-Function Display (MFD). The RPI program of record is 359 C/KC-135 aircraft due to projected divestment plan.

Funding may be used to address Diminishing Manufacturing Sources (DMS) issues.

Milestone/Development Status

Materiel Development Decision/Acquisition Strategy Panel Sep 18  
Milestone-C Nov 19

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	6.124	15.196	4.833	-	4.833	3.718	3.812	3.598	0.150
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.000	2.006	3.621	-	3.621	3.711	3.804	3.067	0.000
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.000	0.730	1.316	-	1.316	1.350	1.383	1.454	0.000
<b>Total:</b> Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	<b>6.124</b>	<b>17.932</b>	<b>9.770</b>	<b>0.000</b>	<b>9.770</b>	<b>8.779</b>	<b>8.999</b>	<b>8.119</b>	<b>0.150</b>

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5				<b>P-1 Line Item Number / Title:</b> C13500 / C-135						<b>Modification Number / Title:</b> 9826 / Rudder Position Indicator (RPI)			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> KC-135				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b>					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> RPI													
A Kits													
Recurring													
RPI:INSTALL KITS Group A (Active)	0 / 0.000	0 / 0.000	30 / 0.930	30 / 0.953	- / -	30 / 0.953	30 / 0.977	30 / 1.001	22 / 0.753	- / -	- / -	142 / 4.614	
RPI:INSTALL KITS Group A (Guard)	0 / 0.000	0 / 0.000	33 / 1.023	33 / 1.048	- / -	33 / 1.048	33 / 1.074	33 / 1.101	23 / 0.787	- / -	- / -	155 / 5.033	
RPI:INSTALL KITS Group A (Reserve)	0 / 0.000	0 / 0.000	12 / 0.372	12 / 0.381	- / -	12 / 0.381	12 / 0.391	12 / 0.400	14 / 0.479	- / -	- / -	62 / 2.023	
<i>Subtotal: Recurring</i>	- / 0.000	- / 0.000	- / 2.325	- / 2.382	- / -	- / 2.382	- / 2.442	- / 2.502	- / 2.019	- / -	- / -	- / 11.670	
B Kits													
Recurring													
RPI:EQUIPMENT Group B (Active)	- / -	- / -	30 / 0.894	30 / 0.916	- / -	30 / 0.916	30 / 0.939	30 / 0.963	22 / 0.569	- / -	- / -	142 / 4.281	
RPI:EQUIPMENT Group B (Guard)	- / -	- / -	33 / 0.983	33 / 1.008	- / -	33 / 1.008	33 / 1.033	33 / 1.059	23 / 0.595	- / -	- / -	155 / 4.678	
RPI:EQUIPMENT Group B (Reserve)	- / -	- / -	12 / 0.358	12 / 0.366	- / -	12 / 0.366	12 / 0.376	12 / 0.385	14 / 0.362	- / -	- / -	62 / 1.847	
<i>Subtotal: Recurring</i>	- / -	- / -	- / 2.235	- / 2.290	- / -	- / 2.290	- / 2.348	- / 2.407	- / 1.526	- / -	- / -	- / 10.806	
<i>Subtotal: RPI</i>	- / 0.000	- / 0.000	- / 4.560	- / 4.672	- / -	- / 4.672	- / 4.790	- / 4.909	- / 3.545	- / -	- / -	- / 22.476	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / 0.000	- / 4.560	- / 4.672	- / -	- / 4.672	- / 4.790	- / 4.909	- / 3.545	- / -	- / -	- / 22.476	
<b>Support (All Modification Items)</b>													
GROUP A: TOTAL NONRECURRING	- / -	- / -	- / 3.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.400	
GROUP B: TOTAL NONRECURRING	- / -	- / -	- / 1.555	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.555	
Change Orders	- / 0.250	- / 0.205	- / 1.535	- / 0.250	- / -	- / 0.250	- / 0.194	- / 0.150	- / 0.385	- / -	- / -	- / 2.969	
Data	- / 0.135	- / -	- / -	- / 0.214	- / -	- / 0.214	- / 0.000	- / -	- / -	- / -	- / -	- / 0.349	
SIM/TRAINER	0 / 0.000	19 / 2.869	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 2.869	
PMA - Contractor Services	- / 0.520	- / 0.250	- / 0.500	- / 0.261	- / -	- / 0.261	- / 0.150	- / 0.203	- / 0.150	- / 0.150	- / -	- / 2.184	
PMA - Other Gov't Costs	- / 0.900	- / 1.225	- / 0.775	- / 0.400	- / -	- / 0.400	- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / 3.300	
OTHER GOVT	- / 1.100	- / 1.575	- / 15.607	- / 10.417	- / -	- / 10.417	- / 0.000	- / -	- / 0.209	- / -	- / -	- / 18.908	
<i>Subtotal: Support</i>	0 / 2.905	19 / 6.124	0 / 13.372	- / 1.542	- / -	- / 1.542	- / 0.344	- / 0.353	- / 0.744	- / 0.150	- / -	19 / 25.534	
<b>Installation</b>													
<i>Modification Item 1 of 1:</i> RPI	- / -	- / -	- / -	75 / 3.556	- / -	75 / 3.556	75 / 3.645	75 / 3.737	75 / 3.830	59 / 0.000	- / -	359 / 14.768	
<i>Subtotal: Installation</i>	- / -	- / -	- / -	75 / 3.556	- / -	75 / 3.556	75 / 3.645	75 / 3.737	75 / 3.830	59 / 0.000	- / -	359 / 14.768	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>2.905</b>	<b>6.124</b>	<b>17.932</b>	<b>9.770</b>	<b>0.000</b>	<b>9.770</b>	<b>8.779</b>	<b>8.999</b>	<b>8.119</b>	<b>0.150</b>	<b>-</b>	<b>62.778</b>	

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> C13500 / C-135	<b>Modification Number / Title:</b> 9826 / Rudder Position Indicator (RPI)
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B		<b>MDAP/MAIS Code:</b>

**Modification Item 1 of 1:** RPI

**Manufacturer Information**

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023	
Delivery Dates		Sep 2020	Sep 2021	Sep 2022	Sep 2023	Sep 2024	

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	75 / 3.556	- / -	75 / 3.556	- / -	- / -	- / -	- / -	- / -	75 / 3.556
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	75 / 3.645	- / -	- / -	- / -	- / -	75 / 3.645
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	75 / 3.737	- / -	- / -	- / -	75 / 3.737
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	75 / 3.830	- / -	- / -	75 / 3.830
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	59 / 0.000	- / -	59 / 0.000
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	- / -	- / -	- / -	75 / 3.556	- / -	75 / 3.556	75 / 3.645	75 / 3.737	75 / 3.830	59 / 0.000	- / -	359 / 14.768

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	0	0	0	0	0	0	0	0	19	19	19	18	19	19	19	18	19	19	19	18	19	19	19	18	19	19	19	18	19	19	19	18	2	0	359
Out	0	0	0	0	0	0	0	0	0	19	19	19	18	19	19	19	18	19	19	19	18	19	19	19	18	19	19	19	18	19	19	19	18	2	0	359



**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> C13500 / C-135	<b>Modification Number / Title:</b> 9827 / KC-135 AERO-I SATCOM replacement

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	0.000	28.581	16.274	0.000	16.274	23.682	24.580	1.330	0.100	0.000	94.547
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	0.000	28.581	16.274	0.000	16.274	23.682	24.580	1.330	0.100	0.000	94.547
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	-	<b>0.000</b>	<b>28.581</b>	<b>16.274</b>	<b>0.000</b>	<b>16.274</b>	<b>23.682</b>	<b>24.580</b>	<b>1.330</b>	<b>0.100</b>	<b>0.000</b>	<b>94.547</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Aero-I services are used to provide oceanic Controller/Pilot Data Link Communications (CPDLC) to Air Traffic Control and Aircraft Communications Addressing and Reporting System (ACARS) Beyond Line of Sight (BLOS) Command and Control (C2) messages to 618th Tactical Air Control Center (TACC) Global Decision Support System. Inmarsat's existing third generation satellites (I-3) which provide Aero-I services will no longer be supported after 31 Dec 22. This program replaces the unsupported Inmarsat radios with Iridium radios.

Program of Record: 359 C/KC-135s (and 19 Simulators) based on projected KC-135 divestment plan. Iridium installations planned to be performed by a combination of Programmed Depot Maintenance (PDM) and Contract Field Team (CFT). The CFT installations begin in FY21 and the PDM installations begin with the FY22 cycle. Both installations continue through FY24.

Funding may be used to address Diminishing Manufacturing Sources (DMS) issues.

Milestone/Development Status

This program will begin its integration effort in FY20. The solution is a mature commercial-off-the-shelf product. Materiel Development Decision/Acquisition Strategy Panel completed Feb 19.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.000	28.581	10.556	-	10.556	11.093	11.991	1.330	0.100
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.000	-	4.579	-	4.579	9.156	9.156	0.000	-
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.000	-	1.139	-	1.139	3.433	3.433	0.000	-
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>0.000</b>	<b>28.581</b>	<b>16.274</b>	<b>0.000</b>	<b>16.274</b>	<b>23.682</b>	<b>24.580</b>	<b>1.330</b>	<b>0.100</b>

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> C13500 / C-135					<b>Modification Number / Title:</b> 9827 / KC-135 AERO-I SATCOM replacement			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> KC-135				<b>Modification Type:</b> Reliability & Maintainability				<b>Related RDT&amp;E PEs:</b>					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> Group B													
A Kits													
Recurring													
Group B:INSTALL KITS Group A (Active)	- / -	0 / 0.000	- / -	27 / 0.856	- / -	27 / 0.856	44 / 1.394	44 / 1.394	32 / 0.000	- / -	- / -	147 / 3.644	
Group B:INSTALL KITS Group A (Guard)	- / -	0 / 0.000	- / -	24 / 0.761	- / -	24 / 0.761	48 / 1.521	48 / 1.521	40 / 0.000	- / -	- / -	160 / 3.803	
Group B:INSTALL KITS Group A (Reserve)	- / -	- / 0.000	- / -	4 / 0.127	- / -	4 / 0.127	18 / 0.570	18 / 0.570	12 / 0.000	- / -	- / -	52 / 1.267	
<i>Subtotal: Recurring</i>	- / -	- / 0.000	- / -	- / 1.744	- / -	- / 1.744	- / 3.485	- / 3.485	- / 0.000	- / -	- / -	- / 8.714	
B Kits													
Recurring													
Group B:EQUIPMENT Group B (Active)	- / -	0 / 0.000	- / -	27 / 3.430	- / -	27 / 3.430	44 / 5.578	44 / 5.578	32 / 0.000	- / -	- / -	147 / 14.586	
Group B:EQUIPMENT Group B (Guard)	- / -	0 / 0.000	- / -	24 / 3.043	- / -	24 / 3.043	48 / 6.085	48 / 6.085	40 / 0.000	- / -	- / -	160 / 15.213	
Group B:EQUIPMENT Group B (Reserve)	- / -	0 / 0.000	- / -	4 / 0.883	- / -	4 / 0.883	18 / 2.282	18 / 2.282	12 / 0.000	- / -	- / -	52 / 5.447	
<i>Subtotal: Recurring</i>	- / -	- / 0.000	- / -	- / 7.356	- / -	- / 7.356	- / 13.945	- / 13.945	- / 0.000	- / -	- / -	- / 35.246	
<i>Subtotal: Group B</i>	- / -	- / 0.000	- / -	- / 9.100	- / -	- / 9.100	- / 17.430	- / 17.430	- / 0.000	- / -	- / -	- / 43.960	
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / 0.000	- / -	- / 9.100	- / -	- / 9.100	- / 17.430	- / 17.430	- / 0.000	- / -	- / -	- / 43.960	
<b>Support (All Modification Items)</b>													
GROUP B: TOTAL NONRECURRING	- / -	- / 0.000	- / 10.566	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 10.566	
GROUP A: TOTAL NONRECURRING	- / -	- / 0.000	- / 6.980	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 6.980	
PMA - Other Gov't Costs	- / -	- / -	- / 2.110	- / 0.613	- / -	- / 0.613	- / 0.150	- / 0.625	- / 0.435	- / -	- / -	- / 3.933	
PMA - Contractor Services	- / -	- / -	- / 1.250	- / 0.125	- / -	- / 0.125	- / 0.625	- / 0.625	- / 0.625	- / -	- / -	- / 3.250	
OTHER GOVT	- / -	- / -	- / 2.220	- / 0.000	- / -	- / 0.000	- / 0.847	- / 0.718	- / 0.100	- / 0.100	- / -	- / 3.985	
Change Orders	- / -	- / -	- / 1.775	- / -	- / -	- / -	- / 0.213	- / 0.211	- / 0.100	- / -	- / -	- / 2.299	
SUPPORT-EQUIP	- / -	- / -	- / 1.400	- / 0.740	- / -	- / 0.740	- / 0.866	- / 1.430	- / 0.070	- / -	- / -	- / 4.506	
Data	- / -	- / -	- / 0.180	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.180	
SIM/TRAINER	- / -	- / -	8 / 2.100	11 / 3.920	- / -	11 / 3.920	- / -	- / -	- / -	- / -	- / -	19 / 6.020	
<i>Subtotal: Support</i>	- / -	- / 0.000	8 / 28.581	11 / 5.398	- / -	11 / 5.398	- / 2.701	- / 3.609	- / 1.330	- / 0.100	- / 0.000	19 / 41.719	
<b>Installation</b>													
<i>Modification Item 1 of 1:</i> Group B	- / -	- / -	- / -	55 / 1.776	- / -	55 / 1.776	110 / 3.551	110 / 3.541	84 / 0.000	- / -	- / -	359 / 8.868	
<i>Subtotal: Installation</i>	- / -	- / -	- / -	55 / 1.776	- / -	55 / 1.776	110 / 3.551	110 / 3.541	84 / 0.000	- / -	- / -	359 / 8.868	
<b>Total</b>													

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> C13500 / C-135	<b>Modification Number / Title:</b> 9827 / KC-135 AERO-I SATCOM replacement

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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<b>Models of Systems Affected:</b> KC-135	<b>Modification Type:</b> Reliability & Maintainability	<b>Related RDT&amp;E PEs:</b>
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Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Total Cost (Procurement + Support + Installation)</b>	-	0.000	28.581	16.274	0.000	16.274	23.682	24.580	1.330	0.100	0.000	94.547

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> C13500 / C-135	<b>Modification Number / Title:</b> 9827 / KC-135 AERO-I SATCOM replacement

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** Group B

**Manufacturer Information**

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 2

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Oct 2020	Oct 2021	Oct 2022	Oct 2023	
Delivery Dates			Dec 2020	Dec 2021	Dec 2022	Dec 2023	

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	55 / 1.776	- / -	55 / 1.776	0 / 0.000	- / -	- / -	- / -	- / -	55 / 1.776
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	110 / 3.551	- / -	- / -	- / -	- / -	110 / 3.551
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	110 / 3.541	- / -	- / -	- / -	110 / 3.541
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	84 / 0.000	- / -	- / -	84 / 0.000
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	55 / 1.776	- / -	55 / 1.776	110 / 3.551	110 / 3.541	84 / 0.000	- / -	- / -	359 / 8.868

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	0	0	0	0	9	9	9	28	27	28	27	28	27	28	27	28	29	28	27	0	-	-	-	-	0	359
Out	0	-	-	-	-	0	0	0	0	9	9	9	28	27	28	27	28	27	28	27	28	29	28	27	0	-	-	-	-	0	359

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	<b>P-1 Line Item Number / Title:</b> C135BO / OC-135B
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> 0305145F	<b>Other Related Program Elements:</b> 0305145F
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	23.080	5.913	0.000	0.000	-	0.000	0.000	0.000	5.553	5.654	0.000	40.200
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	23.080	5.913	0.000	0.000	-	0.000	0.000	0.000	5.553	5.654	0.000	40.200
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>23.080</b>	<b>5.913</b>	<b>0.000</b>	<b>0.000</b>	-	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>5.553</b>	<b>5.654</b>	<b>0.000</b>	<b>40.200</b>

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

**Description:**

The OC-135B aircraft supports the implementation of the United States Government (USG) Open Skies Treaty. Mission equipment on the OC-135B includes wet film optical framing and panoramic cameras. Open Skies Sensors program addresses the requirements in the Presidential Policy Directive-15 (PPD-15), which states, "The United States shall begin budgeting no later than Fiscal Year 2014 to upgrade the sensors on the current aircraft by replacing film-based cameras with available electro-optical sensors.(U)" Additionally, current cameras are nearly obsolete, frequently unreliable, hard and increasingly expensive to maintain, and repair parts must be individually manufactured. In addition, the web film manufacturers are discontinuing production of the film stock.

This camera replacement program will replace the wet film cameras with modern, digital cameras. This program will result in modern, digital cameras with higher reliability, maintainability and cost effectiveness. The customer of the imagery will be able to more readily use the imagery products and the equipment service life will be extended significantly.

OC-135B fleet consists of two aircraft. Both aircraft will be modified. One aircraft has been modified during development using RDT&E funds. Each aircraft will receive one A-kit and two B-kits to comply with treaty requirements.

Funding for this exhibit contained in PE 0305145F

**Justification:**

No FY 2021 funding requested.

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	<b>P-1 Line Item Number / Title:</b> CALL00 / Compass Call
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0207253F
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	324.443	172.261	110.754	193.389	12.800	206.189	143.387	116.081	100.027	87.496	0.000	1,260.638
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	324.443	172.261	110.754	193.389	12.800	206.189	143.387	116.081	100.027	87.496	0.000	1,260.638
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>324.443</b>	<b>172.261</b>	<b>110.754</b>	<b>193.389</b>	<b>12.800</b>	<b>206.189</b>	<b>143.387</b>	<b>116.081</b>	<b>100.027</b>	<b>87.496</b>	<b>0.000</b>	<b>1,260.638</b>

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

Initial Spares ( <i>\$ in Millions</i> )	-	10.618	10.805	10.995	-	10.995	11.219	11.420	11.626	19.839	-	86.522
Flyaway Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The COMPASS CALL capability is the USAF's premier wide-area coverage Airborne Electronic Attack (AEA) Offensive Counter Information (OCI) weapon system. In order to ensure continued tactical effectiveness COMPASS CALL's Prime Mission Equipment (PME) must evolve to keep pace with emerging adversary developments in communications, radar, and sensor technology as well as the use of rapidly advancing commercial communications technology. To meet this challenge the COMPASS CALL program employs an incremental Baseline upgrade acquisition strategy that puts capability into the warfighter's hands as soon as practical and ensures each iteration of the weapon system is effective against the highest priority threats. Capabilities inserted into each Baseline are planned in advance, based on war-fighter inputs. Executive Management Reviews are held to review and set the expectations for the Baseline content as production nears. Procurement funds are required for modification kit production (hardware, firmware, and software), installation, certification and test on an EC-37B re-host platform in accordance with the Baseline upgrade cyclic schedule.

As of second quarter FY2020, the EC-130H COMPASS CALL fleet consists of one (1) Baseline 1 (BL1) aircraft and ten (10) Mid-Baseline 2 (MBL2) aircraft. There is also one (1) TC-130H trainer aircraft. In FY 2018, two (2) BL1 aircraft were divested (one was inducted into the 309th Aerospace Maintenance and Regeneration Group, one was provided to a museum) and in FY 2019 one (1) BL1 aircraft was divested. The remaining BL1 aircraft will divest in FY 2020.

In addition to these aircraft, the program also includes one (1) EC-130H Weapon System Trainer (WST, flight deck simulator) and two (2) COMPASS CALL Mission Crew Simulators (CCMCS). With each Baseline upgrade, the efforts focus on reliability and sustainability improvements, obsolescence resolution, weight reduction, simplification of PME operations and maintenance, and increased electronic attack capabilities.

In FY 2017, the COMPASS CALL re-host program was initiated to begin the transition to the EC-37B platform. The EC-37B aircraft utilize PME harvested from the EC-130H aircraft and upgraded to the latest Baseline. Procurement of the air vehicles for re-host is performed under the Aircraft Procurement, Air Force appropriation, Budget Activity 04, Budget Sub Activity 05 under P-1 Line Item Number: CALL00/COMPASS CALL.

COMPASS CALL modification efforts include, but are not limited to, the Counter Radar Subsystem, third generation Special Purpose Emitter Array (SPEAR) subsystem, and other systems necessary to counter modern commercial and military communications, navigation, radar, and other threats in the electromagnetic spectrum; as well as aircraft and PME retrofits. Baseline upgrades and enhancements will also include necessary support equipment, training device/simulator modifications, test and test support activities (planning, integration). The simulators provide for the training and qualification of aircrew and ground personnel as well as address training obsolescence issues.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft		<b>P-1 Line Item Number / Title:</b> CALL00 / Compass Call
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0207253F
<b>Line Item MDAP/MAIS Code:</b> N/A		
FY 2019 funding totals include \$36.4M for OCO, it is included in the P-3A for Mod Number 1001 (COMPASS CALL). FY 2021 funding totals include \$12.8M for OCO, it is included in the P-3A for Mod Number 1001 (COMPASS CALL).		
Due to the rapidly changing threat environment encountered in overseas contingency operations, the acquisition program manager has the authority to redirect funding, as necessary, to meet currently slated and/or emerging Combatant Command requirements through the integration of Quick Reaction Capability (QRC) kits and other high-priority efforts.		
Funding for this exhibit is contained in PE 0207253F.		



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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

**P-1 Line Item Number / Title:**  
CALL00 / Compass Call

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0207253F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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	1001 / COMPASS CALL (Capability Improvement)		A		- / 0.000	- / 36.400	- / 0.000	- / 0.000	- / 12.800	- / 12.800
P-3a	1003 / COMPASS CALL Baseline Modifications (Capability Improvement)		A		- / 324.443	- / 135.861	- / 110.754	- / 193.389	- / 0.000	- / 193.389
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 324.443</b>	<b>- / 172.261</b>	<b>- / 110.754</b>	<b>- / 193.389</b>	<b>- / 12.800</b>	<b>- / 206.189</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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	1001 / COMPASS CALL (Capability Improvement)		A		- / 0.000	- / -	- / -	- / -	- / -	- / 49.200
P-3a	1003 / COMPASS CALL Baseline Modifications (Capability Improvement)		A		- / 143.387	- / 116.080	- / 100.027	- / 87.496	- / 0.000	- / 1,211.437
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 143.387</b>	<b>- / 116.081</b>	<b>- / 100.027</b>	<b>- / 87.496</b>	<b>- / 0.000</b>	<b>- / 1,260.638</b>

\*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:**  
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> CALL00 / Compass Call	<b>Modification Number / Title:</b> 1001 / COMPASS CALL

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	0.000	36.400	0.000	0.000	12.800	12.800	0.000	-	-	-	-	49.200
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	0.000	36.400	0.000	0.000	12.800	12.800	0.000	-	-	-	-	49.200
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>0.000</b>	<b>36.400</b>	<b>0.000</b>	<b>0.000</b>	<b>12.800</b>	<b>12.800</b>	<b>0.000</b>	-	-	-	-	<b>49.200</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The COMPASS CALL capability is the USAF's premier wide-area coverage Airborne Electronic Attack (AEA) Offensive Counter Information (OCI) weapon system. In order to ensure continued tactical effectiveness, COMPASS CALL's Prime Mission Equipment (PME) must evolve to keep pace with emerging adversary developments in communications, radar, and sensor technology as well as the use of rapidly advancing commercial communications technology. To meet this challenge the COMPASS CALL program employs an incremental Baseline upgrade acquisition strategy that puts capability into the warfighter's hands as soon as practical and ensures each iteration of the weapon system is effective against the highest priority threats. Capabilities inserted into each Baseline are planned in advance, based on warfighter inputs. Executive Management Reviews are held to review and set the expectation for Baseline content as production nears. Procurement funds are required for modification kit production (hardware, firmware, and software), installation, certification, and test on a re-host platform in accordance with the Baseline upgrade cyclic schedule.

As of second quarter FY2020, the COMPASS CALL EC-130H fleet consists of one (1) Baseline 1 (BL1) aircraft and ten (10) Mid-Baseline 2 (MBL2) aircraft. There is also one (1) TC-130H trainer aircraft. In FY 2018, two (2) BL1 aircraft were divested (one was inducted into the 309th Aerospace Maintenance and Regeneration Group, one was provided to a museum) and in FY 2019 one (1) BL1 aircraft was divested. The remaining BL1 aircraft will divest in FY 2020. EC-130H aircraft baseline upgrade modification efforts are complete.

COMPASS CALL modification efforts include, but are not limited to, Counter Radar Subsystem and the third generation Special Purpose Emitter Array (SPEAR) subsystem. Procurement funds are also used for avionics modifications to meet Communications, Navigation, Surveillance/Air Traffic Management (CNS/ATM) requirements and address avionics obsolescence issues. Similarly, Baseline upgrades and enhancements will include necessary support equipment and training device/simulator modifications. The simulators replicate the fielded aircraft configurations, provide training and qualification of aircrew and ground personnel, and address training and certification obsolescence issues. Equipment includes aircraft and PME retrofits based on the inspection and modification cyclic schedule.

In FY 2019, Mod Number 1001 includes \$36.4M of OCO funding for Small Adaptive Bank of Electronic Resources (SABER) integration into the COMPASS CALL mission system to rapidly counter a continuously changing RF environment. SABER will transition current EC-130H quick reaction capabilities (QRCs) onto a unified Software Defined Radio (SDR) Open Mission System (OMS) compliant SDR subsystem. As of second quarter FY 2020, this effort procures five (5) Group A/B kits for modification of five (5) Avionics Viability Program (AVP) modified MBL2 EC-130H aircraft as opposed to the originally projected two (2) in second quarter FY 2019.

FY 2021 OCO in the amount of \$12.8M in Mod Number 1001 for Modern Communication Technology, CLEAVER. CLEAVER provides voice recognition and rapid integration of emerging capabilities.

Due to the rapidly changing threat environment encountered in overseas contingency operations, the acquisition program manager has the authority to redirect funding as necessary to meet currently stated and/or emerging Combatant Command requirements through the integration of Quick Reaction Capability (QRC) kits and other high-priority efforts.

Funding for this exhibit is contained in PE 0207253F.



**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>											<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> CALL00 / Compass Call					<b>Modification Number / Title:</b> 1001 / COMPASS CALL		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> EC-130H				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207253F				
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>												
<b>Modification Item 1 of 2:</b> Equipment Group B (Active)												
B Kits												
Recurring												
Equipment Group B (Active):EQUIPMENT Group B (Active)	- / -	- / -	- / -	- / -	5 / 1.500	5 / 1.500	- / -	- / -	- / -	- / -	- / -	5 / 1.500
<b>Subtotal: Recurring</b>	- / -	- / -	- / -	- / -	- / 1.500	- / 1.500	- / -	- / -	- / -	- / -	- / -	- / 1.500
<b>Subtotal: Equipment Group B (Active)</b>	- / -	- / -	- / -	- / -	- / 1.500	- / 1.500	- / -	- / -	- / -	- / -	- / -	- / 1.500
<b>Modification Item 2 of 2:</b> Mid-Baseline 2												
A Kits												
Recurring												
Mid-Baseline 2:INSTALL KITS Group A (Active)	- / -	5 / 1.275	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.275
<b>Subtotal: Recurring</b>	- / -	- / 1.275	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.275
B Kits												
Recurring												
Mid-Baseline 2:EQUIPMENT Group B (Active)	0 / 0.000	5 / 6.600	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 6.600
<b>Subtotal: Recurring</b>	- / 0.000	- / 6.600	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.600
<b>Subtotal: Mid-Baseline 2</b>	- / 0.000	- / 7.875	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 7.875
<b>Subtotal: Procurement, All Modification Items</b>	- / 0.000	- / 7.875	- / -	- / -	- / 1.500	- / 1.500	- / -	- / -	- / -	- / -	- / -	- / 9.375
<b>Support (All Modification Items)</b>												
GROUP A: TOTAL NONRECURRING	- / -	- / 1.403	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.403
GROUP B: TOTAL NONRECURRING	- / -	- / 121.727	- / -	- / -	- / 19.800	- / 19.800	- / -	- / -	- / -	- / -	- / -	- / 31.527
<b>Subtotal: Support</b>	- / -	- / 123.130	- / -	- / -	- / 19.800	- / 19.800	- / -	- / -	- / -	- / -	- / -	- / 32.930
<b>Installation</b>												
<b>Modification Item 1 of 2:</b> Equipment Group B (Active)	- / -	- / -	- / -	- / -	5 / 1.500	5 / 1.500	- / -	- / -	- / -	- / -	- / -	5 / 1.500
<b>Modification Item 2 of 2:</b> Mid-Baseline 2	- / -	5 / 5.395	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 5.395
<b>Subtotal: Installation</b>	- / -	5 / 5.395	- / -	- / -	5 / 1.500	5 / 1.500	- / -	- / -	- / -	- / -	- / -	10 / 6.895
<b>Total</b>												
<b>Total Cost (Procurement + Support + Installation)</b>	<b>0.000</b>	<b>36.400</b>	<b>0.000</b>	<b>0.000</b>	<b>12.800</b>	<b>12.800</b>	<b>0.000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>49.200</b>

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> CALL00 / Compass Call	<b>Modification Number / Title:</b> 1001 / COMPASS CALL
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**ID Code** (A=Service Ready, B=Not Service Ready) : A **MDAP/MAIS Code:**

**Modification Item 1 of 2:** Equipment Group B (Active)

**Manufacturer Information**

Manufacturer Name: L3Harris Technologies	Manufacturer Location: Waco, TX
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Dec 2020				
Delivery Dates			Sep 2021				

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	5 / 1.500	5 / 1.500	- / -	- / -	- / -	- / -	- / -	5 / 1.500
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	- / -	- / -	- / -	- / -	5 / 1.500	5 / 1.500	- / -	- / -	- / -	- / -	- / -	5 / 1.500

**Installation Schedule**

PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	5
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	0	5

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> CALL00 / Compass Call	<b>Modification Number / Title:</b> 1001 / COMPASS CALL
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**ID Code** (A=Service Ready, B=Not Service Ready) : A **MDAP/MAIS Code:**

**Modification Item 2 of 2:** Mid-Baseline 2

**Manufacturer Information**

Manufacturer Name: L-3 Technologies Manufacturer Location: Waco, TX

Administrative Leadtime (in Months): 2 Production Leadtime (in Months): 3

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	May 2019						
Delivery Dates	Aug 2019						

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	5 / 5.395	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 5.395
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	5 / 5.395	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 5.395

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	5
Out	0	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	5

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> CALL00 / Compass Call	<b>Modification Number / Title:</b> 1003 / COMPASS CALL Baseline Modifications

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	324.443	135.861	110.754	193.389	0.000	193.389	143.387	116.080	100.027	87.496	0.000	1,211.437
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	324.443	135.861	110.754	193.389	0.000	193.389	143.387	116.080	100.027	87.496	0.000	1,211.437
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>324.443</b>	<b>135.861</b>	<b>110.754</b>	<b>193.389</b>	<b>0.000</b>	<b>193.389</b>	<b>143.387</b>	<b>116.080</b>	<b>100.027</b>	<b>87.496</b>	<b>0.000</b>	<b>1,211.437</b>

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

Initial Spares ( <i>\$ in Millions</i> )	10.050	10.618	10.805	10.995	-	10.995	11.219	11.420	11.626	19.839	-	96.572
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The COMPASS CALL capability is the USAF's premier wide-area coverage Airborne Electronic Attack (AEA) Offensive Counter Information (OCI) weapon system. In order to ensure continued tactical effectiveness, COMPASS CALL's Prime Mission Equipment (PME) must evolve to keep pace with emerging adversary developments in communications, radar, and sensor technology as well as the use of rapidly advancing commercial communications technology. To meet this challenge, the COMPASS CALL program employs an incremental Baseline upgrade acquisition strategy that puts capability into the warfighter's hands as soon as practical and ensures each iteration of the weapon system is effective against the highest priority threats. Capabilities inserted into each Baseline are planned in advance, based on warfighter inputs. Executive Management Reviews are held to review and set the expectation for Baseline content as production nears. Both modification kit components and integration costs for a given Baseline upgrade are procured in the first fiscal year (FY) of execution and installed the next year. Procurement funds are required for modification kit production (hardware, firmware, and software) to include software integration lab components, installation, certification, and test on a re-host platform in accordance with the Baseline upgrade cyclic schedule.

Re-hosting the EC-130H onto the EC-37B effort consists of the purchase of new aircraft plus the reuse of legacy EC-130H PME hardware upgraded to the latest Baseline. The first rehost baseline will be Baseline 3, and will be installed on the first five (5) aircraft. The remaining five (5) aircraft will be procured and modified to host Baseline 4. The FY21 budget request is the first year that a Baseline 4 EC-37B will be procured. The FY21 budget supports the procurement of Baseline 4 Group A and prime mission equipment (Group B), installation of PME into the Systems Integration Laboratory (SIL), support equipment which includes test program sets, weapon systems integration efforts, Compass Call Mission Crew Simulator upgrades, recurring and non-recurring engineering for Baseline 3 and 4 weapons system change management as a result of a concurrency between PME/aircraft production, modification and integration, and program management administration (PMA) requirements. Procurement and installation of the PME modification kits onto those air vehicles is performed under this line item (CALL00/Modification Number 1003). Procurement of the air vehicles for re-host is performed under the Aircraft Procurement, Air Force appropriation, Budget Activity 04, Budget Sub Activity 05 under P-1 Line Item Number: CALL00/COMPASS CALL.

COMPASS CALL modification efforts include, but are not limited to, the Counter Radar Subsystem; next generation Special Purpose Emitter Array (SPEAR) subsystem; and aircraft and PME retrofits. Baseline upgrades and enhancements will also include necessary support equipment, training device/simulator modifications, test and test support activities (planning, integration). The simulators provide for the training and qualification of aircrew and ground personnel as well as address training obsolescence issues.

Due to the rapidly changing threat environment encountered in combat operations, the acquisition program manager has the authority to redirect funding as necessary to meet currently stated and/or emerging Combatant Commander requirements through the integration of Quick Reaction Capability (QRC) kits and other high-priority efforts.

Funding for this exhibit is contained in PE 0207253F.

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> CALL00 / Compass Call	<b>Modification Number / Title:</b> 1003 / COMPASS CALL Baseline Modifications
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>	
Milestone/Development Status		
The COMPASS CALL weapon system is continuously improved using a rapid development and acquisition process supporting a Baseline upgrade strategy. User needs and technology opportunities are continuously reviewed. The COMPASS CALL Baseline 3 configuration will begin initial fielding in 2023. The COMPASS CALL Baseline 4 configuration will begin initial fielding in 2026.		
Milestone/Development Status		
The COMPASS CALL weapon system is continuously improved using a rapid development and acquisition process supporting a Baseline upgrade strategy. User needs and technology opportunities are continuously reviewed. The COMPASS CALL Baseline 3 configuration will begin initial fielding in 2023.		



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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> CALL00 / Compass Call					<b>Modification Number / Title:</b> 1003 / COMPASS CALL Baseline Modifications			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> EC-37B				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207253F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1: COMPASS CALL MODS</i>													
A Kits													
Recurring													
COMPASS CALL MODS:INSTALL KITS Group A (Active)	2 / 27.668	2 / 18.681	1 / 9.600	1 / 22.400	- / -	1 / 22.400	1 / 13.650	1 / 14.175	1 / 12.822	1 / 10.900	- / -	10 / 129.896	
<i>Subtotal: Recurring</i>	- / 27.668	- / 18.681	- / 9.600	- / 22.400	- / -	- / 22.400	- / 13.650	- / 14.175	- / 12.822	- / 10.900	- / -	- / 129.896	
B Kits													
Recurring													
COMPASS CALL MODS:EQUIPMENT Group B (Active)	2 / 99.709	2 / 63.461	1 / 35.500	1 / 74.931	- / -	1 / 74.931	1 / 39.045	1 / 40.591	1 / 40.684	1 / 42.271	- / -	10 / 436.192	
<i>Subtotal: Recurring</i>	- / 99.709	- / 63.461	- / 35.500	- / 74.931	- / -	- / 74.931	- / 39.045	- / 40.591	- / 40.684	- / 42.271	- / -	- / 436.192	
<i>Subtotal: COMPASS CALL MODS</i>	- / 127.377	- / 82.142	- / 45.100	- / 97.331	- / -	- / 97.331	- / 52.695	- / 54.766	- / 53.506	- / 53.171	- / -	- / 566.088	
<i>Subtotal: Procurement, All Modification Items</i>	- / 127.377	- / 82.142	- / 45.100	- / 97.331	- / -	- / 97.331	- / 52.695	- / 54.766	- / 53.506	- / 53.171	- / -	- / 566.088	
<b>Support (All Modification Items)</b>													
GROUP A: TOTAL NONRECURRING	- / 55.557	- / 12.798	- / 5.100	- / 17.400	- / -	- / 17.400	- / 19.045	- / 4.844	- / 3.542	- / 1.847	- / -	- / 120.133	
GROUP B: TOTAL NONRECURRING	- / 92.866	- / 18.125	- / 20.020	- / 20.251	- / -	- / 20.251	- / 21.545	- / 14.076	- / 12.856	- / 11.914	- / -	- / 211.653	
PMA - Other Gov't Costs	- / 1.908	- / 0.000	- / 3.901	- / 3.901	- / -	- / 3.901	- / 3.901	- / 3.901	- / 3.901	- / 3.903	- / -	- / 25.316	
SUPPORT-EQUIP	- / 15.890	- / 2.102	- / 12.101	- / 15.800	- / -	- / 15.800	- / 19.615	- / 20.000	- / 7.915	- / 2.545	- / -	- / 95.968	
SIM/TRAINER	1 / 10.994	- / -	1 / 13.500	1 / 30.000	- / -	1 / 30.000	1 / 17.880	1 / 9.787	1 / 9.601	1 / 5.410	- / -	7 / 97.172	
<i>Subtotal: Support</i>	1 / 177.215	- / 33.025	1 / 54.622	1 / 87.352	- / -	1 / 87.352	1 / 81.986	1 / 52.608	1 / 37.815	1 / 25.619	- / -	7 / 550.242	
<b>Installation</b>													
<i>Modification Item 1 of 1: COMPASS CALL MODS</i>	2 / 19.851	2 / 20.694	1 / 11.032	1 / 8.706	- / -	1 / 8.706	1 / 8.706	1 / 8.706	1 / 8.706	1 / 8.706	- / -	10 / 95.107	
<i>Subtotal: Installation</i>	2 / 19.851	2 / 20.694	1 / 11.032	1 / 8.706	- / -	1 / 8.706	1 / 8.706	1 / 8.706	1 / 8.706	1 / 8.706	- / -	10 / 95.107	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>324.443</b>	<b>135.861</b>	<b>110.754</b>	<b>193.389</b>	<b>0.000</b>	<b>193.389</b>	<b>143.387</b>	<b>116.080</b>	<b>100.027</b>	<b>87.496</b>	<b>0.000</b>	<b>1,211.437</b>	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> CALL00 / Compass Call	<b>Modification Number / Title:</b> 1003 / COMPASS CALL Baseline Modifications

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** COMPASS CALL MODS

**Manufacturer Information**

Manufacturer Name: L-3 Technologies	Manufacturer Location: Greenville, TX
Administrative Leadtime (in Months): 1	Production Leadtime (in Months): 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Nov 2018	Nov 2019	Nov 2020	Nov 2021	Nov 2022	Nov 2023	Nov 2024
Delivery Dates	Aug 2019	Aug 2020	Aug 2021	Aug 2022	Aug 2023	Aug 2024	Aug 2025

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 / 19.851	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 19.851
FY 2019	- / -	2 / 20.694	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 20.694
FY 2020	- / -	- / -	1 / 11.032	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 11.032
FY 2021	- / -	- / -	- / -	1 / 8.706	- / -	1 / 8.706	- / -	- / -	- / -	- / -	- / -	1 / 8.706
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	1 / 8.706	- / -	- / -	- / -	- / -	1 / 8.706
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 8.706	- / -	- / -	- / -	1 / 8.706
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 8.706	- / -	- / -	1 / 8.706
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 8.706	- / -	1 / 8.706
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	2 / 19.851	2 / 20.694	1 / 11.032	1 / 8.706	- / -	1 / 8.706	1 / 8.706	1 / 8.706	1 / 8.706	1 / 8.706	- / -	10 / 95.107

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	0	10
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	1	-	-	5	10

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	<b>P-1 Line Item Number / Title:</b> CFIN00 / combat flight inspection - CFIN
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ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0401314F	Other Related Program Elements: 0401314F
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	0.495	0.499	0.508	0.000	-	0.000	0.000	0.000	0.000	0.000	-	1.502
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	0.495	0.499	0.508	0.000	-	0.000	0.000	0.000	0.000	0.000	-	1.502
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>0.495</b>	<b>0.499</b>	<b>0.508</b>	<b>0.000</b>	<b>-</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>1.502</b>

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

**Description:**

Funds are required to procure and sustain unique military equipment on three FAA owned, Air Force operated, Canadair Challenger flight inspection aircraft to provide the DoD Combat Flight Inspection (CFIN) capability. CFIN is an Air Force combat capability to validate and certify airfield instrument approach and landing equipment, and associated instrument procedures, are safe and meet specifications before all-weather combat flight operations can begin. The CFIN capability is provided by three FAA Canadair Challenger aircraft modified with unique military equipment required for the CFIN mission, including secure anti-jam radios, military Identification Friend or Foe Mode IV and V transponders, and survivability equipment.

This funding may include emerging modification requirements to support PMA, A&AS, equipment and other government cost

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	<b>P-1 Line Item Number / Title:</b> DARP01 / RC-135
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> 0305207F	<b>Other Related Program Elements:</b> 0305207F
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	587.512	394.532	227.673	191.332	-	191.332	211.736	210.502	85.720	232.123	-	2,141.130
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	587.512	394.532	227.673	191.332	-	191.332	211.736	210.502	85.720	232.123	-	2,141.130
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>587.512</b>	<b>394.532</b>	<b>227.673</b>	<b>191.332</b>	<b>-</b>	<b>191.332</b>	<b>211.736</b>	<b>210.502</b>	<b>85.720</b>	<b>232.123</b>	<b>-</b>	<b>2,141.130</b>

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

Initial Spares ( <i>\$ in Millions</i> )	-	49.520	50.448	51.352	-	51.352	52.380	53.332	24.730	-	-	281.762
Flyaway Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The USAF's Manned Reconnaissance Systems program includes seventeen (17) RC-135V/W RIVET JOINT, three (3) RC-135S COBRA BALL and two (2) RC-135U COMBAT SENT mission aircraft performing Air Combat Command (ACC) operational missions. The RC-135V/W RIVET JOINT is the majority variant that drives the Baseline integration and modification upgrade strategy for the entire RC-135 fleet. Therefore, a significant amount of the modification budget is directly related to RIVET JOINT weapon system baseline strategy enhancements which subsequently transfer into the follow-on baseline strategy enhancements for the COBRA BALL and COMBAT SENT weapon systems.

RC-135 Viability Assessments in 2008 and 2012 reported that despite the fleet average airframe age (44 years) and accumulated flight hours (38,000) as of the end of FY 2007, the RC-135 should be able to continue to meet the user's needs by performing intended operations through at least 2050. Viability was assessed based on underlying analyses of reliability, maintainability, performance, corrosion, fatigue, architectural stability, safety and availability. The Viability Assessment also summarized that the RC-135 fleet has experienced significant improvements in reliability, maintainability and availability since FY 2001. The Program Manager attributes these improvements directly to the 645th Aeronautical Systems Group's (645 AESG) Baseline integration and spiral modification upgrade strategy and synergies gained with long-standing relationships with the RC-135 industry partners.

FY21 procurement funding will concentrate on three major efforts: (1) continuing the conversion of RIVET JOINT Baseline 11 aircraft to Baseline 13 configuration, (2) continue the sustainment of RIVET JOINT Baseline 12, and (3) continue the autopilot upgrade. Ten RIVET JOINT aircraft are projected to receive the Baseline 13 configuration. During this same period, COMBAT SENT will complete integration and testing of Baseline 6 with the COBRA BALL continuing integration and testing of Baseline 6. The COMBAT SENT and COBRA BALL baselines closely align with RIVET JOINT Baseline 12. Additionally, FY21 procurement will ensure integration and fielding updates to the RC-135 ground systems, which include RIVET JOINT Ground Data Processing Systems (GDPS), Distributed Mission Shelters (DMS), Mission Crew Training Systems (MCTS), Airborne Capabilities Extension System (ACES) and Operational Flight Trainers (OFT). The ground systems are upgraded to remain consistent with the fielded aircraft configurations to allow for training and qualification of the aircrew and maintenance personnel assigned, plus verification and certification of software builds that are continuously modified to address the dynamic mission requirements of these weapons systems. Due to higher USAF priorities, \$13.842M of FY21 procurement funding is being re-phased into FY22 and FY23 under RIVET JOINT.

The RIVET JOINT Baseline integration efforts of Baselines 12 and 13 which started in early FY19, address the 2012 RC-135 Multi-Attribute Utility Assessment (MUA) that detailed operational effectiveness, cost and program analyses of the alternative weapon system configurations. The MUA determined that retaining and sustaining the RC-135V/W airframe offers the highest assessed weapons system utility (measured as a benefit of cost-to-risk ratio) over the 25-year assessment period.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft		<b>P-1 Line Item Number / Title:</b> DARP01 / RC-135
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> 0305207F	<b>Other Related Program Elements:</b> 0305207F
<b>Line Item MDAP/MAIS Code:</b> N/A		
<p>FY20 Congressional adds in the amount of \$258.386M were added to several Budget Activities (BA), to include \$33.124M added under Initial Spares BA 06. The increase in funding was to replace mission and training systems destroyed during the March 2019 flood at Offutt AFB, NE.</p> <p>Following the approval of the Memorandum of Agreement between the National Security Agency/Central Security Service (NSA/CSS) Directorate of Operations and the United States Air Force on 26 September 2016, an additional \$3.0M was provided in FY18 through the Future Years Defense Plan due to previous shortfalls in funding.</p> <p>USAF will restore FY24/25 procurement funding to historical funding levels in FY22. This corrects deltas resulting from planning-to-program database transfer discrepancies. FY25 BA 05 has already been restored with only BA 06 deltas remaining in FY25. Additionally, the USAF planning database resourcing allocation has been restored from FY26 onward to prevent future discrepancies.</p> <p>Funding for this exhibit is contained in PE 0305207F.</p>		

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

**P-1 Line Item Number / Title:**  
DARP01 / RC-135

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0305207F **Other Related Program Elements:** 0305207F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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***	4266 / CONSTANT PHOENIX (Capability Improvement)				- / -	- / 208.290	- / 7.937	- / -	- / -	- / -
P-3a	2504 / COBRA BALL (Capability Improvement)		A		- / 19.428	- / 6.776	- / 12.177	- / 12.414	- / 0.000	- / 12.414
P-3a	4263 / RIVET JOINT (Capability Improvement)		A		- / 530.930	- / 169.664	- / 197.574	- / 168.952	- / 0.000	- / 168.952
P-3a	4265 / COMBAT SENT (Capability Improvement)		A		- / 37.154	- / 9.802	- / 9.985	- / 9.966	- / 0.000	- / 9.966
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 587.512</b>	<b>- / 394.532</b>	<b>- / 227.673</b>	<b>- / 191.332</b>	<b>- / -</b>	<b>- / 191.332</b>

  

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	4266 / CONSTANT PHOENIX (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 216.227
P-3a	2504 / COBRA BALL (Capability Improvement)		A		- / 12.656	- / 12.902	- / 13.154	- / 13.392	- / -	- / 102.899
P-3a	4263 / RIVET JOINT (Capability Improvement)		A		- / 188.889	- / 187.225	- / 62.004	- / 207.978	- / -	- / 1,713.216
P-3a	4265 / COMBAT SENT (Capability Improvement)		A		- / 10.191	- / 10.375	- / 10.562	- / 10.753	- / -	- / 108.788
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 211.736</b>	<b>- / 210.502</b>	<b>- / 85.720</b>	<b>- / 232.123</b>	<b>- / -</b>	<b>- / 2,141.130</b>

\*\*\* Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

\*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:**  
Due to the changing threat and rapidly evolving electromagnetic combat environment encountered during the RC-135's prolonged commitment to Overseas Contingency Operations (OCO), the acquisition program manager has the authority to redirect funding as necessary to meet current and emerging Combatant Commander and/or Intelligence Community requirements to better meet the war fighting objectives.

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> DARP01 / RC-135	<b>Modification Number / Title:</b> 2504 / COBRA BALL

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	19.428	6.776	12.177	12.414	0.000	12.414	12.656	12.902	13.154	13.392	-	102.899
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	19.428	6.776	12.177	12.414	0.000	12.414	12.656	12.902	13.154	13.392	-	102.899
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>19.428</b>	<b>6.776</b>	<b>12.177</b>	<b>12.414</b>	<b>0.000</b>	<b>12.414</b>	<b>12.656</b>	<b>12.902</b>	<b>13.154</b>	<b>13.392</b>	-	<b>102.899</b>

*(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 Millions)	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

FY21 procurement funding acquires and installs various upgrades and enhancement modifications for the three (3) RC-135S COBRA BALL aircraft performing Air Combat Command (ACC) directed operational missions. Due to the rapidly changing global threat environment, the acquisition program manager has the authority to redirect funding as necessary to meet current stated and emerging Combatant Command (CCMD) and Intelligence Community (IC) requirements.

The Operational Requirements Document (ORD) addresses airframe, sensor, navigation, communications, data link, and processing requirements necessary to keep the RC-135 fleet viable through 2050. A Program Management Directive (PMD) provides direction to the 645th Aeronautical Systems Group (645 AESG) for the acquisition and sustainment of the weapons system, associated mission support equipment, and processing, exploitation and dissemination tools.

The RC-135S COBRA BALL program--Defense Airborne Reconnaissance Program (DARP)/Manned Reconnaissance Systems is managed in accordance with an incremental baseline upgrade acquisition strategy in order to maintain collection parity with evolving and emerging adversarial weapons systems utilized by state and non-state actors. The 645 AESG Baseline upgrade strategy requires purchase agreements for long-lead items that take approximately 10 to 12 months from contract award to delivery. Items required for integration in a given Baseline upgrade are contracted for purchase in the first year of the procurement funding cycle and are acquired and installed in the subsequent year. This acquisition strategy has been successful in maintaining critical combat capability in the Intelligence, Surveillance, and Reconnaissance (ISR) arena over the last 50 years.

FY21 procurement funding efforts will concentrate on the initiatives pertaining to completing the development, integration and fielding COBRA BALL Baseline 7 enhancements. Baseline 7 subsystem upgrades consist of, but are not limited to: Foreign Instrumentation Signals Intelligence (FISINT) Direction Finding and Digital Data Recording, Digital Search, Target Discrimination via SATCOM, and the integration of the RIVET JOINT Baseline 12 communications intelligence (COMINT) suite.

Funding for this exhibit contained in PE 0305207F.

**Milestone/Development Status**

FY21 procurement funding is associated with the acquisition, integration, and fielding of Baseline 7, as well as logistical support efforts for the Baseline 6 configuration upgrades and enhancements on the three (3) RC-135S COBRA BALL aircraft, their sensor systems, and associated ground support systems. These upgrades are attributed to the research and development efforts initiated in FY 2017 and FY 2018. These initiatives formed the basis for the RC-135S COBRA BALL fleet modification strategy.



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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> DARP01 / RC-135					<b>Modification Number / Title:</b> 2504 / COBRA BALL			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> RC-135S, TC-135W			<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0305207F						
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1: Baseline Upgrade</i>													
A Kits													
Recurring													
Baseline Upgrade:INSTALL KITS Group A (Active)	3 / 3.566	1 / 1.111	1 / 3.044	1 / 3.127	- / -	1 / 3.127	1 / 3.190	1 / 3.255	1 / 3.321	1 / 3.381	- / -	10 / 23.995	
<i>Subtotal: Recurring</i>	- / 3.566	- / 1.111	- / 3.044	- / 3.127	- / -	- / 3.127	- / 3.190	- / 3.255	- / 3.321	- / 3.381	- / -	- / 23.995	
B Kits													
Recurring													
Baseline Upgrade:EQUIPMENT Group B (Active)	3 / 5.015	1 / 1.867	1 / 5.267	1 / 5.411	- / -	1 / 5.411	1 / 5.520	1 / 5.630	1 / 5.744	1 / 5.848	- / -	10 / 40.302	
<i>Subtotal: Recurring</i>	- / 5.015	- / 1.867	- / 5.267	- / 5.411	- / -	- / 5.411	- / 5.520	- / 5.630	- / 5.744	- / 5.848	- / -	- / 40.302	
<i>Subtotal: Baseline Upgrade</i>	- / 8.581	- / 2.978	- / 8.311	- / 8.538	- / -	- / 8.538	- / 8.710	- / 8.885	- / 9.065	- / 9.229	- / -	- / 64.297	
<i>Subtotal: Procurement, All Modification Items</i>	- / 8.581	- / 2.978	- / 8.311	- / 8.538	- / -	- / 8.538	- / 8.710	- / 8.885	- / 9.065	- / 9.229	- / -	- / 64.297	
<b>Installation</b>													
<i>Modification Item 1 of 1: Baseline Upgrade</i>													
	3 / 10.847	1 / 3.798	1 / 3.866	1 / 3.876	0 / 0.000	1 / 3.876	1 / 3.946	1 / 4.017	1 / 4.089	1 / 4.163	- / -	10 / 38.602	
<i>Subtotal: Installation</i>	3 / 10.847	1 / 3.798	1 / 3.866	1 / 3.876	0 / -	1 / 3.876	1 / 3.946	1 / 4.017	1 / 4.089	1 / 4.163	- / -	10 / 38.602	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>19.428</b>	<b>6.776</b>	<b>12.177</b>	<b>12.414</b>	<b>0.000</b>	<b>12.414</b>	<b>12.656</b>	<b>12.902</b>	<b>13.154</b>	<b>13.392</b>	<b>-</b>	<b>102.899</b>	

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification: PB 2021 Air Force** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> DARP01 / RC-135	<b>Modification Number / Title:</b> 2504 / COBRA BALL
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** Baseline Upgrade

**Manufacturer Information**

Manufacturer Name: L-3 Technologies	Manufacturer Location: Greenville, TX
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Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 6
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Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023	Dec 2024
Delivery Dates	Jun 2019	Jun 2020	Jun 2021	Jun 2022	Jun 2023	Jun 2024	Jun 2025

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	3 / 10.847	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	3 / 10.847
FY 2019	- / -	1 / 3.798	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 3.798
FY 2020	- / -	- / -	1 / 3.866	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 3.866
FY 2021	- / -	- / -	- / -	1 / 3.876	- / -	1 / 3.876	- / -	- / -	- / -	- / -	- / -	1 / 3.876
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	1 / 3.946	- / -	- / -	- / -	- / -	1 / 3.946
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 4.017	- / -	- / -	- / -	1 / 4.017
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 4.089	- / -	- / -	1 / 4.089
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 4.163	- / -	1 / 4.163
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	<b>3 / 10.847</b>	<b>1 / 3.798</b>	<b>1 / 3.866</b>	<b>1 / 3.876</b>	<b>0 / 0.000</b>	<b>1 / 3.876</b>	<b>1 / 3.946</b>	<b>1 / 4.017</b>	<b>1 / 4.089</b>	<b>1 / 4.163</b>	<b>- / -</b>	<b>10 / 38.602</b>

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	0	10
Out	3	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	0	10

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> DARP01 / RC-135	<b>Modification Number / Title:</b> 4263 / RIVET JOINT

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	530.930	169.664	197.574	168.952	0.000	168.952	188.889	187.225	62.004	207.978	-	1,713.216
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	530.930	169.664	197.574	168.952	0.000	168.952	188.889	187.225	62.004	207.978	-	1,713.216
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>530.930</b>	<b>169.664</b>	<b>197.574</b>	<b>168.952</b>	<b>0.000</b>	<b>168.952</b>	<b>188.889</b>	<b>187.225</b>	<b>62.004</b>	<b>207.978</b>	<b>-</b>	<b>1,713.216</b>

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

Initial Spares (\$ in Millions)	45.615	49.520	50.448	51.352	-	51.352	52.380	53.332	24.730	-	-	327.377
Gross/Weapon System Unit Cost (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

FY21 procurement funding acquires and installs various upgrade and enhancement modifications for the seventeen (17) RC-135V/W RIVET JOINT aircraft performing Air Combat Command (ACC) directed operational missions. The enhancements will focus on improving the RC-135's ability to compete and deter in the near-peer environment across the range of military operations. Due to the rapidly changing global threat environment, the acquisition program manager has the authority to redirect funding as necessary to meet current stated and emerging Combatant Command (CCMD) and Intelligence Community (IC) requirements. Due to higher Air Force priorities \$13.842M of FY21 procurement funding is being re-phased into FY22 and FY23.

The Operational Requirements Document (ORD) addresses airframe, sensor, navigation, communications, data link, and processing requirements necessary to keep the RC-135 fleet viable through 2050. A Program Management Directive (PMD) provides direction to the 645th Aeronautical Systems Group (645 AESG) for the acquisition and sustainment of the weapons system, associated mission support equipment, and processing, exploitation and dissemination tools.

The RC-135V/W RIVET JOINT program -- Defense Airborne Reconnaissance Program (DARP)/Manned Reconnaissance Systems is managed in accordance with an incremental baseline upgrade acquisition strategy in order to maintain collection parity with an evolving threat environment. The 645 AESG's Baseline upgrade strategy requires purchase agreements for long lead items that take approximately 10 to 12 months from contract award to delivery. Items required for integration in a given Baseline upgrade are contracted and purchased in the first year of the procurement funding cycle and are acquired and installed in the next year. This acquisition strategy has been successful in maintaining critical combat capability in the Intelligence, Surveillance and Reconnaissance (ISR) arena over the last 50 years.

FY21 procurement funding will sustain fielded RIVET JOINT Baseline 12 configured aircraft but will also concentrate on fielding Baseline 13 aircraft. Baseline 13 subsystem upgrades consist of, but are not limited to: High Frequency (HF) search, Integral HF Direction Finding, Reconfigurable Collection Environment (RCE) Beamformer, RCE DF/Geolocation, Integral Wideband Recorder, Pulse Train processing, search-thru-jammer hardening, moving emitter geolocation and moving target fusion, improved wide band communication links. The program will also begin Baseline 14 engineering.

Funding for this exhibit contained in PE 0305207F.

**Milestone/Development Status**

FY21 procurement funding is associated with acquisition, integration, fielding and logistical support efforts for the Baseline 13 configuration upgrades/enhancements on the RC-135V/W RIVET JOINT aircraft, sensor systems, and associated ground support systems. These upgrades are attributed to the research and development efforts initiated in FY16 and FY17. These initiatives formed the basis for the RC-135V/W RIVET JOINT fleet modification strategy.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> DARP01 / RC-135					<b>Modification Number / Title:</b> 4263 / RIVET JOINT			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> RC-135V, RC-135W, TC-135W				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0305207F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1: Baseline Upgrade (2)</i>													
A Kits													
Recurring													
Baseline Upgrade:INSTALL KITS Group A (Active)	12 / 348.150	4 / 106.890	4 / 135.622	4 / 105.958	- / -	4 / 105.958	4 / 124.495	4 / 121.666	1 / 29.405	4 / 137.338	- / -	37 / 1,109.524	
<i>Subtotal: Recurring</i>	- / 348.150	- / 106.890	- / 135.622	- / 105.958	- / -	- / 105.958	- / 124.495	- / 121.666	- / 29.405	- / 137.338	- / -	- / 1,109.524	
B Kits													
Recurring													
Baseline Upgrade:EQUIPMENT Group B (Active)	12 / 37.356	4 / 13.339	4 / 13.164	4 / 13.401	- / -	4 / 13.401	4 / 13.743	4 / 13.992	1 / 14.286	4 / 17.160	- / -	37 / 136.441	
<i>Subtotal: Recurring</i>	- / 37.356	- / 13.339	- / 13.164	- / 13.401	- / -	- / 13.401	- / 13.743	- / 13.992	- / 14.286	- / 17.160	- / -	- / 136.441	
<i>Subtotal: Baseline Upgrade (2)</i>	- / 385.506	- / 120.229	- / 148.786	- / 119.359	- / -	- / 119.359	- / 138.238	- / 135.658	- / 43.691	- / 154.498	- / -	- / 1,245.965	
<i>Subtotal: Procurement, All Modification Items</i>	- / 385.506	- / 120.229	- / 148.786	- / 119.359	- / -	- / 119.359	- / 138.238	- / 135.658	- / 43.691	- / 154.498	- / -	- / 1,245.965	
<b>Support (All Modification Items)</b>													
PMA - Other Gov't Costs	- / 3.945	- / 1.317	- / 1.300	- / 1.313	- / -	- / 1.313	- / 1.468	- / 1.495	- / 0.382	- / 1.550	- / -	- / 12.770	
<i>Subtotal: Support</i>	- / 3.945	- / 1.317	- / 1.300	- / 1.313	- / -	- / 1.313	- / 1.468	- / 1.495	- / 0.382	- / 1.550	- / -	- / 12.770	
<b>Installation</b>													
<i>Modification Item 1 of 1: Baseline Upgrade (2)</i>	12 / 141.479	4 / 48.118	4 / 47.488	4 / 48.280	0 / 0.000	4 / 48.280	4 / 49.183	4 / 50.072	1 / 17.931	4 / 51.930	- / -	37 / 454.481	
<i>Subtotal: Installation</i>	12 / 141.479	4 / 48.118	4 / 47.488	4 / 48.280	0 / -	4 / 48.280	4 / 49.183	4 / 50.072	1 / 17.931	4 / 51.930	- / -	37 / 454.481	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>530.930</b>	<b>169.664</b>	<b>197.574</b>	<b>168.952</b>	<b>0.000</b>	<b>168.952</b>	<b>188.889</b>	<b>187.225</b>	<b>62.004</b>	<b>207.978</b>	<b>-</b>	<b>1,713.216</b>	

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**Exhibit P-3a, Individual Modification: PB 2021 Air Force** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> DARP01 / RC-135	<b>Modification Number / Title:</b> 4263 / RIVET JOINT
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**ID Code** (A=Service Ready, B=Not Service Ready) : A **MDAP/MAIS Code:**

**Modification Item 1 of 1:** Baseline Upgrade (2)

**Manufacturer Information**

Manufacturer Name: L3Harris Technologies Manufacturer Location: Greenville, TX

Administrative Leadtime (in Months): 2 Production Leadtime (in Months): 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023	Dec 2024
Delivery Dates	Sep 2019	Sep 2020	Sep 2021	Sep 2022	Sep 2023	Sep 2024	Sep 2025

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	12 / 141.479	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	12 / 141.479
FY 2019	- / -	4 / 48.118	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 48.118
FY 2020	- / -	- / -	4 / 47.488	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 47.488
FY 2021	- / -	- / -	- / -	4 / 48.280	- / -	4 / 48.280	- / -	- / -	- / -	- / -	- / -	4 / 48.280
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	4 / 49.183	- / -	- / -	- / -	- / -	4 / 49.183
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 50.072	- / -	- / -	- / -	4 / 50.072
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 17.931	- / -	- / -	1 / 17.931
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 51.930	- / -	4 / 51.930
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	12 / 141.479	4 / 48.118	4 / 47.488	4 / 48.280	0 / 0.000	4 / 48.280	4 / 49.183	4 / 50.072	1 / 17.931	4 / 51.930	- / -	37 / 454.481

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	1	1	1	1	0	37
Out	12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	-	1	-	1	1	1	1	0	37

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> DARP01 / RC-135	<b>Modification Number / Title:</b> 4265 / COMBAT SENT

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	37.154	9.802	9.985	9.966	0.000	9.966	10.191	10.375	10.562	10.753	-	108.788
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	37.154	9.802	9.985	9.966	0.000	9.966	10.191	10.375	10.562	10.753	-	108.788
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>37.154</b>	<b>9.802</b>	<b>9.985</b>	<b>9.966</b>	<b>0.000</b>	<b>9.966</b>	<b>10.191</b>	<b>10.375</b>	<b>10.562</b>	<b>10.753</b>	-	<b>108.788</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

FY21 procurement funding acquires and installs various upgrade and enhancement modifications for the two (2) RC-135U COMBAT SENT aircraft performing Air Combat Command (ACC) directed operational missions. Due to the rapidly changing global threat environment and technological advances of our adversaries, the acquisition program manager has the authority to redirect funding as necessary to meet current stated and emerging Combatant Command (CCMD) and Intelligence Community (IC) requirements.

The Operational Requirements Document (ORD) addresses airframe, sensor, navigation, communications, data link, and processing requirements necessary to keep the RC-135 fleet viable through 2050. A Program Management Directive (PMD) provides direction to the 645th Aeronautical Systems Group (645 AESG) for the acquisition and sustainment of the weapons system, associated mission support equipment, and processing, exploitation and dissemination tools.

The RC-135U COMBAT SENT program -- Defense Airborne Reconnaissance Program (DARP)/Manned Reconnaissance Systems) is managed in accordance with an incremental baseline upgrade acquisition strategy in order to maintain collection parity with the evolving threat environment. The 645 AESG's Baseline upgrade strategy requires purchase agreements for long-lead items that take approximately 12 months from contract award to delivery. Items required for integration in a given Baseline upgrade are contracted for purchase in the first year of the procurement funding cycle and are acquired and installed in the next year. This acquisition strategy has been successful in maintaining critical combat capability in the ISR arena over the last 50 years.

FY21 procurement funding efforts will concentrate on sustainment and completion of the COMBAT SENT Baseline 5 and Baseline 6 enhancements respectively. Baseline 6 subsystem upgrades consist of, but are not limited to: Wideband collection, Scientific and Technical Processors, improved antennas, improved operator interface and reporting tools, sensor calibration/testing systems, integration of the RIVET JOINT Baseline 13 Communication Intelligence (COMINT) suite, and enhancing capabilities in dense signal environments.

Funding for this exhibit contained in PE 0305207F.

**Milestone/Development Status**

FY21 procurement funding is associated with the acquisition, integration, fielding and logistical support efforts for the Baseline 6 configuration upgrades/enhancements of the two (2) RC-135U COMBAT SENT aircraft, sensor systems, and associated ground support systems. These upgrades are attributed to the research and development efforts initiated in FY17 and FY18. These initiatives formed the basis for the RC-135U COMBAT SENT fleet modification strategy.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> DARP01 / RC-135					<b>Modification Number / Title:</b> 4265 / COMBAT SENT			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> RC-135U				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0305207F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> Baseline Upgrade (3)													
A Kits													
Recurring													
Baseline Upgrade:INSTALL KITS Group A (Active)	3 / 19.589	1 / 2.042	1 / 2.081	1 / 2.118	- / -	1 / 2.118	1 / 2.156	1 / 2.195	1 / 2.235	1 / 2.275	- / -	10 / 34.691	
<i>Subtotal: Recurring</i>	- / 19.589	- / 2.042	- / 2.081	- / 2.118	- / -	- / 2.118	- / 2.156	- / 2.195	- / 2.235	- / 2.275	- / -	- / 34.691	
B Kits													
Recurring													
Baseline Upgrade:EQUIPMENT Group B (Active)	3 / 3.147	1 / 1.103	1 / 1.121	1 / 1.141	- / -	1 / 1.141	1 / 1.161	1 / 1.182	1 / 1.203	1 / 1.225	- / -	10 / 11.283	
<i>Subtotal: Recurring</i>	- / 3.147	- / 1.103	- / 1.121	- / 1.141	- / -	- / 1.141	- / 1.161	- / 1.182	- / 1.203	- / 1.225	- / -	- / 11.283	
<i>Subtotal: Baseline Upgrade (3)</i>	- / 22.736	- / 3.145	- / 3.202	- / 3.259	- / -	- / 3.259	- / 3.317	- / 3.377	- / 3.438	- / 3.500	- / -	- / 45.974	
<i>Subtotal: Procurement, All Modification Items</i>	- / 22.736	- / 3.145	- / 3.202	- / 3.259	- / -	- / 3.259	- / 3.317	- / 3.377	- / 3.438	- / 3.500	- / -	- / 45.974	
<b>Installation</b>													
<i>Modification Item 1 of 1:</i> Baseline Upgrade (3)													
	3 / 14.418	1 / 6.657	1 / 6.783	1 / 6.707	0 / 0.000	1 / 6.707	1 / 6.874	1 / 6.998	1 / 7.124	1 / 7.253	- / -	10 / 62.814	
<i>Subtotal: Installation</i>	3 / 14.418	1 / 6.657	1 / 6.783	1 / 6.707	0 / -	1 / 6.707	1 / 6.874	1 / 6.998	1 / 7.124	1 / 7.253	- / -	10 / 62.814	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>37.154</b>	<b>9.802</b>	<b>9.985</b>	<b>9.966</b>	<b>0.000</b>	<b>9.966</b>	<b>10.191</b>	<b>10.375</b>	<b>10.562</b>	<b>10.753</b>	<b>-</b>	<b>108.788</b>	

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**Exhibit P-3a, Individual Modification: PB 2021 Air Force** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> DARP01 / RC-135	<b>Modification Number / Title:</b> 4265 / COMBAT SENT
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** Baseline Upgrade (3)

**Manufacturer Information**

Manufacturer Name: L3Harris Technologies	Manufacturer Location: Greenville, TX
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Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 6
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Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023	Dec 2024
Delivery Dates	Jun 2019	Jun 2020	Jun 2021	Jun 2022	Jun 2023	Jun 2024	Jun 2025

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	3 / 14.418	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	3 / 14.418
FY 2019	- / -	1 / 6.657	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 6.657
FY 2020	- / -	- / -	1 / 6.783	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 6.783
FY 2021	- / -	- / -	- / -	1 / 6.707	- / -	1 / 6.707	- / -	- / -	- / -	- / -	- / -	1 / 6.707
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	1 / 6.874	- / -	- / -	- / -	- / -	1 / 6.874
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 6.998	- / -	- / -	- / -	1 / 6.998
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 7.124	- / -	- / -	1 / 7.124
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 7.253	- / -	1 / 7.253
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	<b>3 / 14.418</b>	<b>1 / 6.657</b>	<b>1 / 6.783</b>	<b>1 / 6.707</b>	<b>0 / 0.000</b>	<b>1 / 6.707</b>	<b>1 / 6.874</b>	<b>1 / 6.998</b>	<b>1 / 7.124</b>	<b>1 / 7.253</b>	<b>- / -</b>	<b>10 / 62.814</b>

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	0	10
Out	3	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	0	10



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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	<b>P-1 Line Item Number / Title:</b> E00300 / E-3
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0207417F	Other Related Program Elements: 0207417F
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	970.461	48.365	112.092	172.141	-	172.141	228.533	250.289	294.570	289.499	164.306	2,530.256
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	0.000	0.000
Net Procurement (P-1) ( <i>\$ in Millions</i> )	970.461	48.365	112.092	172.141	-	172.141	228.533	250.289	294.570	289.499	164.306	2,530.256
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	0.000	0.000
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>970.461</b>	<b>48.365</b>	<b>112.092</b>	<b>172.141</b>	-	<b>172.141</b>	<b>228.533</b>	<b>250.289</b>	<b>294.570</b>	<b>289.499</b>	<b>164.306</b>	<b>2,530.256</b>
<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> )	-	14.898	19.975	13.835	-	13.835	-	-	-	-	-	48.708
Flyaway Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The four-engine E-3 is a modified Boeing 707 airframe which carries airborne radar and provides all-altitude air surveillance, threat warning, and control of theater air forces. Totals include funding for Airborne Warning and Control System (AWACS) Upgrades. This line item funds modifications and may be used to address Diminishing Manufacturing Sources (DMS) issues for the overall E-3 weapon system to include aircraft, simulators, and training devices.

Life of Type (LoT) buy to procure parts for retrofit of Production jets.

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**Exhibit P-40, Budget Line Item Justification: PB 2021 Air Force** **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

**P-1 Line Item Number / Title:**  
E00300 / E-3

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0207417F **Other Related Program Elements:** 0207417F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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***	50001P / TSI (Other)				- / 19.007	- / 0.000	- / -	- / 0.000	- / -	- / 0.000
P-40a***	50001T / BLOCK 40/45 UPGRADE (Capability Improvement)				- / 658.246	- / 0.000	- / -	- / 0.000	- / -	- / 0.000
P-40a***	50002T / AWACS Mode 5 Acceleration (Capability Improvement)				- / -	- / -	- / 2.343	- / 1.003	- / -	- / 1.003
P-40a***	7225 / NEXT GENERATION IDENTIFICATION FRIEND OR FOE (IFF) (Capability Improvement)				- / 56.833	- / -	- / -	- / -	- / -	- / -
P-40a***	8662 / AETC MTD UPGRADES-FIELD TRAINING DETACHMENTS (Capability Improvement)				- / 7.699	- / 0.707	- / 0.719	- / 0.065	- / -	- / 0.065
P-40a***	9707 / RM&A Mod (Reliability & Maintainability)				- / 22.219	- / 0.075	- / 0.328	- / 0.320	- / -	- / 0.320
P-40a***	9716 / VERTICAL STABILIZER AND RUDDER (Reliability & Maintainability)				- / 1.816	- / -	- / -	- / -	- / -	- / -
P-40a***	9717 / ELECTRONIC PROTECTION (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	9719 / Combat ID Diminishing Manufacturing Sources (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	9721 / AWACS Communications Integration Program (ACIP) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	99999XA / LOW COST MOD - AIRFRAME (Reliability & Maintainability)				- / 2.449	- / 1.999	- / 1.999	- / 1.999	- / -	- / 1.999
P-40a***	99999XB / LOW COST MOD - AVIONICS & MISSION SYSTEMS (Reliability & Maintainability)				- / 2.449	- / 1.999	- / 1.999	- / 1.999	- / -	- / 1.999
P-40a***	99999XC / Low Cost Mod - Communications (Reliability & Maintainability)				- / -	- / -	- / -	- / 1.999	- / -	- / 1.999
P-40a***	99999XD / Low Cost Mod - Human Systems (Reliability & Maintainability)				- / -	- / -	- / -	- / 1.999	- / -	- / 1.999
P-3a	50002 / Communication Networking Upgrade (CNU) (Capability Improvement)		B		- / 0.000	- / 0.000	- / 4.423	- / 28.044	- / 0.000	- / 28.044
P-3a	9709 / E-3 DRAGON (Capability Improvement)		B		- / 122.726	- / 32.709	- / 83.670	- / 75.393	- / 0.000	- / 75.393
P-3a	9718 / IP-enabled Capability (IPEC) (Capability Improvement)		B		- / 77.017	- / 10.876	- / 16.611	- / 22.919	- / 0.000	- / 22.919
P-3a	1 / US Contribution to NATO AWACS Modernization Projects (Other)		A		- / -	- / 0.000	- / 0.000	- / 36.401	- / 0.000	- / 36.401
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 970.461</b>	<b>- / 48.365</b>	<b>- / 112.092</b>	<b>- / 172.141</b>	<b>- / -</b>	<b>- / 172.141</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	50001P / TSI (Other)				- / -	- / -	- / -	- / -	- / -	- / 19.007
P-40a***	50001T / BLOCK 40/45 UPGRADE (Capability Improvement)				- / 0.000	- / -	- / -	- / -	- / -	- / 658.246
P-40a***	50002T / AWACS Mode 5 Acceleration (Capability Improvement)				- / 1.283	- / -	- / -	- / -	- / -	- / 4.629
P-40a***	7225 / NEXT GENERATION IDENTIFICATION FRIEND OR FOE (IFF) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 56.833

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

**P-1 Line Item Number / Title:**  
E00300 / E-3

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0207417F **Other Related Program Elements:** 0207417F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	8662 / AETC MTD UPGRADES-FIELD TRAINING DETACHMENTS (Capability Improvement)				- / 0.114	- / 0.158	- / 0.775	- / 0.789	- / -	- / 11.026
P-40a***	9707 / RM&A Mod (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / 22.942
P-40a***	9716 / VERTICAL STABILIZER AND RUDDER (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / 1.816
P-40a***	9717 / ELECTRONIC PROTECTION (Capability Improvement)				- / -	- / -	- / 0.000	- / 28.707	- / -	- / 28.707
P-40a***	9719 / Combat ID Diminishing Manufacturing Sources (Capability Improvement)				- / -	- / -	- / 19.002	- / 27.509	- / 81.770	- / 128.281
P-40a***	9721 / AWACS Communications Integration Program (ACIP) (Capability Improvement)				- / 46.680	- / 46.680	- / 46.680	- / 46.680	- / -	- / 186.720
P-40a***	99999XA / LOW COST MOD - AIRFRAME (Reliability & Maintainability)				- / 1.999	- / 1.999	- / 1.999	- / 1.999	- / 3.998	- / 20.440
P-40a***	99999XB / LOW COST MOD - AVIONICS & MISSION SYSTEMS (Reliability & Maintainability)				- / 1.999	- / 1.999	- / 1.999	- / 1.999	- / 3.998	- / 20.440
P-40a***	99999XC / Low Cost Mod - Communications (Reliability & Maintainability)				- / 1.999	- / 1.999	- / 1.999	- / 1.999	- / -	- / 9.995
P-40a***	99999XD / Low Cost Mod - Human Systems (Reliability & Maintainability)				- / 1.999	- / 1.999	- / 1.999	- / 1.999	- / -	- / 9.995
P-3a	50002 / Communication Networking Upgrade (CNU) (Capability Improvement)			B	- / 9.159	- / 15.893	- / 9.660	- / 6.281	- / 9.436	- / 82.896
P-3a	9709 / E-3 DRAGON (Capability Improvement)			B	- / 87.162	- / 126.943	- / 159.992	- / 122.487	- / 65.104	- / 876.186
P-3a	9718 / IP-enabled Capability (IPEC) (Capability Improvement)			B	- / 10.642	- / 5.907	- / 2.296	- / -	- / -	- / 146.268
P-3a	1 / US Contribution to NATO AWACS Modernization Projects (Other)			A	- / 65.497	- / 46.712	- / 48.169	- / 49.050	- / -	- / 245.829
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 228.533</b>	<b>- / 250.289</b>	<b>- / 294.570</b>	<b>- / 289.499</b>	<b>- / 164.306</b>	<b>- / 2,530.256</b>

\*\*\* Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

\*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:**  
Funding will continue to provide enhancements to E-3G sensors, Communication/Networking, Mission Computing, and Platform to maintain viable Battle Management Command and Control (BMC2) capability as long as needed and continues to address DMS and mandates.

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> E00300 / E-3	<b>Modification Number / Title:</b> 50002 / Communication Networking Upgrade (CNU)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	0.000	0.000	4.423	28.044	0.000	28.044	9.159	15.893	9.660	6.281	9.436	82.896
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	0.000	0.000	4.423	28.044	0.000	28.044	9.159	15.893	9.660	6.281	9.436	82.896
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>0.000</b>	<b>0.000</b>	<b>4.423</b>	<b>28.044</b>	<b>0.000</b>	<b>28.044</b>	<b>9.159</b>	<b>15.893</b>	<b>9.660</b>	<b>6.281</b>	<b>9.436</b>	<b>82.896</b>

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

Initial Spares ( <i>\$ in Millions</i> )	-	-	6.222	-	-	-	-	-	-	-	-	6.222
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

E-3 Communication Network Upgrade (CNU): CNU will provide a Link 16 capability with high-jam-resistance, high-speed, crypto-secure computer-to-computer connectivity in support of every type of military platform from Air Force fighters to Navy submarines. The current 20 year old Class 2 terminal has sustainability/Diminishing Manufacturing Sources (DMS) issues and does not support mandated Crypto Mod (CM) & Freq Remap (FR). CNU resolves DMS issues, provides CM & FR, Link 16 enhancements & growth for Next Gen Tactical Data Link (TDL). This modification program has related RDT&E funding in PE 0207417F.

**Milestone/Development Status**

Development contract awarded 3Q FY19.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>											<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5				<b>P-1 Line Item Number / Title:</b> E00300 / E-3				<b>Modification Number / Title:</b> 50002 / Communication Networking Upgrade (CNU)					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> E-3				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207417F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0207417F	- / 29.115	- / 17.022	- / 16.411	1 / 28.865	- / -	1 / 28.865	- / 16.226	- / 20.261	- / 1.867	- / -	- / -	1 / 129.767	
<b>Procurement</b>													
<b>Modification Item 1 of 1: CNU</b>													
A Kits													
Recurring													
CNU:INSTALL KITS Group A (Active)	- / -	- / -	4 / 0.122	11 / 0.341	- / -	11 / 0.341	2 / 0.388	4 / 1.055	6 / 0.372	3 / 0.370	0 / 0.936	30 / 3.584	
<i>Subtotal: Recurring</i>	- / -	- / -	- / 0.122	- / 0.341	- / -	- / 0.341	- / 0.388	- / 1.055	- / 0.372	- / 0.370	- / 0.936	- / 3.584	
B Kits													
Recurring													
CNU:EQUIPMENT Group B (Active)	- / -	- / -	4 / 3.893	11 / 9.153	- / -	11 / 9.153	2 / 2.023	4 / 4.389	6 / 5.473	3 / 2.972	- / 0.935	30 / 28.838	
<i>Subtotal: Recurring</i>	- / -	- / -	- / 3.893	- / 9.153	- / -	- / 9.153	- / 2.023	- / 4.389	- / 5.473	- / 2.972	- / 0.935	- / 28.838	
<i>Subtotal: CNU</i>	- / -	- / -	- / 4.015	- / 9.494	- / -	- / 9.494	- / 2.411	- / 5.444	- / 5.845	- / 3.342	- / 1.871	- / 32.422	
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / -	- / 4.015	- / 9.494	- / -	- / 9.494	- / 2.411	- / 5.444	- / 5.845	- / 3.342	- / 1.871	- / 32.422	
<b>Support (All Modification Items)</b>													
GROUP A: TOTAL NONRECURRING	- / -	- / -	- / -	- / 4.562	- / -	- / 4.562	- / 2.912	- / 4.618	- / 0.636	- / 0.837	- / 2.868	- / 16.433	
GROUP B: TOTAL NONRECURRING	- / -	- / -	- / -	- / 12.000	- / -	- / 12.000	- / 0.715	- / 2.028	- / 0.380	- / 0.587	- / 2.041	- / 17.751	
Change Orders	- / -	- / -	- / -	- / 0.132	- / -	- / 0.132	- / 0.234	- / 0.248	- / 0.065	- / 0.000	- / 0.000	- / 0.679	
ICS-Labor	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.012	- / 1.042	- / 1.073	- / -	- / -	- / 3.127	
PMA - Contractor Services	- / -	- / -	- / 0.408	- / 0.670	- / -	- / 0.670	- / 1.419	- / 1.661	- / 1.543	- / 1.398	- / 2.656	- / 9.755	
PMA - Other Gov't Costs	- / -	- / -	- / -	- / 1.186	- / -	- / 1.186	- / 0.456	- / 0.852	- / 0.118	- / 0.117	- / -	- / 2.729	
<i>Subtotal: Support</i>	- / -	- / -	- / 0.408	- / 18.550	- / -	- / 18.550	- / 6.748	- / 10.449	- / 3.815	- / 2.939	- / 7.565	- / 50.474	
<b>Installation</b>													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>0.000</b>	<b>0.000</b>	<b>4.423</b>	<b>28.044</b>	<b>0.000</b>	<b>28.044</b>	<b>9.159</b>	<b>15.893</b>	<b>9.660</b>	<b>6.281</b>	<b>9.436</b>	<b>82.896</b>	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> E00300 / E-3			<b>Modification Number / Title:</b> 50002 / Communication Networking Upgrade (CNU)	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 1 of 1:</b> CNU							
<b>Manufacturer Information</b>							
Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 24			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates		May 2020	May 2021	May 2022	May 2023	May 2024	May 2025
Delivery Dates		May 2022	May 2023	May 2024	May 2025	May 2026	May 2027
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 30		

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> E00300 / E-3	<b>Modification Number / Title:</b> 9709 / E-3 DRAGON

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	122.726	32.709	83.670	75.393	0.000	75.393	87.162	126.943	159.992	122.487	65.104	876.186
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	122.726	32.709	83.670	75.393	0.000	75.393	87.162	126.943	159.992	122.487	65.104	876.186
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>122.726</b>	<b>32.709</b>	<b>83.670</b>	<b>75.393</b>	<b>0.000</b>	<b>75.393</b>	<b>87.162</b>	<b>126.943</b>	<b>159.992</b>	<b>122.487</b>	<b>65.104</b>	<b>876.186</b>

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

Initial Spares ( <i>\$ in Millions</i> )	11.828	11.651	10.448	10.631	-	10.631	-	-	-	-	-	44.558
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

E-3 DMS Replacement of Avionics for Global Operations and Navigation (DRAGON): DRAGON completes the Federal Aviation Administration (FAA), International Civil Aviation Organization (ICAO), and European Organization for the Safety of Air Navigation (EUROCONTROL) air traffic control mandated safety of flight capabilities. This program will provide the E-3 fleet with the flight instruments and other avionics for the Required Navigation Performance (RNP), and the surveillance and communication capabilities necessary to maintain continued critical unrestricted access to global airspace. Non-compliance will result in airspace restrictions and denials that will impact AWACS ability to support worldwide responses to situations requiring immediate on-scene BM/C2. DRAGON replaces the existing Diminishing Manufacturing Sources (DMS) Global Positioning System (GPS) Integrated Navigation System (GINS) with a modern Flight Management System (FMS) that will accommodate new capabilities including Mode 5 Identification Friend or Foe (IFF) and Joint Mission Planning System (JMPS). Also included as part of the modification is the addition of data link communications, voice and data link digital radios, and improved visual displays. Additionally, the acquisition of DRAGON flight simulators also contains DMS efforts which include removal of end-of-life software/hardware within simulator systems and move to a modular, common open system architecture that is sustainable and cyber resilient. The simulator effort also implements requirements and standards defined under the Simulator Common Architecture Requirements and Standards (SCARS) initiative. Emphasis on employment of Commercial-Off-The-Shelf (COTS) avionics is expected to lower cost, reduce the tech refresh cycle, and enhance life cycle management. DRAGON will provide development of support and test equipment needed for DRAGON production; DRAGON will also provide DMS and Interim Contractor Support (ICS) needed to support the DRAGON modified aircraft. The Engineering and Manufacturing Development (EMD) phase of DRAGON was executed as a Cooperative Program between the US and NATO. Production will be executed as a USAF only effort.

**Milestone/Development Status**

FY11-FY21 RDT&E funds support integration of the DRAGON requirements/flight simulator. EMD Contract Award: November 2011 Milestone B Approval: November 2011 Milestone C Approval: July 2017 LRIP Contract Award: 29 June 2017 Anticipated FRP Contract Awards: July 2020/ November 2020

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>											<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5				<b>P-1 Line Item Number / Title:</b> E00300 / E-3					<b>Modification Number / Title:</b> 9709 / E-3 DRAGON			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> E-3B, E-3C				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207417F				
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>												
0207417F	- / 381.211	- / 10.121	- / 0.200	- / 2.900	- / -	- / 2.900	- / -	- / -	- / -	- / -	- / -	- / 394.432
<b>Procurement</b>												
<b>Modification Item 1 of 1: DRAGON</b>												
A Kits												
Recurring												
DRAGON:INSTALL KITS Group A (Active)	5 / 17.118	- / -	4 / 15.684	4 / 14.672	- / -	4 / 14.672	4 / 14.880	4 / 14.846	5 / 16.468	4 / 14.944	- / -	30 / 108.612
<i>Subtotal: Recurring</i>	- / 17.118	- / -	- / 15.684	- / 14.672	- / -	- / 14.672	- / 14.880	- / 14.846	- / 16.468	- / 14.944	- / -	- / 108.612
B Kits												
Recurring												
DRAGON:EQUIPMENT Group B (Active)	5 / 39.070	0 / 0.000	4 / 23.535	4 / 22.918	- / -	4 / 22.918	4 / 23.450	4 / 23.706	5 / 27.896	4 / 24.356	- / -	30 / 184.931
<i>Subtotal: Recurring</i>	- / 39.070	- / 0.000	- / 23.535	- / 22.918	- / -	- / 22.918	- / 23.450	- / 23.706	- / 27.896	- / 24.356	- / -	- / 184.931
<i>Subtotal: DRAGON</i>	- / 56.188	- / 0.000	- / 39.219	- / 37.590	- / -	- / 37.590	- / 38.330	- / 38.552	- / 44.364	- / 39.300	- / -	- / 293.543
<i>Subtotal: Procurement, All Modification Items</i>	- / 56.188	- / 0.000	- / 39.219	- / 37.590	- / -	- / 37.590	- / 38.330	- / 38.552	- / 44.364	- / 39.300	- / -	- / 293.543
<b>Support (All Modification Items)</b>												
GROUP A: TOTAL NONRECURRING	- / 27.759	- / 5.388	- / 3.600	- / -	- / -	- / -	- / 1.855	- / 45.821	- / 68.139	- / 35.745	- / 17.384	- / 205.691
GROUP B: TOTAL NONRECURRING	- / 19.102	- / 1.350	- / 2.418	- / 2.466	- / -	- / 2.466	- / -	- / -	- / -	- / -	- / -	- / 25.336
Change Orders	- / 12.910	- / 13.093	- / 15.872	- / 19.742	- / -	- / 19.742	- / 16.217	- / 15.894	- / 15.068	- / 14.741	- / 15.121	- / 128.658
Data	- / -	- / -	- / -	- / 0.000	- / -	- / 0.000	- / 0.000	- / -	- / -	- / -	- / -	- / 0.000
SIM/TRAINER	- / -	0 / 0.100	0 / 0.200	1 / 9.800	- / -	1 / 9.800	- / -	- / -	- / -	- / -	- / -	1 / 10.100
ICS-Labor	- / -	- / 0.205	- / 0.268	- / 0.818	- / -	- / 0.818	- / 1.375	- / 1.569	- / 1.605	- / 1.633	- / -	- / 17.473
PMA - Contractor Services	- / 2.952	- / 2.470	- / 2.511	- / 2.561	- / -	- / 2.561	- / 2.612	- / 2.664	- / 2.718	- / 2.772	- / 15.711	- / 26.971
OTHER GOVT	- / 2.003	- / 0.925	- / 0.939	- / 0.954	- / -	- / 0.954	- / 0.969	- / 0.984	- / 0.999	- / 1.015	- / 0.412	- / 19.200
PMA - Other Gov't Costs	- / 1.812	- / 1.678	- / 1.943	- / 1.732	- / -	- / 1.732	- / 2.074	- / 1.959	- / 2.239	- / 2.101	- / 1.526	- / 17.064
<i>Subtotal: Support</i>	- / 66.538	0 / 25.209	0 / 27.751	1 / 28.073	- / -	1 / 28.073	- / 25.102	- / 68.891	- / 90.768	- / 58.007	- / 40.154	1 / 430.493
<b>Installation</b>												
<b>Modification Item 1 of 1: DRAGON</b>	- / -	1 / 7.500	3 / 16.700	2 / 9.730	- / -	2 / 9.730	5 / 23.730	4 / 19.500	5 / 24.860	5 / 25.180	5 / 24.950	30 / 152.150
<i>Subtotal: Installation</i>	- / -	1 / 7.500	3 / 16.700	2 / 9.730	- / -	2 / 9.730	5 / 23.730	4 / 19.500	5 / 24.860	5 / 25.180	5 / 24.950	30 / 152.150
<b>Total</b>												
<b>Total Cost (Procurement + Support + Installation)</b>	<b>122.726</b>	<b>32.709</b>	<b>83.670</b>	<b>75.393</b>	<b>0.000</b>	<b>75.393</b>	<b>87.162</b>	<b>126.943</b>	<b>159.992</b>	<b>122.487</b>	<b>65.104</b>	<b>876.186</b>



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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> E00300 / E-3	<b>Modification Number / Title:</b> 9709 / E-3 DRAGON
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**ID Code** (A=Service Ready, B=Not Service Ready) : B **MDAP/MAIS Code:**

**Modification Item 1 of 1:** DRAGON

**Manufacturer Information**

Manufacturer Name: Boeing	Manufacturer Location: Oklahoma City
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 18

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024	Jan 2025
Delivery Dates		Jul 2021	Jul 2022	Jul 2023	Jul 2024	Jul 2025	Jul 2026

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 / 7.500	3 / 16.700	1 / 4.865	- / -	1 / 4.865	- / -	- / -	- / -	- / -	- / -	5 / 29.065
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	1 / 4.865	- / -	1 / 4.865	3 / 14.238	- / -	- / -	- / -	- / -	4 / 19.103
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	2 / 9.492	2 / 9.750	- / -	- / -	- / -	4 / 19.242
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 9.750	2 / 9.944	- / -	- / -	4 / 19.694
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 14.916	1 / 5.036	- / -	4 / 19.952
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 20.144	1 / 4.990	5 / 25.134
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 19.960	4 / 19.960
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	- / -	1 / 7.500	3 / 16.700	2 / 9.730	- / -	2 / 9.730	5 / 23.730	4 / 19.500	5 / 24.860	5 / 25.180	5 / 24.950	30 / 152.150

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	1	-	-	-	-	2	1	1	-	-	1	1	1	1	2	-	2	1	1	1	1	2	1	1	2	1	1	5	30
Out	0	-	-	-	-	1	-	-	-	-	2	1	1	-	-	1	1	1	1	2	-	2	1	1	1	1	2	1	1	9	30

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> E00300 / E-3	<b>Modification Number / Title:</b> 9718 / IP-enabled Capability (IPEC)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	77.017	10.876	16.611	22.919	0.000	22.919	10.642	5.907	2.296	-	-	146.268
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	77.017	10.876	16.611	22.919	0.000	22.919	10.642	5.907	2.296	-	-	146.268
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>77.017</b>	<b>10.876</b>	<b>16.611</b>	<b>22.919</b>	<b>0.000</b>	<b>22.919</b>	<b>10.642</b>	<b>5.907</b>	<b>2.296</b>	-	-	<b>146.268</b>

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

Initial Spares ( <i>\$ in Millions</i> )	-	-	-	3.204	-	3.204	-	-	-	-	-	3.204
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Internet Protocol Enabled Communication (IPEC): IPEC provides the E-3G aircraft with a medium-bandwidth IP communications capability to connect to the Global Information Grid (GIG) and will support net-centric operations/warfare. IPEC provides a reliable IP-Enabled communication capability to support a shortened digitized kill-chain of time-sensitive targets. The modification provides a permanent INMARSAT-based IP-Enabled communications package supporting warfighter identified requirements for increased bandwidth SIPRNET and multi-domain networks. This modification has related RDT&E funding in PE 0207417F.

**Milestone/Development Status**

EMD contract awarded 21 September 2015.

Limited Production Contract awarded 4 November 2016. Full Rate Kits 11-24, Installs 11-17 UCA awarded 30 November 2017, definitized 15 May 2019; Full Rate kits 25-26 award projected 31 March 2020, kits 27-28 award projected 30 June 2020, kit 29 award projected 30 November 2020, kits 30-31 award projected 30 November 2021.

Out of 30 Production aircraft, 14 IPEC mods have been completed to date.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>											<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5				<b>P-1 Line Item Number / Title:</b> E00300 / E-3				<b>Modification Number / Title:</b> 9718 / IP-enabled Capability (IPEC)				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B						<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> E-3			<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207417F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>												
0207417F	- / 64.486	- / 1.000	- / 0.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 65.986
<b>Procurement</b>												
<b>Modification Item 1 of 1:</b> IP Enabled Communication												
A Kits												
Recurring												
IP Enabled Communication:INSTALL KITS Group A (Active)	23 / 23.832	- / -	4 / 3.574	1 / 0.885	- / -	1 / 0.885	2 / 1.618	- / -	- / -	- / -	- / -	30 / 29.909
<i>Subtotal: Recurring</i>	- / 23.832	- / -	- / 3.574	- / 0.885	- / -	- / 0.885	- / 1.618	- / -	- / -	- / -	- / -	- / 29.909
B Kits												
Recurring												
IP Enabled Communication:EQUIPMENT Group B (Active)	23 / 31.776	- / -	4 / 3.574	1 / 0.885	- / -	1 / 0.885	2 / 1.618	- / -	- / -	- / -	- / -	30 / 37.853
<i>Subtotal: Recurring</i>	- / 31.776	- / -	- / 3.574	- / 0.885	- / -	- / 0.885	- / 1.618	- / -	- / -	- / -	- / -	- / 37.853
<i>Subtotal: IP Enabled Communication</i>	- / 55.608	- / -	- / 7.148	- / 1.770	- / -	- / 1.770	- / 3.236	- / -	- / -	- / -	- / -	- / 67.762
<i>Subtotal: Procurement, All Modification Items</i>	- / 55.608	- / -	- / 7.148	- / 1.770	- / -	- / 1.770	- / 3.236	- / -	- / -	- / -	- / -	- / 67.762
<b>Support (All Modification Items)</b>												
GROUP B: TOTAL NONRECURRING	- / 1.946	- / 3.664	- / 1.650	- / 8.276	- / -	- / 8.276	- / 2.554	- / 1.679	- / -	- / -	- / -	- / 19.769
GROUP A: TOTAL NONRECURRING	- / 10.113	- / 2.636	- / 1.304	- / 1.391	- / -	- / 1.391	- / 0.542	- / 0.180	- / -	- / -	- / -	- / 16.166
Change Orders	- / 3.264	- / 0.830	- / 1.493	- / 7.102	- / -	- / 7.102	- / 0.304	- / 0.114	- / -	- / -	- / -	- / 13.107
ICS-Labor	- / 3.200	- / 1.342	- / 1.423	- / 1.465	- / -	- / 1.465	- / 1.509	- / 1.554	- / -	- / -	- / -	- / 10.493
PMA - Contractor Services	- / 2.886	- / 2.404	- / 3.593	- / 2.915	- / -	- / 2.915	- / 2.497	- / 2.380	- / 2.296	- / -	- / -	- / 18.971
<i>Subtotal: Support</i>	- / 21.409	- / 10.876	- / 9.463	- / 21.149	- / -	- / 21.149	- / 7.406	- / 5.907	- / 2.296	- / -	- / -	- / 78.506
<b>Installation</b>												
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>												
<b>Total Cost (Procurement + Support + Installation)</b>	<b>77.017</b>	<b>10.876</b>	<b>16.611</b>	<b>22.919</b>	<b>0.000</b>	<b>22.919</b>	<b>10.642</b>	<b>5.907</b>	<b>2.296</b>	<b>-</b>	<b>-</b>	<b>146.268</b>

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> E00300 / E-3			<b>Modification Number / Title:</b> 9718 / IP-enabled Capability (IPEC)	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 1 of 1:</b> IP Enabled Communication							
<b>Manufacturer Information</b>							
Manufacturer Name: Boeing				Manufacturer Location: Oklahoma City			
Administrative Leadtime (in Months): 1				Production Leadtime (in Months): 16			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates		Mar 2020	Mar 2021	Mar 2022			
Delivery Dates		Jul 2021	Jul 2022	Jul 2023			
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 30		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> E00300 / E-3	<b>Modification Number / Title:</b> 1 / US Contribution to NATO AWACS Modernization Projects

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

<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	0.000	0.000	36.401	0.000	36.401	65.497	46.712	48.169	49.050	-	245.829
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	0.000	0.000	36.401	0.000	36.401	65.497	46.712	48.169	49.050	-	245.829
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	-	<b>0.000</b>	<b>0.000</b>	<b>36.401</b>	<b>0.000</b>	<b>36.401</b>	<b>65.497</b>	<b>46.712</b>	<b>48.169</b>	<b>49.050</b>	-	<b>245.829</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

NATO E-3 aircraft provide air and maritime surveillance and air control for allied forces in the NATO area of operations. Fiscal Year Defense Plan funding provides the required U.S. contribution for projects defined by the NATO Airborne Early Warning and Control (NAEWC) Board of Directors and approved by the U.S. government. These projects include but are not limited to the Follow-on Upgrade Program (FUP I) and future modernization projects. The Follow-on Upgrade program satisfies international airspace mandates for upgraded Communications Navigation Surveillance/Air Traffic Management (CNS/ATM) as well as transponder upgrades for Mode 5 and Enhanced Mode S and includes planning activities for a FUP II effort. Future efforts include but are not limited to FUP II efforts and other modernization projects. These future projects will enable the aircraft to maintain interoperability, meet emerging military requirements and sustain the NATO fleet for the future needs of NATO.

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> E00300 / E-3	<b>Modification Number / Title:</b> 1 / US Contribution to NATO AWACS Modernization Projects

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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<b>Models of Systems Affected:</b> NATO AWACS Modernization Projects	<b>Modification Type:</b> Other	<b>Related RDT&amp;E PEs:</b>
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Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>												
<i>Modification Item 1 of 1:</i> Service Support to NATO AEW&C												
B Kits												
Recurring												
Service Support to NATO AEW&C:EQUIPMENT Group B (Active)	- / -	- / -	- / -	- / 36.401	- / -	- / 36.401	- / 65.497	- / 46.712	- / 48.169	- / 49.050	- / -	- / 245.829
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / 36.401	- / -	- / 36.401	- / 65.497	- / 46.712	- / 48.169	- / 49.050	- / -	- / 245.829
<i>Subtotal: Service Support to NATO AEW&amp;C</i>	- / -	- / -	- / -	- / 36.401	- / -	- / 36.401	- / 65.497	- / 46.712	- / 48.169	- / 49.050	- / -	- / 245.829
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / -	- / -	- / 36.401	- / -	- / 36.401	- / 65.497	- / 46.712	- / 48.169	- / 49.050	- / -	- / 245.829

<b>Installation</b>												
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

<b>Total</b>												
<b>Total Cost (Procurement + Support + Installation)</b>	-	0.000	0.000	36.401	0.000	36.401	65.497	46.712	48.169	49.050	-	245.829

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> E00300 / E-3			<b>Modification Number / Title:</b> 1 / US Contribution to NATO AWACS Modernization Projects	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 1 of 1:</b> Service Support to NATO AEW&C							
<b>Manufacturer Information</b>							
Manufacturer Name: Unknown				Manufacturer Location: Unknown			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 0			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 0		

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	<b>P-1 Line Item Number / Title:</b> E00400 / E-4
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ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0302015F	Other Related Program Elements: 0101316F, 0302015F
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	194.640	67.858	58.477	58.803	-	58.803	52.240	38.817	41.160	41.913	0.000	553.908
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	194.640	67.858	58.477	58.803	-	58.803	52.240	38.817	41.160	41.913	0.000	553.908
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>194.640</b>	<b>67.858</b>	<b>58.477</b>	<b>58.803</b>	<b>-</b>	<b>58.803</b>	<b>52.240</b>	<b>38.817</b>	<b>41.160</b>	<b>41.913</b>	<b>0.000</b>	<b>553.908</b>

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

Initial Spares ( <i>\$ in Millions</i> )	-	1.061	0.332	0.339	-	0.339	0.346	0.352	0.358	0.365	-	3.153
Flyaway Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This line item funds modifications to the four (4) aircraft E-4B fleet. The four (4) engine E-4B is a highly modified Boeing 747 Model 200 (747-200) airframe which supports the National Airborne Operations Center (NAOC) mission. NAOC provides national civilian and military leadership with a worldwide, survivable, and enduring communications node of the National Military Command System (NMCS). The modifications listed within this document provide updates to maintain Federal Aviation Agency (FAA) airframe flight worthiness certification and provide additional capabilities to the aircraft flight control, navigation and communication systems, as well as the primary mission equipment to ensure the E-4B is able to execute its various missions. These modifications also enhance operational capability while improving flight safety, reliability, and maintainability.

The current Boeing estimated design service life of the Boeing 747-200 E-4B airframe is 115K hours and 30K cycles. It is estimated this limit will be reached by 2033. However, as the aircraft age, depot periods will need to be extended due to maintenance issues associated with an aging fleet, thus limiting the E-4B's ability to support the NAOC mission due to aircraft non-availability. The age of the four (4) E-4B aircraft fleet presents Diminishing Manufacturing Sources and Material Shortages (DMSMS) issues involving primary mission equipment, and to a lesser extent the airframe. Airframe DMSMS and issues associated with the non-availability of FAA certified parts are expected to increase due to the dwindling world-wide number of Boeing 747-200 aircraft because of the international commercial airline industry removing aging aircraft from their inventories. Funding also supports emerging modification requirements, Government travel, Advisory and Assistance Services Contract (A&ASC), Federally Funded Research and Development Contract (FFRDC) support and equipment as required.

Funding may be used to address Diminishing Manufacturing Sources and Material Shortages (DMSMS) issues.

This funding may include emerging modification requirements to support PMA, A&AS, equipment and other government cost.

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**Exhibit P-40, Budget Line Item Justification: PB 2021 Air Force** **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

**P-1 Line Item Number / Title:**  
E00400 / E-4

**ID Code** (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** 0302015F **Other Related Program Elements:** 0101316F, 0302015F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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***	3410 / NPES (NC2AIS) E-4B (Reliability & Maintainability)				- / 2.730	- / -	- / -	- / -	- / -	- / -
P-40a***	4380 / MUOS (Capability Improvement)				- / -	- / 0.000	- / 5.700	- / 2.399	- / -	- / 2.399
P-40a***	4406A / SHF Modernization (Capability Improvement)				- / 109.088	- / 11.000	- / -	- / -	- / -	- / -
P-40a***	9709F / CNS/ATM(ADS-B OUT) (Capability Improvement)				- / 9.978	- / 0.000	- / 0.000	- / -	- / -	- / -
P-40a***	99999X / Low Cost Modifications (Reliability & Maintainability)				- / 10.350	- / 1.990	- / 1.990	- / 1.990	- / -	- / 1.990
P-3a	3411 / Survivable SHF (Capability Improvement)		B		- / -	- / 0.000	- / 0.000	- / 14.663	- / 0.000	- / 14.663
P-3a	1 / AEHF Compatible Terminal/PNVC (Capability Improvement)		B		- / 0.017	- / 8.107	- / 3.472	- / 13.986	- / 0.000	- / 13.986
P-3a	4409 / Low Frequency Transmit System (LFTS) (Capability Improvement)		B		- / 36.954	- / 41.281	- / 41.748	- / 20.039	- / 0.000	- / 20.039
P-3a	2 / SERVICE BULLETINS (Reliability & Maintainability)		B		- / 25.523	- / 5.480	- / 5.567	- / 5.726	- / 0.000	- / 5.726
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 194.640</b>	<b>- / 67.858</b>	<b>- / 58.477</b>	<b>- / 58.803</b>	<b>- / -</b>	<b>- / 58.803</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	3410 / NPES (NC2AIS) E-4B (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / 2.730
P-40a***	4380 / MUOS (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 8.099
P-40a***	4406A / SHF Modernization (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 120.088
P-40a***	9709F / CNS/ATM(ADS-B OUT) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 9.978
P-40a***	99999X / Low Cost Modifications (Reliability & Maintainability)				- / 1.990	- / 1.990	- / 1.990	- / 1.990	- / -	- / 24.280
P-3a	3411 / Survivable SHF (Capability Improvement)		B		- / 29.696	- / 29.706	- / 30.241	- / 30.794	- / -	- / 135.100
P-3a	1 / AEHF Compatible Terminal/PNVC (Capability Improvement)		B		- / 14.651	- / 1.078	- / 2.742	- / 2.792	- / -	- / 46.845
P-3a	4409 / Low Frequency Transmit System (LFTS) (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 140.022
P-3a	2 / SERVICE BULLETINS (Reliability & Maintainability)		B		- / 5.903	- / 6.043	- / 6.187	- / 6.337	- / 0.000	- / 66.766
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 52.240</b>	<b>- / 38.817</b>	<b>- / 41.160</b>	<b>- / 41.913</b>	<b>- / 0.000</b>	<b>- / 553.908</b>

\*\*\* Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

\*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:**  
This program, P-3A Mod 3411, Survivable SHF, is a new start.

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> E00400 / E-4	<b>Modification Number / Title:</b> 3411 / Survivable SHF

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	0.000	0.000	14.663	0.000	14.663	29.696	29.706	30.241	30.794	-	135.100
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	0.000	0.000	14.663	0.000	14.663	29.696	29.706	30.241	30.794	-	135.100
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	-	<b>0.000</b>	<b>0.000</b>	<b>14.663</b>	<b>0.000</b>	<b>14.663</b>	<b>29.696</b>	<b>29.706</b>	<b>30.241</b>	<b>30.794</b>	-	<b>135.100</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This program, P-3A Mod 3411, Survivable SHF, is a new start.

The Survivable Super High Frequency (SSHF) program addresses reliability and maintainability issues currently experienced by the E-4B Jam-Resistant Secure Communications (JRSC) system. The modification replaces the legacy High Power Amplifier (HPA), SHF antenna system, and modem that have been on the E-4B for over 30 years. The system provides a protected SHF link in support of National Leadership Command Capability (NLCC) National & Nuclear Command, Control, and Communications (N2C3) voice and data services. SSHF enables operation in jamming, scintillation, and other threat scenarios. System replacement is required to meet Presidential Policy Directive (PPD)-35 and the E-4B National Airborne Operations Center (NAOC) Capability Development Document (CDD), ensuring there is constant and consistent connectivity between National Leadership and Military Forces in all phases of conflict. The SSHF program has associated Research Development Test and Evaluation funding (PE 0302015F) that will modify one prototype aircraft. APAF will fund the remaining three aircraft.

This funding may include emerging modification requirements to support PMA, A&AS, equipment and other government cost.

**Milestone/Development Status**

Approved as Section 804 Middle Tier Acquisition in April 2019. A risk-reduction study was completed in FY2019 to help further define the acquisition strategy of the SSHF modernization program. The program will be acquired in 2 phases: Phase 1 will include technical solutions such as upgrading the existing modems, systems integration lab, and Ka-band system. Phase 2 will include new modem technology, new Ku-band system, common workstation, and upgrades to the X-band system.

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date: February 2020</b>			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> E00400 / E-4					<b>Modification Number / Title:</b> 3411 / Survivable SHF			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> E-4B				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0302015F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0302015F	- / -	- / 2.089	1 / 55.086	- / 3.473	- / -	- / 3.473	- / -	- / -	- / -	- / -	- / -	1 / 60.648	
<b>Procurement</b>													
<b>Modification Item 1 of 2: A</b>													
A Kits													
Recurring													
A:INSTALL KITS Group A (Active)													
	- / -	- / -	- / -	1 / 2.060	- / -	1 / 2.060	1 / 2.122	1 / 2.185	- / -	- / -	- / -	3 / 6.367	
<i>Subtotal: Recurring</i>													
	- / -	- / -	- / -	- / 2.060	- / -	- / 2.060	- / 2.122	- / 2.185	- / -	- / -	- / -	- / 6.367	
<i>Subtotal: A</i>													
	- / -	- / -	- / -	- / 2.060	- / -	- / 2.060	- / 2.122	- / 2.185	- / -	- / -	- / -	- / 6.367	
<b>Modification Item 2 of 2: COMMON: B</b>													
B Kits													
Recurring													
COMMON: B:EQUIPMENT Group B (Active)													
	- / -	- / -	- / -	1 / 3.605	- / -	1 / 3.605	1 / 3.713	1 / 3.825	- / -	- / -	- / -	3 / 11.143	
<i>Subtotal: Recurring</i>													
	- / -	- / -	- / -	- / 3.605	- / -	- / 3.605	- / 3.713	- / 3.825	- / -	- / -	- / -	- / 11.143	
<i>Subtotal: COMMON: B</i>													
	- / -	- / -	- / -	- / 3.605	- / -	- / 3.605	- / 3.713	- / 3.825	- / -	- / -	- / -	- / 11.143	
<i>Subtotal: Procurement, All Modification Items</i>													
	- / -	- / -	- / -	- / 5.665	- / -	- / 5.665	- / 5.835	- / 6.010	- / -	- / -	- / -	- / 17.510	
<b>Support (All Modification Items)</b>													
Data													
	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.000	- / 1.118	- / -	- / -	- / 3.118	
A&AS													
	- / -	- / -	- / -	- / 2.000	- / -	- / 2.000	- / 1.947	- / 1.962	- / -	- / -	- / -	- / 5.909	
PMA - Other Gov't Costs													
	- / -	- / -	- / -	- / 1.561	- / -	- / 1.561	- / 0.696	- / 1.167	- / 29.123	- / 30.794	- / -	- / 63.341	
SUPPORT-EQUIP													
	- / -	- / -	- / -	- / 2.990	- / -	- / 2.990	- / -	- / 4.990	- / -	- / -	- / -	- / 7.980	
Change Orders													
	- / -	- / -	- / -	- / 2.447	- / -	- / 2.447	- / -	- / 2.650	- / -	- / -	- / -	- / 5.097	
<i>Subtotal: Support</i>													
	- / -	- / -	- / -	- / 8.998	- / -	- / 8.998	- / 2.643	- / 12.769	- / 30.241	- / 30.794	- / -	- / 85.445	
<b>Installation</b>													
<b>Modification Item 1 of 2: A</b>													
	- / -	- / -	- / -	- / -	- / -	- / -	2 / 21.218	1 / 10.927	- / -	- / -	- / -	3 / 32.145	
<i>Subtotal: Installation</i>													
	- / -	- / -	- / -	- / -	- / -	- / -	2 / 21.218	1 / 10.927	- / -	- / -	- / -	3 / 32.145	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	-	0.000	0.000	14.663	0.000	14.663	29.696	29.706	30.241	30.794	-	135.100	

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> E00400 / E-4	<b>Modification Number / Title:</b> 3411 / Survivable SHF

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 2: A**

**Manufacturer Information**

Manufacturer Name: L-3	Manufacturer Location: Salt Lake City
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 4

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Jun 2021	Dec 2021	Oct 2022		
Delivery Dates			Oct 2021	Apr 2022	Feb 2023		

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	1 / 10.609	- / -	- / -	- / -	- / -	1 / 10.609
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	1 / 10.609	- / -	- / -	- / -	- / -	1 / 10.609
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 10.927	- / -	- / -	- / -	1 / 10.927
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	2 / 21.218	1 / 10.927	- / -	- / -	- / -	3 / 32.145

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	0	3
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	0	3

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> E00400 / E-4			<b>Modification Number / Title:</b> 3411 / Survivable SHF	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 2 of 2:</b> COMMON: B							
<b>Manufacturer Information</b>							
Manufacturer Name: N/A				Manufacturer Location: N/A			
Administrative Leadtime (in Months):				Production Leadtime (in Months):			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 0		

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> E00400 / E-4	<b>Modification Number / Title:</b> 1 / AEHF Compatible Terminal/PNVC

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	0.017	8.107	3.472	13.986	0.000	13.986	14.651	1.078	2.742	2.792	-	46.845
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	0.017	8.107	3.472	13.986	0.000	13.986	14.651	1.078	2.742	2.792	-	46.845
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>0.017</b>	<b>8.107</b>	<b>3.472</b>	<b>13.986</b>	<b>0.000</b>	<b>13.986</b>	<b>14.651</b>	<b>1.078</b>	<b>2.742</b>	<b>2.792</b>	-	<b>46.845</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This modification will install a Family of Beyond-Line-Of-Sight Terminals (FAB-T) / Presidential National Voice Conferencing (PNVC) system and will remove the currently installed Military Strategic Tactical Relay (MILSTAR) / Survivable Emergency Conferencing Network (SECN) systems. This modification is required to meet existing Presidential Policy Directive (PPD)-35, and National Security Presidential Directive (NSPD)-51/Homeland Security Presidential Directive (HSPD)-20 requirements and to ensure continued connectivity and interoperability as satellite and communications infrastructure evolves. FAB-T Command Post Terminals will replace the MILSTAR Terminal and will provide access to protected wideband Advanced Extremely High Frequency (AEHF) satellite networks. PNVC replaces SECN, which will not be supported once the AEHF satellite network is in place.

This funding may include emerging modification requirements to support PMA, A&AS, equipment and other government cost.

**Milestone/Development Status**

Milestone B occurred in November 2016 and the Systems Requirements Review (SRR) occurred in June 2017, the Preliminary Design Review (PDR) occurred in May 2018 and the Critical Design Review (CDR) occurred in 4QTR FY18. Two prototype kits funded with FY16 RDT&E. Will purchase second production kit with FY20 procurement funding and install with FY22 funds due to a 16-month lead-time. Other efforts will include integration and support activities and logistics planning.

Milestone C will occur 4Q FY20.

Note: Initial FY19 production kit reflects a higher cost based on procurement of one FAB-T kit and two PNVC kits. FY20 production kit reflects procurement of one FAB-T kit and zero PNVC kits. Justification based on economic buy for the PNVC kit in FY19.

Note: FY23-25 funds will be for retrofits of the prototype kits when FAB-T antennas become available.

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> E00400 / E-4					<b>Modification Number / Title:</b> 1 / AEHF Compatible Terminal/PNVC			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> E-4B				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0302015F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0302015F	2 / 48.030	- / 24.337	- / 15.087	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 87.454	
<b>Procurement</b>													
<i>Modification Item 1 of 1: AEHF Initial Kits</i>													
A Kits													
Recurring													
AEHF Initial Kits:INSTALL KITS Group A (Active)	- / -	1 / 7.607	1 / 2.972	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 10.579	
<i>Subtotal: Recurring</i>	- / -	- / 7.607	- / 2.972	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.579	
<i>Subtotal: AEHF Initial Kits</i>	- / -	- / 7.607	- / 2.972	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.579	
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / 7.607	- / 2.972	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.579	
<b>Support (All Modification Items)</b>													
Change Orders	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.078	- / 2.742	- / -	- / -	- / 3.820	
PMA - Other Gov't Costs	- / 0.017	- / 0.500	- / 0.500	- / 0.495	- / -	- / 0.495	- / -	- / -	- / -	- / 2.792	- / -	- / 4.304	
<i>Subtotal: Support</i>	- / 0.017	- / 0.500	- / 0.500	- / 0.495	- / -	- / 0.495	- / -	- / 1.078	- / 2.742	- / 2.792	- / -	- / 8.124	
<b>Installation</b>													
<i>Modification Item 1 of 1: AEHF Initial Kits</i>	- / -	- / -	- / -	1 / 13.491	- / -	1 / 13.491	1 / 14.651	- / -	- / -	- / -	- / -	2 / 28.142	
<i>Subtotal: Installation</i>	- / -	- / -	- / -	1 / 13.491	- / -	1 / 13.491	1 / 14.651	- / -	- / -	- / -	- / -	2 / 28.142	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>0.017</b>	<b>8.107</b>	<b>3.472</b>	<b>13.986</b>	<b>0.000</b>	<b>13.986</b>	<b>14.651</b>	<b>1.078</b>	<b>2.742</b>	<b>2.792</b>	<b>-</b>	<b>46.845</b>	



**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> E00400 / E-4	<b>Modification Number / Title:</b> 1 / AEHF Compatible Terminal/PNVC

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** AEHF Initial Kits

**Manufacturer Information**

Manufacturer Name: Raytheon	Manufacturer Location: Largo, FL
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 16

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jun 2019	Jun 2020					
Delivery Dates	Oct 2020	Oct 2021					

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	1 / 13.491	- / -	1 / 13.491	- / -	- / -	- / -	- / -	- / -	1 / 13.491
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	1 / 14.651	- / -	- / -	- / -	- / -	1 / 14.651
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	1 / 13.491	- / -	1 / 13.491	1 / 14.651	- / -	- / -	- / -	- / -	2 / 28.142

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	2
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	0	2

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> E00400 / E-4	<b>Modification Number / Title:</b> 4409 / Low Frequency Transmit System (LFTS)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	36.954	41.281	41.748	20.039	0.000	20.039	0.000	0.000	0.000	0.000	0.000	140.022
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	36.954	41.281	41.748	20.039	0.000	20.039	0.000	0.000	0.000	0.000	0.000	140.022
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>36.954</b>	<b>41.281</b>	<b>41.748</b>	<b>20.039</b>	<b>0.000</b>	<b>20.039</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>140.022</b>

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

Initial Spares ( <i>\$ in Millions</i> )	5.668	0.734	-	-	-	-	-	-	-	-	-	6.402
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The Low Frequency Transmit System (LFTS) program will replace the current Very Low Frequency/Low Frequency (VLF/LF) Transmit system on the four aircraft E-4B fleet. The current system has been on the E-4B for over 35 years and is unsustainable. System replacement is required in order to meet existing Presidential Policy Directive (PPD)-35 requirements and ensure there is constant and consistent connectivity between National Leadership and Military Forces in all phases on conflict. The E-4B National Airborne Operations Center (NAOC) Capability Development Document (CDD) is the relevant requirements document with the LF requirement revalidated in Oct 2013 for LFTS. The Air Force Requirements for Oversight Council (AFROC) approved AF1067 is ACC 13-059. LFTS will consist of three primary equipment groups: a Power Amplifier/Coupler (PA/C) group, a Trailing Wire Antenna (TWA) group, and a Control group.

This funding may include emerging modification requirements to support PMA, A&AS, equipment and other government cost.

**Milestone/Development Status**

Milestone B and the Systems Requirements Review (SRR) occurred in February 2015. The Preliminary Design Review (PDR) completed in October 2015 and the Critical Design Review (CDR) completed in March 2016. FY16 and FY17 RDT&E utilized for the prototype kit. Prototype installation occurred during the Programmed Depot Maintenance (PDM) inducting November 2017 and funded with FY18 and FY19 RDT&E. The first production kit purchased with FY17 procurement funding and installed with FY19 funds due to an 18-month lead-time. The second production kit purchased with FY17 and FY18 funds with installation utilizing FY20 funds. The LFTS Trainer will be funded with FY20 funds. Other efforts will include integration and support activities and logistics planning. Second aircraft complete in FY20 meeting IOC requirement.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> E00400 / E-4					<b>Modification Number / Title:</b> 4409 / Low Frequency Transmit System (LFTS)				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>							
<b>Models of Systems Affected:</b> E-4B				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0302015F						
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>														
0302015F	1 / 118.622	- / 24.575	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 143.197		
<b>Procurement</b>														
<i>Modification Item 1 of 1: LFTS Baseline Kit</i>														
A Kits														
Recurring														
LFTS Baseline Kit:INSTALL KITS Group A (Active)	2 / 36.154	1 / 17.610	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 53.764		
<i>Subtotal: Recurring</i>	- / 36.154	- / 17.610	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 53.764		
<i>Subtotal: LFTS Baseline Kit</i>	- / 36.154	- / 17.610	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 53.764		
<i>Subtotal: Procurement, All Modification Items</i>	- / 36.154	- / 17.610	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 53.764		
<b>Support (All Modification Items)</b>														
SIM/TRAINER	- / -	- / -	1 / 19.600	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 19.600		
PMA - Other Gov't Costs	- / 0.800	- / 0.400	- / 0.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.600		
<i>Subtotal: Support</i>	- / 0.800	- / 0.400	1 / 20.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 21.200		
<b>Installation</b>														
<i>Modification Item 1 of 1: LFTS Baseline Kit</i>	- / -	1 / 23.271	1 / 21.748	1 / 20.039	- / -	1 / 20.039	- / -	- / -	- / -	- / -	- / -	3 / 65.058		
<i>Subtotal: Installation</i>	- / -	1 / 23.271	1 / 21.748	1 / 20.039	- / -	1 / 20.039	- / -	- / -	- / -	- / -	- / -	3 / 65.058		
<b>Total</b>														
<b>Total Cost (Procurement + Support + Installation)</b>	<b>36.954</b>	<b>41.281</b>	<b>41.748</b>	<b>20.039</b>	<b>0.000</b>	<b>20.039</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>140.022</b>		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> E00400 / E-4	<b>Modification Number / Title:</b> 4409 / Low Frequency Transmit System (LFTS)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** LFTS Baseline Kit

**Manufacturer Information**

Manufacturer Name: Boeing	Manufacturer Location: Oklahoma City
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 18

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	May 2019						
Delivery Dates	Nov 2020						

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 / 23.271	1 / 21.748	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 45.019
FY 2019	- / -	- / -	- / -	1 / 20.039	- / -	1 / 20.039	- / -	- / -	- / -	- / -	- / -	1 / 20.039
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	1 / 23.271	1 / 21.748	1 / 20.039	- / -	1 / 20.039	- / -	- / -	- / -	- / -	- / -	3 / 65.058

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	1	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	3
Out	0	-	-	-	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	0	3

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force	<b>Date:</b> February 2020
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<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> E00400 / E-4	<b>Modification Number / Title:</b> 2 / SERVICE BULLETINS
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	25.523	5.480	5.567	5.726	0.000	5.726	5.903	6.043	6.187	6.337	0.000	66.766
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	25.523	5.480	5.567	5.726	0.000	5.726	5.903	6.043	6.187	6.337	0.000	66.766
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority <i>(\$ in Millions)</i></b>	<b>25.523</b>	<b>5.480</b>	<b>5.567</b>	<b>5.726</b>	<b>0.000</b>	<b>5.726</b>	<b>5.903</b>	<b>6.043</b>	<b>6.187</b>	<b>6.337</b>	<b>0.000</b>	<b>66.766</b>

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

Initial Spares <i>(\$ in Millions)</i>	0.325	0.327	0.332	0.339	-	0.339	0.346	0.352	0.358	0.365	-	2.744
Gross/Weapon System Unit Cost <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Funds are required to complete Service Bulletins in order to maintain compliance with FAA standards and certification. Service Bulletins affect the safety, maintenance, and reliability for the aircraft, engines, and associated mission equipment. The funding profile and installation timeline is driven by Service Bulletin due date and aircraft availability.

**Milestone/Development Status**

None

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date: February 2020</b>			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> E00400 / E-4					<b>Modification Number / Title:</b> 2 / SERVICE BULLETINS			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> E-4B				<b>Modification Type:</b> Reliability & Maintainability				<b>Related RDT&amp;E PEs:</b> 0302015F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1: Service Support Deliverables</i>													
A Kits													
Recurring													
Service Support Deliverables:INSTALL KITS Group A (Active)	14 / 16.707	2 / 2.610	2 / 2.652	2 / 2.731	- / -	2 / 2.731	2 / 2.694	2 / 2.809	2 / 2.938	2 / 3.137	- / -	28 / 36.278	
<i>Subtotal: Recurring</i>	- / 16.707	- / 2.610	- / 2.652	- / 2.731	- / -	- / 2.731	- / 2.694	- / 2.809	- / 2.938	- / 3.137	- / -	- / 36.278	
<i>Subtotal: Service Support Deliverables</i>	- / 16.707	- / 2.610	- / 2.652	- / 2.731	- / -	- / 2.731	- / 2.694	- / 2.809	- / 2.938	- / 3.137	- / -	- / 36.278	
<i>Subtotal: Procurement, All Modification Items</i>	- / 16.707	- / 2.610	- / 2.652	- / 2.731	- / -	- / 2.731	- / 2.694	- / 2.809	- / 2.938	- / 3.137	- / -	- / 36.278	
<b>Support (All Modification Items)</b>													
SUPPORT-EQUIP	- / 2.200	- / 0.030	- / 0.020	- / 0.052	- / -	- / 0.052	- / 0.032	- / 0.044	- / 0.054	- / -	- / -	- / 2.432	
A&AS	- / 0.435	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.435	
<i>Subtotal: Support</i>	- / 2.635	- / 0.030	- / 0.020	- / 0.052	- / -	- / 0.052	- / 0.032	- / 0.044	- / 0.054	- / -	- / -	- / 2.867	
<b>Installation</b>													
<i>Modification Item 1 of 1: Service Support Deliverables</i>	14 / 6.181	2 / 2.840	2 / 2.895	2 / 2.943	- / -	2 / 2.943	2 / 3.177	2 / 3.190	2 / 3.195	2 / 3.200	- / -	28 / 27.621	
<i>Subtotal: Installation</i>	14 / 6.181	2 / 2.840	2 / 2.895	2 / 2.943	- / -	2 / 2.943	2 / 3.177	2 / 3.190	2 / 3.195	2 / 3.200	- / -	28 / 27.621	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>25.523</b>	<b>5.480</b>	<b>5.567</b>	<b>5.726</b>	<b>0.000</b>	<b>5.726</b>	<b>5.903</b>	<b>6.043</b>	<b>6.187</b>	<b>6.337</b>	<b>0.000</b>	<b>66.766</b>	

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**Exhibit P-3a, Individual Modification: PB 2021 Air Force** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> E00400 / E-4	<b>Modification Number / Title:</b> 2 / SERVICE BULLETINS
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**ID Code** (A=Service Ready, B=Not Service Ready) : B **MDAP/MAIS Code:**

**Modification Item 1 of 1:** Service Support Deliverables

**Manufacturer Information**

Manufacturer Name: Boeing	Manufacturer Location: San Antonio, TX
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 4

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jan 2019	Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024	Jan 2025
Delivery Dates	May 2019	May 2020	May 2021	May 2022	May 2023	May 2024	May 2025

**Installation Information**

**Method of Implementation:** Depot Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	14 / 6.181	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 6.181
FY 2019	- / -	2 / 2.840	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.840
FY 2020	- / -	- / -	2 / 2.895	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.895
FY 2021	- / -	- / -	- / -	2 / 2.943	- / -	2 / 2.943	- / -	- / -	- / -	- / -	- / -	2 / 2.943
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	2 / 3.177	0 / 0.000	- / -	- / -	- / -	2 / 3.177
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 3.190	- / -	- / -	- / -	2 / 3.190
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 3.195	- / -	- / -	2 / 3.195
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 3.200	- / -	2 / 3.200
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	14 / 6.181	2 / 2.840	2 / 2.895	2 / 2.943	- / -	2 / 2.943	2 / 3.177	2 / 3.190	2 / 3.195	2 / 3.200	- / -	28 / 27.621

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	-	-	2	-	-	-	2	-	-	-	2	-	-	-	2	-	-	-	2	-	-	-	2	-	-	-	2	-	0	28
Out	14	-	-	-	2	-	-	-	2	-	-	-	2	-	-	-	2	-	-	-	2	-	-	-	2	-	-	-	2	0	28

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	<b>P-1 Line Item Number / Title:</b> E00800 / E-8
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ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0207581F	Other Related Program Elements: N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	0.000	37.807	48.778	11.037	0.000	11.037	31.190	19.364	7.601	43.561	-	199.338
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	0.000	37.807	48.778	11.037	0.000	11.037	31.190	19.364	7.601	43.561	-	199.338
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>0.000</b>	<b>37.807</b>	<b>48.778</b>	<b>11.037</b>	<b>0.000</b>	<b>11.037</b>	<b>31.190</b>	<b>19.364</b>	<b>7.601</b>	<b>43.561</b>	<b>-</b>	<b>199.338</b>

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

**Description:**

This line item funds modifications to the E-8C Joint Surveillance Target Attack Radar System (JSTARS) aircraft through FY 2025. JSTARS was developed for ground surveillance, targeting, and battle management. The E-8C is a modified Boeing 707-300 airframe that provides a unique blend of Battle Management Command and Control (BMC2) and Intelligence, Surveillance, and Reconnaissance (ISR). Air Battle Managers onboard the JSTARS use its wide area ground surveillance radar to build situational awareness and identify targets which are passed to strike assets or crossed cued with ISR platforms. The capability to perform this dual mission at the tactical edge both reduces the time to execute the kill chain and improves ISR collections across the range of military options.

There are 16 E-8Cs in inventory plus 1 E-8A trainer.

Funding may be used to address other general modernization and/or sustainment related requirements such as but not limited to: Diminishing Manufacturing Sources (DMS), technical refresh of hardware or software, aviation and security mandates, or safety of flight requirements. Additionally, funds may be used to procure items associated with UONs or rapid acquisition/fielding requirements in support of combat mission related requirements, MUOS-SATURN, MIDS-JTRS (CMS-4), Blue Force Tracker, and JSTARS Radar Modernization (JSRM).

**FY2019:**

- PME/DMS completed last modification on A/C #16
- ELT delivered 17 kits and installed 7
- Provided other Program Office direct cost associated with executing programs

**FY2020:**

- DMOC contract to be awarded
- BE-CDL contract to be awarded
- Provide other Program Office direct cost associated with executing programs
- Congress added \$20M for re-engining effort MOD# 38207 (FY 20 NDAA line 058)

**FY2021**

- BE-CDL continues procurement of kits / installs

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft		<b>P-1 Line Item Number / Title:</b> E00800 / E-8

<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B	<b>Program Elements for Code B Items:</b> 0207581F	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

- SATCOM/MUOS radios MOD#38206. This is a new start effort.
- Provide other Program Office direct cost associated with executing programs

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	24.807	48.778	11.037	0.000	11.037	31.190	19.364	7.601	43.561
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	13.000	0.000	0.000	-	0.000	-	-	-	-
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>37.807</b>	<b>48.778</b>	<b>11.037</b>	<b>0.000</b>	<b>11.037</b>	<b>31.190</b>	<b>19.364</b>	<b>7.601</b>	<b>43.561</b>

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

**P-1 Line Item Number / Title:**  
E00800 / E-8

**ID Code** (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** 0207581F **Other Related Program Elements:** N/A

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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***	38202 / Common Data Link (Other)				- / -	- / 24.807	- / 23.778	- / 3.436	- / -	- / 3.436
P-40a***	38203 / Distributed Mission Ops Center (DMOC) (Other)				- / -	- / -	- / 5.000	- / 0.000	- / -	- / 0.000
P-40a***	38204 / JSTARS OCO Requirements (Other)				- / -	- / 13.000	- / 0.000	- / 0.000	- / -	- / 0.000
P-40a***	38207 / JSTARS Re-engining (Reliability & Maintainability)				- / -	- / -	- / 20.000	- / 0.000	- / -	- / 0.000
P-3a	38206 / SATCOM/MUOS Radios (Capability Improvement)		B		- / -	- / -	- / -	- / 7.601	- / 0.000	- / 7.601
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 0.000</b>	<b>- / 37.807</b>	<b>- / 48.778</b>	<b>- / 11.037</b>	<b>- / 0.000</b>	<b>- / 11.037</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	38202 / Common Data Link (Other)				- / 23.589	- / 11.763	- / -	- / 35.960	- / -	- / 123.333
P-40a***	38203 / Distributed Mission Ops Center (DMOC) (Other)				- / -	- / -	- / -	- / -	- / -	- / 5.000
P-40a***	38204 / JSTARS OCO Requirements (Other)				- / -	- / -	- / -	- / -	- / -	- / 13.000
P-40a***	38207 / JSTARS Re-engining (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / 20.000
P-3a	38206 / SATCOM/MUOS Radios (Capability Improvement)		B		- / 7.601	- / 7.601	- / 7.601	- / 7.601	- / -	- / 38.005
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 31.190</b>	<b>- / 19.364</b>	<b>- / 7.601</b>	<b>- / 43.561</b>	<b>- / -</b>	<b>- / 199.338</b>

\*\*\* Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

\*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:**  
This program, P-3A Mod 38206, SATCOM/MUOS Radios, is a new start.  
This program, P-3A Mod 38207, JSTARS Re-engining , is a new start.

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> E00800 / E-8	<b>Modification Number / Title:</b> 38206 / SATCOM/MUOS Radios

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	-	-	7.601	0.000	7.601	7.601	7.601	7.601	7.601	-	38.005
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	-	-	7.601	0.000	7.601	7.601	7.601	7.601	7.601	-	38.005
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	-	-	-	<b>7.601</b>	<b>0.000</b>	<b>7.601</b>	<b>7.601</b>	<b>7.601</b>	<b>7.601</b>	<b>7.601</b>	-	<b>38.005</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This program, P-3A Mod 38206, SATCOM/MUOS Radios, is a new start.

Replace current radios & associated filters, amps, and any associated software/hardware required to satisfy MUOS/SATURN requirements. This is in accordance with CJCSI 6251.01D

**Milestone/Development Status**

Development required but currently unfunded.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	7.601	0.000	7.601	7.601	7.601	7.601	7.601
<b>Total:</b> Secondary Distribution	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	-	-	<b>7.601</b>	<b>0.000</b>	<b>7.601</b>	<b>7.601</b>	<b>7.601</b>	<b>7.601</b>	<b>7.601</b>

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> E00800 / E-8					<b>Modification Number / Title:</b> 38206 / SATCOM/MUOS Radios			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> E-8C				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b>					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> SATCOM/MUOS Radios													
B Kits													
Recurring													
SATCOM/MUOS Radios:EQUIPMENT Group B (Active)	- / -	- / -	- / -	2 / 7.601	- / -	2 / 7.601	2 / 7.601	2 / 7.601	2 / 7.601	2 / 7.601	- / -	10 / 38.005	
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / 7.601	- / -	- / 7.601	- / 7.601	- / 7.601	- / 7.601	- / 7.601	- / -	- / 38.005	
<i>Subtotal: SATCOM/MUOS Radios</i>	- / -	- / -	- / -	- / 7.601	- / -	- / 7.601	- / 7.601	- / 7.601	- / 7.601	- / 7.601	- / -	- / 38.005	
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / -	- / -	- / 7.601	- / -	- / 7.601	- / 7.601	- / 7.601	- / 7.601	- / 7.601	- / -	- / 38.005	
<b>Support (All Modification Items)</b>													
GROUP B: TOTAL NONRECURRING	- / -	- / -	- / -	- / -	- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / -	- / -	- / 0.000	
<i>Subtotal: Support</i>	- / -	- / -	- / -	- / -	- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / -	- / -	- / 0.000	
<b>Installation</b>													
<i>Modification Item 1 of 1:</i> SATCOM/MUOS Radios	- / -	- / -	- / -	2 / 0.000	- / -	2 / 0.000	2 / 0.000	2 / 0.000	2 / 0.000	2 / 0.000	- / -	10 / 0.000	
<i>Subtotal: Installation</i>	- / -	- / -	- / -	2 / 0.000	- / -	2 / 0.000	2 / 0.000	2 / 0.000	2 / 0.000	2 / 0.000	- / -	10 / 0.000	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	-	-	-	7.601	0.000	7.601	7.601	7.601	7.601	7.601	-	38.005	

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> E00800 / E-8	<b>Modification Number / Title:</b> 38206 / SATCOM/MUOS Radios
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**ID Code** (A=Service Ready, B=Not Service Ready) : B **MDAP/MAIS Code:**

**Modification Item 1 of 1:** SATCOM/MUOS Radios

**Manufacturer Information**

Manufacturer Name: Northrop Grumman	Manufacturer Location: Melbourne FL.
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Feb 2021	Feb 2022	Feb 2023	Feb 2024	Feb 2025
Delivery Dates			Aug 2021	Aug 2022	Aug 2023	Aug 2024	Aug 2025

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	2 / 0.000	- / -	2 / 0.000	- / -	- / -	- / -	- / -	- / -	2 / 0.000
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.000	- / -	- / -	- / -	- / -	2 / 0.000
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.000	- / -	- / -	- / -	2 / 0.000
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.000	- / -	- / -	2 / 0.000
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.000	- / -	2 / 0.000
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	- / -	- / -	- / -	2 / 0.000	- / -	2 / 0.000	2 / 0.000	2 / 0.000	2 / 0.000	2 / 0.000	- / -	10 / 0.000

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	-	2	-	-	-	2	-	-	-	2	-	-	-	2	-	-	-	2	-	-	0	10
Out	0	-	-	-	-	-	-	-	-	-	-	2	-	-	-	2	-	-	-	2	-	-	-	2	-	-	-	2	-	0	10

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	<b>P-1 Line Item Number / Title:</b> E34045 / Airborne Warning and Cntrl Sys (AWACS) 40/45
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0207417F	Other Related Program Elements: 0207417F
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**Line Item MDAP/MAIS Code:** 277

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	742.595	69.280	32.821	53.343	-	53.343	42.412	0.000	0.000	0.000	0.000	940.451
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	0.000	0.000
Net Procurement (P-1) ( <i>\$ in Millions</i> )	742.595	69.280	32.821	53.343	-	53.343	42.412	0.000	0.000	0.000	0.000	940.451
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	0.000	0.000
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>742.595</b>	<b>69.280</b>	<b>32.821</b>	<b>53.343</b>	<b>-</b>	<b>53.343</b>	<b>42.412</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>940.451</b>

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

Initial Spares ( <i>\$ in Millions</i> )	4.492	3.174	3.226	3.282	-	3.282	-	-	-	-	-	14.174
Flyaway Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The Airborne Warning and Control System (AWACS) provides a highly mobile, flexible, survivable theater Battle Management (BM), Wide Area Surveillance, and Command and Control (C2) capability. It is capable of detecting, identifying, and tracking airborne and maritime targets at extended ranges as well as identifying air/ground emitters. AWACS can relay "big picture information to C2 agencies and friendly aircraft. AWACS provides worldwide response to situations requiring immediate on-scene C2/BM using embedded real-time surveillance for employment of US and allied combat air forces. AWACS is critical to gaining and maintaining battle-space air superiority. AWACS coordinates with both tactical and C2 assets in theater to execute the air mission. The AWACS Block 40/45 Upgrade program is the largest modification in U.S. AWACS history and represents the critical foundation and baseline system required for all future AWACS enterprise modifications including net-centric operations. The AWACS Block 40/45 Upgrade provides a single target/single track capability with an improved human-machine interface for time-critical targeting designed to increase combat effectiveness and reduce fratricide. The AWACS Block 40/45 Upgrade program includes an upgrade to Electronic Support Measures sensor data processing; Multi-Source Integration; a Data Link Infrastructure with prioritized data link bandwidth management for Link 16/Link 11; new battle management tools; capability to parse, allow user access to, and integrate Air Control Order/Air Tasking Order data; enhanced mission and console recording capabilities; and an update to a low-bandwidth internet chat capability (Secure Iridium Chat).

Low Rate Initial Production (LRIP) was approved for six (6) aircraft in November 2008 [one (1) buy in FY2009, two (2) buys in FY2010, and three (3) buys in FY2012]. The Block 40/45 Full Rate Production was approved in November 2012 for the remaining twenty five (25) aircraft and technology refresh of the six (6) LRIP aircraft; the corresponding production contract was awarded on 27 December 2012. The FY2015 President's budget reduced the AWACS inventory of 31 aircraft to 24 and funding for Block 40/45 Full Rate Production to 24 aircraft. Budgetary actions in FY2017-FY2019 have restored the required funding for 31 aircraft. The program awarded an undefinitized contract action in FY2019 to procure remaining Block 40/45 production kits to be used to modify the seven (7) remaining Block 30/35 aircrafts and is currently in the process of awarding a contract to procure production kits to update version 3.0 aircraft to version 4.0, and provide contractor shipside and engineering support for modifications. Additionally, the Program Office will provide updates to fielded ground support systems and provide systems to support organic software maintenance.

In FY2013, the program office began Depot Activation activities to comply with Sources of Repair Assignment Program (SORAP) 09-063 that mandates organic hardware and software maintenance. In December 2015 the Government awarded a contract to fully implement an organic software maintenance facility for aircraft and ground systems at the 558th Software Engineering Squadron by FY 2020 and will continue adding capability in FY 2021. Depot activation of select components and implementation of a Performance Based Logistics (PBL) strategy recommended by our Product Support Business Case Analysis are in work.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft		<b>P-1 Line Item Number / Title:</b> E34045 / Airborne Warning and Cntrl Sys (AWACS) 40/45
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> 0207417F	<b>Other Related Program Elements:</b> 0207417F
<b>Line Item MDAP/MAIS Code:</b> 277		
<p>The Program will continue to meet emerging cyber security and system integration requirements and maintain fielded aircraft by transitioning from Interim Contractor Support (ICS) to two long-term PBL Contractor Logistics Support (CLS) contracts to be awarded in FY2020. The program will continue to support the 552nd ACW and field support infrastructure at the 962nd Air Control Squadron at Joint Base Elmendorf- Richardson, AK and the 961st Air Control Squadron at Kadena AFB, Japan.</p> <p>Funding for this modification had previously been contained in Weapon System Code (WSC) E00300, but as part of OSD's Major Programs Transparency Initiative and starting in FY2015, the AWACS Block 40/45 Upgrade (MDAP) was moved to WSC E34045. Prior year funding and associated quantities remains in WSC E00300.</p> <p>FY2021 Plan: Program continues to complete block modification upgrades to the 40/45 configuration (E-3G). Four (4) Block 30/35 aircraft (P24, P25, P26, and P27) will be inducted to be retrofitted to the Block 40/45 DMS 4.0 baseline configuration. The Program will also induct four (4) older DMS variant aircraft (L4, L5, P10, and P11) for modification to the 40/45 DMS 4.0 baseline configuration. The one (1) aircraft that began modification from Block 30/35 to Block 40/45 in FY2020 (P23) will be delivered to the 552nd Air Control Wing (ACW) at Tinker AFB, OK in FY2021, bringing the total 40/45 (E-3G) configured aircraft to twenty-three (23). Additionally, six (6) older DMS variant aircraft (L4, L5, L6, P7, P8, and P9) will be converted to the latest 40/45 DMS 4.0 baseline configuration in FY21. The program will also install the Mission Crew Trainer Set (MCTS) procured in FY2020 at the Distributed Mission Operations Center and install the MCTS at the Virtual Test and Training Center. The Program will continue to meet emerging cyber security and system integration requirements and continue executing a Performance Based Logistics contract to maintain fielded aircraft and ground support systems. The program will continue to support the 552nd ACW and field support infrastructure at the 962nd Air Control Squadron at Joint Base Elmendorf- Richardson, AK and the 961st Air Control Squadron at Kadena AFB, Japan.</p>		



**UNCLASSIFIED**

**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

**P-1 Line Item Number / Title:**  
E34045 / Airborne Warning and Cntrl Sys (AWACS) 40/45

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0207417F **Other Related Program Elements:** 0207417F

**Line Item MDAP/MAIS Code:** 277

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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	1 / BLOCK 40/45 BLOCK UPGRADE (Capability Improvement)		A		- / 742.595	- / 69.280	- / 32.821	- / 53.343	- / 0.000	- / 53.343
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 742.595</b>	<b>- / 69.280</b>	<b>- / 32.821</b>	<b>- / 53.343</b>	<b>- / -</b>	<b>- / 53.343</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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	1 / BLOCK 40/45 BLOCK UPGRADE (Capability Improvement)		A		- / 42.412	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 940.451
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 42.412</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 940.451</b>

\*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.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> E34045 / Airborne Warning and Cntrl Sys (AWACS) 40/45	<b>Modification Number / Title:</b> 1 / BLOCK 40/45 BLOCK UPGRADE

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

<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	742.595	69.280	32.821	53.343	0.000	53.343	42.412	0.000	0.000	0.000	0.000	940.451
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	742.595	69.280	32.821	53.343	0.000	53.343	42.412	0.000	0.000	0.000	0.000	940.451
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>742.595</b>	<b>69.280</b>	<b>32.821</b>	<b>53.343</b>	<b>0.000</b>	<b>53.343</b>	<b>42.412</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>940.451</b>

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

Initial Spares ( <i>\$ in Millions</i> )	4.492	3.174	3.226	3.282	-	3.282	0.000	0.000	0.000	-	0.000	14.174
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The Airborne Warning and Control System (AWACS) provides a highly mobile, flexible, survivable theater Battle Management (BM), Wide Area Surveillance, and Command and Control (C2) capability. It is capable of detecting, identifying, and tracking airborne and maritime targets at extended ranges as well as identifying air/ground emitters. AWACS can relay "big picture information to C2 agencies and friendly aircraft. AWACS provides worldwide response to situations requiring immediate on-scene C2/BM using embedded real-time surveillance for employment of US and allied combat air forces. AWACS is critical to gaining and maintaining battle-space air superiority. AWACS coordinates with both tactical and C2 assets in theater to execute the air mission. The AWACS Block 40/45 Upgrade program is the largest modification in U.S. AWACS history and represents the critical foundation and baseline system required for all future AWACS enterprise modifications including net-centric operations. The AWACS Block 40/45 Upgrade provides a single target/single track capability with an improved human-machine interface for time-critical targeting designed to increase combat effectiveness and reduce fratricide. The AWACS Block 40/45 Upgrade program includes an upgrade to Electronic Support Measures sensor data processing; Multi-Source Integration; a Data Link Infrastructure with prioritized data link bandwidth management for Link 16/Link 11; new battle management tools; capability to parse, allow user access to, and integrate Air Control Order/Air Tasking Order data; enhanced mission and console recording capabilities; and an update to a low-bandwidth internet chat capability (Secure Iridium Chat).

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**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> E34045 / Airborne Warning and Cntrl Sys (AWACS) 40/45	<b>Modification Number / Title:</b> 1 / BLOCK 40/45 BLOCK UPGRADE
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A		<b>MDAP/MAIS Code:</b>
<p>Funding for this modification had previously been contained in Weapon System Code (WSC) E00300, but as part of OSD's Major Programs Transparency Initiative and starting in FY2015, the AWACS Block 40/45 Upgrade (MDAP) was moved to WSC E34045. Prior year funding and associated quantities remains in WSC E00300.</p> <p>FY2021 Plan: Program continues to complete block modification upgrades to the 40/45 configuration (E-3G). Four (4) Block 30/35 aircraft (P24, P25, P26, and P27) will be inducted to be retrofitted to the Block 40/45 DMS 4.0 baseline configuration. The Program will also induct four (4) older DMS variant aircraft (L4, L5, P10, and P11) for modification to the 40/45 DMS 4.0 baseline configuration. The one (1) aircraft that began modification from Block 30/35 to Block 40/45 in FY2020 (P23) will be delivered to the 552nd Air Control Wing (ACW) at Tinker AFB, OK in FY2021, bringing the total 40/45 (E-3G) configured aircraft to twenty-three (23). Additionally, six (6) older DMS variant aircraft (L4, L5, L6, P7, P8, and P9) will be converted to the latest 40/45 DMS 4.0 baseline configuration in FY21. The program will also install the Mission Crew Trainer Set (MCTS) procured in FY2020 at the Distributed Mission Operations Center and install the MCTS at the Virtual Test and Training Center. The Program will continue to meet emerging cyber security and system integration requirements and continue executing a Performance Based Logistics contract to maintain fielded aircraft and ground support systems. The program will continue to support the 552nd ACW and field support infrastructure at the 962nd Air Control Squadron at Joint Base Elmendorf- Richardson, AK and the 961st Air Control Squadron at Kadena AFB, Japan.</p> <p>Milestone/Development Status</p> <p>11/08 - Completed Aircraft Block 40/45 Development (Milestone C/LRIP), 08/11 - Completed Aircraft Block 40/45 Pre-Production, 11/13 - Completed Development of MCMT, 02/14 - Completed Development of MCTS, 06/14 - Completed Development of DGS/GS, 06/14 - Last (6th) LRIP Jet Delivered, First Production Jet Inducted, 07/14 - IOC Declared by ACC/CC.</p>		

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> E34045 / Airborne Warning and Cntrl Sys (AWACS) 40/45					<b>Modification Number / Title:</b> 1 / BLOCK 40/45 BLOCK UPGRADE			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> E-3				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207417F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> Block 4045													
A Kits													
Recurring													
Block 4045:INSTALL KITS Group A (Active)	18 / 109.989	- / 0.000	- / 0.107	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	18 / 110.096	
<i>Subtotal: Recurring</i>	- / 109.989	- / 0.000	- / 0.107	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 110.096	
B Kits													
Recurring													
Block 4045:EQUIPMENT Group B (Active)	- / 92.845	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 92.845	
<i>Subtotal: Recurring</i>	- / 92.845	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 92.845	
<i>Subtotal: Block 4045</i>	- / 202.834	- / 0.000	- / 0.107	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 202.941	
<i>Subtotal: Procurement, All Modification Items</i>	- / 202.834	- / 0.000	- / 0.107	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 202.941	
<b>Support (All Modification Items)</b>													
GROUP B: TOTAL NONRECURRING	- / 88.321	- / 10.174	- / 0.027	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 98.522	
Make New Selection	- / 162.009	- / 33.596	- / 3.736	- / 19.241	- / -	- / 19.241	- / 21.525	- / -	- / -	- / -	- / -	- / 240.107	
Change Orders	- / 3.717	- / 1.725	- / 0.591	- / 0.830	- / -	- / 0.830	- / 0.816	- / -	- / -	- / -	- / -	- / 17.679	
SIM/TRAINER	2 / 37.934	- / -	1 / 15.845	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 53.779	
SUPPORT-EQUIP	- / 175.501	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 175.501	
ICS-Labor	- / 105.995	- / 0.000	- / 0.000	- / 8.425	- / -	- / 8.425	- / 5.673	- / -	- / -	- / -	- / -	- / 120.093	
OTHER GOVT	- / 6.363	- / 11.864	- / 0.435	- / 0.630	- / -	- / 0.630	- / 0.564	- / -	- / -	- / -	- / -	- / 19.856	
PMA - Other Gov't Costs	- / 14.390	- / 1.574	- / 0.624	- / 1.015	- / -	- / 1.015	- / 0.807	- / -	- / -	- / -	- / -	- / 18.410	
PMA - Contractor Services	- / 18.702	- / 4.942	- / 3.225	- / 4.044	- / -	- / 4.044	- / 4.142	- / -	- / -	- / -	- / -	- / 35.055	
<i>Subtotal: Support</i>	2 / 512.932	- / 63.875	1 / 24.483	- / 34.185	- / -	- / 34.185	- / 33.527	- / 0.000	- / 0.000	- / 0.000	- / 0.000	3 / 669.002	
<b>Installation</b>													
<i>Modification Item 1 of 1:</i> Block 4045	12 / 26.829	2 / 5.405	1 / 8.231	4 / 19.158	- / -	4 / 19.158	2 / 8.885	2 / 0.000	- / -	- / -	- / -	23 / 68.508	
<i>Subtotal: Installation</i>	12 / 26.829	2 / 5.405	1 / 8.231	4 / 19.158	- / -	4 / 19.158	2 / 8.885	2 / 0.000	- / -	- / -	- / -	23 / 68.508	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>742.595</b>	<b>69.280</b>	<b>32.821</b>	<b>53.343</b>	<b>0.000</b>	<b>53.343</b>	<b>42.412</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>940.451</b>	

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> E34045 / Airborne Warning and Cntrl Sys (AWACS) 40/45	<b>Modification Number / Title:</b> 1 / BLOCK 40/45 BLOCK UPGRADE
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** Block 4045

**Manufacturer Information**

Manufacturer Name: Boeing	Manufacturer Location: Seattle
Administrative Leadtime (in Months): 5	Production Leadtime (in Months): 16

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	12 / 26.829	2 / 5.405	1 / 8.231	4 / 19.158	- / -	4 / 19.158	2 / 8.885	2 / 0.000	- / -	- / -	- / -	23 / 68.508
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	12 / 26.829	2 / 5.405	1 / 8.231	4 / 19.158	- / -	4 / 19.158	2 / 8.885	2 / 0.000	- / -	- / -	- / -	23 / 68.508

**Installation Schedule**

PYS	In	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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		
	8	-	1	1	1	1	-	1	-	1	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	18
	7	1	-	-	1	-	1	-	-	1	1	1	1	-	1	1	-	-	1	1	-	-	-	-	-	-	-	-	-	0	18

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	<b>P-1 Line Item Number / Title:</b> FBLOST / Family of Beyond Line-of-Sight Terminals
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0303001F, 0303601F
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**Line Item MDAP/MAIS Code:** 199

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	66.898	14.293	7.910	1.573	-	1.573	0.000	0.000	0.000	0.000	-	90.674
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	66.898	14.293	7.910	1.573	-	1.573	0.000	0.000	0.000	0.000	-	90.674
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>66.898</b>	<b>14.293</b>	<b>7.910</b>	<b>1.573</b>	-	<b>1.573</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	-	<b>90.674</b>

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

Initial Spares ( <i>\$ in Millions</i> )	-	1.343	6.140	-	-	-	-	-	-	-	-	7.483
Flyaway Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

In FY2021, P-1 Line Item BP11 FBLOST APPN 3010, BP 11, CLC Family of Beyond Line-Sight Terminals efforts were transferred to Appropriation 3022F, Procurement, Space Force, from Appropriation 3021F due to the creation of a new Appropriation for Space Force.

The Family of Advanced Beyond Line-of-Sight Terminals (FAB-T) program replaces legacy Milstar terminals and provides Extremely High Frequency (EHF), protected high data rate communication for nuclear and conventional forces to include Presidential and National Voice Conferencing (PNVC). FAB-T will provide this new, highly secure, state-of-the-art capability for DoD platforms to include: Strategic platforms and airborne/ground command posts via Milstar; AEHF; and Enhanced Polar System (EPS) satellites. FAB-T terminals will also support the critical command and control (C2) of the Milstar, AEHF and EPS satellite constellations.

The Force Element Terminal (FET) subprogram provides a nuclear survivable terminal capable of communicating with the Milstar and AEHF satellites, and provides for survivable NC3 data transport services (EAM dissemination and force report back) for airborne platforms. The FET is for the B-52 and select RC-135 aircraft and will not provide satellite control or PNVC functionality.

The PNVC capability is a critical element of the Nuclear Command, Control, and Communications (NC3) system. PNVC is the Survivable Emergency Conferencing Network (SECN) replacement capability which provides anti-jam, anti-scintillation, survivable, and endurable voice communications through the AEHF satellite system for national and strategic users. Equipment upgrades required for this system include the development and production of several new components by other organizations, including the Baseband Interface Group (BIG) and Multi-Stream Summing Device (MSD-III) for airborne users.

Programs and projects in the space warfighting enterprise are evaluating ways to maximize innovation, resiliency, and our ability to rapidly respond to known and emerging threats. Space enterprise efforts aim to execute technology risk reduction efforts, integration of new or repurposed capabilities, enterprise decision-making tools, experimentation, and rapid prototyping and fielding via all appropriate acquisition authorities and contract mechanisms.

Funding for this exhibit is contained in PE 1203001F

**Justification:**

FAB-T awarded the terminal buys successfully procuring 23 Airborne Terminals. In FY 2021, the program will continue to support platform install activities, provide Interim Contractor Support for the existing fielded terminals and other support activities. Rapidly respond to implement system resiliency and situational awareness necessary to operate in the contested space domain. Activities may include, but are not limited to program office support, studies, technical analysis, prototyping, depot activation (stand-up), ICS, etc.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft		<b>P-1 Line Item Number / Title:</b> FBLOST / Family of Beyond Line-of-Sight Terminals
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0303001F, 0303601F
<b>Line Item MDAP/MAIS Code:</b> 199		



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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	<b>P-1 Line Item Number / Title:</b> H00100 / H-1
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0101235F	Other Related Program Elements: 0101235F, 0401314F, 0804747F
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	28.252	11.824	3.817	4.410	-	4.410	4.494	2.852	2.018	2.055	-	59.722
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	28.252	11.824	3.817	4.410	-	4.410	4.494	2.852	2.018	2.055	-	59.722
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>28.252</b>	<b>11.824</b>	<b>3.817</b>	<b>4.410</b>	<b>-</b>	<b>4.410</b>	<b>4.494</b>	<b>2.852</b>	<b>2.018</b>	<b>2.055</b>	<b>-</b>	<b>59.722</b>

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

**Description:**

This line item funds modifications to UH-1N and UH-1H/TH-1H aircraft. The two-engine UH-1N is a light, utility helicopter primarily used for missile site and range support and distinguished visitor airlift support. There are 62 UH-1N aircraft in the inventory. They were built with an estimated service life of 10,000 flight hours and are not service limited due to on-going modifications and upgrades. There are 28 TH-1H aircraft in the inventory. They are used in the helicopter track for USAF Specialized Undergraduate Pilot Training. The TH-1H modernization modification provided a service life of 20 years, the last one was delivered in 2013.

Starting in FY19 the UH-1N Service Life Extension Program (SLEP) was added for a portion of the UH-1N fleet to address aging fleet problems to include: structural repairs, replacement of key systems based on structural fatigue, system obsolescence and a diminishing manufacturing industrial base. Additionally, this effort will address safety requirements to include: Federal Aviation Administration, DoD, engineering mandates and configuration changes. This effort includes funding for the UH-1N System Program Office (e.g., A&AS, support, travel). The funds budgeted FY 2019 - 2022 will enable the SLEP of up to 63 aircraft required to meet mission requirements until the MH-139A helicopter is fielded to replace the UH-1N.

Funding may be used to address Diminishing Manufacturing Sources (DMS) issues.

Funding in this exhibit is contained in PE 0101235F, PE 0401314F, and PE 0804747F.

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	<b>P-1 Line Item Number / Title:</b> H06000 / H-60
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0207224F, 0207228F	Other Related Program Elements: 0207224F, 0207228F
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**Line Item MDAP/MAIS Code:** None

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	722.321	92.026	26.879	44.538	0.000	44.538	20.071	28.869	35.010	32.721	0.000	1,002.435
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	722.321	92.026	26.879	44.538	0.000	44.538	20.071	28.869	35.010	32.721	0.000	1,002.435
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>722.321</b>	<b>92.026</b>	<b>26.879</b>	<b>44.538</b>	<b>0.000</b>	<b>44.538</b>	<b>20.071</b>	<b>28.869</b>	<b>35.010</b>	<b>32.721</b>	<b>0.000</b>	<b>1,002.435</b>

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

**Description:**

This line item funds modifications to the HH-60G helicopter. The HH-60G currently supports the Air Force's core function of Personnel Recovery. The primary mission of the HH-60G is to conduct day, night, and marginal weather Combat Search and Rescue (CSAR) in order to recover isolated personnel in hostile or permissive environments. Potential mission areas include casualty evacuation (CASEVAC), medical evacuation (MEDEVAC), non-combatant evacuation operations, civil search and rescue, international aid, disaster humanitarian relief, and insertion/extraction of combat forces. There are currently 104 aircraft. The Operational Loss Replacement (OLR) Mission Modification program will deliver the final 12 (of 21) additional aircraft, bringing the fleet size up to 116 by 4Q FY20.

The modification efforts budgeted in FY21 provides safety and survivability upgrades, mission avionics upgrades, operational loss replacement mission modifications, and addresses obsolescence issues.

FY20 Appropriation added \$6M to the Operational Loss Replacement (OLR) Mission Modification to procure additional kits bringing the total from 19 to 21 kits.

FY19 funding totals include \$40.6M for Overseas Contingency Operations.

Funding may be used to address Diminishing Manufacturing Source issues.

Funding for this exhibit is contained in PE 0207228F.

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 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	77.414	26.879	21.914	0.000	21.914	13.054	22.633	35.010	32.721
AFNG	Quantity	-	-	-	-	-	-	-	-	-

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Air Force			<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft			<b>P-1 Line Item Number / Title:</b> H06000 / H-60		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A		<b>Program Elements for Code B Items:</b> 0207224F, 0207228F		<b>Other Related Program Elements:</b> 0207224F, 0207228F	
<b>Line Item MDAP/MAIS Code:</b> None					

<b>Secondary Distribution</b>		<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
	Total Obligation Authority	7.551	-	11.475	0.000	11.475	2.200	5.212	0.000	-
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	7.061	-	11.149	-	11.149	4.817	1.024	-	-
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>92.026</b>	<b>26.879</b>	<b>44.538</b>	<b>0.000</b>	<b>44.538</b>	<b>20.071</b>	<b>28.869</b>	<b>35.010</b>	<b>32.721</b>

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**Exhibit P-40, Budget Line Item Justification: PB 2021 Air Force** **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

**P-1 Line Item Number / Title:**  
H06000 / H-60

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0207224F, 0207228F **Other Related Program Elements:** 0207224F, 0207228F

**Line Item MDAP/MAIS Code:** None

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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***	8564 / Control Display Unit (CDU) (Capability Improvement)				- / 31.634	- / 0.110	- / -	- / -	- / -	- / -
P-40a***	8565 / Navigation System Upgrade (NSU) (Capability Improvement)				- / 64.282	- / 1.210	- / 1.298	- / 1.310	- / -	- / 1.310
P-40a***	8844 / Multi-function Color Display (Capability Improvement)				- / 39.821	- / 3.480	- / 2.610	- / 4.210	- / -	- / 4.210
P-40a***	8850 / MODE 5 (Capability Improvement)				- / 29.777	- / 2.485	- / 2.148	- / 3.624	- / -	- / 3.624
P-40a***	8852 / CSAR Avionics/Electrical Upgrade (Capability Improvement)				- / 17.257	- / 0.780	- / 0.324	- / 0.160	- / 0.000	- / 0.160
P-40a***	8853 / DEFENSIVE SYSTEM UPGRADE (Capability Improvement)				- / 15.029	- / 40.560	- / -	- / 1.800	- / -	- / 1.800
P-40a***	8854 / HH-60 OLR Mission Modifications (Other)				- / 452.321	- / 0.400	- / 12.643	- / 1.710	- / -	- / 1.710
P-40a***	8856 / Block 162 (Service Life Extension)				- / 48.390	- / 0.030	- / 3.370	- / 0.250	- / -	- / 0.250
P-40a***	8861 / HH-60 DATALINKS (Capability Improvement)				- / 10.361	- / 17.478	- / 0.550	- / 3.344	- / -	- / 3.344
P-40a***	8862 / HH-60G Communication Suite Control Integration (Capability Improvement)				- / 4.490	- / 1.000	- / 0.540	- / -	- / -	- / -
P-40a***	99999X / Low Cost Modifications (Other)				- / 7.019	- / 0.753	- / 0.210	- / 0.120	- / -	- / 0.120
P-3a	8859 / DVE Sensor (Capability Improvement)		B		- / 1.940	- / 23.740	- / 3.186	- / 28.010	- / 0.000	- / 28.010
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 722.321</b>	<b>- / 92.026</b>	<b>- / 26.879</b>	<b>- / 44.538</b>	<b>- / 0.000</b>	<b>- / 44.538</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	8564 / Control Display Unit (CDU) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 31.744
P-40a***	8565 / Navigation System Upgrade (NSU) (Capability Improvement)				- / 0.010	- / -	- / -	- / -	- / -	- / 68.110
P-40a***	8844 / Multi-function Color Display (Capability Improvement)				- / 4.210	- / 2.210	- / 2.210	- / -	- / -	- / 58.751
P-40a***	8850 / MODE 5 (Capability Improvement)				- / 2.910	- / 0.010	- / -	- / -	- / -	- / 40.954
P-40a***	8852 / CSAR Avionics/Electrical Upgrade (Capability Improvement)				- / 0.240	- / -	- / -	- / -	- / -	- / 18.761
P-40a***	8853 / DEFENSIVE SYSTEM UPGRADE (Capability Improvement)				- / 0.010	- / -	- / -	- / -	- / -	- / 57.399
P-40a***	8854 / HH-60 OLR Mission Modifications (Other)				- / 1.570	- / -	- / -	- / -	- / -	- / 468.644
P-40a***	8856 / Block 162 (Service Life Extension)				- / 0.010	- / -	- / -	- / -	- / -	- / 52.050
P-40a***	8861 / HH-60 DATALINKS (Capability Improvement)				- / 4.860	- / 7.649	- / 1.800	- / 15.543	- / -	- / 61.585
P-40a***	8862 / HH-60G Communication Suite Control Integration (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 6.030
P-40a***	99999X / Low Cost Modifications (Other)				- / 0.185	- / 1.443	- / 0.824	- / 1.968	- / -	- / 12.522
P-3a	8859 / DVE Sensor (Capability Improvement)		B		- / 6.066	- / 17.557	- / 30.176	- / 15.210	- / 0.000	- / 125.885
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 20.071</b>	<b>- / 28.869</b>	<b>- / 35.010</b>	<b>- / 32.721</b>	<b>- / 0.000</b>	<b>- / 1,002.435</b>

\*\*\* Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

\*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.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft		<b>P-1 Line Item Number / Title:</b> H06000 / H-60
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> 0207224F, 0207228F	<b>Other Related Program Elements:</b> 0207224F, 0207228F
<b>Line Item MDAP/MAIS Code:</b> None		
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.		

**Justification:**

FY21 funding includes the purchase of 36 Degraded Visual Environment (DVE) sensor kits to provide increased safety and situational awareness.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> H06000 / H-60	<b>Modification Number / Title:</b> 8859 / DVE Sensor

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	1.940	23.740	3.186	28.010	0.000	28.010	6.066	17.557	30.176	15.210	0.000	125.885
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	1.940	23.740	3.186	28.010	0.000	28.010	6.066	17.557	30.176	15.210	0.000	125.885
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>1.940</b>	<b>23.740</b>	<b>3.186</b>	<b>28.010</b>	<b>0.000</b>	<b>28.010</b>	<b>6.066</b>	<b>17.557</b>	<b>30.176</b>	<b>15.210</b>	<b>0.000</b>	<b>125.885</b>

*(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 Millions)	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

A modification proposal (AF Form 1067, ACC 14-161) was received to install Degraded Visual Environment (DVE)/Terrain Awareness and Warning System (TAWS) on HH-60G. The DVE program will add new capability to the HH-60G, increasing mission capability and enhancing safety by providing adequate situational awareness of uncharted terrain and obstacles for safe flight operations in Degraded Visual Environments (DVE). 58% of helicopter losses and 52% of fatalities during Operation Iraqi Freedom, Operation Enduring Freedom are attributable to Control Flight into terrain, wire or object strikes, or hard landings in DVE conditions. The systems integrated and installed by this program will greatly minimize the hazards of DVE operations, preventing mishaps and fatalities. Initiated and validated by an AF Form 1067, the DVE system shall provide aircraft navigation in day and night DVE conditions en-route and in the take-off and landing area with a real time sensor. Aircrew should be able to easily identify hazards such as terrain, antennas, wires, and poles traveling to and from the take-off and landing areas. In the take-off and landing phase, this will aid aircrew in easily identifying and avoiding hazards such as poles, vehicles, fence posts, wires, ditches, berms, holes, and large rocks.

This program will modify up to 85 aircraft with DVE sensors. FY17 & FY18 funding initiated an integration phase of this program, adapting non-developmental sensor systems to the HH-60G platform. FY19 funds continued the Non-recurring Engineering (NRE) effort, funded testing, and procured an initial production batch of DVE production kits. FY20 funding covers program management costs. FY21 funding will be used to procure the first lot of 36 production kits. FY22 funding will be used to install the first lot of production kits.

**Milestone/Development Status**

The system is currently still in development with Non-Recurring Engineering work. In FY21, the system will move into the Integration and Test phase before moving into kit delivery and fielding in FY22.

The system integrates with existing HH-60G optical sensor, display, navigation, and flight management systems to the maximum extent practical. The system is composed of line replaceable units that will be supported through the Air Force supply system and replaceable at the organizational level.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AF									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	23.740	3.186	6.410	-	6.410	0.566	16.017	30.176	15.210
AFNG									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	-	-	11.475	-	11.475	2.200	1.540	-	-
AFR									
Quantity	-	-	-	-	-	-	-	-	-

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> H06000 / H-60	<b>Modification Number / Title:</b> 8859 / DVE Sensor
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**ID Code** (A=Service Ready, B=Not Service Ready) : B **MDAP/MAIS Code:**

<b>Secondary Distribution</b>	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Total Obligation Authority	-	-	10.125	-	10.125	3.300	-	-	-
<b>Total:</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	-	-	-	-	-	-	-	-	-
Total Obligation Authority	23.740	3.186	28.010	0.000	28.010	6.066	17.557	30.176	15.210



**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> H06000 / H-60					<b>Modification Number / Title:</b> 8859 / DVE Sensor			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> HH-60G				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207228F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1: DVE</i>													
A Kits													
Recurring													
DVE:INSTALL KITS Group A (Active)	0 / 0.000	2 / 1.000	- / -	4 / 0.520	- / -	4 / 0.520	- / -	21 / 2.730	17 / 2.210	9 / 1.170	- / -	53 / 7.630	
DVE:INSTALL KITS Group A (Guard)	- / -	- / -	- / -	17 / 2.210	- / -	17 / 2.210	- / -	- / -	- / -	- / -	- / -	17 / 2.210	
DVE:INSTALL KITS Group A (Reserve)	- / -	- / -	- / -	15 / 1.950	- / -	15 / 1.950	- / -	- / -	- / -	- / -	- / -	15 / 1.950	
<i>Subtotal: Recurring</i>	<i>- / 0.000</i>	<i>- / 1.000</i>	<i>- / -</i>	<i>- / 4.680</i>	<i>- / -</i>	<i>- / 4.680</i>	<i>- / -</i>	<i>- / 2.730</i>	<i>- / 2.210</i>	<i>- / 1.170</i>	<i>- / -</i>	<i>- / 11.790</i>	
B Kits													
Recurring													
DVE:EQUIPMENT Group B (Active)	0 / 0.000	2 / 0.200	- / -	4 / 2.180	- / -	4 / 2.180	- / -	21 / 11.550	17 / 9.350	9 / 4.950	- / -	53 / 28.230	
DVE:EQUIPMENT Group B (Guard)	- / -	- / -	- / -	17 / 9.265	- / -	17 / 9.265	- / -	- / -	- / -	- / -	- / -	17 / 9.265	
DVE:EQUIPMENT Group B (Reserve)	- / -	- / -	- / -	15 / 8.175	- / -	15 / 8.175	- / -	- / -	- / -	- / -	- / -	15 / 8.175	
<i>Subtotal: Recurring</i>	<i>- / 0.000</i>	<i>- / 0.200</i>	<i>- / -</i>	<i>- / 19.620</i>	<i>- / -</i>	<i>- / 19.620</i>	<i>- / -</i>	<i>- / 11.550</i>	<i>- / 9.350</i>	<i>- / 4.950</i>	<i>- / -</i>	<i>- / 45.670</i>	
<i>Subtotal: DVE</i>	<i>- / 0.000</i>	<i>- / 1.200</i>	<i>- / -</i>	<i>- / 24.300</i>	<i>- / -</i>	<i>- / 24.300</i>	<i>- / -</i>	<i>- / 14.280</i>	<i>- / 11.560</i>	<i>- / 6.120</i>	<i>- / -</i>	<i>- / 57.460</i>	
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / 0.000</i>	<i>- / 1.200</i>	<i>- / -</i>	<i>- / 24.300</i>	<i>- / -</i>	<i>- / 24.300</i>	<i>- / -</i>	<i>- / 14.280</i>	<i>- / 11.560</i>	<i>- / 6.120</i>	<i>- / -</i>	<i>- / 57.460</i>	
<b>Support (All Modification Items)</b>													
GROUP B: TOTAL NONRECURRING	- / 0.000	- / 19.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 19.000	
GROUP A: TOTAL NONRECURRING	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	
Mod of Spares	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.700	- / -	- / -	- / 5.700	
OTHER GOVT	- / 1.350	- / 2.940	- / 2.336	- / 3.060	- / -	- / 3.060	- / 0.050	- / 0.357	- / 7.746	- / 2.820	- / -	- / 20.659	
PMA - Other Govt Costs	- / 0.060	- / 0.100	- / 0.050	- / 0.150	- / -	- / 0.150	- / 0.050	- / 0.050	- / 0.050	- / 0.050	- / -	- / 0.560	
PMA - Contractor Services	- / 0.530	- / 0.500	- / 0.500	- / 0.500	- / -	- / 0.500	- / 0.466	- / 0.450	- / 0.500	- / 0.500	- / -	- / 3.946	
<i>Subtotal: Support</i>	<i>- / 1.940</i>	<i>- / 22.540</i>	<i>- / 2.886</i>	<i>- / 3.710</i>	<i>- / -</i>	<i>- / 3.710</i>	<i>- / 0.566</i>	<i>- / 0.857</i>	<i>- / 13.996</i>	<i>- / 3.370</i>	<i>- / -</i>	<i>- / 49.865</i>	
<b>Installation</b>													
<i>Modification Item 1 of 1: DVE</i>	<i>- / -</i>	<i>- / -</i>	<i>2 / 0.300</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>25 / 5.500</i>	<i>11 / 2.420</i>	<i>21 / 4.620</i>	<i>17 / 5.720</i>	<i>9 / 0.000</i>	<i>85 / 18.560</i>	
<i>Subtotal: Installation</i>	<i>- / -</i>	<i>- / -</i>	<i>2 / 0.300</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>25 / 5.500</i>	<i>11 / 2.420</i>	<i>21 / 4.620</i>	<i>17 / 5.720</i>	<i>9 / -</i>	<i>85 / 18.560</i>	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>1.940</b>	<b>23.740</b>	<b>3.186</b>	<b>28.010</b>	<b>0.000</b>	<b>28.010</b>	<b>6.066</b>	<b>17.557</b>	<b>30.176</b>	<b>15.210</b>	<b>0.000</b>	<b>125.885</b>	

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> H06000 / H-60	<b>Modification Number / Title:</b> 8859 / DVE Sensor
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**ID Code** (A=Service Ready, B=Not Service Ready) : B **MDAP/MAIS Code:**

**Modification Item 1 of 1:** DVE

**Manufacturer Information**

Manufacturer Name: Sierra Nevada Corp Manufacturer Location: Sparks, NV

Administrative Leadtime (in Months): 7 Production Leadtime (in Months): 10

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	May 2019		May 2021		May 2023	May 2024	May 2025
Delivery Dates	Mar 2020		Mar 2022		Mar 2024	Mar 2025	Mar 2026

**Installation Information**

**Method of Implementation:** Depot Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	2 / 0.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.300
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	25 / 5.500	11 / 2.420	- / -	- / -	- / -	36 / 7.920
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	21 / 4.620	- / -	- / -	21 / 4.620
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 3.740	- / -	17 / 3.740
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.980	9 / 0.000	9 / 1.980
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	2 / 0.300	- / -	- / -	- / -	25 / 5.500	11 / 2.420	21 / 4.620	17 / 5.720	9 / 0.000	85 / 18.560

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	2	-	-	-	-	-	-	13	12	6	5	-	-	5	5	5	6	5	5	5	2	9	85
Out	0	-	-	-	-	-	-	-	2	-	-	-	-	-	-	13	12	6	5	-	-	-	5	5	5	6	5	5	5	11	85

**UNCLASSIFIED**

**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	<b>P-1 Line Item Number / Title:</b> HAWK00 / RQ-4 Mods
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0305220F	Other Related Program Elements: 0305220F
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**Line Item MDAP/MAIS Code:** 252

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	531.963	123.715	1.704	40.468	-	40.468	41.076	64.433	123.305	8.991	0.000	935.655
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	531.963	123.715	1.704	40.468	-	40.468	41.076	64.433	123.305	8.991	0.000	935.655
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>531.963</b>	<b>123.715</b>	<b>1.704</b>	<b>40.468</b>	<b>-</b>	<b>40.468</b>	<b>41.076</b>	<b>64.433</b>	<b>123.305</b>	<b>8.991</b>	<b>0.000</b>	<b>935.655</b>

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

Initial Spares ( <i>\$ in Millions</i> )	0.750	2.069	0.746	3.330	-	3.330	3.504	-	13.297	-	-	23.696
Flyaway Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Beginning in FY21, to support the divestiture of the Block 20/30 aircraft, efforts will be pivoted to focus on supporting the Block 40 fleet and closing out the Block 30 efforts to maximize value to the USAF and DoD.

The RQ-4 System provides high altitude, deep look, long-endurance Intelligence, Surveillance, and Reconnaissance (ISR) capability that complements space and other airborne collectors during peacetime, crisis, and war-fighting scenarios. The aircraft is an autonomous, high altitude, long-endurance, Remotely Piloted Aircraft (RPA). Currently, the active inventory consists of four (4) Block 20s which have been converted to Battlefield Airborne Communications Nodes (BACN), twenty (20) Block 30s, and ten (10) Block 40s. The ground segment includes the Mission Control Element (MCE) and the Launch Recovery Element (LRE). There are a total of twenty-one (21) active ground segments in the existing RQ-4 inventory. Two (2) additional production LREs were purchased in 2015 and have since been installed. The RQ-4 program will incorporate applicable synergies with other platforms, including the U.S. Navy Triton, and other RPA weapon systems.

The designed service life of the Block 30 RPAs is approximately 25 years with an average service life remaining of 13 years through 2032. The designed service life of the Block 40 RPAs is approximately 25 years with an average service life remaining of 15 years through 2034. The Program Office is exploring options to extend the service life.

The RQ-4B is the successor to the RQ-4A, and is designed to employ 3,000 pounds of payload and enable multi-intelligence (multi-INT) collecting. The RQ-4B has three configurations: Block 20, Block 30, and Block 40. Of the six (6) Block 20s that were built, four (4) remain and have since been converted to BACN. The Block 30 employs upgraded Synthetic Aperture Radar (SAR) and Electro-Optical/Infrared (EO/IR) sensors - Enhanced Integrated Sensor Suite (EISS) and integrates a wide spectrum signals intelligence (SIGINT) sensor, the Airborne Signals Intelligence Payload (ASIP). EISS and ASIP are used simultaneously to create a multi-INT platform. Additionally, the Block 30 have been equipped with an ISR Payload Adapter that enables the utilization of the MS-177 multi-spectral sensor which is the next generation of the Senior Year Electro-optical Reconnaissance-2(SYER-2) sensor currently flown on the U-2. The Block 40 integrates the Multi-Platform Radar Technology Insertion Program (MP-RTIP) radar that has Ground Moving Target Indicator (GMTI) capability. The ground segment includes the Mission Control Element (MCE) and the Launch Recovery Element (LRE). The support segment includes aerospace ground equipment, tech orders, spares, support equipment, and training to enable operation of the RQ-4 System.

To protect production schedules from Diminishing Manufacturing Sources (DMS) and material shortages issues, the program will perform schedule protection buys when appropriate. Funding may be used to alleviate DMS issues for which there are not sufficient Government spares and/or the ability to repair organically or commercially is not viable.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft		<b>P-1 Line Item Number / Title:</b> HAWK00 / RQ-4 Mods
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> 0305220F	<b>Other Related Program Elements:</b> 0305220F
<b>Line Item MDAP/MAIS Code:</b> 252		
<p>The RQ-4 system will be continually modified to maintain pace with evolving threats and increasing capabilities included in modernization efforts. FY21 funds will support modification efforts to include aircraft mods, other sensor enhancements, trainers, on-board data storage, low cost modifications, retrofit support planning, change requests, structural modifications required to bring the Global Hawk aircraft up to current configurations, support equipment, other modification efforts to upgrade the Global Hawk fleet, as well as technology insertion activities in support of Better Buying Power initiatives.</p> <p>Funding for this exhibit is contained in PE 0305220F.</p>		

**UNCLASSIFIED**

**Exhibit P-40, Budget Line Item Justification: PB 2021 Air Force** **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

**P-1 Line Item Number / Title:**  
HAWK00 / RQ-4 Mods

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0305220F **Other Related Program Elements:** 0305220F

**Line Item MDAP/MAIS Code:** 252

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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***	99999X / Low Cost Modifications (Capability Improvement)				- / 0.000	- / -	- / -	- / 2.000	- / -	- / 2.000
P-3a	470001 / GH Aircraft Mods (Capability Improvement)		B		- / 432.163	- / 101.290	- / 1.704	- / 29.468	- / 0.000	- / 29.468
P-3a	470003 / GH Ground Station Mods (Capability Improvement)		A		- / 15.523	- / -	- / -	- / -	- / -	- / -
P-3a	470009 / ASIP Increment I (Capability Improvement)		B		- / 37.154	- / 2.573	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	470010 / SAR (Capability Improvement)		A		- / 3.640	- / -	- / -	- / -	- / -	- / -
P-3a	470011 / ASIP Install/Calibration (Capability Improvement)		A		- / 4.834	- / -	- / -	- / -	- / -	- / -
P-3a	470012 / MODE 5/ADS-B (Capability Improvement)		B		- / 6.267	- / 0.000	- / 0.000	- / -	- / -	- / -
P-3a	470013 / Sensor Enhancements (Capability Improvement)		A		- / 29.382	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	470019 / Communication Interoperability/Enhancements (Capability Improvement)		A		- / 3.000	- / 0.000	- / 0.000	- / 9.000	- / 0.000	- / 9.000
P-3a	470020 / EISS Enhancements (Capability Improvement)		B		- / 0.000	- / 19.852	- / 0.000	- / 0.000	- / 0.000	- / 0.000
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 531.963</b>	<b>- / 123.715</b>	<b>- / 1.704</b>	<b>- / 40.468</b>	<b>- / -</b>	<b>- / 40.468</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 2.000	- / 2.000	- / 2.000	- / -	- / -	- / 8.000
P-3a	470001 / GH Aircraft Mods (Capability Improvement)		B		- / 30.076	- / 53.433	- / 112.305	- / 0.000	- / 0.000	- / 760.439
P-3a	470003 / GH Ground Station Mods (Capability Improvement)		A		- / -	- / -	- / -	- / -	- / -	- / 15.523
P-3a	470009 / ASIP Increment I (Capability Improvement)		B		- / -	- / -	- / -	- / -	- / -	- / 39.727
P-3a	470010 / SAR (Capability Improvement)		A		- / -	- / -	- / -	- / -	- / -	- / 3.640
P-3a	470011 / ASIP Install/Calibration (Capability Improvement)		A		- / -	- / -	- / -	- / -	- / -	- / 4.834
P-3a	470012 / MODE 5/ADS-B (Capability Improvement)		B		- / -	- / -	- / -	- / -	- / -	- / 6.267
P-3a	470013 / Sensor Enhancements (Capability Improvement)		A		- / -	- / -	- / -	- / -	- / -	- / 29.382
P-3a	470019 / Communication Interoperability/Enhancements (Capability Improvement)		A		- / 9.000	- / 9.000	- / 9.000	- / 8.991	- / -	- / 47.991
P-3a	470020 / EISS Enhancements (Capability Improvement)		B		- / 0.000	- / -	- / -	- / -	- / -	- / 19.852
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 41.076</b>	<b>- / 64.433</b>	<b>- / 123.305</b>	<b>- / 8.991</b>	<b>- / 0.000</b>	<b>- / 935.655</b>

\*\*\* Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

\*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:**

**UNCLASSIFIED**

<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft		<b>P-1 Line Item Number / Title:</b> HAWK00 / RQ-4 Mods
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> 0305220F	<b>Other Related Program Elements:</b> 0305220F

**Line Item MDAP/MAIS Code:** 252

The RQ-4 system will be continually modified to maintain pace with evolving threats and increasing capabilities included in modernization efforts. FY21 funds will support modification efforts to include aircraft mods, other sensor enhancements, trainers, on-board data storage, low cost modifications, retrofit support planning, change requests, structural modifications required to bring the Global Hawk aircraft up to current configurations, support equipment, other modification efforts to upgrade the Global Hawk fleet, as well as technology insertion activities in support of Better Buying Power initiatives.

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HAWK00 / RQ-4 Mods	<b>Modification Number / Title:</b> 470001 / GH Aircraft Mods
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**ID Code** (A=Service Ready, B=Not Service Ready) : B **MDAP/MAIS Code:**

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	432.163	101.290	1.704	29.468	0.000	29.468	30.076	53.433	112.305	0.000	0.000	760.439
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	432.163	101.290	1.704	29.468	0.000	29.468	30.076	53.433	112.305	0.000	0.000	760.439
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority <i>(\$ in Millions)</i></b>	<b>432.163</b>	<b>101.290</b>	<b>1.704</b>	<b>29.468</b>	<b>0.000</b>	<b>29.468</b>	<b>30.076</b>	<b>53.433</b>	<b>112.305</b>	<b>0.000</b>	<b>0.000</b>	<b>760.439</b>

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

Initial Spares <i>(\$ in Millions)</i>	0.750	-	0.746	3.330	-	3.330	0.000	0.000	13.297	-	0.000	18.123
Gross/Weapon System Unit Cost <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Beginning in FY21, to support the divestiture of the Block 20/30 aircraft, efforts will be pivoted to focus on supporting the Block 40 fleet and closing out the Block 30 efforts to maximize value to the USAF and DoD.

The Global Hawk System provides high altitude, deep look, long-endurance intelligence, surveillance, and reconnaissance (ISR) capability that complements space and other airborne collectors during peacetime, crisis, and war-fighting scenarios. The aircraft is an autonomous, high altitude, long-endurance, unmanned aircraft system (UAS) and must maintain interoperability with government and commercial communications systems and exploitation nodes within the AF and other DoD systems. The Global Hawk program will incorporate applicable synergies with other platforms, including the U.S. Navy's Triton, and other remotely piloted aircraft (RPA) weapon systems.

The Global Hawk system will be continually modified to maintain pace with evolving threats and increasing capabilities included in modernization efforts. These planned modifications include aircraft, payload, ground station/communications, and other retrofits to incorporate/modify capabilities and maintain interoperability across the RQ-4 mission area. Air Vehicle modifications are written to the Line Replaceable Unit (LRU) level, not the overarching Total Aircraft Breakdown.

This Mod will cover change requests, retrofit planning, ISR Payload Adaptors, Diminishing Manufacturing Source (DMS) and Reliability and Maintainability (R&M) retrofits, Integrated Functional Capability (IFC) retrofits, trainers, contested environment initiatives, test support, support equipment, studies, other government costs, and program support. This Mod may be used to cover the efforts required to bring the early production aircraft up to the current operational configuration.

Requirement source: Air Combat Command.

Note: Mod 470001 includes FY19 Congressional Add funding for additional BACN capability.

**Milestone/Development Status**

The RQ-4 program will continue to develop, test and implement aircraft, sensor, communications and ground station performance, interoperability, sustainability and safety enhancements and solutions for implementation on the RQ-4 platform and ground based systems in an effort to maintain and improve aircraft and payload availability effectiveness and reduce life-cycle costs.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>											<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5				<b>P-1 Line Item Number / Title:</b> HAWK00 / RQ-4 Mods				<b>Modification Number / Title:</b> 470001 / GH Aircraft Mods				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B						<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> RQ-4			<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b>					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>												
<i>Modification Item 1 of 1:</i> Global Hawk Air Craft Mods												
A Kits												
Recurring												
Global Hawk Air Craft Mods:INSTALL KITS Group A (Active)	67 / 3.811	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	67 / 3.811
<i>Subtotal: Recurring</i>	- / 3.811	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.811
B Kits												
Recurring												
Global Hawk Air Craft Mods:EQUIPMENT Group B (Active)	67 / 359.226	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	67 / 359.226
<i>Subtotal: Recurring</i>	- / 359.226	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 359.226
<i>Subtotal: Global Hawk Air Craft Mods</i>	- / 363.037	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 363.037
<i>Subtotal: Procurement, All Modification Items</i>	- / 363.037	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 363.037
<b>Support (All Modification Items)</b>												
Change Orders	- / 42.888	- / 100.000	- / -	- / 28.090	- / -	- / 28.090	- / 28.629	- / 51.943	- / 110.815	- / -	- / -	- / 362.365
Mod of Spares	9 / 0.875	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 0.875
OTHER GOVT	- / 5.100	- / 1.290	- / 1.704	- / 1.378	- / -	- / 1.378	- / 1.447	- / 1.490	- / 1.490	- / -	- / -	- / 13.899
<i>Subtotal: Support</i>	9 / 48.863	- / 101.290	- / 1.704	- / 29.468	- / -	- / 29.468	- / 30.076	- / 53.433	- / 112.305	- / -	- / -	9 / 377.139
<b>Installation</b>												
<i>Modification Item 1 of 1:</i> Global Hawk Air Craft Mods	67 / 20.263	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	67 / 20.263
<i>Subtotal: Installation</i>	67 / 20.263	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	67 / 20.263
<b>Total</b>												
<b>Total Cost (Procurement + Support + Installation)</b>	<b>432.163</b>	<b>101.290</b>	<b>1.704</b>	<b>29.468</b>	<b>0.000</b>	<b>29.468</b>	<b>30.076</b>	<b>53.433</b>	<b>112.305</b>	<b>0.000</b>	<b>0.000</b>	<b>760.439</b>



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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force	<b>Date:</b> February 2020
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<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HAWK00 / RQ-4 Mods	<b>Modification Number / Title:</b> 470001 / GH Aircraft Mods
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** Global Hawk Air Craft Mods

**Manufacturer Information**

Manufacturer Name: Northrop Grumman	Manufacturer Location: Palmdale, California
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	67 / 20.263	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	67 / 20.263
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	67 / 20.263	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	67 / 20.263

**Installation Schedule**

PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67
Out	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force	<b>Date:</b> February 2020
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<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HAWK00 / RQ-4 Mods	<b>Modification Number / Title:</b> 470003 / GH Ground Station Mods
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	15.523	-	-	-	-	-	-	-	-	-	-	15.523
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	15.523	-	-	-	-	-	-	-	-	-	-	15.523
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority <i>(\$ in Millions)</i></b>	<b>15.523</b>	-	-	-	-	-	-	-	-	-	-	<b>15.523</b>

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

Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-	3.504	-	-	-	-	3.504
Gross/Weapon System Unit Cost <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Beginning in FY21, to support the divestiture of the Block 20/30 aircraft, efforts will be pivoted to focus on supporting the Block 40 fleet and closing out the Block 30 efforts to maximize value to the USAF and DoD.

Mod 470003 included small modifications for the Global Hawk Ground Segment system.

No additional funding requested through the FYDP. Any small modifications will be addressed in the Low Cost Mod line (99999X) or other Mod line.

**Milestone/Development Status**

Block 10 and 20 are fielded and production is complete. Blocks 30-40 are in development. Block 20 first production lot was awarded in FY04, and entered development test in FY07. Block 40 was awarded in FY06. Ongoing modifications support emerging requirements and reliability, maintainability & availability issues.

Future ground station development blocks support the aircraft Block 30/40 development and fielding schedules. Ongoing modifications support emerging requirements and reliability, maintainability & availability issues.

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> HAWK00 / RQ-4 Mods					<b>Modification Number / Title:</b> 470003 / GH Ground Station Mods			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> RQ-4				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0305220F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> Ground Station Mods													
B Kits													
Recurring													
Ground Station Mods:EQUIPMENT Group B (Active)	19 / 14.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 14.100	
<i>Subtotal: Recurring</i>	- / 14.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 14.100	
<i>Subtotal: Ground Station Mods</i>	- / 14.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 14.100	
<i>Subtotal: Procurement, All Modification Items</i>	- / 14.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 14.100	
<b>Support (All Modification Items)</b>													
OTHER GOVT	- / 0.523	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.523	
<i>Subtotal: Support</i>	- / 0.523	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.523	
<b>Installation</b>													
<i>Modification Item 1 of 1:</i> Ground Station Mods	19 / 0.900	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 0.900	
<i>Subtotal: Installation</i>	19 / 0.900	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 0.900	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>15.523</b>	-	-	-	-	-	-	-	-	-	-	<b>15.523</b>	

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HAWK00 / RQ-4 Mods	<b>Modification Number / Title:</b> 470003 / GH Ground Station Mods
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**ID Code** (A=Service Ready, B=Not Service Ready) : A **MDAP/MAIS Code:**

**Modification Item 1 of 1:** Ground Station Mods

**Manufacturer Information**

Manufacturer Name: Northrop Grumman	Manufacturer Location: Palmdale, CA
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 2

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	19 / 0.900	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 0.900
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	19 / 0.900	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 0.900

**Installation Schedule**

PYS	In	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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		
	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	19
	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	19

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HAWK00 / RQ-4 Mods	<b>Modification Number / Title:</b> 470009 / ASIP Increment I

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

<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	37.154	2.573	0.000	0.000	0.000	0.000	-	-	-	-	-	39.727
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	37.154	2.573	0.000	0.000	0.000	0.000	-	-	-	-	-	39.727
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>37.154</b>	<b>2.573</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	-	-	-	-	-	<b>39.727</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Beginning in FY21, to support the divestiture of the Block 20/30 aircraft, efforts will be pivoted to focus on supporting the Block 40 fleet and closing out the Block 30 efforts to maximize value to the USAF and DoD.

Airborne Signals Intelligence Payload (ASIP) Increment 1 incorporates additional signals and integrates advanced collection algorithms providing increased mission capability. It is a follow-on effort to the ASIP baseline program in compliance with SIGINT Capability Working Group priorities. The retrofit task implemented using the rotatable spares concept.

This program retrofits fifteen (15) Block 30 aircraft as well as twelve (12) spare chassis.

**Milestone/Development Status**

ISR Sensors group (AFLCMC/WINS) will initiate development effort, which will deliver hardware and software for initial testing and DT. The WINS development contract was awarded in Jun 15 with delivery in Nov 16. Global Hawk's NRE effort will support DT and procurement of modification kits. Retrofit kit procurement contract was awarded in Mar 2016.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> HAWK00 / RQ-4 Mods					<b>Modification Number / Title:</b> 470009 / ASIP Increment I			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> RQ-4				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0305220F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0305220F	- / 0.807	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.807	
<b>Procurement</b>													
<b>Modification Item 1 of 1:</b> Group A Install Kits													
A Kits													
Recurring													
Group A Install Kits:INSTALL KITS Group A (Active)	15 / 1.895	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 1.895	
<i>Subtotal: Recurring</i>	- / 1.895	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.895	
B Kits													
Recurring													
Group A Install Kits:EQUIPMENT Group B (Active)	15 / 17.054	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 17.054	
<i>Subtotal: Recurring</i>	- / 17.054	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 17.054	
<i>Subtotal: Group A Install Kits</i>	- / 18.949	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 18.949	
<i>Subtotal: Procurement, All Modification Items</i>	- / 18.949	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 18.949	
<b>Support (All Modification Items)</b>													
OTHER GOVT	- / 3.046	- / 2.573	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.619	
Mod of Spare	12 / 15.159	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 15.159	
<i>Subtotal: Support</i>	12 / 18.205	- / 2.573	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 20.778	
<b>Installation</b>													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>37.154</b>	<b>2.573</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>39.727</b>	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> HAWK00 / RQ-4 Mods			<b>Modification Number / Title:</b> 470009 / ASIP Increment I	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 1 of 1:</b> Group A Install Kits							
<b>Manufacturer Information</b>							
Manufacturer Name: Northrop Grumman				Manufacturer Location: Palmdale, California			
Administrative Leadtime (in Months): 5				Production Leadtime (in Months): 12			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 15		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HAWK00 / RQ-4 Mods	<b>Modification Number / Title:</b> 470010 / SAR

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

<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	3.640	-	-	-	-	-	-	-	-	-	-	3.640
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	3.640	-	-	-	-	-	-	-	-	-	-	3.640
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>3.640</b>	-	-	-	-	-	-	-	-	-	-	<b>3.640</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Beginning in FY21, to support the divestiture of the Block 20/30 aircraft, efforts will be pivoted to focus on supporting the Block 40 fleet and closing out the Block 30 efforts to maximize value to the USAF and DoD.

Synthetic Aperture Radar (SAR) incorporates SAR selectable Point Image Mode, for Detected and Complex Imagery into the Enhanced Integrated Sensor Suite (EISS). Software was developed and incorporated into fielded Global Hawk Integrated Functional Capability (IFC) 4.0.1.1. This modification was implemented on all Block 20 and Block 30 aircraft to include necessary revisions to the technical documentation. The major effort for this modification was updating the Phase Distortion Tables (PDT) of the Enhanced Receiver Exciter Controller (EREC). A total of forty-four (44) ERECs will be rotated back to vendor for PDT update. Installation costs include calibration and other associated costs to update the PDTs.

**Milestone/Development Status**

The PDT table updates and fielding of ERECs occurred as a rotatable pool with a start date in Q4 FY16.



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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HAWK00 / RQ-4 Mods	<b>Modification Number / Title:</b> 470010 / SAR

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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<b>Models of Systems Affected:</b> RQ-4	<b>Modification Type:</b> Capability Improvement	<b>Related RDT&amp;E PEs:</b> 0305220F
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Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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**

<b>Modification Item 1 of 1:</b> Group B Calibration/Installation												
B Kits												
Recurring												
Group B Calibration/Installation:EQUIPMENT Group B (Active)	44 / 0.910	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	44 / 0.910
<i>Subtotal: Recurring</i>	- / 0.910	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.910
<i>Subtotal: Group B Calibration/Installation</i>	- / 0.910	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.910
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.910	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.910

**Installation**

<b>Modification Item 1 of 1:</b> Group B Calibration/Installation	44 / 2.730	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	44 / 2.730
<i>Subtotal: Installation</i>	44 / 2.730	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	44 / 2.730

**Total**

<b>Total Cost (Procurement + Support + Installation)</b>	<b>3.640</b>	-	-	-	-	-	-	-	-	-	-	<b>3.640</b>
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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HAWK00 / RQ-4 Mods	<b>Modification Number / Title:</b> 470010 / SAR
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**ID Code** (A=Service Ready, B=Not Service Ready) : A **MDAP/MAIS Code:**

**Modification Item 1 of 1:** Group B Calibration/Installation

**Manufacturer Information**

Manufacturer Name: Northrop Grumman	Manufacturer Location: Palmdale, California
Administrative Leadtime (in Months): 5	Production Leadtime (in Months): 1

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	44 / 2.730	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	44 / 2.730
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	44 / 2.730	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	44 / 2.730

**Installation Schedule**

PYS	In	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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		
	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	44
	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	44

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HAWK00 / RQ-4 Mods	<b>Modification Number / Title:</b> 470011 / ASIP Install/Calibration
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**ID Code** (A=Service Ready, B=Not Service Ready) : A **MDAP/MAIS Code:**

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	4.834	-	-	-	-	-	-	-	-	-	-	4.834
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	4.834	-	-	-	-	-	-	-	-	-	-	4.834
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority <i>(\$ in Millions)</i></b>	<b>4.834</b>	-	-	-	-	-	-	-	-	-	-	<b>4.834</b>

*(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 Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Beginning in FY21, to support the divestiture of the Block 20/30 aircraft, efforts will be pivoted to focus on supporting the Block 40 fleet and closing out the Block 30 efforts to maximize value to the USAF and DoD.

This program converts a total of eight (8) Block 30I air vehicles into Block 30M (Airborne Signals Intelligence Payload (ASIP) capable) air vehicles to meet Air Combat Command (ACC) requirements. The original retrofit plan was to convert eleven (11) Block 30I air vehicles into Block 30M capable air vehicles; however, this effort was halted by PB13. As a result, only three (3) of the eleven (11) Block 30Is were retrofitted.

The ASIP retrofit program was never restarted and certain critical Line Replaceable Units (LRUs) were directed to be redistributed within the USAF and cannot be reconstituted. This project will require the installation of Group A hardware at the Contractor facility followed by a significant calibration effort of at least three, 8+ hour flights per air vehicle. The current schedule includes one (1) ASIP provided as Government Furnished Equipment (GFE) by ACC and two (2) Lot 11 ASIP kits (Group A included with kits). These three (3) ASIP units are currently scheduled to install on the last three (3) air vehicles, making them Block 30Ms with the ASIP installed. If any additional ASIP sensors become available, they will also be installed as part of this effort.

This effort results in a minimum of three (3) Block 30M air vehicles, with the remaining quantity being Block 30M capable air vehicles.

**Milestone/Development Status**

Contract awarded Mar FY16.

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> HAWK00 / RQ-4 Mods					<b>Modification Number / Title:</b> 470011 / ASIP Install/Calibration			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> RQ-4				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0305220F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> Grp A Install Kits (2)													
A Kits													
Recurring													
Grp A Install Kits:INSTALL KITS Group A (Active)	6 / 0.920	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.920	
<i>Subtotal: Recurring</i>	- / 0.920	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.920	
<i>Subtotal: Grp A Install Kits (2)</i>	- / 0.920	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.920	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.920	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.920	
<b>Support (All Modification Items)</b>													
Change Orders	- / 2.955	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.955	
<i>Subtotal: Support</i>	- / 2.955	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.955	
<b>Installation</b>													
<i>Modification Item 1 of 1:</i> Grp A Install Kits (2)	6 / 0.959	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.959	
<i>Subtotal: Installation</i>	6 / 0.959	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.959	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>4.834</b>	-	-	-	-	-	-	-	-	-	-	<b>4.834</b>	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force	<b>Date:</b> February 2020
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<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HAWK00 / RQ-4 Mods	<b>Modification Number / Title:</b> 470011 / ASIP Install/Calibration
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** Grp A Install Kits (2)

**Manufacturer Information**

Manufacturer Name: Northrop Grumman	Manufacturer Location: Palmdale, CA
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Administrative Leadtime (in Months): 12	Production Leadtime (in Months): 3
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Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 / 0.959	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.959
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	6 / 0.959	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.959

**Installation Schedule**

PYS	In	Out	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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		
	6	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	6
	6	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	6

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HAWK00 / RQ-4 Mods	<b>Modification Number / Title:</b> 470012 / MODE 5/ADS-B

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

<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	6.267	0.000	0.000	-	-	-	-	-	-	-	-	6.267
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	6.267	0.000	0.000	-	-	-	-	-	-	-	-	6.267
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>6.267</b>	<b>0.000</b>	<b>0.000</b>	-	-	-	-	-	-	-	-	<b>6.267</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Beginning in FY21, to support the divestiture of the Block 20/30 aircraft, efforts will be pivoted to focus on supporting the Block 40 fleet and closing out the Block 30 efforts to maximize value to the USAF and DoD.

Mode 5 is an enhancement to the legacy Mode 4 Identification, Friend or Foe (IFF) which has been in use since the mid-1950s for military identification. Mode 5 provides four graduated levels of data transmission with enhanced security protection and technology advances and includes question and answer identification/classified interrogation, position reporting capability, selective interrogation, and data exchange capability. The National Security Agency and Joint Chiefs of Staff have placed a mandate to replace Mode 4 with Mode 5 by 30 Jun 2020.

Automatic Dependent Surveillance-Broadcast (ADS-B) is a function for air vehicles that periodically transmits its state vector (positions/velocities) and other information to air traffic controllers. This allows air traffic controllers to know where the platform is as it enters a specific air space. Mode S, which gives more detailed information on the identity of aircraft to the air traffic controller, is also being implemented with this upgrade as part of the IFF hardware. ADS-B supports improved use of airspace and enhanced safety, and is required for use in the European theater by the International Civil Aviation Organization (European FAA). The Federal Aviation Administration (FAA) and DoD have mandated implementation by 1 January 2020.

This program will retrofit thirty-four (34) aircraft: four (4) Block 20, twenty (20) Block 30, and ten (10) Block 40 aircraft.

**Projected milestones:**

- SRR - Completed Jun 2016
- CDR - Completed Nov 2016
- DT Begins - Feb 2019
- OT Begins - Oct 2019
- Fielding - Jun 2020
- Retrofit - Mar 2020

**Milestone/Development Status**

Contract was awarded Mar 2016. Development is underway with a projected 38-month period of performance. The development will progress to a stage where the Contractor will be able to release documentation to commence kitting for retrofit. Therefore, certain retrofit activities will begin prior to full completion of development effort.

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**Exhibit P-3a, Individual Modification: PB 2021 Air Force** **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 3010F / 05 / 5 **P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods **Modification Number / Title:** 470012 / MODE 5/ADS-B

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

**Models of Systems Affected:** RQ-4 **Modification Type:** Capability Improvement **Related RDT&E PEs:** 0305220F

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>												
0305220F	- / 2.303	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.303
<b>Procurement</b>												
<i>Modification Item 1 of 1: Grp B Equipment</i>												
B Kits												
Recurring												
Grp B Equipment:EQUIPMENT Group B (Active)	34 / 5.327	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 5.327
<i>Subtotal: Recurring</i>	- / 5.327	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.327
<i>Subtotal: Grp B Equipment</i>	- / 5.327	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.327
<i>Subtotal: Procurement, All Modification Items</i>	- / 5.327	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.327
<b>Installation</b>												
<i>Modification Item 1 of 1: Grp B Equipment</i>												
	34 / 0.940	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 0.940
<i>Subtotal: Installation</i>	34 / 0.940	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 0.940
<b>Total</b>												
<b>Total Cost (Procurement + Support + Installation)</b>	<b>6.267</b>	<b>0.000</b>	<b>0.000</b>	-	-	-	-	-	-	-	-	<b>6.267</b>

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 3010F / 05 / 5 **P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods **Modification Number / Title:** 470012 / MODE 5/ADS-B

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

**Modification Item 1 of 1:** Grp B Equipment

**Manufacturer Information**

Manufacturer Name: Northrop Grumman Manufacturer Location: Palmdale, California

Administrative Leadtime (in Months): 10 Production Leadtime (in Months): 1

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	34 / 0.940	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 0.940
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	34 / 0.940	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 0.940

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	34
Out	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	34



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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HAWK00 / RQ-4 Mods	<b>Modification Number / Title:</b> 470013 / Sensor Enhancements

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

<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	29.382	0.000	0.000	0.000	0.000	0.000	-	-	-	-	-	29.382
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	29.382	0.000	0.000	0.000	0.000	0.000	-	-	-	-	-	29.382
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>29.382</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	-	-	-	-	-	<b>29.382</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Beginning in FY21, to support the divestiture of the Block 20/30 aircraft, efforts will be pivoted to focus on supporting the Block 40 fleet and closing out the Block 30 efforts to maximize value to the USAF and DoD.

This modification program includes the purchase and installation of Intelligence, Surveillance and Reconnaissance (ISR) Payload Adapters (IPAs), interface harnessing, Interchangeable Fairings (ICFs), as well as other related sensor enhancements. This Mod reflects nine (9) Blk 30 air vehicles to be retrofitted. IPAs provide a common air vehicle physical interface with an Open Mission Systems (OMS) software layer for payloads, which is expected to provide reduced cost and schedule air vehicle integration. IPAs to be installed on Airborne Signals Intelligence Payload (ASIP) capable aircraft.

Requirement source: CPD.

Milestone/Development Status

The NRE to install IPAs and harnessing onto the aircraft has been completed. ICF development work was awarded on contract in Aug 2018.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>											<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5				<b>P-1 Line Item Number / Title:</b> HAWK00 / RQ-4 Mods				<b>Modification Number / Title:</b> 470013 / Sensor Enhancements				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A						<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> RQ-4			<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0305220F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>												
<i>Modification Item 1 of 1:</i> Grp B Equipment (2)												
A Kits												
Recurring												
Grp B Equipment:INSTALL KITS Group A (Active)	3 / 3.621	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 3.621
<i>Subtotal: Recurring</i>	- / 3.621	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.621
B Kits												
Recurring												
Grp B Equipment:EQUIPMENT Group B (Active)	3 / 5.758	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 5.758
<i>Subtotal: Recurring</i>	- / 5.758	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.758
<i>Subtotal: Grp B Equipment (2)</i>	- / 9.379	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.379
<i>Subtotal: Procurement, All Modification Items</i>	- / 9.379	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.379
<b>Support (All Modification Items)</b>												
OTHER GOVT	- / 4.551	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.551
Change Orders	- / 5.358	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.358
<i>Subtotal: Support</i>	- / 9.909	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.909
<b>Installation</b>												
<i>Modification Item 1 of 1:</i> Grp B Equipment (2)	3 / 10.094	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 10.094
<i>Subtotal: Installation</i>	3 / 10.094	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 10.094
<b>Total</b>												
<b>Total Cost (Procurement + Support + Installation)</b>	<b>29.382</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>29.382</b>

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 3010F / 05 / 5 **P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods **Modification Number / Title:** 470013 / Sensor Enhancements

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

**Modification Item 1 of 1:** Grp B Equipment (2)

**Manufacturer Information**

Manufacturer Name: Northrop Grumman Manufacturer Location: Palmdale, California

Administrative Leadtime (in Months): 10 Production Leadtime (in Months): 1

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	3 / 10.094	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 10.094
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	3 / 10.094	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 10.094

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	3
Out	3	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	3

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HAWK00 / RQ-4 Mods	<b>Modification Number / Title:</b> 470019 / Communication Interoperability/ Enhancements

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	3.000	0.000	0.000	9.000	0.000	9.000	9.000	9.000	9.000	8.991	-	47.991
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	3.000	0.000	0.000	9.000	0.000	9.000	9.000	9.000	9.000	8.991	-	47.991
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>3.000</b>	<b>0.000</b>	<b>0.000</b>	<b>9.000</b>	<b>0.000</b>	<b>9.000</b>	<b>9.000</b>	<b>9.000</b>	<b>9.000</b>	<b>8.991</b>	-	<b>47.991</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Beginning in FY21, to support the divestiture of the Block 20/30 aircraft, efforts will be pivoted to focus on supporting the Block 40 fleet and closing out the Block 30 efforts to maximize value to the USAF and DoD.

In order to support multiple worldwide missions for remote split operations (RSO), a long-term SATCOM reach back capability is required. RSO dictate the need for a secure SATCOM C3 long-haul transmission capability enabling the physical separation of the SATCOM wideband antenna from the Mission Control Element (MCE). This solution must support use of all Ku and Extended Tether Pod (ETP) antennae authorized for use with Global Hawk. The expected result of this capability allows the transmission of C3 over existing long haul circuitry using Asynchronous Transfer Mode (ATM) and Ethernet, enabling the needed geographical separation required to conduct worldwide RSO.

In order to accommodate the communication interoperability/enhancements long term technical solution for reach-back monitoring and address the diminishing manufacturing source (DMS) for the AP4000, there's a need for a reach-back capability upgrade pair that replaces both the AP4000 and Broadmore 500.

This project will replace the AP4000 and Broadmore 500s in the MCEs and Launch Recovery Elements (LRE) with a pair of reach-back capability upgrades. This will address the short term diminishing manufacturing source for the AP4000s and also enable a long term technical solution for reach-back monitoring.

The Global Hawk Program office has an existing relationship with the Space and Naval Warfare Systems Command (SPAWAR), which will allow for the fastest and least expensive method to purchase and install the equipment. Funding will also be used to update documentation through the Contractor.

SPAWAR will purchase all equipment, parts, and materials required for thirty-four (34) upgrades.

The Mobile User Objective System (MUOS) effort will upgrade legacy GH Ultra High Frequency (UHF) communications to satisfy USAF long-term operational effectiveness, suitability, and flexibility objectives. This effort retrofits GH air vehicles, cockpits, and associated communication system equipment.

**Milestone/Development Status**

Development installation, test, and checkout to be accomplished in 2018 and early 2019. The production assets can be purchased prior to full completion of development work.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>											<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5				<b>P-1 Line Item Number / Title:</b> HAWK00 / RQ-4 Mods				<b>Modification Number / Title:</b> 470019 / Communication Interoperability/ Enhancements					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> RQ-4			<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0305220F						
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> Group B Equipment													
A Kits													
Recurring													
Group B Equipment:INSTALL KITS Group A (Active)	34 / 0.450	- / -	- / -	24 / 9.000	- / 0.000	24 / 9.000	24 / 9.000	24 / 9.000	24 / 9.000	24 / 8.991	- / -	154 / 45.441	
<i>Subtotal: Recurring</i>	- / 0.450	- / -	- / -	- / 9.000	- / 0.000	- / 9.000	- / 9.000	- / 9.000	- / 9.000	- / 8.991	- / -	- / 45.441	
B Kits													
Recurring													
Group B Equipment:EQUIPMENT Group B (Active)	34 / 1.750	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 1.750	
<i>Subtotal: Recurring</i>	- / 1.750	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.750	
<i>Subtotal: Group B Equipment</i>	- / 2.200	- / -	- / -	- / 9.000	- / 0.000	- / 9.000	- / 9.000	- / 9.000	- / 9.000	- / 8.991	- / -	- / 47.191	
<i>Subtotal: Procurement, All Modification Items</i>	- / 2.200	- / -	- / -	- / 9.000	- / 0.000	- / 9.000	- / 9.000	- / 9.000	- / 9.000	- / 8.991	- / -	- / 47.191	
<b>Support (All Modification Items)</b>													
Change Orders	- / 0.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.500	
<i>Subtotal: Support</i>	- / 0.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.500	
<b>Installation</b>													
<i>Modification Item 1 of 1:</i> Group B Equipment	34 / 0.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 0.300	
<i>Subtotal: Installation</i>	34 / 0.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 0.300	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>3.000</b>	<b>0.000</b>	<b>0.000</b>	<b>9.000</b>	<b>0.000</b>	<b>9.000</b>	<b>9.000</b>	<b>9.000</b>	<b>9.000</b>	<b>8.991</b>	<b>-</b>	<b>47.991</b>	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HAWK00 / RQ-4 Mods	<b>Modification Number / Title:</b> 470019 / Communication Interoperability/ Enhancements

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** Group B Equipment

**Manufacturer Information**

Manufacturer Name: Northrop Grumman	Manufacturer Location: Palmdale, California
Administrative Leadtime (in Months): 10	Production Leadtime (in Months): 1

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	34 / 0.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 0.300
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	34 / 0.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 0.300

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	34
Out	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	34

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HAWK00 / RQ-4 Mods	<b>Modification Number / Title:</b> 470020 / EISS Enhancements

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	19.852	0.000	0.000	0.000	0.000	0.000	-	-	-	-	19.852
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	19.852	0.000	0.000	0.000	0.000	0.000	-	-	-	-	19.852
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>0.000</b>	<b>19.852</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>19.852</b>

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

Initial Spares (\$ in Millions)	-	2.069	-	-	-	-	-	-	-	-	-	2.069
Gross/Weapon System Unit Cost (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Beginning in FY21, to support the divestiture of the Block 20/30 aircraft, efforts will be pivoted to focus on supporting the Block 40 fleet and closing out the Block 30 efforts to maximize value to the USAF and DoD.

The RQ-4 program is developing and testing several capability enhancements within the Enhanced Integrated Sensor Suite (EISS) to provide improved Intelligence gathering capabilities and performance. These enhancements will increase mission performance of the Enhanced EO/IR Receiver Unit (EERU) by fielding the retrofit of a new Electro Optical (EO) camera with greater range and photo gathering ability, higher data transmission rate and increased reliability.

This modification will include an upgrade from 8-bit to 12-bit digital images which increases National Imagery Interpretability Rating Scale (NIIRS) range and improves image quality in hazy atmospheric conditions. Additional performance and capability upgrades include improved resilience to cold storage down to -40 C instead of -10 C, elimination of intermittent noise and interference in images, and a more uniform image plane that will reduce the quilting effect in mosaicked composite images.

This retrofit includes upgrade kits and installs on twenty (19) Block 30 aircraft and twelve (12) spare modification kits, Government Furnished Property (GFP) repair, and focus and calibration efforts as required.

Also, six (6) Spare 501T cameras will be procured under Budget Program 16, Weapon System RQ-4 UAV procurement exhibits. Installation to be conducted organically. The FY19 quantity and cost shown reflect negotiated contract options.

Acquisition information:

- Systems Requirement Review (SRR) - Mar 2018
- Preliminary Design Review (PDR) - May 2018
- Critical Design Review (CDR) - Sep 2018
- Developmental Test & Evaluation (DTE) completion - Oct 2019
- Technical Data Package (TDP) - Oct 2019
- Requirement source: Diminishing Manufacturing Source (DMS)

Milestone/Development Status

RTD&E anticipated to last approx. 18-24 months. The objective is to begin retrofit activities immediately after completion of DT/OT in order to minimize any delay to the field.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> HAWK00 / RQ-4 Mods					<b>Modification Number / Title:</b> 470020 / EISS Enhancements			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> RQ-4				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0305220F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0305220F	- / 6.917	- / 8.309	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 15.226	
<b>Procurement</b>													
<b>Modification Item 1 of 1:</b> Grp B Equipment (3)													
B Kits													
Recurring													
Grp B Equipment:EQUIPMENT Group B (Active)	- / -	20 / 5.237	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 5.237	
<i>Subtotal: Recurring</i>	- / -	- / 5.237	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.237	
<i>Subtotal: Grp B Equipment (3)</i>	- / -	- / 5.237	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.237	
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / 5.237	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.237	
<b>Support (All Modification Items)</b>													
OTHER GOVT	- / -	- / 4.111	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.111	
<i>Subtotal: Support</i>	- / -	- / 4.111	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.111	
<b>Installation</b>													
<b>Modification Item 1 of 1:</b> Grp B Equipment (3)													
<i>Subtotal: Installation</i>	- / -	20 / 10.504	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 10.504	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>0.000</b>	<b>19.852</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>19.852</b>	



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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HAWK00 / RQ-4 Mods	<b>Modification Number / Title:</b> 470020 / EISS Enhancements
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**ID Code** (A=Service Ready, B=Not Service Ready) : B **MDAP/MAIS Code:**

**Modification Item 1 of 1:** Grp B Equipment (3)

**Manufacturer Information**

Manufacturer Name: Raytheon Co.	Manufacturer Location: Waltham, MA
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 3

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jun 2019						
Delivery Dates	Sep 2019						

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	20 / 10.504	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 10.504
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	20 / 10.504	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 10.504

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	10	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	20
Out	0	-	-	10	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	20

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0207224F, 0207230F	Other Related Program Elements: 0207224F, 0207230F
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**Line Item MDAP/MAIS Code:** 257

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	300.277	125.654	34.850	20.780	58.020	78.800	49.290	14.978	4.447	33.472	0.000	641.768
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	300.277	125.654	34.850	20.780	58.020	78.800	49.290	14.978	4.447	33.472	0.000	641.768
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>300.277</b>	<b>125.654</b>	<b>34.850</b>	<b>20.780</b>	<b>58.020</b>	<b>78.800</b>	<b>49.290</b>	<b>14.978</b>	<b>4.447</b>	<b>33.472</b>	<b>0.000</b>	<b>641.768</b>

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

**Description:**

HC/MC-130 Recapitalization will replace and augment the aging USAF fleets of combat rescue HC-130P/N, special operations MC-130E/P/H and AC-130H/U/W aircraft which are experiencing airworthiness, maintainability and operational limitations. This program provides a common baseline configuration aircraft.

The HC-130J aircraft provides combat search and rescue infiltration and exfiltration including aerial refueling of aircraft in combat search and rescue operations as well as acting as an airborne command post during rescue operations. The MC-130J can provide specialized mobility capability to position, supply, re-supply and recover specialized ground tactical units. This funding will support studies to reduce potential risks, potential Diminishing Manufacturing Sources (DMS) and obsolescence solutions, to include if optimal, life of type buys or bridge buys limited to the program of record quantity. The designed service life is 30 years and the average service life remaining for an HC-130J is 26.07 years and for an MC-130J is 25.15 years.

The modifications budgeted in FY21 will improve the reliability, maintainability, safety, mission performance, reduce logistics costs, and implement fleet upgrades and enhancements to meet emerging requirements for the HC/MC-130J aircraft and associated training systems. This modification permits the initiation and employment of rapid acquisition authorities to respond to emerging threats and requirements as needed.

Funding for this exhibit is contained in PE 0207224F (HC-130J) and PE 0207230F (MC-130J).

FY19 funding totals include \$87.90M for Overseas Contingency Operations.

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**Exhibit P-40, Budget Line Item Justification: PB 2021 Air Force** **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

**P-1 Line Item Number / Title:**  
HCMC00 / HC/MC-130 Modifications

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0207224F, 0207230F **Other Related Program Elements:** 0207224F, 0207230F

**Line Item MDAP/MAIS Code:** 257

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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***	8762 / MC-130J Link 16 (Capability Improvement)				- / -	- / -	- / -	- / -	- / 4.420	- / 4.420
P-40a***	99999X / Low Cost Modifications (Safety)				- / 8.148	- / 0.640	- / 1.000	- / 1.988	- / -	- / 1.988
P-3a	5222 / HC/MC-130J Block 8.1 (Capability Improvement)		B		- / -	- / 26.808	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	8632 / MC-130J Increment 2 (Capability Improvement)		A		- / 39.364	- / 0.065	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	8634 / HC-130J Common Configuration (Capability Improvement)		A		- / 42.233	- / 4.509	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	8635 / HC-130J Personnel Locator System (Capability Improvement)		B		- / 104.444	- / 2.793	- / 1.938	- / 2.021	- / 0.000	- / 2.021
P-3a	8636 / HC-130J Situational Awareness (Capability Improvement)		B		- / 48.236	- / 21.200	- / 12.411	- / 0.000	- / 24.700	- / 24.700
P-3a	8639 / Wireless Intercom (Capability Improvement)		B		- / 0.700	- / 11.059	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	8642 / (AbMN) Air borne Mission Networking (Capability Improvement)		A		- / 14.692	- / 0.000	- / 19.501	- / 16.771	- / 0.000	- / 16.771
P-3a	8648 / ADS-B out Acceleration (Capability Improvement)		A		- / 1.780	- / 2.530	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	8652 / (RFCM) Radio Frequency Countermeasures (Capability Improvement)		B		- / 40.680	- / 22.150	- / 0.000	- / 0.000	- / 28.900	- / 28.900
P-3a	8658 / Paratroop Door (Capability Improvement)		B		- / 0.000	- / 24.500	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	8659 / Broadband Antenna (Capability Improvement)		B		- / 0.000	- / 9.400	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	8761 / HC/MC/AC MUOS (Capability Improvement)		B		- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 300.277</b>	<b>- / 125.654</b>	<b>- / 34.850</b>	<b>- / 20.780</b>	<b>- / 58.020</b>	<b>- / 78.800</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	8762 / MC-130J Link 16 (Capability Improvement)				- / 0.000	- / 0.000	- / -	- / -	- / -	- / 4.420
P-40a***	99999X / Low Cost Modifications (Safety)				- / 1.000	- / 0.998	- / 0.914	- / -	- / -	- / 14.688
P-3a	5222 / HC/MC-130J Block 8.1 (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 26.808
P-3a	8632 / MC-130J Increment 2 (Capability Improvement)		A		- / 0.000	- / 0.000	- / -	- / -	- / -	- / 39.429
P-3a	8634 / HC-130J Common Configuration (Capability Improvement)		A		- / 0.000	- / 0.000	- / -	- / -	- / -	- / 46.742
P-3a	8635 / HC-130J Personnel Locator System (Capability Improvement)		B		- / -	- / -	- / -	- / -	- / -	- / 111.196
P-3a	8636 / HC-130J Situational Awareness (Capability Improvement)		B		- / 3.095	- / 3.371	- / 3.533	- / 2.398	- / 0.000	- / 118.944
P-3a	8639 / Wireless Intercom (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 11.759
P-3a	8642 / (AbMN) Air borne Mission Networking (Capability Improvement)		A		- / 45.195	- / 10.609	- / 0.000	- / -	- / -	- / 106.768
P-3a	8648 / ADS-B out Acceleration (Capability Improvement)		A		- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / 4.310
P-3a	8652 / (RFCM) Radio Frequency Countermeasures (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / 91.730
P-3a	8658 / Paratroop Door (Capability Improvement)		B		- / 0.000	- / 0.000	- / -	- / -	- / -	- / 24.500
P-3a	8659 / Broadband Antenna (Capability Improvement)		B		- / 0.000	- / 0.000	- / -	- / -	- / -	- / 9.400
P-3a	8761 / HC/MC/AC MUOS (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 31.074	- / 0.000	- / 31.074

**UNCLASSIFIED**

**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

**P-1 Line Item Number / Title:**  
HCMC00 / HC/MC-130 Modifications

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0207224F, 0207230F **Other Related Program Elements:** 0207224F, 0207230F

**Line Item MDAP/MAIS Code:** 257

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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)
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				- / 49.290	- / 14.978	- / 4.447	- / 33.472	- / 0.000	- / 641.768

\*\*\* Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

\*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:**  
This program, P-3A Mod 8762, MC-130J Link 16, is a new start.

This program, P-3A Mod 8762, MC-130J Link 16, is an FY21 new start.

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications	<b>Modification Number / Title:</b> 5222 / HC/MC-130J Block 8.1

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	26.808	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	26.808
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	26.808	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	26.808
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	-	<b>26.808</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>26.808</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This program funds unique HC-130J integration requirements for the Block 7.0/8.1 program. The C-130J Program (PE 0401132F) provides the Block 7.0/8.1 requirements that are common to all C-130J aircraft. The program will deliver Communication, Navigation and Surveillance/Air Traffic Management (CNS/ATM) capabilities required for compliance with evolving international standards, thereby allowing HC-130J aircraft to operate in international airspace. It also incorporates but is not limited to capabilities such as a new Flight Management System (FMS), Civil GPS Navigation and Data Link, Identification Friend or Foe (IFF) Transponder Mode-5, Automatic Dependent Surveillance-Broadcast Out (ADS-B Out), Link-16 and 4th Communications/Navigation/Identification Management Unit (CNI-MU).

In 2018 the USAF significantly revamped its HC-130J Block 7.0/8.1. upgrade strategy. The MC-130J was de-scoped from the current Block 7.0/8.1 program to allow the MC 130J to prioritize other (SOCOM-funded) modifications while allowing the USAF to move forward with Block 7.0/8.1 on the HC-130J.

The HC-130J Block 7.0/8.1 modification upgrade falls under the ACAT 1C HC/MC-130J Recapitalization Program currently but is being move to be a separate ACAT III program. The HC-130J Block 7.0/8.1 retrofit installation program funds the Group A kits, installation of retrofit kits, delta kit components, and associated trainer efforts. The Common Core Group B kits are funded in the C-130J Block 7.0/8.1 program.

The USAF will be fielding Link-16(under the Situational Awareness Modification) and Combat System Operator (CSO) 2.5 Station (under the Defensive System Suite Program) portions of Block 7.0/8.1 separately accelerating install of these capabilities to meet dependent program schedule requirements and operational interoperability requirements.

This program will retrofit 39 HC-130Js. To date, the program has acquired 4 kits (one using RDT&E funds). The program is currently paused until more funds are programmed.

**Milestone/Development Status**

HC-130J Block 7.0/8.1 Trial Kit Install RDT&E project started in FY16 to be completed in FY21.

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification: PB 2021 Air Force** **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 3010F / 05 / 5 **P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications **Modification Number / Title:** 5222 / HC/MC-130J Block 8.1

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

**Models of Systems Affected:** HC-130J, MC-130J, AC-130J **Modification Type:** Capability Improvement **Related RDT&E PEs:** 0207224F

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>												
<i>Modification Item 1 of 1:</i> CSO 2.5 (Crew Station Operation)												
A Kits												
Recurring												
CSO 2.5 (Crew Station Operation):INSTALL KITS Group A (Active)	- / -	3 / 9.438	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 9.438
<i>Subtotal: Recurring</i>	- / -	- / 9.438	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.438
<i>Subtotal: CSO 2.5 (Crew Station Operation)</i>	- / -	- / 9.438	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.438
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / 9.438	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.438
<b>Support (All Modification Items)</b>												
GROUP A: TOTAL NONRECURRING	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / 0.000
OTHER GOVT	- / -	- / 17.370	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 17.370
<i>Subtotal: Support</i>	- / -	- / 17.370	- / -	- / -	- / -	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / 17.370
<b>Installation</b>												
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>												
<b>Total Cost (Procurement + Support + Installation)</b>	-	26.808	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	26.808

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications			<b>Modification Number / Title:</b> 5222 / HC/MC-130J Block 8.1	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 1 of 1:</b> CSO 2.5 (Crew Station Operation)							
<b>Manufacturer Information</b>							
Manufacturer Name: Unknown				Manufacturer Location: Unknown			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 0			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 0		



**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications	<b>Modification Number / Title:</b> 8632 / MC-130J Increment 2

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

<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	39.364	0.065	0.000	0.000	0.000	0.000	0.000	0.000	-	-	-	39.429
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	39.364	0.065	0.000	0.000	0.000	0.000	0.000	0.000	-	-	-	39.429
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>39.364</b>	<b>0.065</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>39.429</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The MC-130J Increment 2 modification brings 10 MC-130J Increment 1 aircraft up to the baseline Increment 2 configuration. Current funding includes but is not limited to completing the total requirement of 10 aircraft modifications, adding LAIRCM Group A provisions, crashworthy loadmaster seats, increased electrical power, installation of specific enhanced situational awareness modifications, modifying MC-130J training systems. Additionally, this funding request includes, but is not limited to, supporting any safety of flight issues identified during the modification, OFP builds, training requirements, and potential DMS, to include life of type buys or bridge buys limited to the program of record quantity. It also provides for the installation of specific SOF/PR modifications to the MC-130J aircraft.

8 MC-130J Increment 1 aircraft have been delivered to units as Increment 2. All remaining kits will be delivered by 9 Jun 2020.

The Prior Years funding total includes \$4.416M in Overseas Contingency Operations.

**Milestone/Development Status**

Increment 2 development is complete.

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications					<b>Modification Number / Title:</b> 8632 / MC-130J Increment 2			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> MC-130J				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b>					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> Inc 1-2													
B Kits													
Recurring													
Inc 1-2:EQUIPMENT Group B (Active)	10 / 17.246	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 17.246	
<i>Subtotal: Recurring</i>	- / 17.246	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 17.246	
<i>Subtotal: Inc 1-2</i>	- / 17.246	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 17.246	
<i>Subtotal: Procurement, All Modification Items</i>	- / 17.246	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 17.246	
<b>Support (All Modification Items)</b>													
Change Orders	- / 3.411	- / 0.065	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.476	
SIM/TRAINER	5 / 10.235	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 10.235	
<i>Subtotal: Support</i>	5 / 13.646	- / 0.065	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 13.711	
<b>Installation</b>													
<i>Modification Item 1 of 1:</i> Inc 1-2	4 / 8.472	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 8.472	
<i>Subtotal: Installation</i>	4 / 8.472	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 8.472	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>39.364</b>	<b>0.065</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>-</b>	<b>39.429</b>	

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications	<b>Modification Number / Title:</b> 8632 / MC-130J Increment 2

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** Inc 1-2

**Manufacturer Information**

Manufacturer Name: Lockheed Martin	Manufacturer Location: Marietta GA
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	4 / 8.472	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 8.472
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	4 / 8.472	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 8.472

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	8	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	10
Out	8	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	10

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications	<b>Modification Number / Title:</b> 8634 / HC-130J Common Configuration

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

<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	42.233	4.509	0.000	0.000	0.000	0.000	0.000	0.000	-	-	-	46.742
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	42.233	4.509	0.000	0.000	0.000	0.000	0.000	0.000	-	-	-	46.742
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>42.233</b>	<b>4.509</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>46.742</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The HC-130J Common Configuration/Block Upgrade modifications includes upgrades to the Turret Units (TU) and Electronic Units (EU) with associated wiring harness and software which includes adding the additional fourth Communication, Identification, Navigation, Management Units (CNI-MUs) and Removable Memory Module (RMM) cards with combined Option X and Continuous Improvement Program (CIP) software. This includes but is not limited to correction of deficiency report items identified during production, modifying HC-130J training systems, supporting operational flight program(OFP) builds, potential DMS and obsolescence solutions, to include if optimal, life of type buys or bridge buys limited to the program of record quantity. Common Configuration/Block Upgrade modifications brought the first 2 HC-130J Increment 0 aircraft up to the baseline Increment 2 configuration which were completed in May 2018. Increment 2 also included adding LAIRCM Group A provisions, crashworthy loadmaster seats, and increased electrical power. These modifications ensure total fleet commonality and avoids many Diminishing Manufacturing Sources issues. It also provides for the installation of specific special operation modifications to HC-130J aircraft. This HC-130J mod is related to the MC-130J Increment 2 Mod (Mod #8632) which brings 10 MC-130Js from the Increment 1 to the Increment 2 configuration.

**Milestone/Development Status**

Complete

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications					<b>Modification Number / Title:</b> 8634 / HC-130J Common Configuration			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> HC-130J				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207224F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> Inc 0-2 Common Configuration													
A Kits													
Recurring													
Inc 0-2 Common Configuration:INSTALL KITS Group A (Active)	2 / 6.078	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 6.078	
<i>Subtotal: Recurring</i>	- / 6.078	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.078	
<i>Subtotal: Inc 0-2 Common Configuration</i>	- / 6.078	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.078	
<i>Subtotal: Procurement, All Modification Items</i>	- / 6.078	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.078	
<b>Support (All Modification Items)</b>													
GROUP A: TOTAL NONRECURRING	- / 9.008	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.008	
SIM/TRAINER	5 / 7.138	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 7.138	
SUPPORT-EQUIP	- / 5.428	- / 4.509	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.937	
GFP	- / 2.708	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.708	
<i>Subtotal: Support</i>	5 / 24.282	- / 4.509	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 28.791	
<b>Installation</b>													
<i>Modification Item 1 of 1:</i> Inc 0-2 Common Configuration	2 / 11.873	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 11.873	
<i>Subtotal: Installation</i>	2 / 11.873	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 11.873	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>42.233</b>	<b>4.509</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>-</b>	<b>46.742</b>	

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications	<b>Modification Number / Title:</b> 8634 / HC-130J Common Configuration
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**ID Code** (A=Service Ready, B=Not Service Ready) : A **MDAP/MAIS Code:**

**Modification Item 1 of 1:** Inc 0-2 Common Configuration

**Manufacturer Information**

Manufacturer Name: Lockheed Martin Aero	Manufacturer Location: Marietta Ga
Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 / 11.873	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 11.873
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	2 / 11.873	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 11.873

**Installation Schedule**

PYS	FY 2019	FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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						
In	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	2
Out	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	2

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications	<b>Modification Number / Title:</b> 8635 / HC-130J Personnel Locator System

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	104.444	2.793	1.938	2.021	0.000	2.021	-	-	-	-	-	111.196
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	104.444	2.793	1.938	2.021	0.000	2.021	-	-	-	-	-	111.196
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>104.444</b>	<b>2.793</b>	<b>1.938</b>	<b>2.021</b>	<b>0.000</b>	<b>2.021</b>	-	-	-	-	-	<b>111.196</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This is an update to the personnel recovery communication systems to include, but not limited to, the lightweight airborne recovery system (LARS). This update was driven by the limited ability of the previous systems to connect to the emergency beacon frequency of 406 MHz or to connect with existing and future military survival radios such as the Combat Survivor Evader Locator (CSEL)(AN/PRQ-7) or the AN/PRC-112). It is a secure system that uses two-way encrypted over-the-horizon data communications. The system has gone through developmental test (DT) and operational test (OT) and has been approved for fielding. This effort includes but is not limited to kits, training, tech data, Readiness Spares Package (RSP), Operation Flight Program (OFP) builds, and other government costs. The LARS program will equip all 39 HC-130J aircraft that will be in the fleet. 27 kits and installs are completed. 6 additional kits will be installed in FY20 which have been purchased. The remaining 6 kits and installs will be funded in the future.

Milestone/Development Status

N/A

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>											<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5				<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications							<b>Modification Number / Title:</b> 8635 / HC-130J Personnel Locator System		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> HC-130J				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207224F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1: Personnel Locator System</i>													
A Kits													
Recurring													
Personnel Locator System:INSTALL KITS Group A (Active)	36 / 1.099	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	36 / 1.099	
<i>Subtotal: Recurring</i>	- / 1.099	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.099	
B Kits													
Recurring													
Personnel Locator System:EQUIPMENT Group B (Active)	27 / 6.938	- / 2.793	- / 1.938	- / 2.021	- / -	- / 2.021	- / -	- / -	- / -	- / -	- / -	27 / 13.690	
<i>Subtotal: Recurring</i>	- / 6.938	- / 2.793	- / 1.938	- / 2.021	- / -	- / 2.021	- / -	- / -	- / -	- / -	- / -	- / 13.690	
<i>Subtotal: Personnel Locator System</i>	- / 8.037	- / 2.793	- / 1.938	- / 2.021	- / -	- / 2.021	- / -	- / -	- / -	- / -	- / -	- / 14.789	
<i>Subtotal: Procurement, All Modification Items</i>	- / 8.037	- / 2.793	- / 1.938	- / 2.021	- / -	- / 2.021	- / -	- / -	- / -	- / -	- / -	- / 14.789	
<b>Support (All Modification Items)</b>													
GROUP A: TOTAL NONRECURRING	- / 0.599	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.599	
Change Orders	- / 88.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 88.400	
SIM/TRAINER	1 / 1.446	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.446	
SUPPORT-EQUIP	- / 0.974	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.974	
<i>Subtotal: Support</i>	1 / 91.419	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 91.419	
<b>Installation</b>													
<i>Modification Item 1 of 1: Personnel Locator System</i>	33 / 4.988	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	33 / 4.988	
<i>Subtotal: Installation</i>	33 / 4.988	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	33 / 4.988	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>104.444</b>	<b>2.793</b>	<b>1.938</b>	<b>2.021</b>	<b>0.000</b>	<b>2.021</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>111.196</b>	



**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications	<b>Modification Number / Title:</b> 8635 / HC-130J Personnel Locator System

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** Personnel Locator System

**Manufacturer Information**

Manufacturer Name: Unknown	Manufacturer Location: Unknown
Administrative Leadtime (in Months): 5	Production Leadtime (in Months): 4

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	33 / 4.988	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	33 / 4.988
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	33 / 4.988	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	33 / 4.988

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	30	-	-	4	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	36	
Out	30	-	-	4	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	36		

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications	<b>Modification Number / Title:</b> 8636 / HC-130J Situational Awareness

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	48.236	21.200	12.411	0.000	24.700	24.700	3.095	3.371	3.533	2.398	0.000	118.944
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	48.236	21.200	12.411	0.000	24.700	24.700	3.095	3.371	3.533	2.398	0.000	118.944
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>48.236</b>	<b>21.200</b>	<b>12.411</b>	<b>0.000</b>	<b>24.700</b>	<b>24.700</b>	<b>3.095</b>	<b>3.371</b>	<b>3.533</b>	<b>2.398</b>	<b>0.000</b>	<b>118.944</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Equips HC-130J Personnel Recovery fleet with situational awareness capabilities to increase, maintain, and sustain the personnel recovery task force's ability to rapidly exchange secure information between disparate tactical network systems and enable onboard, real time situational awareness. The Situational Awareness Capabilities Upgrade (SACU) Program is implemented in phases.

SACU Phase 1A equips the HC-130J fleet with 5 situational awareness capabilities (Situational Awareness Data Link (SADL), Blue Force Tracking (BFT), PRC-117 High Performance Waveform (HPW), Air Force Tactical Receiver System-Ruggedized (AFTRS-R) and Joint Precision Aerial Delivery system (JPADS)) which were inherent in legacy aircraft. SACU Phase 1B equips the HC-130J fleet with Video Data Link and Special Communications Radios. SACU Phase 2 equips the HC-130J with Blue Force Tracking 2 (BFT-2), replaces Combat System Officer (CSO) laptops with solid state server and Video Display Terminal (VDT), Video Encoder, additional Ethernet connections in cargo area, and replaces the federated situational awareness software suite to include the Joint Mission Planning System (JMPS) interface. SACU Phase 2 also procures installation kits and installs, includes upgrading the 7.0/8.1 Link 16 Multifunctional Information Distribution System (MIDS) Joint Tactical Radio System (JTRS) capability. These capabilities were accelerated to meet operational needs.

This funding profile provides the support needed to procure and install for each of the 3 SACU phases on 39 HC-130J aircraft, as well as the field support required. Procurement will include Phase 1A (3 kits to cover congressional added aircraft), Phase 1B (20 kits & installs), Phase 2 (39 kits & installs). This funding request includes but is not limited to potential support of: DMS and obsolescence solutions, to include (if optimal) life of type buys or bridge buys limited to the program of record quantity; Changes to existing SACU configurations and/or capabilities; Upgrades to simulators/training devices; Interim Contractor Support (ICS) requirements; and to address Field Support needs such as Training, Interim Supply Support, and Support equipment.

Phases 1A, 1B and 2 together make up the SACU requirement. SACU is required on 39 HC-130Js

**Milestone/Development Status:**

Phase 1A - MS C, 17 Dec 15 - Completed 31 of 39 installs

Phase 1B - MS C, 31 May 16 - Completed 9 of 19 installs

Phase 2 - MS C, 17 Jan 18 - Completed System Requirements Review, Preliminary Design Review, and Critical Design Review

The Prior Year Funding includes FY16 funds of \$5.68M for Overseas Contingency Operations.

FY17 and FY18 program funding was baseline.

FY19 funding includes \$35.90M for Overseas Contingency Operations.

FY20 program funding is baseline.

FY21 funding includes \$24.7M for Overseas Contingency Operations.

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications	<b>Modification Number / Title:</b> 8636 / HC-130J Situational Awareness
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>	
The install schedule in this document represents SACU Phase 2.		
Milestone/Development Status		
N/A		

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>											<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5				<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications					<b>Modification Number / Title:</b> 8636 / HC-130J Situational Awareness			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> HC-130J				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207224F				
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>												
<i>Modification Item 1 of 1:</i> Situational Awareness												
A Kits												
Recurring												
Situational Awareness:INSTALL KITS Group A (Active)	32 / 1.692	5 / 12.000	- / -	- / -	9 / 24.700	9 / 24.700	- / -	- / -	- / -	- / -	- / -	46 / 38.392
<i>Subtotal: Recurring</i>	- / 1.692	- / 12.000	- / -	- / -	- / 24.700	- / 24.700	- / -	- / -	- / -	- / -	- / -	- / 38.392
B Kits												
Recurring												
Situational Awareness:EQUIPMENT Group B (Active)	13 / 10.455	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 10.455
<i>Subtotal: Recurring</i>	- / 10.455	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.455
<i>Subtotal: Situational Awareness</i>	- / 12.147	- / 12.000	- / -	- / -	- / 24.700	- / 24.700	- / -	- / -	- / -	- / -	- / -	- / 48.847
<i>Subtotal: Procurement, All Modification Items</i>	- / 12.147	- / 12.000	- / -	- / -	- / 24.700	- / 24.700	- / -	- / -	- / -	- / -	- / -	- / 48.847
<b>Support (All Modification Items)</b>												
GROUP A: TOTAL NONRECURRING	- / 11.790	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.790
PMA - Contractor Services	- / 0.332	- / -	- / 1.160	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.492
OCO INSTALLATIONS	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.095	- / 3.371	- / 3.533	- / 2.398	- / -	- / 12.397
ICS-Labor	2 / 2.819	- / -	- / 3.700	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 6.519
SIM/TRAINER	1 / 8.659	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 8.659
SUPPORT-EQUIP	- / 10.678	- / -	- / 3.140	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 13.818
<i>Subtotal: Support</i>	3 / 34.278	- / -	- / 8.000	- / -	- / -	- / -	- / 3.095	- / 3.371	- / 3.533	- / 2.398	- / -	3 / 54.675
<b>Installation</b>												
<i>Modification Item 1 of 1:</i> Situational Awareness	32 / 1.811	39 / 9.200	0 / 4.411	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	71 / 15.422
<i>Subtotal: Installation</i>	32 / 1.811	39 / 9.200	- / 4.411	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	71 / 15.422
<b>Total</b>												
<b>Total Cost (Procurement + Support + Installation)</b>	<b>48.236</b>	<b>21.200</b>	<b>12.411</b>	<b>0.000</b>	<b>24.700</b>	<b>24.700</b>	<b>3.095</b>	<b>3.371</b>	<b>3.533</b>	<b>2.398</b>	<b>0.000</b>	<b>118.944</b>

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications	<b>Modification Number / Title:</b> 8636 / HC-130J Situational Awareness
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**ID Code** (A=Service Ready, B=Not Service Ready) : B **MDAP/MAIS Code:**

**Modification Item 1 of 1:** Situational Awareness

**Manufacturer Information**

Manufacturer Name: Lockheed Martin Aero	Manufacturer Location: Marietta, GA
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 4

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jan 2019		Jan 2021				
Delivery Dates	May 2019		May 2021				

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	32 / 1.811	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 1.811
FY 2019	- / -	39 / 9.200	0 / 4.411	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	39 / 13.611
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	32 / 1.811	39 / 9.200	0 / 4.411	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	71 / 15.422

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	32	4	4	4	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	50
Out	32	4	4	4	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	50

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications	<b>Modification Number / Title:</b> 8639 / Wireless Intercom

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

<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	0.700	11.059	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	11.759
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	0.700	11.059	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	11.759
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>0.700</b>	<b>11.059</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>11.759</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This is an update to inter-phone communication system (ICS) to include, but not limited to, the Integrated Secure Wireless Inter-phone Communication System (ISWICS). This update is a type 1 encrypted system that is compatible with approved headsets, helmets, and oxygen masks and allows the loadmaster and other crew to wirelessly communicate with crew members in normal, push-to-talk, and voice activated mode (VOX). In addition to added wireless capability to the current ICS this upgrade also allows maintenance and forward area refueling point (FARP) crew to utilize ICS rather than relying on hand signals. This effort includes but is not limited to kits, training, tech data, Readiness Spares Package (RSPs), Operational Flight Program (OFP) builds, and other government costs. This is a non-developmental, commercially off the shelf available system. Total requirement to be procured and installed is up to 134 on both the HC-130J and MC-130J aircraft.

One unit was acquired in 2019 from SCI for demo purposes. The acquisition strategy for future purchases is currently being worked.

The Prior Years Funding includes FY17 funds of \$0.70M for Overseas Contingency Operations. FY19 funding includes \$11.10M for Overseas Contingency Operations.

**Milestone/Development Status**

The estimated kit buy date is August 2020.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5				<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications						<b>Modification Number / Title:</b> 8639 / Wireless Intercom		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> HC-130J			<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207224F, 0207230F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>												
<i>Modification Item 1 of 1:</i> Wireless Interphone Communication System												
B Kits												
Recurring												
Wireless Interphone Communication System:EQUIPMENT Group B (Active)	1 / 0.200	45 / 11.059	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 11.259
<i>Subtotal: Recurring</i>	- / 0.200	- / 11.059	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.259
<i>Subtotal: Wireless Interphone Communication System</i>	- / 0.200	- / 11.059	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.259
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.200	- / 11.059	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.259
<b>Support (All Modification Items)</b>												
PMA - Other Gov't Costs	0 / 0.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.500
<i>Subtotal: Support</i>	0 / 0.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.500
<b>Installation</b>												
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>												
<b>Total Cost (Procurement + Support + Installation)</b>	<b>0.700</b>	<b>11.059</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>11.759</b>

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications			<b>Modification Number / Title:</b> 8639 / Wireless Intercom	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B				<b>MDAP/MAIS Code:</b>			
<b>Modification Item 1 of 1:</b> Wireless Interphone Communication System							
<b>Manufacturer Information</b>							
Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime (in Months): 1				Production Leadtime (in Months): 8			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates	Jun 2019						
Delivery Dates	Feb 2020						
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate						<b>Installation Quantity:</b> 46	



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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications	<b>Modification Number / Title:</b> 8642 / (AbMN) Air borne Mission Networking

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	14.692	0.000	19.501	16.771	0.000	16.771	45.195	10.609	0.000	-	-	106.768
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	14.692	0.000	19.501	16.771	0.000	16.771	45.195	10.609	0.000	-	-	106.768
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>14.692</b>	<b>0.000</b>	<b>19.501</b>	<b>16.771</b>	<b>0.000</b>	<b>16.771</b>	<b>45.195</b>	<b>10.609</b>	<b>0.000</b>	-	-	<b>106.768</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

AbMN is AFSOC's key enabler for Joint All-Domain Command and Control in modern conflict environments; it is a net-centric capability to improve tactical decision making by creating a correlated, common operating picture and provides for enhanced, digital collaboration with Combat Air Forces and Coalition partners. This modification equips the MC-130J with the service common hardware to satisfy the USAF Airborne Networking mandate as well as AFSOC's communication Networking tactical datalink capability requirements as stated in the USSOCOM Airborne Mission Networking Capabilities Development Document, dated 6 January 2016. The service common hardware will be permanently integrated in the MC-130J aircraft as part of USSOCOMs AbMN modification and provides capabilities that include Beyond Line of Site, Line of Site, and Full Motion Video datalink. This funding request will support potential DMS and obsolescence solutions, to include if optimal, life of type buys or bridge buys limited to the program of record quantity. This program includes, but is not limited to, kits, training, tech data, deployment packages, and other government costs.

Requirement is 57 MC-130J aircrafts.

This program provides the AF service common hardware for USSOCOM PE (1160403BB). USSOCOM funds the integration and installation of the AF service common hardware as part of its AbMN program.

Milestone/Development Status

Milestone Development Status:

MS-B; LRIP start 3QFY20

Install Schedule

FY19-1, FY20- 2, FY21- 2, FY22- 1 (reduced from 4 due to funding delta in FY21), FY23-30- 6 per year for a total of 57 installs

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications					<b>Modification Number / Title:</b> 8642 / (AbMN) Air borne Mission Networking			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> MC-130J				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b>					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> AbMNGroup B													
B Kits													
Recurring													
AbMNGroup B:EQUIPMENT Group B (Active)	2 / 14.692	- / -	3 / 14.354	4 / 16.771	- / -	4 / 16.771	6 / 30.000	- / -	- / -	- / -	- / -	15 / 75.817	
<i>Subtotal: Recurring</i>	- / 14.692	- / -	- / 14.354	- / 16.771	- / -	- / 16.771	- / 30.000	- / -	- / -	- / -	- / -	- / 75.817	
<i>Subtotal: AbMNGroup B</i>	- / 14.692	- / -	- / 14.354	- / 16.771	- / -	- / 16.771	- / 30.000	- / -	- / -	- / -	- / -	- / 75.817	
<i>Subtotal: Procurement, All Modification Items</i>	- / 14.692	- / -	- / 14.354	- / 16.771	- / -	- / 16.771	- / 30.000	- / -	- / -	- / -	- / -	- / 75.817	
<b>Support (All Modification Items)</b>													
OTHER GOVT	- / -	- / -	- / 15.147	- / 0.000	- / -	- / 0.000	- / 15.195	- / 10.609	- / -	- / -	- / -	- / 30.951	
<i>Subtotal: Support</i>	- / -	- / -	- / 15.147	- / 0.000	- / -	- / 0.000	- / 15.195	- / 10.609	- / -	- / -	- / -	- / 30.951	
<b>Installation</b>													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>14.692</b>	<b>0.000</b>	<b>19.501</b>	<b>16.771</b>	<b>0.000</b>	<b>16.771</b>	<b>45.195</b>	<b>10.609</b>	<b>0.000</b>	<b>-</b>	<b>-</b>	<b>106.768</b>	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications			<b>Modification Number / Title:</b> 8642 / (AbMN) Air borne Mission Networking	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 1 of 1:</b> AbMNGroup B							
<b>Manufacturer Information</b>							
Manufacturer Name: Lockheed Martin				Manufacturer Location: Marietta, GA			
Administrative Leadtime (in Months): 3				Production Leadtime (in Months): 5			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates		Jun 2020	Jun 2021	Jan 2022			
Delivery Dates		Nov 2020	Nov 2021	Jun 2022			
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 15		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications	<b>Modification Number / Title:</b> 8648 / ADS-B out Acceleration

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

<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	1.780	2.530	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	-	4.310
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	1.780	2.530	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	-	4.310
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>1.780</b>	<b>2.530</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	-	-	<b>4.310</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This funding is used to improve compliance with USG and international mandates that allow HC/MC-130Js to utilize US and international airspace. This includes, but is not limited to, the Automatic Dependent Surveillance-Broadcast (ADS-B) Out program. HC/MC-130J is a part of the C-130J ADS-B Acceleration program which separated the ADS-B Out program from the 7.0/8.1 Program. The C-130J ADS-B Out program addresses the Federal Aviation Administration/International Civil Aviation Organization (FAA/ICAO) Communications/Navigation/Surveillance and Air Traffic Management (CNS/ATM) mandate. Aircraft not installed with ADS-B Out during production will be modified immediately after production delivery, prior to delivery to units.

Milestone/Development Status

Funding shown above will complete retrofits by 31 March 2020.

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**Exhibit P-3a, Individual Modification: PB 2021 Air Force** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications	<b>Modification Number / Title:</b> 8648 / ADS-B out Acceleration
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**ID Code** (A=Service Ready, B=Not Service Ready) : A **MDAP/MAIS Code:**

**Models of Systems Affected:** MC-130J **Modification Type:** Capability Improvement **Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1: Group A</i>													
A Kits													
Recurring													
Group A:INSTALL KITS Group A (Active)	0 / 1.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.000	
<i>Subtotal: Recurring</i>	- / 1.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.000	
<i>Subtotal: Group A</i>	- / 1.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.000	
<i>Subtotal: Procurement, All Modification Items</i>	- / 1.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.000	
<b>Support (All Modification Items)</b>													
PMA - Contractor Services	- / 0.780	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.780	
OTHER GOVT	- / -	- / 12.530	- / 10.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 12.530	
<i>Subtotal: Support</i>	- / 0.780	- / 12.530	- / 10.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 13.310	
<b>Installation</b>													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>1.780</b>	<b>2.530</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>-</b>	<b>4.310</b>

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications			<b>Modification Number / Title:</b> 8648 / ADS-B out Acceleration	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 1 of 1:</b> Group A							
<b>Manufacturer Information</b>							
Manufacturer Name: Lockheed Martin				Manufacturer Location: Marietta, GA			
Administrative Leadtime (in Months): 1				Production Leadtime (in Months): 5			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 0		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications	<b>Modification Number / Title:</b> 8652 / (RFCM) Radio Frequency Countermeasures

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	40.680	22.150	0.000	0.000	28.900	28.900	0.000	0.000	0.000	-	-	91.730
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	40.680	22.150	0.000	0.000	28.900	28.900	0.000	0.000	0.000	-	-	91.730
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>40.680</b>	<b>22.150</b>	<b>0.000</b>	<b>0.000</b>	<b>28.900</b>	<b>28.900</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	-	-	<b>91.730</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The HC-130J Radio Frequency Countermeasures (RFCM) program procures and installs the Defensive Systems Suite (DSS) which installs the ALQ-213A, Advanced Threat Display and Countermeasure Dispensing System (CMDS) two-position yoke switch kits to allow the HC-130J to operate in contested environments. DSS will also include the CSO 2.5 redesign developed under the Block 7.0/8.1 program. This was previously included in Phase 2 of the Situational Awareness Communication Upgrade (SACU) program, however it is also required for the DSS modification which will be put on the aircraft before SACU. The DSS program includes but is not limited to equipment, associated support requirements, OFP builds, training, spares, Diminishing Manufacturing Source (DMS) and Interim Contractor Support (ICS).

The requirement is for 39 HC-130Js. Current funding includes the 39 HC-130J aircraft.

FY18 funds include \$40.68M for Overseas Contingency Operations.  
 FY19 funds include \$22.19M for Overseas Contingency Operations.  
 FY21 funds include \$28.90M for Overseas Contingency Operations.

**Milestone/Development Status**

The program has entered Milestone B and is preparing to award contract for Non-Recurring Engineering (NRE)/Trial Kit Installation (TKI), purchase of Group B items and installation on the HC-130J fleet.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications					<b>Modification Number / Title:</b> 8652 / (RFCM) Radio Frequency Countermeasures			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> HC-130J				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207224F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> RFCM													
A Kits													
Recurring													
RFCM:INSTALL KITS Group A (Active)	28 / 40.680	11 / 22.150	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	39 / 62.830	
<i>Subtotal: Recurring</i>	- / 40.680	- / 22.150	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 62.830	
B Kits													
Recurring													
RFCM:EQUIPMENT Group B (Active)	- / -	- / -	- / -	- / -	- / 28.900	- / 28.900	- / -	- / -	- / -	- / -	- / -	- / 28.900	
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / -	- / 28.900	- / 28.900	- / -	- / -	- / -	- / -	- / -	- / 28.900	
<i>Subtotal: RFCM</i>	- / 40.680	- / 22.150	- / -	- / -	- / 28.900	- / 28.900	- / -	- / -	- / -	- / -	- / -	- / 91.730	
<i>Subtotal: Procurement, All Modification Items</i>	- / 40.680	- / 22.150	- / -	- / -	- / 28.900	- / 28.900	- / -	- / -	- / -	- / -	- / -	- / 91.730	
<b>Support (All Modification Items)</b>													
GROUP A: TOTAL NONRECURRING	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	
OTHER GOVT	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	
Change Orders	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	
<i>Subtotal: Support</i>	- / 0.000	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	
<b>Installation</b>													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>40.680</b>	<b>22.150</b>	<b>0.000</b>	<b>0.000</b>	<b>28.900</b>	<b>28.900</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>-</b>	<b>91.730</b>	



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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications			<b>Modification Number / Title:</b> 8652 / (RFCM) Radio Frequency Countermeasures	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 1 of 1:</b> RFCM							
<b>Manufacturer Information</b>							
Manufacturer Name: Lockheed Martin Aero				Manufacturer Location: Marietta, GA			
Administrative Leadtime ( <i>in Months</i> ): 6				Production Leadtime ( <i>in Months</i> ): 12			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates	Aug 2020						
Delivery Dates	Aug 2021						
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 39		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications	<b>Modification Number / Title:</b> 8658 / Paratroop Door

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	0.000	24.500	0.000	0.000	0.000	0.000	0.000	0.000	-	-	-	24.500
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	0.000	24.500	0.000	0.000	0.000	0.000	0.000	0.000	-	-	-	24.500
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>0.000</b>	<b>24.500</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>24.500</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

HC-130J Upgraded Paratroop Door System will upgrade the paratroop door system that combines improved visual scanning, armor, and a spring-loaded counter balance system that alleviates damage to paratroop doors, facilitates operation, and egress with armor installed. Current funding includes but is not limited to purchasing kits to modify the active duty fleet, associated training, tech data, and other government costs.

FY19 funds of \$24.50M are for Overseas Contingency Operations.

Install are to begin in FY20 third quarter for TKI/PKI. Phase II will award in FY20 fourth quarter.

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5				<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications						<b>Modification Number / Title:</b> 8658 / Paratroop Door			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> HC-130J				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207224F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> Paratroop Kits													
A Kits													
Recurring													
Paratroop Kits:INSTALL KITS Group A (Active)	- / -	11 / 15.800	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 15.800	
<i>Subtotal: Recurring</i>	- / -	- / 15.800	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 15.800	
<i>Subtotal: Paratroop Kits</i>	- / -	- / 15.800	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 15.800	
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / 15.800	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 15.800	
<b>Support (All Modification Items)</b>													
GROUP A: TOTAL NONRECURRING	- / -	- / 8.700	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.700	
<i>Subtotal: Support</i>	- / -	- / 8.700	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.700	
<b>Installation</b>													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>0.000</b>	<b>24.500</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>-</b>	<b>24.500</b>	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications			<b>Modification Number / Title:</b> 8658 / Paratroop Door	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 1 of 1:</b> Paratroop Kits							
<b>Manufacturer Information</b>							
Manufacturer Name: Airdyne Aerospace				Manufacturer Location: Brooksville, FL			
Administrative Leadtime (in Months): 9				Production Leadtime (in Months): 4			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates	Jul 2019						
Delivery Dates	Nov 2019						
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 11		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force	<b>Date:</b> February 2020
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<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications	<b>Modification Number / Title:</b> 8659 / Broadband Antenna
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	0.000	9.400	0.000	0.000	0.000	0.000	0.000	0.000	-	-	-	9.400
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	0.000	9.400	0.000	0.000	0.000	0.000	0.000	0.000	-	-	-	9.400
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority <i>(\$ in Millions)</i></b>	<b>0.000</b>	<b>9.400</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>9.400</b>

*(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 Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Equips the MC-130J with an airborne satellite terminal that delivers over the horizon high-speed IP communications (Full motion video link). Current funding includes but is not limited to aircraft kits, OFP (Operational Flight Program) builds, associated training, tech data, RSPs, aircraft verification/qualification, and other government costs required for installation on up to 6 aircraft. The remaining fleet will be outfitted under the Air-borne Mission Networking (AbMN) program.

FY19 funds include \$9.4M for Overseas Contingency Operations.

Milestone/Development Status

Milestone: N/A

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 3010F / 05 / 5 **P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications **Modification Number / Title:** 8659 / Broadband Antenna

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

**Models of Systems Affected:** MC-130J **Modification Type:** Capability Improvement **Related RDT&E PEs:** 0207230F

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>												
<i>Modification Item 1 of 1:</i> Group A Kits												
A Kits												
Recurring												
Group A Kits:INSTALL KITS Group A (Active)	- / -	4 / 9.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 9.400
<i>Subtotal: Recurring</i>	- / -	- / 9.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.400
<i>Subtotal: Group A Kits</i>	- / -	- / 9.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.400
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / 9.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.400
<b>Installation</b>												
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>												
<b>Total Cost (Procurement + Support + Installation)</b>	<b>0.000</b>	<b>9.400</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>-</b>	<b>9.400</b>

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications			<b>Modification Number / Title:</b> 8659 / Broadband Antenna	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 1 of 1:</b> Group A Kits							
<b>Manufacturer Information</b>							
Manufacturer Name: Sierra Nevada Corporation				Manufacturer Location: Sparks,NV			
Administrative Leadtime (in Months): 2				Production Leadtime (in Months): 15			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates	Dec 2019						
Delivery Dates	Mar 2021						
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 4		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications	<b>Modification Number / Title:</b> 8761 / HC/MC/AC MUOS

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

<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	31.074	0.000	31.074
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	31.074	0.000	31.074
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	-	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>31.074</b>	<b>0.000</b>	<b>31.074</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

MUOS is only one of many updates covered under this modification which is a broad communications modernization activity. The HC/MC(AC)-130J Communication Modernization addresses obsolescence, mandates, and requirements relating to the High Frequency (HF), Very High Frequency (VHF), Ultra High Frequency (UHF), and satellite (SATCOM) radios, as well as all related encryption units. Funding includes, but is not limited to, upgrading all previously listed radios and associated encryption units on the HC/MC(AC)-130J fleets, associated Group A provisions, spares, and associated training units. This funding request also includes, but is not limited to, supporting any safety of flight issues identified during modification, OFP builds, training requirements, associated publications, and potential DMS, to include, if optimal, life of type buys or bridge buys limited to the program of record quantity. Related milestone dates and installation schedule dates are for installation on aircraft.

**Milestone/Development Status**

Development begins in FY20



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**Exhibit P-3a, Individual Modification: PB 2021 Air Force** **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 3010F / 05 / 5 **P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications **Modification Number / Title:** 8761 / HC/MC/AC MUOS

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

**Models of Systems Affected:** HCMCAC-130J **Modification Type:** Capability Improvement **Related RDT&E PEs:** 0207224F

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> MUOS													
A Kits													
Recurring													
MUOS:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	33 / 31.074	- / -	33 / 31.074
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 31.074	- / -	- / 31.074
<i>Subtotal: MUOS</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 31.074	- / -	- / 31.074
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 31.074	- / -	- / 31.074
<b>Installation</b>													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	31.074	0.000	31.074

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> HCMC00 / HC/MC-130 Modifications			<b>Modification Number / Title:</b> 8761 / HC/MC/AC MUOS	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 1 of 1:</b> MUOS							
<b>Manufacturer Information</b>							
Manufacturer Name: Various				Manufacturer Location: Unknown			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 0			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							Mar 2025
Delivery Dates							Mar 2025
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate						<b>Installation Quantity:</b> 33	

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	<b>P-1 Line Item Number / Title:</b> OTHACF / Other Aircraft
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> 0207224F, 0207701F, 0401897F	<b>Other Related Program Elements:</b> 0207224F, 0207249F, 0207701F, 0401897F
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	378.375	98.566	50.098	100.774	-	100.774	55.921	48.602	99.795	55.970	0.000	888.101
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	378.375	98.566	50.098	100.774	-	100.774	55.921	48.602	99.795	55.970	0.000	888.101
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>378.375</b>	<b>98.566</b>	<b>50.098</b>	<b>100.774</b>	<b>-</b>	<b>100.774</b>	<b>55.921</b>	<b>48.602</b>	<b>99.795</b>	<b>55.970</b>	<b>0.000</b>	<b>888.101</b>

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

Initial Spares ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	0.111	0.113	-	-	0.224
Flyaway Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

FY19 funding totals include \$29.2M for Overseas Contingency Operations (OCO). PE 0207249 (\$22M Advance Targeting Pods (ATP) & Upgrades; \$7.2M ATP Digital Video). PE 0207701F \$10.400M for threat simulators for Nellis Air Force Base (AFB) Virtual Test Training Range.

This line item funds multiple modifications that apply to weapon systems funded at less than \$2 million per year as well as weapon systems with much greater budgets. The overall goal of the modifications budgeted is to enhance capability and improve reliability and maintainability.

Funding contained in this platform's documentation directly aids simulator aircraft training systems training enterprise to continue its overall FYDP pilot production increase, thus reducing the USAF pilot shortage.

Battlefield Airborne Communications Node (BACN) provides a Combatant Commander (CCDR) flexible, long-endurance, responsive airborne communications capability. BACN provides a dedicated airborne capability to conduct voice bridging/translation, Tactical Data Link (TDL) gateway, and TDL relay functions for beyond-line-of-sight (BLOS) data communications for the war fighter. Funding for this exhibit contained in PE 0207610F.

Fifth-To-Fourth Generation Gateway Urgent Operational Need (524 GW UON) is also funded under BP 11 Line Item #24 OTHACF PE 0207238F.

Mobility Air Forces (MAF) Training supports the modification and enhancement of high fidelity MAF aircrew training and support systems to meet combat readiness needs, to include efforts to ensure full employment of Distributed Mission Operations (DMO) capabilities. FY21 funding establishes DMO capability of C-130J Maintenance and Aircrew Training Systems.

Funding for this exhibit contained in PE 0207224F, 0207249F, 0303601F, 0401897F.

Beginning in FY21, to support the divestiture of the EQ-4B (a variant of the RQ-4 Block 20/30 aircraft) efforts will taper accordingly, to include BACN payload sustainment & other BACN specific 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 mission, domestic emergency responses, and providing military support to civilian authorities.

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**Exhibit P-40, Budget Line Item Justification: PB 2021 Air Force** **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

**P-1 Line Item Number / Title:**  
OTHACF / Other Aircraft

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0207224F, 0207701F, 0401897F **Other Related Program Elements:** 0207224F, 0207249F, 0207701F, 0401897F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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***	8669 / Full Combat Mission Training (Capability Improvement)				- / 76.404	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40a***	8735 / DAS000 (ROBE) (Capability Improvement)				- / -	- / 10.400	- / -	- / -	- / -	- / -
P-40a***	8736 / Counterdrug USSOUTHCOM Support (No text provided.)				- / -	- / 1.200	- / -	- / -	- / -	- / -
P-40a***	99999J / MISCELLANEOUS LOW COSTS MODS (Combat Developments) (Other)				- / 142.687	- / 0.248	- / 4.616	- / 0.154	- / -	- / 0.154
P-40a***	HH-60U / HH-60U (Capability Improvement)				- / 3.608	- / -	- / 1.900	- / 1.897	- / -	- / 1.897
P-3a	8670 / MAF Training (Capability Improvement)		B		- / 33.686	- / 0.000	- / 0.100	- / 16.505	- / 0.000	- / 16.505
P-3a	8674 / ATP upgrade Legacy to SE (Other)		A		- / 69.914	- / 36.303	- / 29.861	- / 30.553	- / 0.000	- / 30.553
P-3a	8675 / ATP-SE Technology Insertion (Capability Improvement)		A		- / 52.076	- / 35.300	- / 13.621	- / 13.814	- / 0.000	- / 13.814
P-3a	8733 / Battlefield ABN Comm Node (BACN) (Other)		A		- / 0.000	- / 15.115	- / 0.000	- / 37.851	- / 0.000	- / 37.851
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 378.375</b>	<b>- / 98.566</b>	<b>- / 50.098</b>	<b>- / 100.774</b>	<b>- / -</b>	<b>- / 100.774</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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-40a***	8669 / Full Combat Mission Training (Capability Improvement)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 76.404
P-40a***	8735 / DAS000 (ROBE) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 10.400
P-40a***	8736 / Counterdrug USSOUTHCOM Support (No text provided.)				- / -	- / -	- / -	- / -	- / -	- / 1.200
P-40a***	99999J / MISCELLANEOUS LOW COSTS MODS (Combat Developments) (Other)				- / 0.157	- / 0.160	- / 0.163	- / 0.166	- / -	- / 148.351
P-40a***	HH-60U / HH-60U (Capability Improvement)				- / 1.898	- / 1.897	- / 1.897	- / 1.932	- / -	- / 15.029
P-3a	8670 / MAF Training (Capability Improvement)		B		- / 0.099	- / 0.101	- / 0.103	- / 0.105	- / -	- / 50.699
P-3a	8674 / ATP upgrade Legacy to SE (Other)		A		- / 0.987	- / 1.485	- / 0.000	- / 0.989	- / -	- / 170.092
P-3a	8675 / ATP-SE Technology Insertion (Capability Improvement)		A		- / 14.127	- / 14.379	- / 52.802	- / 52.778	- / -	- / 248.897
P-3a	8733 / Battlefield ABN Comm Node (BACN) (Other)		A		- / 38.653	- / 30.580	- / 44.830	- / -	- / -	- / 167.029
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 55.921</b>	<b>- / 48.602</b>	<b>- / 99.795</b>	<b>- / 55.970</b>	<b>- / 0.000</b>	<b>- / 888.101</b>

\*\*\* Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

\*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:**  
This program, P-3A Mod 8733, Battlefield ABN Comm Node (BACN).

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft		<b>P-1 Line Item Number / Title:</b> OTHACF / Other Aircraft
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> 0207224F, 0207701F, 0401897F	<b>Other Related Program Elements:</b> 0207224F, 0207249F, 0207701F, 0401897F
<b>Line Item MDAP/MAIS Code:</b> N/A		
Funding will support procurement of new Payload capability & integration as well as purchases of other Mods to the existing fleet and related provisioning supplies. Additionally this funding procures ground systems, to include Interim Contract Support.		
Funding may be used to address Diminishing Manufacturing Sources (DMS) issues.		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> OTHACF / Other Aircraft	<b>Modification Number / Title:</b> 8670 / MAF Training

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	33.686	0.000	0.100	16.505	0.000	16.505	0.099	0.101	0.103	0.105	-	50.699
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	33.686	0.000	0.100	16.505	0.000	16.505	0.099	0.101	0.103	0.105	-	50.699
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>33.686</b>	<b>0.000</b>	<b>0.100</b>	<b>16.505</b>	<b>0.000</b>	<b>16.505</b>	<b>0.099</b>	<b>0.101</b>	<b>0.103</b>	<b>0.105</b>	-	<b>50.699</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Mobility Air Forces (MAF) Training supports the modification and enhancement of high fidelity MAF aircrew training and support systems to meet combat readiness needs. Modifications include efforts to ensure full employment of Distributed Mission Operations (DMO) capabilities. Use of enhanced, DMO-capable trainers provides a cost effective means of conducting daily training, mission rehearsal, joint force exercises, tactics development activity, and Virtual Aerial Refueling. This makes aircraft that would otherwise be used for training available to war fighting commanders to conduct combat operations. Funding establishes DMO capability for MAF DMO to include modifications to MAF platform training systems and networks.

FY21 funding includes modification of C-130J Maintenance and Aircrew Training Systems (MATS) to establish DMO capability.

Diminishing Manufacturing Source efforts include removal of end-of life software/hardware within simulators systems and move to a modular, common open system architecture that is sustainable and cyber-resilient. Implementation requirements and standards are defined under the Simulator Common Architecture Requirements and Standards (SCARS) initiative.

Milestone/Development Status

N/A

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> OTHACF / Other Aircraft					<b>Modification Number / Title:</b> 8670 / MAF Training			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> KC-135				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0401897F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<b>Modification Item 1 of 6:</b> C-5 Simulator Lateral Motion Maneuver Modification													
A Kits													
Recurring													
C-5 Simulator Lateral Motion Maneuver Modification:INSTALL KITS Group A (Active)	5 / 1.489	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.489	
<b>Subtotal: Recurring</b>	- / 1.489	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.489	
<b>Subtotal: C-5 Simulator Lateral Motion Maneuver Modification</b>	- / 1.489	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.489	
<b>Modification Item 2 of 6:</b> C-5 System Integration Lab (SIL)													
A Kits													
Recurring													
C-5 System Integration Lab (SIL):INSTALL KITS Group A (Active)	1 / 3.800	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 3.800	
<b>Subtotal: Recurring</b>	- / 3.800	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.800	
<b>Subtotal: C-5 System Integration Lab (SIL)</b>	- / 3.800	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.800	
<b>Modification Item 3 of 6:</b> C-5 WST DMO													
A Kits													
Recurring													
C-5 WST DMO:INSTALL KITS Group A (Active)	5 / 12.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 12.300	
<b>Subtotal: Recurring</b>	- / 12.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 12.300	
<b>Subtotal: C-5 WST DMO</b>	- / 12.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 12.300	
<b>Modification Item 4 of 6:</b> Intra-Altus Network													
A Kits													
Recurring													
Intra-Altus Network:INSTALL KITS Group A (Active)	1 / 1.630	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.630	
<b>Subtotal: Recurring</b>	- / 1.630	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.630	
<b>Subtotal: Intra-Altus Network</b>	- / 1.630	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.630	
<b>Modification Item 5 of 6:</b> KC-135 DMO Virtual Air Refueling													
A Kits													

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> OTHACF / Other Aircraft					<b>Modification Number / Title:</b> 8670 / MAF Training			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> KC-135				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0401897F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Recurring</b>													
KC-135 DMO Virtual Air Refueling:INSTALL KITS Group A (Active)	19 / 13.907	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 13.907	
<i>Subtotal: Recurring</i>	- / 13.907	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 13.907	
<i>Subtotal: KC-135 DMO Virtual Air Refueling</i>	- / 13.907	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 13.907	
<b>Modification Item 6 of 6: MAF DMO</b>													
<b>A Kits</b>													
<b>Recurring</b>													
MAF DMO:INSTALL KITS Group A (Active)	1 / 0.560	- / -	1 / 0.100	- / -	- / -	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	2 / 0.660	
<i>Subtotal: Recurring</i>	- / 0.560	- / -	- / 0.100	- / -	- / -	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 0.660	
<i>Subtotal: MAF DMO</i>	- / 0.560	- / -	- / 0.100	- / -	- / -	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 0.660	
<i>Subtotal: Procurement, All Modification Items</i>	- / 33.686	- / -	- / 0.100	- / -	- / -	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 33.786	
<b>Support (All Modification Items)</b>													
SIM/TRAINER	- / -	- / -	- / -	8 / 16.505	- / -	8 / 16.505	1 / 0.099	1 / 0.101	1 / 0.103	1 / 0.105	- / -	12 / 16.913	
PMA - Other Gov't Costs	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	
<i>Subtotal: Support</i>	- / 0.000	- / -	- / -	8 / 16.505	- / -	8 / 16.505	1 / 0.099	1 / 0.101	1 / 0.103	1 / 0.105	- / -	12 / 16.913	
<b>Installation</b>													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>33.686</b>	<b>0.000</b>	<b>0.100</b>	<b>16.505</b>	<b>0.000</b>	<b>16.505</b>	<b>0.099</b>	<b>0.101</b>	<b>0.103</b>	<b>0.105</b>	<b>-</b>	<b>50.699</b>	



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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> OTHACF / Other Aircraft			<b>Modification Number / Title:</b> 8670 / MAF Training	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 1 of 6:</b> C-5 Simulator Lateral Motion Maneuver Modification							
<b>Manufacturer Information</b>							
Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 0			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 5		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> OTHACF / Other Aircraft			<b>Modification Number / Title:</b> 8670 / MAF Training	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B				<b>MDAP/MAIS Code:</b>			
<b>Modification Item 2 of 6:</b> C-5 System Integration Lab (SIL)							
<b>Manufacturer Information</b>							
Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 0			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 1		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> OTHACF / Other Aircraft			<b>Modification Number / Title:</b> 8670 / MAF Training	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B				<b>MDAP/MAIS Code:</b>			
<b>Modification Item 3 of 6:</b> C-5 WST DMO							
<b>Manufacturer Information</b>							
Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 0			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 5		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> OTHACF / Other Aircraft			<b>Modification Number / Title:</b> 8670 / MAF Training	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B				<b>MDAP/MAIS Code:</b>			
<b>Modification Item 4 of 6:</b> Intra-Altus Network							
<b>Manufacturer Information</b>							
Manufacturer Name: TBD				Manufacturer Location: Altus Air Force Base			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 0			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 1		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> OTHACF / Other Aircraft			<b>Modification Number / Title:</b> 8670 / MAF Training	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B				<b>MDAP/MAIS Code:</b>			
<b>Modification Item 5 of 6:</b> KC-135 DMO Virtual Air Refueling							
<b>Manufacturer Information</b>							
Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 0			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 19		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> OTHACF / Other Aircraft			<b>Modification Number / Title:</b> 8670 / MAF Training	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 6 of 6:</b> MAF DMO							
<b>Manufacturer Information</b>							
Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 0			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 4		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> OTHACF / Other Aircraft	<b>Modification Number / Title:</b> 8674 / ATP upgrade Legacy to SE

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

<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	69.914	36.303	29.861	30.553	0.000	30.553	0.987	1.485	0.000	0.989	-	170.092
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	69.914	36.303	29.861	30.553	0.000	30.553	0.987	1.485	0.000	0.989	-	170.092
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>69.914</b>	<b>36.303</b>	<b>29.861</b>	<b>30.553</b>	<b>0.000</b>	<b>30.553</b>	<b>0.987</b>	<b>1.485</b>	<b>0.000</b>	<b>0.989</b>	-	<b>170.092</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The LITENING and Sniper ATP contracts will address requirements centered on new capability as well as hardware and software upgrades necessary to align with the most current pod configuration. This would include host platform integration and test, modification of spares, correction of service life deficiencies, technical orders, repair data, studies, support of depot repair requirements and all modifications necessary to capitalize on the most current required capability. In addition, this requirement provides for program management support (PMA). Funds may be used to address emerging and short-notice Diminishing Manufacturing Sources and Material Shortages (DMSMS) issues.

Quantities will vary based on funding, negotiated prices and COCOM requirements.

**Milestone/Development Status**

ATP reached Full Operational Capability (FOC) July 2017

**Milestone/Development Status**

Legacy will incorporate Sensor Enhancement (SE) capabilities already developed through the SE contract.

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**Exhibit P-3a, Individual Modification: PB 2021 Air Force** **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 3010F / 05 / 5 **P-1 Line Item Number / Title:** OTHACF / Other Aircraft **Modification Number / Title:** 8674 / ATP upgrade Legacy to SE

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

**Models of Systems Affected:** A-10, F-15C, F-15E, F-16, B-1, B-52 **Modification Type:** Other **Related RDT&E PEs:** 0207249F

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>												
<i>Modification Item 1 of 1:</i> Upgrade Kit												
A Kits												
Recurring												
Upgrade Kit:INSTALL KITS Group A (Active)	299 / 66.497	200 / 27.633	200 / 28.361	200 / 28.993	- / -	200 / 28.993	10 / 0.937	10 / 1.402	- / -	10 / 0.965	- / -	929 / 154.788
<i>Subtotal: Recurring</i>	- / 66.497	- / 27.633	- / 28.361	- / 28.993	- / -	- / 28.993	- / 0.937	- / 1.402	- / -	- / 0.965	- / -	- / 154.788
<i>Subtotal: Upgrade Kit</i>	- / 66.497	- / 27.633	- / 28.361	- / 28.993	- / -	- / 28.993	- / 0.937	- / 1.402	- / -	- / 0.965	- / -	- / 154.788
<i>Subtotal: Procurement, All Modification Items</i>	- / 66.497	- / 27.633	- / 28.361	- / 28.993	- / -	- / 28.993	- / 0.937	- / 1.402	- / -	- / 0.965	- / -	- / 154.788
<b>Support (All Modification Items)</b>												
GROUP A: TOTAL NONRECURRING	- / -	- / 17.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 17.200
PMA - Contractor Services	- / 1.446	- / 0.880	- / 0.900	- / 0.930	- / -	- / 0.930	- / 0.030	- / 0.050	- / 0.000	- / 0.013	- / -	- / 4.249
PMA - Other Gov't Costs	- / 1.971	- / 0.590	- / 0.600	- / 0.630	- / -	- / 0.630	- / 0.020	- / 0.033	- / 0.000	- / 0.011	- / -	- / 3.855
<i>Subtotal: Support</i>	- / 3.417	- / 8.670	- / 1.500	- / 1.560	- / -	- / 1.560	- / 0.050	- / 0.083	- / 0.000	- / 0.024	- / -	- / 15.304
<b>Installation</b>												
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>												
<b>Total Cost (Procurement + Support + Installation)</b>	<b>69.914</b>	<b>36.303</b>	<b>29.861</b>	<b>30.553</b>	<b>0.000</b>	<b>30.553</b>	<b>0.987</b>	<b>1.485</b>	<b>0.000</b>	<b>0.989</b>	<b>-</b>	<b>170.092</b>



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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> OTHACF / Other Aircraft			<b>Modification Number / Title:</b> 8674 / ATP upgrade Legacy to SE	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 1 of 1:</b> Upgrade Kit							
<b>Manufacturer Information</b>							
Manufacturer Name: Lockheed Martin				Manufacturer Location: Orlando, FL			
Administrative Leadtime (in Months): 1				Production Leadtime (in Months): 12			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates	Mar 2019	Mar 2020	Mar 2021	Mar 2022	Mar 2023		Mar 2025
Delivery Dates	Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024		Mar 2026
Manufacturer Name: Northrop Grumman				Manufacturer Location: Rolling Meadows, IL			
Administrative Leadtime (in Months): 1				Production Leadtime (in Months): 12			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates	Mar 2019	Mar 2020	Mar 2021	Mar 2022	Mar 2023		Mar 2025
Delivery Dates	Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024		Mar 2026
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 929		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> OTHACF / Other Aircraft	<b>Modification Number / Title:</b> 8675 / ATP-SE Technology Insertion

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	52.076	35.300	13.621	13.814	0.000	13.814	14.127	14.379	52.802	52.778	-	248.897
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	52.076	35.300	13.621	13.814	0.000	13.814	14.127	14.379	52.802	52.778	-	248.897
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>52.076</b>	<b>35.300</b>	<b>13.621</b>	<b>13.814</b>	<b>0.000</b>	<b>13.814</b>	<b>14.127</b>	<b>14.379</b>	<b>52.802</b>	<b>52.778</b>	-	<b>248.897</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This effort improves the critical capability of Combat Identification (CID). The LITENING and Sniper ATP contracts will address requirements centered on hardware and software upgrades and associated host platform integration (to include necessary test), modification of spares, correction of service life deficiencies, technical orders, repair data, studies and support of organic depot repair requirements. Modification of legacy pods to ATP-SE standards may be necessary for modifications. In addition, this requirement provides for program management support (PMA). Funds may be used to address emerging and short-notice Diminishing Manufacturing and Material Shortage (DMSMS) issues.

Quantities will vary based on funding, negotiated prices and COCOM requirements.

**Milestone/Development Status**

ATP reached Full Operational Capability (FOC) July 2017

**Milestone/Development Status**

Upgrades will incorporate capabilities developed by industry and through the SE contract.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5				<b>P-1 Line Item Number / Title:</b> OTHACF / Other Aircraft						<b>Modification Number / Title:</b> 8675 / ATP-SE Technology Insertion		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> A-10, F-15C, F-15E, F-16, B-1, B-52				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0207249F				
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>												
<i>Modification Item 1 of 1: Upgrade Kit (2)</i>												
A Kits												
Recurring												
Upgrade Kit:INSTALL KITS Group A (Active)	165 / 50.256	144 / 11.500	144 / 10.821	144 / 11.014	- / -	144 / 11.014	144 / 11.327	144 / 12.079	200 / 51.002	200 / 50.508	- / -	1,285 / 208.507
<i>Subtotal: Recurring</i>	- / 50.256	- / 11.500	- / 10.821	- / 11.014	- / -	- / 11.014	- / 11.327	- / 12.079	- / 51.002	- / 50.508	- / -	- / 208.507
<i>Subtotal: Upgrade Kit (2)</i>	- / 50.256	- / 11.500	- / 10.821	- / 11.014	- / -	- / 11.014	- / 11.327	- / 12.079	- / 51.002	- / 50.508	- / -	- / 208.507
<i>Subtotal: Procurement, All Modification Items</i>	- / 50.256	- / 11.500	- / 10.821	- / 11.014	- / -	- / 11.014	- / 11.327	- / 12.079	- / 51.002	- / 50.508	- / -	- / 208.507
<b>Support (All Modification Items)</b>												
GROUP A: TOTAL NONRECURRING	- / 0.000	- / 22.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 22.000
PMA - Contractor Services	- / -	- / 0.600	- / 0.600	- / 0.600	- / -	- / 0.600	- / 0.600	- / 0.600	- / 0.600	- / 0.600	- / -	- / 4.200
PMA - Other Gov't Costs	- / -	- / 0.200	- / 0.200	- / 0.200	- / -	- / 0.200	- / 0.200	- / 0.200	- / 0.200	- / 0.170	- / -	- / 1.370
<i>Subtotal: Support</i>	- / 0.000	- / 22.800	- / 0.800	- / 0.800	- / -	- / 0.800	- / 0.800	- / 0.800	- / 0.800	- / 0.770	- / -	- / 27.570
<b>Installation</b>												
<i>Modification Item 1 of 1: Upgrade Kit (2)</i>	13 / 1.820	76 / 1.000	148 / 2.000	144 / 2.000	- / -	144 / 2.000	144 / 2.000	144 / 1.500	144 / 1.000	472 / 1.500	- / -	1,285 / 12.820
<i>Subtotal: Installation</i>	13 / 1.820	76 / 1.000	148 / 2.000	144 / 2.000	- / -	144 / 2.000	144 / 2.000	144 / 1.500	144 / 1.000	472 / 1.500	- / -	1,285 / 12.820
<b>Total</b>												
<b>Total Cost (Procurement + Support + Installation)</b>	<b>52.076</b>	<b>35.300</b>	<b>13.621</b>	<b>13.814</b>	<b>0.000</b>	<b>13.814</b>	<b>14.127</b>	<b>14.379</b>	<b>52.802</b>	<b>52.778</b>	<b>-</b>	<b>248.897</b>

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>											<b>Date:</b> February 2020																				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5						<b>P-1 Line Item Number / Title:</b> OTHACF / Other Aircraft						<b>Modification Number / Title:</b> 8675 / ATP-SE Technology Insertion																			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A											<b>MDAP/MAIS Code:</b>																				
<b>Modification Item 1 of 1:</b> Upgrade Kit (2)																															
<b>Manufacturer Information</b>																															
Manufacturer Name: Lockheed Martin											Manufacturer Location: Orlando, FL																				
Administrative Leadtime (in Months): 1											Production Leadtime (in Months): 12																				
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>																								
Contract Dates	Jun 2019	Jun 2020	Jun 2021	Jun 2022	Jun 2023	Jun 2024	Nov 2024																								
Delivery Dates	Jun 2020	Jun 2021	Jun 2022	Jun 2023	Jun 2024	Jun 2025	Nov 2025																								
Manufacturer Name: Northrop Grumman											Manufacturer Location: Rolling Meadows, IL																				
Administrative Leadtime (in Months): 1											Production Leadtime (in Months): 12																				
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>																								
Contract Dates	Jun 2019	Jun 2020	Jun 2021	Jun 2022	Jun 2023	Jun 2024	Nov 2024																								
Delivery Dates	Jun 2020	Jun 2021	Jun 2022	Jun 2023	Jun 2024	Jun 2025	Nov 2025																								
<b>Installation Information</b>																															
<b>Method of Implementation:</b> Contractor Facility																															
<b>Installation Cost</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>																			
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (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	13 / 1.820	76 / 1.000	76 / 1.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	165 / 3.820																		
FY 2019	- / -	- / -	72 / 1.000	72 / 1.000	- / -	72 / 1.000	- / -	- / -	- / -	- / -	- / -	- / -	144 / 2.000																		
FY 2020	- / -	- / -	- / -	72 / 1.000	- / -	72 / 1.000	72 / 1.000	- / -	- / -	- / -	- / -	- / -	144 / 2.000																		
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	72 / 1.000	72 / 1.000	- / -	- / -	- / -	- / -	144 / 2.000																		
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 0.500	72 / 0.500	- / -	- / -	- / -	144 / 1.000																		
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 0.500	72 / 0.500	- / -	- / -	144 / 1.000																		
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	200 / 0.500	- / -	- / -	200 / 0.500																		
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	200 / 0.500	- / -	- / -	200 / 0.500																		
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -																		
Total	13 / 1.820	76 / 1.000	148 / 2.000	144 / 2.000	- / -	144 / 2.000	144 / 2.000	144 / 1.500	144 / 1.000	472 / 1.500	- / -	- / -	1,285 / 12.820																		
<b>Installation Schedule</b>																															
	<b>PYS</b>	<b>FY 2019</b>				<b>FY 2020</b>				<b>FY 2021</b>				<b>FY 2022</b>				<b>FY 2023</b>				<b>FY 2024</b>				<b>FY 2025</b>				<b>TC</b>	<b>Tot</b>
		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>		
In	13	-	-	38	38	38	38	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	157	157	158	-	0	1,285
Out	0	-	13	-	-	-	38	38	38	38	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	139	139	102	200	0	1,285

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> OTHACF / Other Aircraft	<b>Modification Number / Title:</b> 8733 / Battlefield ABN Comm Node (BACN)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	0.000	15.115	0.000	37.851	0.000	37.851	38.653	30.580	44.830	-	-	167.029
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	0.000	15.115	0.000	37.851	0.000	37.851	38.653	30.580	44.830	-	-	167.029
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>0.000</b>	<b>15.115</b>	<b>0.000</b>	<b>37.851</b>	<b>0.000</b>	<b>37.851</b>	<b>38.653</b>	<b>30.580</b>	<b>44.830</b>	-	-	<b>167.029</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This program, P-3A Mod 8733, Battlefield ABN Comm Node (BACN).

Battlefield Airborne Communication Node (BACN) provides a Combatant Commander (CCDR) flexible, long-endurance, responsive airborne communications capability. BACN provides a dedicated airborne capability to conduct voice bridging/translation, Tactical Data Link (TDL) gateway, and TDL relay functions for beyond-line-of-sight (BLOS) data communications. Includes integration of Survivability UON - Military GPS (MIL GPS), M Code Military GPS, Protected Tactical Waveform (PTW), High Capacity Backbone (HCB), Fifth-To-Fourth Generation Gateway (524 GW), Identify Friend or Foe (IFF), and Electronic Flight Bags (EFB).

Funding for this exhibit contained in PE 0207610F.

BACN green platform procurement and integration activities support out of P-1 Line Item #99 E011A0/ E-11A BACN in PE: 0207238F.

Beginning in FY21, to support the divestiture of the EQ-4B (a variant of the RQ-4 Block 20/30 aircraft) efforts will taper accordingly, to include BACN payload sustainment & other BACN specific efforts.

**Milestone/Development Status**

BACN includes the payload, its host platforms, and associated ground systems. The program is currently in the Operations and Support (O&S) Phase of the Life Cycle Management System. As requirements emerge for new hardware and software capabilities that improve system performance, external time references, interoperability and open mission system technologies, BACN will host the integration of these and future communication technologies, such as High Capacity Backbone (HCB), Fifth-to-Fourth Gateway (524 GW), and Protected Tactical Waveform (PTW).

Funding will be used to address Diminishing Manufacturing Sources (DMS) Issues. This may include modifications required for enhanced capability and improvements to system reliability and maintainability. Safety of flight considerations, including but not limited to, performance, aircraft structural integrity, availability, and continuity of service requirements for long range reference, local area reference, and landing/terminal reference.

This effort includes Military GPS, advanced navigation systems and any additional mandates levied on the BACN system and platforms. Funding will also be used for fulfillment of requirements in support of alteration, conversion, modernization, and transition to a normalized Program of Record.

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> OTHACF / Other Aircraft	<b>Modification Number / Title:</b> 8733 / Battlefield ABN Comm Node (BACN)
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>	
Transition to BACN Program of Record requires additional BACN aircraft platforms to meet the service retained capability requirements of Combatant Commanders needs emerge in multiple AOR's. This will include, but not be limited to, standardization of avionics baseline and the production of all Supplemental Type Certificates of the most up to date configurations of the fleet.		

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> OTHACF / Other Aircraft					<b>Modification Number / Title:</b> 8733 / Battlefield ABN Comm Node (BACN)			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> MULTI				<b>Modification Type:</b> Other				<b>Related RDT&amp;E PEs:</b>					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> BACN Aircraft													
A Kits													
Recurring													
BACN Aircraft:INSTALL KITS Group A (Active)	- / -	1 / 7.000	- / -	1 / 18.945	- / -	1 / 18.945	1 / 19.346	1 / 15.305	1 / 22.436	- / -	- / -	5 / 83.032	
<i>Subtotal: Recurring</i>	- / -	- / 7.000	- / -	- / 18.945	- / -	- / 18.945	- / 19.346	- / 15.305	- / 22.436	- / -	- / -	- / 83.032	
<i>Subtotal: BACN Aircraft</i>	- / -	- / 7.000	- / -	- / 18.945	- / -	- / 18.945	- / 19.346	- / 15.305	- / 22.436	- / -	- / -	- / 83.032	
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / 7.000	- / -	- / 18.945	- / -	- / 18.945	- / 19.346	- / 15.305	- / 22.436	- / -	- / -	- / 83.032	
<b>Support (All Modification Items)</b>													
GROUP A: TOTAL NONRECURRING	- / -	- / -	- / -	- / 1.461	- / -	- / 1.461	- / 1.486	- / 1.520	- / 1.532	- / -	- / -	- / 5.999	
<i>Subtotal: Support</i>	- / -	- / -	- / -	- / 1.461	- / -	- / 1.461	- / 1.486	- / 1.520	- / 1.532	- / -	- / -	- / 5.999	
<b>Installation</b>													
<i>Modification Item 1 of 1:</i> BACN Aircraft	- / -	1 / 8.115	- / -	1 / 17.445	- / -	1 / 17.445	1 / 17.821	1 / 13.755	1 / 20.862	- / -	- / -	5 / 77.998	
<i>Subtotal: Installation</i>	- / -	1 / 8.115	- / -	1 / 17.445	- / -	1 / 17.445	1 / 17.821	1 / 13.755	1 / 20.862	- / -	- / -	5 / 77.998	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>0.000</b>	<b>15.115</b>	<b>0.000</b>	<b>37.851</b>	<b>0.000</b>	<b>37.851</b>	<b>38.653</b>	<b>30.580</b>	<b>44.830</b>	<b>-</b>	<b>-</b>	<b>167.029</b>	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> OTHACF / Other Aircraft	<b>Modification Number / Title:</b> 8733 / Battlefield ABN Comm Node (BACN)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** BACN Aircraft

**Manufacturer Information**

Manufacturer Name: Bombardier	Manufacturer Location: Bridgeport, WV
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Apr 2019		Apr 2021	Apr 2022	Apr 2023	Apr 2024	
Delivery Dates	Apr 2020		Apr 2022	Apr 2023	Apr 2024	Apr 2025	

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	1 / 8.115	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 8.115
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	1 / 17.445	- / -	1 / 17.445	- / -	- / -	- / -	- / -	- / -	1 / 17.445
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	1 / 17.821	- / -	- / -	- / -	- / -	1 / 17.821
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 13.755	- / -	- / -	- / -	1 / 13.755
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 20.862	- / -	- / -	1 / 20.862
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	1 / 8.115	- / -	1 / 17.445	- / -	1 / 17.445	1 / 17.821	1 / 13.755	1 / 20.862	- / -	- / -	5 / 77.998

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	1	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	-	-	-	0	5
Out	0	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	-	0	5



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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

**P-1 Line Item Number / Title:**  
PRDTB2 / MQ-9 Mods

**ID Code** (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** 0205219F **Other Related Program Elements:** 0205219F

**Line Item MDAP/MAIS Code:** 424

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	1,151.513	189.948	254.415	188.387	-	188.387	161.112	164.395	11.882	12.099	0.000	2,133.751
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	1,151.513	189.948	254.415	188.387	-	188.387	161.112	164.395	11.882	12.099	0.000	2,133.751
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>1,151.513</b>	<b>189.948</b>	<b>254.415</b>	<b>188.387</b>	-	<b>188.387</b>	<b>161.112</b>	<b>164.395</b>	<b>11.882</b>	<b>12.099</b>	<b>0.000</b>	<b>2,133.751</b>

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

Initial Spares ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	2.080	2.080
Flyaway Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

MQ-9 Reaper procurement includes all components of the MQ-9 weapon system. The basic MQ-9 Reaper system consists of the aircraft, sensors, a Ground Control Station (GCS), communications equipment, weapon kits, support equipment, simulator and training devices, technical data/training, and personnel required to operate, maintain, and sustain the system. The system is designed to be modular and open-ended. Mission-specific equipment is employed in a plug-and-play mission kit concept allowing specific aircraft and Ground Control Station (GCS) configurations to be tailored to fit mission needs.

MQ-9 aircraft will continue to be modified to ensure aircraft are standardized with the latest configuration. Additionally, the MQ-9 system will continue to evolve and upgrade its capabilities to satisfy new requirements and to address Reliability and Maintainability (R&M) and safety issues as they arise. MQ-9 Mods also includes, but is not limited to, aircraft, sensors, ground control stations, and ground support system retrofit to baseline configurations.

There are currently 167 Block 1 and 118 Block 5 MQ-9 aircraft (as of 22 Jan 2020) totaling 285 in the inventory. Not all 285 aircraft will receive every modification. Modification quantities will vary due to attrition and aircraft being modified by other customers. For each P-3a the number of aircraft funded with baseline modification funding is identified.

Efforts in this summary and associated P-3A's have been broken out into several modifications: 9151, 9152, 9154, 9155, 9159, 9164, 9167, and low cost modifications.

This program will revise quantities based on updated user requirements, aircraft availability, and as funding permits. Funding may be used to address Diminishing Manufacturing Sources (DMS) and Non-Recurring Engineering (NRE) issues.

This program has associated Research, Development Test and Evaluation (RDT&E) AF funding in MQ-9 PE 0205219F.

Funding for this exhibit contained in PE 0205219F.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Air Force	<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	<b>P-1 Line Item Number / Title:</b> PRDTB2 / MQ-9 Mods

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0205219F	Other Related Program Elements: 0205219F
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**Line Item MDAP/MAIS Code:** 424

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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	9151 / Block 5 (Capability Improvement)		B		- / 74.752	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	9152 / MQ-9 Field (Capability Improvement)		B		- / 244.499	- / 55.617	- / 25.715	- / 20.407	- / 0.000	- / 20.407
P-3a	9154 / Lynx SAR (Capability Improvement)		B		- / 96.137	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	9155 / GCS Blk 30 (Capability Improvement)		B		- / 140.766	- / 45.181	- / 0.000	- / 7.229	- / 0.000	- / 7.229
P-3a	9159 / R&M enhancements (Reliability & Maintainability)		B		- / 72.782	- / 20.024	- / 13.134	- / 11.626	- / 0.000	- / 11.626
P-3a	9164 / Extended Range MQ-9 (Capability Improvement)		B		- / 243.791	- / 46.485	- / 51.362	- / 17.368	- / 0.000	- / 17.368
P-3a	9167 / MQ-9 Upgrade (Capability Improvement)		B		- / 264.216	- / 22.641	- / 164.204	- / 129.757	- / 0.000	- / 129.757
P-3a	1 / MQ-9 Low Cost Mods (Reliability & Maintainability)		B		- / 14.570	- / 0.000	- / 0.000	- / 2.000	- / 0.000	- / 2.000
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 1,151.513</b>	<b>- / 189.948</b>	<b>- / 254.415</b>	<b>- / 188.387</b>	<b>- / -</b>	<b>- / 188.387</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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	9151 / Block 5 (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 74.752
P-3a	9152 / MQ-9 Field (Capability Improvement)		B		- / 14.404	- / 3.985	- / 0.000	- / 0.000	- / -	- / 364.627
P-3a	9154 / Lynx SAR (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 96.137
P-3a	9155 / GCS Blk 30 (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 193.176
P-3a	9159 / R&M enhancements (Reliability & Maintainability)		B		- / 7.386	- / 5.222	- / 0.000	- / 0.000	- / 0.000	- / 130.174
P-3a	9164 / Extended Range MQ-9 (Capability Improvement)		B		- / 6.350	- / 0.533	- / 0.000	- / 0.000	- / 0.000	- / 365.889
P-3a	9167 / MQ-9 Upgrade (Capability Improvement)		B		- / 130.972	- / 152.655	- / 9.882	- / 10.099	- / 0.000	- / 884.426
P-3a	1 / MQ-9 Low Cost Mods (Reliability & Maintainability)		B		- / 2.000	- / 2.000	- / 2.000	- / 2.000	- / -	- / 24.570
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 161.112</b>	<b>- / 164.395</b>	<b>- / 11.882</b>	<b>- / 12.099</b>	<b>- / 0.000</b>	<b>- / 2,133.751</b>

\*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:**  
Where applicable, justification for individual modifications is provided in the P-3A exhibits

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> PRDTB2 / MQ-9 Mods	<b>Modification Number / Title:</b> 9151 / Block 5

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

<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	74.752	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	74.752
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	74.752	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	74.752
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>74.752</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>74.752</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This modification program includes 2 overarching projects:

Project 1: Upgrades to all MQ-9 Block 1 aircraft. This includes, but is not limited to upgrading the secure communications for the aircraft.

Project 2: Adding new capability into the MQ-9 Block 5 configuration. Specifically, the first effort (Block 5 Modification Project 2) includes, but is not limited to: Vortex Block 5. Release 1 is covered under the Block 5 modification program. The program office will modify 134 Block 5 aircraft.

Requirements for this modification are validated in the MQ-9 Capability Production Document dated 8 August 2006.

This program will revise quantities based on updated user requirements and as funding permits. Funding may be used to address Diminishing Manufacturing Sources (DMS) and Non-Recurring Engineering (NRE) issues.

**Milestone/Development Status**

MQ-9 Block 5 Critical Design Review (CDR) completed April 2011. Developmental Test was completed July 2015. FOT&E completed December 2016. Effort is complete.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date: February 2020</b>			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> PRDTB2 / MQ-9 Mods					<b>Modification Number / Title:</b> 9151 / Block 5			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> MQ-9				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0205219F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0205219F	- / 1,414.376	- / 105.088	- / 127.296	- / 162.080	- / -	- / 162.080	- / 168.160	- / 171.688	- / 42.917	- / 43.706	- / -	- / 2,235.311	
<b>Procurement</b>													
<b>Modification Item 1 of 1: Hybrid Release 1</b>													
A Kits													
Recurring													
Hybrid Release 1:INSTALL KITS Group A (Active)	110 / 2.483	- / 0.000	- / 0.000	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / -	110 / 2.483	
<i>Subtotal: Recurring</i>	- / 2.483	- / 0.000	- / 0.000	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / -	- / 2.483	
B Kits													
Recurring													
Hybrid Release 1:EQUIPMENT Group B (Active)	110 / 11.284	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	110 / 11.284	
<i>Subtotal: Recurring</i>	- / 11.284	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.284	
<i>Subtotal: Hybrid Release 1</i>	- / 13.767	- / 0.000	- / 0.000	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / -	- / 13.767	
<i>Subtotal: Procurement, All Modification Items</i>	- / 13.767	- / 0.000	- / 0.000	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / -	- / 13.767	
<b>Support (All Modification Items)</b>													
OTHER GOVT	- / 59.705	- / 0.000	- / 0.000	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / -	- / 0.000	- / -	- / 59.705	
<i>Subtotal: Support</i>	- / 59.705	- / 0.000	- / 0.000	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / -	- / 0.000	- / -	- / 59.705	
<b>Installation</b>													
<b>Modification Item 1 of 1: Hybrid Release 1</b>	62 / 1.280	48 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	110 / 1.280	
<i>Subtotal: Installation</i>	62 / 1.280	48 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	110 / 1.280	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	74.752	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	74.752	

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 3010F / 05 / 5 **P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods **Modification Number / Title:** 9151 / Block 5

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

**Modification Item 1 of 1:** Hybrid Release 1

**Manufacturer Information**

Manufacturer Name: General Atomics ASI Manufacturer Location: Poway, CA

Administrative Leadtime (in Months): 8 Production Leadtime (in Months): 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	62 / 1.280	48 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	110 / 1.280
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	62 / 1.280	48 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	110 / 1.280

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	62	12	12	12	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110
Out	62	12	12	12	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	110

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> PRDTB2 / MQ-9 Mods	<b>Modification Number / Title:</b> 9152 / MQ-9 Field

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

<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	244.499	55.617	25.715	20.407	0.000	20.407	14.404	3.985	0.000	0.000	-	364.627
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	244.499	55.617	25.715	20.407	0.000	20.407	14.404	3.985	0.000	0.000	-	364.627
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>244.499</b>	<b>55.617</b>	<b>25.715</b>	<b>20.407</b>	<b>0.000</b>	<b>20.407</b>	<b>14.404</b>	<b>3.985</b>	<b>0.000</b>	<b>0.000</b>	-	<b>364.627</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This modification is a portion of the field retrofit program that upgrades MQ-9 aircraft with enhanced capabilities and utilizes a field team to perform the modification. Upgrades that are part of this modification, include but are not limited to, High Definition (HD) aircraft upgrades, Bomb Release Units (BRU)-71 bomb racks, Heavyweight Main Landing Gear (HMLG), VORTEX encrypted datalink, Stores Management System (SMS), Selective Availability Anti-Spoofing Module (SAASM), cast sump, fuel bladders, Barrett Asymmetric Digital Data Link Computers (BADDCC), Beyond Line of Site (BLOS), Global Positioning System (GPS) splitter, and use of Retrofit facility space. The associated costs reflect all costs associated with the multiple elements of the MQ-9 field retrofits.

The quantity of aircraft for each modification varies depending on when the capability was cut into production. This program will revise quantities based on updated user requirements and as funding permits. Funding may be used to address Diminishing Manufacturing Sources (DMS) and Non-Recurring Engineering (NRE) issues.

**Milestone/Development Status**

Development is complete. FY21-23 funding primarily used to support VORTEX encrypted datalink, SAASM, BADDCC, BLOS, and DMS efforts.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>											<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5				<b>P-1 Line Item Number / Title:</b> PRDTB2 / MQ-9 Mods					<b>Modification Number / Title:</b> 9152 / MQ-9 Field			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> MQ-9			<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0205219F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>												
0205219F	- / 1,414.376	- / 105.088	- / 127.296	- / 162.080	- / -	- / 162.080	- / 168.160	- / 171.688	- / 42.917	- / 43.706	- / -	- / 2,235.311
<b>Procurement</b>												
<b>Modification Item 1 of 1:</b> MQ-9 Field Mods												
A Kits												
Recurring												
MQ-9 Field Mods:INSTALL KITS Group A (Active)	571 / 21.773	74 / 4.293	108 / 1.985	55 / 1.575	- / -	55 / 1.575	38 / 1.112	- / -	- / -	- / -	- / -	846 / 30.738
<i>Subtotal: Recurring</i>	- / 21.773	- / 4.293	- / 1.985	- / 1.575	- / -	- / 1.575	- / 1.112	- / -	- / -	- / -	- / -	- / 30.738
B Kits												
Recurring												
MQ-9 Field Mods:EQUIPMENT Group B (Active)	571 / 192.706	74 / 38.095	108 / 17.613	55 / 13.977	- / -	55 / 13.977	38 / 9.866	- / -	- / -	- / -	- / -	846 / 272.257
<i>Subtotal: Recurring</i>	- / 192.706	- / 38.095	- / 17.613	- / 13.977	- / -	- / 13.977	- / 9.866	- / -	- / -	- / -	- / -	- / 272.257
<i>Subtotal: MQ-9 Field Mods</i>	- / 214.479	- / 42.388	- / 19.598	- / 15.552	- / -	- / 15.552	- / 10.978	- / -	- / -	- / -	- / -	- / 302.995
<i>Subtotal: Procurement, All Modification Items</i>	- / 214.479	- / 42.388	- / 19.598	- / 15.552	- / -	- / 15.552	- / 10.978	- / -	- / -	- / -	- / -	- / 302.995
<b>Support (All Modification Items)</b>												
OTHER GOVT	- / 17.647	- / 8.995	- / 4.159	- / 3.300	- / -	- / 3.300	- / 2.330	- / 3.681	- / -	- / -	- / -	- / 40.112
<i>Subtotal: Support</i>	- / 17.647	- / 8.995	- / 4.159	- / 3.300	- / -	- / 3.300	- / 2.330	- / 3.681	- / -	- / -	- / -	- / 40.112
<b>Installation</b>												
<b>Modification Item 1 of 1:</b> MQ-9 Field Mods	424 / 12.373	120 / 4.234	74 / 1.958	120 / 1.555	- / -	120 / 1.555	55 / 1.096	38 / 0.304	15 / 0.000	- / -	- / -	846 / 21.520
<i>Subtotal: Installation</i>	424 / 12.373	120 / 4.234	74 / 1.958	120 / 1.555	- / -	120 / 1.555	55 / 1.096	38 / 0.304	15 / -	- / -	- / -	846 / 21.520
<b>Total</b>												
<b>Total Cost (Procurement + Support + Installation)</b>	<b>244.499</b>	<b>55.617</b>	<b>25.715</b>	<b>20.407</b>	<b>0.000</b>	<b>20.407</b>	<b>14.404</b>	<b>3.985</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>364.627</b>

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> PRDTB2 / MQ-9 Mods	<b>Modification Number / Title:</b> 9152 / MQ-9 Field
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**ID Code** (A=Service Ready, B=Not Service Ready) : B **MDAP/MAIS Code:**

**Modification Item 1 of 1:** MQ-9 Field Mods

**Manufacturer Information**

Manufacturer Name: General Atomics-ASI Manufacturer Location: Poway, CA

Administrative Leadtime (in Months): 8 Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jun 2019	Jun 2020	Jun 2021	Jun 2022			
Delivery Dates	Jun 2020	Jun 2021	Jun 2022	Jun 2023			

**Installation Information**

**Method of Implementation:** Depot Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	424 / 12.373	120 / 4.234	27 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	571 / 16.607
FY 2019	- / -	- / -	47 / 1.958	27 / 0.000	- / -	27 / 0.000	- / -	- / -	- / -	- / -	- / -	74 / 1.958
FY 2020	- / -	- / -	- / -	93 / 1.555	- / -	93 / 1.555	15 / 0.000	- / -	- / -	- / -	- / -	108 / 1.555
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	40 / 1.096	15 / 0.304	- / -	- / -	- / -	55 / 1.400
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	23 / 0.000	15 / 0.000	- / -	- / -	38 / 0.000
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	424 / 12.373	120 / 4.234	74 / 1.958	120 / 1.555	- / -	120 / 1.555	55 / 1.096	38 / 0.304	15 / 0.000	- / -	- / -	846 / 21.520

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	424	30	30	30	30	18	18	19	19	30	30	30	30	13	14	14	14	9	9	10	10	3	4	4	4	-	-	-	-	0	846
Out	423	31	30	30	30	18	18	19	19	30	30	30	30	13	14	14	14	9	9	10	10	3	4	4	4	-	-	-	-	0	846



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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> PRDTB2 / MQ-9 Mods	<b>Modification Number / Title:</b> 9154 / Lynx SAR

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

<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	96.137	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	96.137
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	96.137	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	96.137
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>96.137</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	-	<b>96.137</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The Lynx Block 20A Synthetic Aperture Radar (SAR) began production in July 2012. This effort retrofits the 110 MQ-9 aircraft equipped with the older Lynx Block 20 SAR with the current production configuration (LNXD22000-003-000) of the Lynx Block 20A. This effort also retrofits/upgrades the Lynx Block 20A SAR produced in the earlier LNXD22000-001 and LNXD22000-002 configurations to the current production configuration. Retrofitting all Lynx radars to the current production configuration of the Lynx Block 20A SAR enhances fielded capability, significantly improves reliability and maintainability, provides the capability to locate and track dismounted targets, allows for the use of retrofit facility space, resolves Diminishing Manufacturing Sources (DMS) issues with the fielded radars, addresses security concerns, and facilitates future growth of capabilities.

The requirement for this modification is validated in the MQ-9 Capabilities Production Document dated 8 August 2006.

This program supports all efforts to field the Lynx Block 20A SAR capability.

This program will revise quantities based on updated user requirements and as funding permits. Funding may be used to address DMS and Non-Recurring Engineering (NRE) issues.

Replacement of the Lynx Block 20 SAR is the cost driver in this modification; hence, the 110 Lynx Block 20A SARs produced for that purpose are what is shown in the schedule section of the P-3A.

**Milestone/Development Status**

The Lynx Block 20A SAR completed initial development. It began production in July 2012 and was initially fielded on MQ-9 tail number AF4125 delivered 22 March 2013. Effort is complete.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date: February 2020</b>			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> PRDTB2 / MQ-9 Mods					<b>Modification Number / Title:</b> 9154 / Lynx SAR			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> MQ-9				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0205219F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0205219F	- / 1,414.376	- / 105.088	- / 127.296	- / 162.080	- / -	- / 162.080	- / 168.160	- / 171.688	- / 42.917	- / 43.706	- / -	- / 2,235.311	
<b>Procurement</b>													
<i>Modification Item 1 of 1: Lynx SAR</i>													
A Kits													
Recurring													
Lynx SAR:INSTALL KITS Group A (Active)	76 / 10.218	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	76 / 10.218	
<i>Subtotal: Recurring</i>	- / 10.218	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.218	
B Kits													
Recurring													
Lynx SAR:EQUIPMENT Group B (Active)	76 / 79.272	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	76 / 79.272	
<i>Subtotal: Recurring</i>	- / 79.272	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 79.272	
<i>Subtotal: Lynx SAR</i>	- / 89.490	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 89.490	
<i>Subtotal: Procurement, All Modification Items</i>	- / 89.490	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 89.490	
<b>Support (All Modification Items)</b>													
OTHER GOVT	- / 6.647	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.647	
<i>Subtotal: Support</i>	- / 6.647	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.647	
<b>Installation</b>													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>96.137</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>96.137</b>	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> PRDTB2 / MQ-9 Mods			<b>Modification Number / Title:</b> 9154 / Lynx SAR	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 1 of 1:</b> Lynx SAR							
<b>Manufacturer Information</b>							
Manufacturer Name: General Atomics-ASI				Manufacturer Location: Poway, CA			
Administrative Leadtime (in Months): 2				Production Leadtime (in Months): 12			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 76		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> PRDTB2 / MQ-9 Mods	<b>Modification Number / Title:</b> 9155 / GCS Blk 30

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	140.766	45.181	0.000	7.229	0.000	7.229	0.000	0.000	0.000	0.000	-	193.176
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	140.766	45.181	0.000	7.229	0.000	7.229	0.000	0.000	0.000	0.000	-	193.176
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>140.766</b>	<b>45.181</b>	<b>0.000</b>	<b>7.229</b>	<b>0.000</b>	<b>7.229</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	-	<b>193.176</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The Ground Control Station (GCS) modernization retrofit program upgrades the GCS, including, but not limited to Fixed and Mobile GCS with new Linux processors, high definition displays, ergonomic improvements, tech refreshes, communications improvements, cyber security improvements, Predator Primary Data Links (PPDLs), 2nd ARC-210 radio capabilities, and Barrett Asymmetric Digital Data Link Computers (BADDs). Through an incremental approach, GCS modernization retrofits the legacy system with user-prioritized capabilities to include significant Human-Machine Interface (HMI) improvements and reliability and maintenance enhancements. Unit costs vary due to the mix of fixed and mobile retrofits, which have varying costs.

Requirement for this modification is validated in the MQ-9 Capability Production Document dated 8 August 2006.

This modification supports all efforts required to field the GCS capability and will revise quantities based upon user requirements, GCS Availability, and available funding. Funding may be used to address Diminishing Manufacturing Sources (DMS) and Non-Recurring Engineering (NRE) issues. Funding may be used to update simulators to current configuration.

**Milestone/Development Status**

GCS Critical Design Review completed Apr 2011.

Test and evaluation was completed June 2013. Operation test was completed September 2016.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> PRDTB2 / MQ-9 Mods					<b>Modification Number / Title:</b> 9155 / GCS Blk 30			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> MQ-9				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0205219F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0205219F	- / 1,414.376	- / 105.088	- / 127.296	- / 162.080	- / -	- / 162.080	- / 168.160	- / 171.688	- / 42.917	- / 43.706	- / -	- / 2,235.311	
<b>Procurement</b>													
<b>Modification Item 1 of 1:</b> GCS Block 30													
A Kits													
Recurring													
GCS Block 30:INSTALL KITS Group A (Active)	64 / 11.864	12 / 0.744	- / -	0 / 0.119	- / -	0 / 0.119	0 / 0.000	- / -	- / -	- / -	- / -	76 / 12.727	
<i>Subtotal: Recurring</i>	- / 11.864	- / 0.744	- / -	- / 0.119	- / -	- / 0.119	- / 0.000	- / -	- / -	- / -	- / -	- / 12.727	
B Kits													
Recurring													
GCS Block 30:EQUIPMENT Group B (Active)	64 / 71.435	12 / 20.359	- / -	0 / 3.257	- / -	0 / 3.257	0 / 0.000	- / -	- / -	- / -	- / -	76 / 95.051	
<i>Subtotal: Recurring</i>	- / 71.435	- / 20.359	- / -	- / 3.257	- / -	- / 3.257	- / 0.000	- / -	- / -	- / -	- / -	- / 95.051	
<i>Subtotal: GCS Block 30</i>	- / 83.299	- / 21.103	- / -	- / 3.376	- / -	- / 3.376	- / 0.000	- / -	- / -	- / -	- / -	- / 107.778	
<i>Subtotal: Procurement, All Modification Items</i>	- / 83.299	- / 21.103	- / -	- / 3.376	- / -	- / 3.376	- / 0.000	- / -	- / -	- / -	- / -	- / 107.778	
<b>Support (All Modification Items)</b>													
Change Orders	- / 1.210	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.210	
OTHER GOVT	- / 13.464	- / 5.913	- / -	- / 0.946	- / -	- / 0.946	- / -	- / -	- / -	- / -	- / -	- / 20.323	
<i>Subtotal: Support</i>	- / 14.674	- / 5.913	- / -	- / 0.946	- / -	- / 0.946	- / -	- / -	- / -	- / -	- / -	- / 21.533	
<b>Installation</b>													
<b>Modification Item 1 of 1:</b> GCS Block 30	47 / 42.793	11 / 18.165	12 / 0.000	6 / 2.907	- / -	6 / 2.907	0 / 0.000	- / -	- / -	- / -	- / -	76 / 63.865	
<i>Subtotal: Installation</i>	47 / 42.793	11 / 18.165	12 / -	6 / 2.907	- / -	6 / 2.907	0 / -	- / -	- / -	- / -	- / -	76 / 63.865	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>140.766</b>	<b>45.181</b>	<b>0.000</b>	<b>7.229</b>	<b>0.000</b>	<b>7.229</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>193.176</b>	

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 3010F / 05 / 5 **P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods **Modification Number / Title:** 9155 / GCS Blk 30

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

**Modification Item 1 of 1:** GCS Block 30

**Manufacturer Information**

Manufacturer Name: General Atomics-ASI Manufacturer Location: Poway, CA

Administrative Leadtime (in Months): 2 Production Leadtime (in Months): 3

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Dec 2018						
Delivery Dates	Mar 2019						

**Installation Information**

**Method of Implementation:** Depot Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	47 / 42.793	11 / 0.000	6 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	64 / 42.793
FY 2019	- / -	0 / 18.165	6 / 0.000	6 / 2.907	- / -	6 / 2.907	- / -	- / -	- / -	- / -	- / -	12 / 21.072
FY 2020	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	0 / 0.000
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	47 / 42.793	11 / 18.165	12 / 0.000	6 / 2.907	- / -	6 / 2.907	0 / 0.000	- / -	- / -	- / -	- / -	76 / 63.865

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	47	2	3	3	3	3	3	3	3	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	76
Out	44	4	3	4	3	3	3	3	3	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	76

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> PRDTB2 / MQ-9 Mods	<b>Modification Number / Title:</b> 9159 / R&M enhancements

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

<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	72.782	20.024	13.134	11.626	0.000	11.626	7.386	5.222	0.000	0.000	0.000	130.174
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	72.782	20.024	13.134	11.626	0.000	11.626	7.386	5.222	0.000	0.000	0.000	130.174
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>72.782</b>	<b>20.024</b>	<b>13.134</b>	<b>11.626</b>	<b>0.000</b>	<b>11.626</b>	<b>7.386</b>	<b>5.222</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>130.174</b>

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

Initial Spares ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	2.080	2.080
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This effort enables Reliability and Maintainability (R&M) modifications to the MQ-9 aircraft, sensor payloads, Ground Control Stations (GCS), and simulators. R&M modifications improve component mean time between failure and maintenance action rate requirements, and drive down system sustainability costs. Examples include, but are not limited to improved oil system sampling, new battery junction boxes, angle of attack probes, Ruggedized Aircraft Maintenance Test System (RAMTS), use of retrofit facility space, and improved power inverters. This effort addresses R&M issues identified by the Joint Reliability and Maintainability Evaluation Team (JRMET) and CAT I deficiency reports.

The requirement for R&M Enhancements is validated in the MQ-9 Capability Production Document dated 8 August 2006. The quantity of aircraft for each Block 1 & Block 5 modification varies depending on when the capability was cut into production. In FY21 and out, the R&M funding will be used to conduct other R&M modifications as required and quantities will vary based on funding and user requirements.

This program will revise quantities based on updated user requirements, aircraft availability, and as funding permits. Funding may be used to address Diminishing Manufacturing Sources (DMS) and Non-Recurring Engineering (NRE) issues.

Under this effort the Contractor provides manufacturing, installation, and acceptance testing to all reliability and maintainability modifications on MQ-9 aircraft and ground based systems.

This mod also includes updates to the MSAT configuration simulator.

**Milestone/Development Status**

The MQ-9 program will continue to develop, test, and recommend reliability, maintainability, availability, sustainability, and safety enhancements and solutions for implementation on the MQ-9 platform and ground based systems in an effort to improve aircraft and payload availability and reduce lifecycle costs.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> PRDTB2 / MQ-9 Mods					<b>Modification Number / Title:</b> 9159 / R&M enhancements			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> MQ-9				<b>Modification Type:</b> Reliability & Maintainability				<b>Related RDT&amp;E PEs:</b> 0205219F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0205219F	- / 1,414.376	- / 105.088	- / 127.296	- / 162.080	- / -	- / 162.080	- / 168.160	- / 171.688	- / 42.917	- / 43.706	- / -	- / 2,235.311	
<b>Procurement</b>													
<b>Modification Item 1 of 1: R&amp;M Enhancements</b>													
A Kits													
Recurring													
R&M Enhancements:INSTALL KITS Group A (Active)	170 / 6.650	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	170 / 6.650	
<i>Subtotal: Recurring</i>	- / 6.650	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.650	
B Kits													
Recurring													
R&M Enhancements:EQUIPMENT Group B (Active)	170 / 61.446	- / 15.893	- / 2.089	- / 7.518	- / -	- / 7.518	- / 4.306	- / 3.218	- / -	- / -	- / -	170 / 94.470	
<i>Subtotal: Recurring</i>	- / 61.446	- / 15.893	- / 2.089	- / 7.518	- / -	- / 7.518	- / 4.306	- / 3.218	- / -	- / -	- / -	- / 94.470	
<i>Subtotal: R&amp;M Enhancements</i>	- / 68.096	- / 15.893	- / 2.089	- / 7.518	- / -	- / 7.518	- / 4.306	- / 3.218	- / -	- / -	- / -	- / 101.120	
<i>Subtotal: Procurement, All Modification Items</i>	- / 68.096	- / 15.893	- / 2.089	- / 7.518	- / -	- / 7.518	- / 4.306	- / 3.218	- / -	- / -	- / -	- / 101.120	
<b>Support (All Modification Items)</b>													
OTHER GOVT	- / 4.686	- / 4.131	- / 11.045	- / 4.108	- / -	- / 4.108	- / 3.080	- / 2.004	- / -	- / -	- / -	- / 29.054	
<i>Subtotal: Support</i>	- / 4.686	- / 4.131	- / 11.045	- / 4.108	- / -	- / 4.108	- / 3.080	- / 2.004	- / -	- / -	- / -	- / 29.054	
<b>Installation</b>													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>72.782</b>	<b>20.024</b>	<b>13.134</b>	<b>11.626</b>	<b>0.000</b>	<b>11.626</b>	<b>7.386</b>	<b>5.222</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>130.174</b>	



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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> PRDTB2 / MQ-9 Mods			<b>Modification Number / Title:</b> 9159 / R&M enhancements	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 1 of 1:</b> R&M Enhancements							
<b>Manufacturer Information</b>							
Manufacturer Name: General Atomics ASI				Manufacturer Location: Poway CA			
Administrative Leadtime (in Months): 2				Production Leadtime (in Months): 12			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 170		

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> PRDTB2 / MQ-9 Mods	<b>Modification Number / Title:</b> 9164 / Extended Range MQ-9

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

<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	243.791	46.485	51.362	17.368	0.000	17.368	6.350	0.533	0.000	0.000	0.000	365.889
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	243.791	46.485	51.362	17.368	0.000	17.368	6.350	0.533	0.000	0.000	0.000	365.889
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>243.791</b>	<b>46.485</b>	<b>51.362</b>	<b>17.368</b>	<b>0.000</b>	<b>17.368</b>	<b>6.350</b>	<b>0.533</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>365.889</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This program adds Extended Range (ER) capability to the MQ-9 aircraft. Candidate aircraft modifications include, but are not limited to, external fuel tanks with shipping containers, 4-bladed propellers with shipping containers, engine modifications, fuel system modifications, use of retrofit facility space, and software modifications. Current plan is to modify all MQ-9 aircraft to the ER configuration. This program will revise quantities based on updated user requirements and as funding permits. Funding may be used to address Diminishing Manufacturing Sources (DMS) and Non-Recurring Engineering (NRE) issues.

The ER modification will be upgrading 144 Block 1 aircraft and 136 Block 5 aircraft per the users identified requirements and accounting for adjustments due to aircraft attrition and production cut-in of the ER capability. Overseas Contingency Operations (OCO) funded modifications will have the installations paid for at contract award, but installations will not occur until kits begin to deliver. All other program office installations will be paid for in the year the installations actually occur.

Requirement for this modification was validated by the Chairman of the Joint Chiefs of Staff in conjunction with the Warfighter Senior Integration Group in response to an Urgent Operational Need.

Quantities in FY18 and onward are Block 5 only.

**Milestone/Development Status**

The Air Force delivered 44 modified Block 1 ER aircraft by July 2016 to meet a Joint Urgent Operational Need (JUON). The remaining Block 1 aircraft are programmed to be modified to the ER configuration. All Block 5 aircraft are programmed to be modified to the ER configuration.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> PRDTB2 / MQ-9 Mods					<b>Modification Number / Title:</b> 9164 / Extended Range MQ-9			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> MQ-9				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0205219F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0205219F	- / 1,414.376	- / 105.088	- / 127.296	- / 162.080	- / -	- / 162.080	- / 168.160	- / 171.688	- / 42.917	- / 43.706	- / -	- / 2,235.311	
<b>Procurement</b>													
<b>Modification Item 1 of 1:</b> Extended Range MQ-9													
A Kits													
Recurring													
Extended Range MQ-9:INSTALL KITS Group A (Active)	188 / 18.638	43 / 3.265	26 / 3.608	36 / 1.220	- / -	36 / 1.220	10 / 0.446	0 / 0.037	0 / 0.000	- / -	- / -	303 / 27.214	
<i>Subtotal: Recurring</i>	- / 18.638	- / 3.265	- / 3.608	- / 1.220	- / -	- / 1.220	- / 0.446	- / 0.037	- / 0.000	- / -	- / -	- / 27.214	
B Kits													
Recurring													
Extended Range MQ-9:EQUIPMENT Group B (Active)	188 / 180.640	43 / 33.054	26 / 36.522	36 / 12.350	- / -	36 / 12.350	10 / 4.516	0 / 0.379	0 / 0.000	- / -	- / -	303 / 267.461	
<i>Subtotal: Recurring</i>	- / 180.640	- / 33.054	- / 36.522	- / 12.350	- / -	- / 12.350	- / 4.516	- / 0.379	- / 0.000	- / -	- / -	- / 267.461	
<i>Subtotal: Extended Range MQ-9</i>	- / 199.278	- / 36.319	- / 40.130	- / 13.570	- / -	- / 13.570	- / 4.962	- / 0.416	- / 0.000	- / -	- / -	- / 294.675	
<i>Subtotal: Procurement, All Modification Items</i>	- / 199.278	- / 36.319	- / 40.130	- / 13.570	- / -	- / 13.570	- / 4.962	- / 0.416	- / 0.000	- / -	- / -	- / 294.675	
<b>Support (All Modification Items)</b>													
OTHER GOVT	- / 29.003	- / 8.446	- / 9.332	- / 3.156	- / -	- / 3.156	- / 1.154	- / 0.097	- / -	- / -	- / -	- / 51.188	
<i>Subtotal: Support</i>	- / 29.003	- / 8.446	- / 9.332	- / 3.156	- / -	- / 3.156	- / 1.154	- / 0.097	- / -	- / -	- / -	- / 51.188	
<b>Installation</b>													
<b>Modification Item 1 of 1:</b> Extended Range MQ-9	81 / 15.510	60 / 1.720	67 / 1.900	46 / 0.642	- / -	46 / 0.642	36 / 0.234	13 / 0.020	- / -	- / -	- / -	303 / 20.026	
<i>Subtotal: Installation</i>	81 / 15.510	60 / 1.720	67 / 1.900	46 / 0.642	- / -	46 / 0.642	36 / 0.234	13 / 0.020	- / -	- / -	- / -	303 / 20.026	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>243.791</b>	<b>46.485</b>	<b>51.362</b>	<b>17.368</b>	<b>0.000</b>	<b>17.368</b>	<b>6.350</b>	<b>0.533</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>365.889</b>	

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**Exhibit P-3a, Individual Modification: PB 2021 Air Force** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> PRDTB2 / MQ-9 Mods	<b>Modification Number / Title:</b> 9164 / Extended Range MQ-9
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** Extended Range MQ-9

**Manufacturer Information**

Manufacturer Name: General Atomics - ASI	Manufacturer Location: Poway, CA
Administrative Leadtime (in Months): 5	Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Mar 2019	Mar 2020	Mar 2021	Mar 2022			
Delivery Dates	Mar 2020	Mar 2021	Mar 2022	Mar 2023			

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	81 / 15.510	60 / 0.000	47 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	188 / 15.510
FY 2019	- / -	0 / 1.720	20 / 0.000	23 / 0.000	- / -	23 / 0.000	- / -	- / -	- / -	- / -	- / -	43 / 1.720
FY 2020	- / -	- / -	0 / 1.900	23 / 0.000	- / -	23 / 0.000	3 / 0.000	- / -	- / -	- / -	- / -	26 / 1.900
FY 2021	- / -	- / -	- / -	0 / 0.642	- / -	0 / 0.642	33 / 0.234	3 / 0.000	- / -	- / -	- / -	36 / 0.876
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.020	- / -	- / -	- / -	10 / 0.020
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	81 / 15.510	60 / 1.720	67 / 1.900	46 / 0.642	- / -	46 / 0.642	36 / 0.234	13 / 0.020	- / -	- / -	- / -	303 / 20.026

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	81	9	15	18	18	18	18	16	15	14	14	9	9	9	9	9	9	7	6	-	-	-	-	-	-	-	-	-	-	0	303
Out	81	9	9	15	18	18	18	18	16	15	14	14	9	9	9	9	9	9	4	-	-	-	-	-	-	-	-	-	-	0	303

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> PRDTB2 / MQ-9 Mods	<b>Modification Number / Title:</b> 9167 / MQ-9 Upgrade

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

<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	264.216	22.641	164.204	129.757	0.000	129.757	130.972	152.655	9.882	10.099	0.000	884.426
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	264.216	22.641	164.204	129.757	0.000	129.757	130.972	152.655	9.882	10.099	0.000	884.426
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>264.216</b>	<b>22.641</b>	<b>164.204</b>	<b>129.757</b>	<b>0.000</b>	<b>129.757</b>	<b>130.972</b>	<b>152.655</b>	<b>9.882</b>	<b>10.099</b>	<b>0.000</b>	<b>884.426</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The MQ-9 Upgrade program fields new capabilities for the MQ-9 fleet. This program integrates the approved MQ-9 Upgrade Agile Acquisition Strategy, the associated technology maturation efforts, and fielding and sustainment of capabilities associated with Operational Flight Profile releases.

MQ-9 Unmanned Aircraft System retrofits those capabilities into the MQ-9 platform as required. Although the content of the OFP releases may change in response to changing mission requirements, at this time releases include, but are not limited to, implementing enhanced data processing & dissemination, high definition electro-optical/infra-red imagery with the DAS-4 sensor on the MQ-9 Block 5, VORTEX improvements, enhanced and redundant power, Position, Navigation, and Timing (PNT) upgrades, autonomous systems, upgraded data links, improved weapon system security, and enhanced weapons integration & targeting capabilities across the MQ-9 enterprise. Due to the Agile Acquisition process, retrofit priorities will be determined and executed by Technology Maturation Effort (TME) maturity, aircraft availability, and operational needs.

Requirement for this modification is validated in the MQ-9 Capability Production Document dated 8 August 2006.

This program will revise quantities based on updated user requirements and as funding permits. Funding may be used to address Diminishing Manufacturing Sources (DMS) and Non-Recurring Engineering (NRE) issues. There are no Group A costs as this is a Group B retrofit only for the DAS-4 Turret retrofits.

There are multiple capabilities (within each element of the P-3a) being added to the aircraft, thus the quantities are overstated. Each element will be installed based upon fleet requirements to get to a baseline for that specific capability release.

The quantity of aircraft for each modification varies depending on when the capability was cut into production. For the DAS-4 retrofit, the program planned to modify Block 5 aircraft delivered without DAS-4. For the software release retrofits, the program planned to modify Block 5 aircraft as required.

**Milestone/Development Status**

DAS-4 Development completed in Q4 FY14. Procurement will continue through FY25 of additional equipment developed on the MQ-9 Upgrade program.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5				<b>P-1 Line Item Number / Title:</b> PRDTB2 / MQ-9 Mods						<b>Modification Number / Title:</b> 9167 / MQ-9 Upgrade		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> MQ-9				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0205219F				
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>												
0205219F	- / 1,414.376	- / 105.088	- / 127.296	- / 162.080	- / -	- / 162.080	- / 168.160	- / 171.688	- / 42.917	- / 43.706	- / -	- / 2,235.311
<b>Procurement</b>												
<b>Modification Item 1 of 2: DAS-4 EO/IR Sensor</b>												
A Kits												
Recurring												
DAS-4 EO/IR Sensor:INSTALL KITS Group A (Active)	116 / 0.000	9 / 0.000	145 / 0.000	92 / 0.000	- / -	92 / 0.000	43 / 0.000	- / -	- / -	- / -	- / -	405 / 0.000
<i>Subtotal: Recurring</i>	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 0.000	- / 0.000	- / -	- / -	- / -	- / -	- / 0.000
B Kits												
Recurring												
DAS-4 EO/IR Sensor:EQUIPMENT Group B (Active)	116 / 243.304	9 / 15.876	181 / 134.858	69 / 30.237	- / -	69 / 30.237	30 / 15.644	- / -	- / -	- / -	- / -	405 / 439.919
<i>Subtotal: Recurring</i>	- / 243.304	- / 15.876	- / 134.858	- / 30.237	- / -	- / 30.237	- / 15.644	- / -	- / -	- / -	- / -	- / 439.919
<i>Subtotal: DAS-4 EO/IR Sensor</i>	- / 243.304	- / 15.876	- / 134.858	- / 30.237	- / -	- / 30.237	- / 15.644	- / -	- / -	- / -	- / -	- / 439.919
<b>Modification Item 2 of 2: MQ-9 Upgrade</b>												
A Kits												
Recurring												
MQ-9 Upgrade:INSTALL KITS Group A (Active)	- / -	- / -	- / -	100 / 5.424	- / -	100 / 5.424	259 / 4.639	424 / 16.755	- / -	- / -	- / -	783 / 26.818
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / 5.424	- / -	- / 5.424	- / 4.639	- / 16.755	- / -	- / -	- / -	- / 26.818
B Kits												
Recurring												
MQ-9 Upgrade:EQUIPMENT Group B (Active)	- / -	50 / 4.329	110 / 28.051	639 / 62.114	- / -	639 / 62.114	369 / 77.684	387 / 105.932	- / -	- / -	- / -	1,555 / 278.110
<i>Subtotal: Recurring</i>	- / -	- / 4.329	- / 28.051	- / 62.114	- / -	- / 62.114	- / 77.684	- / 105.932	- / -	- / -	- / -	- / 278.110
<i>Subtotal: MQ-9 Upgrade</i>	- / -	- / 4.329	- / 28.051	- / 67.538	- / -	- / 67.538	- / 82.323	- / 122.687	- / -	- / -	- / -	- / 304.928
<i>Subtotal: Procurement, All Modification Items</i>	- / 243.304	- / 20.205	- / 162.909	- / 97.775	- / -	- / 97.775	- / 97.967	- / 122.687	- / -	- / -	- / -	- / 744.847
<b>Support (All Modification Items)</b>												
OTHER GOVT												
	- / 20.912	- / 2.436	- / 1.295	- / 31.982	- / -	- / 31.982	- / 33.005	- / 29.968	- / 9.882	- / 10.099	- / -	- / 139.579
<i>Subtotal: Support</i>	- / 20.912	- / 2.436	- / 1.295	- / 31.982	- / -	- / 31.982	- / 33.005	- / 29.968	- / 9.882	- / 10.099	- / -	- / 139.579
<b>Installation</b>												
<b>Modification Item 2 of 2: MQ-9 Upgrade</b>												
	- / -	- / -	- / -	- / -	- / -	- / -	100 / 0.000	259 / 0.000	424 / 0.000	- / -	- / -	783 / 0.000
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	100 / 0.000	259 / 0.000	424 / 0.000	- / -	- / -	783 / 0.000
<b>Total</b>												

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force										<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5				<b>P-1 Line Item Number / Title:</b> PRDTB2 / MQ-9 Mods						<b>Modification Number / Title:</b> 9167 / MQ-9 Upgrade		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> MQ-9				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0205219F				
<b>Financial Plan</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
	<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>
<b>Total Cost (Procurement + Support + Installation)</b>	264.216	22.641	164.204	129.757	0.000	129.757	130.972	152.655	9.882	10.099	0.000	884.426

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> PRDTB2 / MQ-9 Mods			<b>Modification Number / Title:</b> 9167 / MQ-9 Upgrade	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B				<b>MDAP/MAIS Code:</b>			
<b>Modification Item 1 of 2:</b> DAS-4 EO/IR Sensor							
<b>Manufacturer Information</b>							
Manufacturer Name: Raytheon				Manufacturer Location: McKinney, TX			
Administrative Leadtime (in Months): 2				Production Leadtime (in Months): 22			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates	May 2019	Jan 2020	Jan 2021	Jan 2022	Jan 2023		
Delivery Dates	Mar 2021	Nov 2021	Nov 2022	Nov 2023	Nov 2024		
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 405		



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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 3010F / 05 / 5 **P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods **Modification Number / Title:** 9167 / MQ-9 Upgrade

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

**Modification Item 2 of 2:** MQ-9 Upgrade

**Manufacturer Information**

Manufacturer Name: General Atomics, ASI Manufacturer Location: Poway, CA

Administrative Leadtime (in Months): 2 Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jan 2019	Dec 2019	Dec 2020	Jan 2022	Jan 2023		
Delivery Dates	Jan 2020	Dec 2020	Dec 2021	Jan 2023	Jan 2024		

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	100 / 0.000	- / -	- / -	- / -	- / -	100 / 0.000
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	259 / 0.000	- / -	- / -	- / -	259 / 0.000
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	424 / 0.000	- / -	- / -	424 / 0.000
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	- / -	- / -	- / -	- / -	- / -	- / -	100 / 0.000	259 / 0.000	424 / 0.000	- / -	- / -	783 / 0.000

**Installation Schedule**

PYS	FY 2019	FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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						
In	0	-	-	-	-	-	-	-	-	-	-	-	-	25	25	25	25	64	65	65	65	106	106	106	106	-	-	-	-	0	783
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	25	25	25	25	64	65	65	65	106	106	106	106	-	-	-	-	0	783

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> PRDTB2 / MQ-9 Mods	<b>Modification Number / Title:</b> 1 / MQ-9 Low Cost Mods
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**ID Code** (A=Service Ready, B=Not Service Ready) : B **MDAP/MAIS Code:**

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	14.570	0.000	0.000	2.000	0.000	2.000	2.000	2.000	2.000	2.000	-	24.570
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	14.570	0.000	0.000	2.000	0.000	2.000	2.000	2.000	2.000	2.000	-	24.570
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority <i>(\$ in Millions)</i></b>	<b>14.570</b>	<b>0.000</b>	<b>0.000</b>	<b>2.000</b>	<b>0.000</b>	<b>2.000</b>	<b>2.000</b>	<b>2.000</b>	<b>2.000</b>	<b>2.000</b>	<b>-</b>	<b>24.570</b>

*(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 Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This effort enables the execution of low cost modifications in a timely manner. This program will revise quantities based on updated user requirements and as funding permits. Funding may be used to address Diminishing Manufacturing Sources (DMS) and Non-Recurring Engineering (NRE) issues.

Under this effort the contractor shall provide manufacturing, installation, and acceptance testing of low cost modifications on MQ-9 aircraft and ground based systems.

Milestone/Development Status

Development is ongoing.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> PRDTB2 / MQ-9 Mods					<b>Modification Number / Title:</b> 1 / MQ-9 Low Cost Mods			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> MQ-9				<b>Modification Type:</b> Reliability & Maintainability				<b>Related RDT&amp;E PEs:</b> 0205219F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>RDT&amp;E PE #</b>													
0205219F	- / 1,414.376	- / 105.088	- / 127.296	- / 162.080	- / -	- / 162.080	- / 168.160	- / 171.688	- / 42.917	- / 43.706	- / -	- / 2,235.311	
<b>Procurement</b>													
<b>Modification Item 1 of 1:</b> MQ-9 Low Cost Mods													
A Kits													
Recurring													
MQ-9 Low Cost Mods:INSTALL KITS Group A (Active)	0 / 0.734	- / -	- / -	0 / 0.000	- / -	0 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	0 / 0.734	
<i>Subtotal: Recurring</i>	- / 0.734	- / -	- / -	- / 0.000	- / -	- / 0.000	- / 0.000	- / -	- / -	- / -	- / -	- / 0.734	
B Kits													
Recurring													
MQ-9 Low Cost Mods:EQUIPMENT Group B (Active)	0 / 13.836	0 / 0.000	- / 0.000	0 / 2.000	- / -	0 / 2.000	0 / 2.000	0 / 2.000	- / 2.000	- / 2.000	- / -	0 / 23.836	
<i>Subtotal: Recurring</i>	- / 13.836	- / 0.000	- / 0.000	- / 2.000	- / -	- / 2.000	- / 2.000	- / 2.000	- / 2.000	- / 2.000	- / -	- / 23.836	
<i>Subtotal: MQ-9 Low Cost Mods</i>	- / 14.570	- / 0.000	- / 0.000	- / 2.000	- / -	- / 2.000	- / 2.000	- / 2.000	- / 2.000	- / 2.000	- / -	- / 24.570	
<i>Subtotal: Procurement, All Modification Items</i>	- / 14.570	- / 0.000	- / 0.000	- / 2.000	- / -	- / 2.000	- / 2.000	- / 2.000	- / 2.000	- / 2.000	- / -	- / 24.570	
<b>Installation</b>													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>14.570</b>	<b>0.000</b>	<b>0.000</b>	<b>2.000</b>	<b>0.000</b>	<b>2.000</b>	<b>2.000</b>	<b>2.000</b>	<b>2.000</b>	<b>2.000</b>	<b>-</b>	<b>24.570</b>	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> PRDTB2 / MQ-9 Mods			<b>Modification Number / Title:</b> 1 / MQ-9 Low Cost Mods	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B				<b>MDAP/MAIS Code:</b>			
<b>Modification Item 1 of 1:</b> MQ-9 Low Cost Mods							
<b>Manufacturer Information</b>							
Manufacturer Name: General Atomics - ASI				Manufacturer Location: Poway, CA			
Administrative Leadtime (in Months): 1				Production Leadtime (in Months): 1			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate						<b>Installation Quantity:</b> 0	

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	<b>P-1 Line Item Number / Title:</b> PRDTB3 / MQ-9 UAS Payloads
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0305206F	Other Related Program Elements: 0305206F
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	27.905	23.000	19.800	0.000	46.100	46.100	0.000	0.000	0.000	0.000	-	116.805
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	27.905	23.000	19.800	0.000	46.100	46.100	0.000	0.000	0.000	0.000	-	116.805
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>27.905</b>	<b>23.000</b>	<b>19.800</b>	<b>0.000</b>	<b>46.100</b>	<b>46.100</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>116.805</b>

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

Initial Spares ( <i>\$ in Millions</i> )	-	7.500	1.500	-	10.700	10.700	-	-	-	-	-	19.700
Flyaway Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The Gorgon Stare system is a podded airborne sensor suite that provides city-sized wide area airborne surveillance and is integrated on specially-modified MQ-9 Reaper Remotely Piloted Aircraft (RPA). The Air Force Requirements Oversight Council (AFROC) approved Air Combat Command's recommendation to transition Gorgon Stare from a Quick Reaction Capability (QRC) to an Air Force Enduring Capability in November 2014. Gorgon Stare's requirements are documented in the Gorgon Stare Wide Area Airborne Sensor Capabilities Production Document (draft). The acquisition strategy for this Air Force podded sensor suite solution is sustainment of the currently fielded capabilities with any upgrades implemented via validated -1067s or Urgent Operational Needs.

As of fourth quarter FY 2019, the Air Force inventory for Gorgon stare includes the following: nine (9) Gorgon Stare pod sets, five (5) Gorgon Stare Mission Controllers (GSMCs), three (3) Gorgon Stare Archive Managers (GSAMs), nine (9) specially-modified MQ-9 Reaper RPAs, and one System Integration Laboratory (SIL).

FY 2019 funding totals include \$23.5M in Overseas Contingency Operations and \$7.0M from the ISR Transfer Fund.

FY 2020 funding totals include \$21.3M in Overseas Contingency Operations.

FY 2021 funding totals include \$56.8M in Overseas Contingency Operations

Due to Gorgon Stare's prolonged commitment to OCO, the acquisition program manager has the authority to redirect funding as necessary to meet current states and emerging Combatant Commander requirements to better meet the war fighting objectives. The Gorgon Stare program is managed by the 645th Aeronautical Systems Group. Funding for this exhibit is contained in PE 0305206F.

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:**  
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

**P-1 Line Item Number / Title:**  
PRDTB3 / MQ-9 UAS Payloads

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0305206F **Other Related Program Elements:** 0305206F

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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	9169 / Gorgon Stare (Capability Improvement)		A		- / 27.905	- / 23.000	- / 19.800	- / 0.000	- / 46.100	- / 46.100
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 27.905</b>	<b>- / 23.000</b>	<b>- / 19.800</b>	<b>- / 0.000</b>	<b>- / 46.100</b>	<b>- / 46.100</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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	9169 / Gorgon Stare (Capability Improvement)		A		- / 0.000	- / 0.000	- / -	- / -	- / -	- / 116.805
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / 0.000</b>	<b>- / -</b>	<b>- / 116.805</b>

\*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:**  
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> PRDTB3 / MQ-9 UAS Payloads	<b>Modification Number / Title:</b> 9169 / Gorgon Stare

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

<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	27.905	23.000	19.800	0.000	46.100	46.100	0.000	0.000	-	-	-	116.805
Less PY Advance Procurement (\$ in Millions)	-	0.000	-	-	-	-	-	-	-	-	-	0.000
Net Procurement (P-1) (\$ in Millions)	27.905	23.000	19.800	0.000	46.100	46.100	0.000	0.000	-	-	-	116.805
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>27.905</b>	<b>23.000</b>	<b>19.800</b>	<b>0.000</b>	<b>46.100</b>	<b>46.100</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>116.805</b>

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

Initial Spares (\$ in Millions)	0.216	7.500	1.500	0.000	10.700	10.700	0.000	0.000	0.000	-	-	19.916
Gross/Weapon System Unit Cost (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The Gorgon Stare system is a podded airborne sensor suite that provides city-sized wide area airborne surveillance and is integrated on specially-modified MQ-9 Reaper Remotely Piloted Aircraft (RPA). The Air Force Requirements Oversight Council (AFROC) approved Air Combat Command's recommendation to transition Gorgon Stare from a Quick Reaction Capability (QRC) to an Air Force Enduring Capability in November 2014. Gorgon Stare's requirements are documented in the Gorgon Stare Wide Area Airborne Sensor Capabilities Production Document (draft). The acquisition strategy for this Air Force podded sensor suite solution is sustainment of the currently fielded capabilities with any upgrades implemented via validated -1067s or Urgent Operational Needs.

As of fourth quarter FY 2019, the Air Force inventory for Gorgon stare includes the following: nine (9) Gorgon Stare pod sets, five (5) Gorgon Stare Mission Controllers (GSMCs), three (3) Gorgon Stare Archive Managers (GSAMs), nine (9) specially-modified MQ-9 Reaper RPAs, and one System Integration Laboratory (SIL).

Prior years funding included a \$20M Congressional Add and a \$2.905 below threshold reprogramming for the purchase of a tenth podset, and \$5M for MAVEN hardware procurement.

FY 2019 funding totals include \$23.5M in Overseas Contingency Operations. FY 2019 OCO funds included \$16M (spares included) for a pod set processor upgrade and \$7.5M (spares included) for a data storage unit pod set upgrade. An additional \$7.0M of FY19 funds was received from the ISR Transfer Fund to procure hardware for the MAVEN program.

FY 2020 funding totals include \$21.3M in Overseas Contingency Operations. FY 2020 OCO funds included \$21.3M (spares included) of OCO funding for hardware necessary to support Beyond Line Of Sight Phase II modifications

FY 2021 funding totals include \$56.8M in Overseas Contingency Operations. FY 2021 OCO funds include \$37.5M (spares included) for IR sensor Diminishing Manufacturing Sources (DMS) for two (2) combat lines, \$6.3M for tagging and tracking kits on all four (4) combat lines, \$8M for Artificial Intelligence-ready Processor kits to finish two (2) remaining combat lines, and \$5M for hardware to enable electro-optical/infrared fusion capabilities for all four (4) combat lines.

Due to Gorgon Stare's prolonged commitment to OCO, the acquisition program manager has the authority to redirect funding as necessary to meet current states and emerging Combatant Commander requirements to better meet the war fighting objectives. The Gorgon Stare program is managed by the 645th Aeronautical Systems Group. Funding for this exhibit is contained in PE 0305206F.

**Milestone/Development Status**

Development of a full field Post Ingest Exploitation solution (tagging and tracking) in FY20

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> PRDTB3 / MQ-9 UAS Payloads					<b>Modification Number / Title:</b> 9169 / Gorgon Stare			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> MQ-9				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b>					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<i>Modification Item 1 of 1:</i> Gorgon Stare													
B Kits													
Recurring													
Gorgon Stare:EQUIPMENT Group B (Active)	2 / 27.905	25 / 23.000	8 / 19.800	0 / 0.000	31 / 46.100	31 / 46.100	- / -	- / -	- / -	- / -	- / -	66 / 116.805	
<i>Subtotal: Recurring</i>	- / 27.905	- / 23.000	- / 19.800	- / 0.000	- / 46.100	- / 46.100	- / -	- / -	- / -	- / -	- / -	- / 116.805	
<i>Subtotal: Gorgon Stare</i>	- / 27.905	- / 23.000	- / 19.800	- / 0.000	- / 46.100	- / 46.100	- / -	- / -	- / -	- / -	- / -	- / 116.805	
<i>Subtotal: Procurement, All Modification Items</i>	- / 27.905	- / 23.000	- / 19.800	- / 0.000	- / 46.100	- / 46.100	- / -	- / -	- / -	- / -	- / -	- / 116.805	
<b>Support (All Modification Items)</b>													
GROUP B: TOTAL NONRECURRING	- / 0.000	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	
<i>Subtotal: Support</i>	- / 0.000	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	
<b>Installation</b>													
<i>Modification Item 1 of 1:</i> Gorgon Stare	- / -	- / -	2 / 0.000	41 / 0.000	0 / 0.000	41 / 0.000	18 / 0.000	5 / 0.000	- / -	- / -	- / -	66 / 0.000	
<i>Subtotal: Installation</i>	- / -	- / -	2 / 0.000	41 / 0.000	0 / 0.000	41 / 0.000	18 / -	5 / -	- / -	- / -	- / -	66 / 0.000	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	<b>27.905</b>	<b>23.000</b>	<b>19.800</b>	<b>0.000</b>	<b>46.100</b>	<b>46.100</b>	<b>0.000</b>	<b>0.000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>116.805</b>	



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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> PRDTB3 / MQ-9 UAS Payloads	<b>Modification Number / Title:</b> 9169 / Gorgon Stare

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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**Modification Item 1 of 1:** Gorgon Stare

**Manufacturer Information**

Manufacturer Name: SNC	Manufacturer Location: Sparks, NV
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Mar 2019	Jun 2020	Dec 2020				
Delivery Dates	Mar 2020	Jun 2021	Dec 2021				

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 / 0.000	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	2 / 0.000
FY 2019	- / -	- / -	0 / 0.000	25 / 0.000	- / -	25 / 0.000	- / -	- / -	- / -	- / -	- / -	25 / 0.000
FY 2020	- / -	- / -	- / -	8 / 0.000	0 / 0.000	8 / 0.000	- / -	- / -	- / -	- / -	- / -	8 / 0.000
FY 2021	- / -	- / -	- / -	8 / 0.000	- / -	8 / 0.000	18 / 0.000	5 / 0.000	- / -	- / -	- / -	31 / 0.000
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	2 / 0.000	41 / 0.000	0 / 0.000	41 / 0.000	18 / 0.000	5 / 0.000	- / -	- / -	- / -	66 / 0.000

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	1	1	-	-	-	25	-	16	-	18	-	-	5	-	-	-	-	-	-	-	-	-	-	-	0	66
Out	0	-	-	-	-	1	1	-	-	-	25	-	16	-	18	-	-	5	-	-	-	-	-	-	-	-	-	-	-	0	66

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**Exhibit P-40, Budget Line Item Justification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0401318F
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**Line Item MDAP/MAIS Code:** 212

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	320.507	60.072	65.348	122.306	6.290	128.596	164.063	151.353	146.678	61.207	348.183	1,446.007
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	320.507	60.072	65.348	122.306	6.290	128.596	164.063	151.353	146.678	61.207	348.183	1,446.007
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>320.507</b>	<b>60.072</b>	<b>65.348</b>	<b>122.306</b>	<b>6.290</b>	<b>128.596</b>	<b>164.063</b>	<b>151.353</b>	<b>146.678</b>	<b>61.207</b>	<b>348.183</b>	<b>1,446.007</b>

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

Initial Spares ( <i>\$ in Millions</i> )	1.123	-	-	6.574	-	6.574	10.935	3.496	-	-	-	22.128
Flyaway Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

The CV-22 is the Air Force Special Operations Forces (SOF) variant of the joint multi-mission V-22 tilt rotor aircraft. The CV-22 provides long-range, high-speed infiltration, exfiltration, and resupply to Special Forces teams in hostile, denied, and politically sensitive areas. The Navy is the lead service for the Joint V-22 program. The Joint Program Manager is responsible for managing all variants of the V-22. Department of the Navy (DoN) funds the development of the MV-22 and CMV-22. The Air Force funds the service-common portion of the CV-22 while United States Special Operations Command (USSOCOM) funds the development and procurement of SOF peculiar systems. The designed service life for the aircraft is 10,000 flying hours over 30 years.

Funding for this exhibit contained in PE 0401318F.

The primary modification budgeted in FY 2021 is the Block C/20 Upgrade.

Funding may be used to address Diminishing Manufacturing Source (DMS) and component obsolescence issues.

FY21 funding totals include \$6.290M for Overseas Contingency Operations (OCO). The funding will be used to procure kits and install Tactical Network (TACNET) Receivers, wiring, and antennas. These kits provide Link 16 capability to provide situational awareness, threat avoidance, sensor points of interest, and fratricide prevention through datalink communication with other airborne and ground forces.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Air Force	<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods

<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0401318F
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**Line Item MDAP/MAIS Code:** 212

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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	8790 / Block 20 Upgrade (Capability Improvement)		A		- / 301.101	- / 58.073	- / 63.349	- / 120.307	- / 6.290	- / 126.597
P-3a	1 / Low Cost Modifications (Other)		A		- / 19.406	- / 1.999	- / 1.999	- / 1.999	- / 0.000	- / 1.999
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 320.507</b>	<b>- / 60.072</b>	<b>- / 65.348</b>	<b>- / 122.306</b>	<b>- / 6.290</b>	<b>- / 128.596</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	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	8790 / Block 20 Upgrade (Capability Improvement)		A		- / 162.064	- / 149.354	- / 144.679	- / 59.208	- / 338.188	- / 1,402.613
P-3a	1 / Low Cost Modifications (Other)		A		- / 1.999	- / 1.999	- / 1.999	- / 1.999	- / 9.995	- / 43.394
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 164.063</b>	<b>- / 151.353</b>	<b>- / 146.678</b>	<b>- / 61.207</b>	<b>- / 348.183</b>	<b>- / 1,446.007</b>

\*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:**  
FY21 \$6.290M of OCO funding will procure 20 Link-16 kits in support of Operation Inherent Resolve.

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods	<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	301.101	58.073	63.349	120.307	6.290	126.597	162.064	149.354	144.679	59.208	338.188	1,402.613
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	301.101	58.073	63.349	120.307	6.290	126.597	162.064	149.354	144.679	59.208	338.188	1,402.613
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>301.101</b>	<b>58.073</b>	<b>63.349</b>	<b>120.307</b>	<b>6.290</b>	<b>126.597</b>	<b>162.064</b>	<b>149.354</b>	<b>144.679</b>	<b>59.208</b>	<b>338.188</b>	<b>1,402.613</b>

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

Initial Spares ( <i>\$ in Millions</i> )	1.123	0.000	-	6.574	-	6.574	10.935	3.496	-	-	-	22.128
Gross/Weapon System Unit Cost ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

Funds the retrofit of fielded CV-22 aircraft, flight training systems, and systems integration laboratories to the Block C/20 configuration. Modifications encompass numerous engineering change proposals (ECP) that have, or will be placed on contract to address a variety of CV-22 weapon system requirements. Additionally, these funds implement production kits and other equipment resulting from related RDT&E projects in the CV-22 Block C/20 program, including nacelle improvements and enhanced self-deployment capabilities.

The Block C/20 modification program improves readiness, operational safety, suitability, and effectiveness, corrects deficiencies identified during operational testing and/or field operations, improves aircraft reliability/maintainability, enhances the aircraft's self-deployment capability, enables unrestricted access to worldwide airspace, and enhances the effectiveness of defensive aircraft survivability systems. Whenever possible, ECPs/kits are installed in blocks to minimize aircraft down time and maximize efficiency. Some ECPs/kits are being incorporated on aircraft as they progress through the production line. Individual P-3As indicate which modifications are implemented at the Contract Field Team (CFT) or Organizational/Intermediate levels. Installation schedules reflect only CFT installs.

Funds also modify and retrofit systems experiencing obsolescing and/or diminishing manufacturing source (DMS) issues, aircraft support equipment, training devices, flight simulators, flight test support, and software. Funding for DMS, flight test support, and software is included in the nonrecurring engineering cost category.

**Milestone/Development Status**

CV-22 program RDT&E funding in PE 0401318F provides for development and testing activities associated with the Block C/20 modifications, Nacelle Improvements, Enhanced Self-Deployment, and Future Capabilities.

Nacelle Improvements: Include improvements to the Infrared Suppressor (IRS), Engine Inlet Separator, Generator Control Unit (GCU); nacelle wiring, heat exchanger, engine health monitoring, and nacelle structure. Common nacelle improvements for both the CV-22 and MV-22 fleets will increase overall aircraft readiness/availability, reduce platform operating life cycle costs, and mitigate impacts to aircraft performance and survivability.

Enhanced Self-Deployment: Capabilities include improved ice protection, engine performance, navigation, communications, battle space awareness and networking/MDC2; electronic warfare; weapons systems; defensive avionics systems and architecture; weight reduction initiatives; modular avionics/cyber security implementation; and changes to the underlying aircraft systems necessary to enable these capabilities.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods					<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> CV-22				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0401318F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>													
<b>Modification Item 1 of 47:</b> AC Bus Tie Impr/Manual Override Switches													
B Kits													
Recurring													
AC Bus Tie Impr/Manual Override Switches:EQUIPMENT Group B (Active)	51 / 0.498	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	51 / 0.498	
<b>Subtotal: Recurring</b>	<b>- / 0.498</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 0.498</b>	
<b>Subtotal: AC Bus Tie Impr/Manual Override Switches</b>	<b>- / 0.498</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 0.498</b>	
<b>Modification Item 2 of 47:</b> Advanced Multifunctional Display													
B Kits													
Recurring													
Advanced Multifunctional Display:EQUIPMENT Group B (Active)	- / -	- / -	- / -	- / -	- / -	- / -	12 / 1.200	12 / 1.200	12 / 1.200	- / -	16 / 1.700	52 / 5.300	
<b>Subtotal: Recurring</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 1.200</b>	<b>- / 1.200</b>	<b>- / 1.200</b>	<b>- / -</b>	<b>- / 1.700</b>	<b>- / 5.300</b>	
<b>Subtotal: Advanced Multifunctional Display</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 1.200</b>	<b>- / 1.200</b>	<b>- / 1.200</b>	<b>- / -</b>	<b>- / 1.700</b>	<b>- / 5.300</b>	
<b>Modification Item 3 of 47:</b> Advanced Threat Warning System (JUON config)													
A Kits													
Recurring													
Advanced Threat Warning System (JUON config):INSTALL KITS Group A (Active)	28 / 29.998	12 / 2.963	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 32.961	
<b>Subtotal: Recurring</b>	<b>- / 29.998</b>	<b>- / 2.963</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 32.961</b>	
B Kits													
Recurring													
Advanced Threat Warning System (JUON config):EQUIPMENT Group B (Active)	27 / 6.024	- / -	12 / 11.796	15 / 14.750	- / -	15 / 14.750	12 / 11.796	- / -	- / -	- / -	- / -	66 / 44.366	
<b>Subtotal: Recurring</b>	<b>- / 6.024</b>	<b>- / -</b>	<b>- / 11.796</b>	<b>- / 14.750</b>	<b>- / -</b>	<b>- / 14.750</b>	<b>- / 11.796</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 44.366</b>	
<b>Subtotal: Advanced Threat Warning System (JUON config)</b>	<b>- / 36.022</b>	<b>- / 2.963</b>	<b>- / 11.796</b>	<b>- / 14.750</b>	<b>- / -</b>	<b>- / 14.750</b>	<b>- / 11.796</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 77.327</b>	
<b>Modification Item 4 of 47:</b> Advanced Threat Warning System (Series 2)													
B Kits													

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods					<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> CV-22				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0401318F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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)	
Recurring													
Advanced Threat Warning System (Series 2):EQUIPMENT Group B (Active)	- / -	- / -	- / -	- / -	- / -	- / -	12 / 9.600	16 / 11.500	16 / 11.500	- / -	7 / 5.032	51 / 37.632	
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.600	- / 11.500	- / 11.500	- / -	- / 5.032	- / 37.632	
<i>Subtotal: Advanced Threat Warning System (Series 2)</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.600	- / 11.500	- / 11.500	- / -	- / 5.032	- / 37.632	
<b>Modification Item 5 of 47:</b> ARC 210 Upgrade 1990A													
B Kits													
Recurring													
ARC 210 Upgrade 1990A:EQUIPMENT Group B (Active)	- / -	- / -	- / -	12 / 0.096	- / -	12 / 0.096	12 / 0.096	12 / 0.096	9 / 0.072	- / -	- / -	45 / 0.360	
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / 0.096	- / -	- / 0.096	- / 0.096	- / 0.096	- / 0.072	- / -	- / -	- / 0.360	
<i>Subtotal: ARC 210 Upgrade 1990A</i>	- / -	- / -	- / -	- / 0.096	- / -	- / 0.096	- / 0.096	- / 0.096	- / 0.072	- / -	- / -	- / 0.360	
<b>Modification Item 6 of 47:</b> Auto Dependent Surveillance-Broadcast ADSB/Out													
B Kits													
Recurring													
Auto Dependent Surveillance-Broadcast ADSB/Out:EQUIPMENT Group B (Active)	51 / 3.092	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	51 / 3.092	
<i>Subtotal: Recurring</i>	- / 3.092	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.092	
<i>Subtotal: Auto Dependent Surveillance-Broadcast ADSB/Out</i>	- / 3.092	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.092	
<b>Modification Item 7 of 47:</b> Auxillary Power Unit (APU) K8/K9 Improvement													
B Kits													
Recurring													
Auxillary Power Unit (APU) K8/K9 Improvement:EQUIPMENT Group B (Active)	- / -	- / -	- / -	- / -	- / -	- / -	16 / 0.193	12 / 0.146	12 / 0.146	12 / 0.146	- / -	52 / 0.631	
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.193	- / 0.146	- / 0.146	- / 0.146	- / -	- / 0.631	
<i>Subtotal: Auxillary Power Unit (APU) K8/K9 Improvement</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.193	- / 0.146	- / 0.146	- / 0.146	- / -	- / 0.631	
<b>Modification Item 8 of 47:</b> Blk C ECP901													
B Kits													
Recurring													
Blk C ECP901:EQUIPMENT Group B (Active)	21 / 14.765	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	21 / 14.765	

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods					<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> CV-22				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0401318F				
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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: Recurring</i>	- / 14.765	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 14.765
<i>Subtotal: Blk C ECP901</i>	- / 14.765	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 14.765
<b>Modification Item 9 of 47:</b> Coanda Valve Reliability Improvement												
B Kits												
Recurring												
Coanda Valve Reliability Improvement:EQUIPMENT Group B (Active)	- / -	- / -	- / -	- / -	- / -	- / -	44 / 1.206	8 / 0.220	- / -	- / -	- / -	52 / 1.426
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.206	- / 0.220	- / -	- / -	- / -	- / 1.426
<i>Subtotal: Coanda Valve Reliability Improvement</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.206	- / 0.220	- / -	- / -	- / -	- / 1.426
<b>Modification Item 10 of 47:</b> Cockpit Voice Recorder/K-VADR ECP964												
B Kits												
Recurring												
Cockpit Voice Recorder/K-VADR ECP964:EQUIPMENT Group B (Active)	16 / 0.518	11 / 0.396	12 / 0.432	13 / 0.468	- / -	13 / 0.468	- / -	- / -	- / -	- / -	- / -	52 / 1.814
<i>Subtotal: Recurring</i>	- / 0.518	- / 0.396	- / 0.432	- / 0.468	- / -	- / 0.468	- / -	- / -	- / -	- / -	- / -	- / 1.814
<i>Subtotal: Cockpit Voice Recorder/K-VADR ECP964</i>	- / 0.518	- / 0.396	- / 0.432	- / 0.468	- / -	- / 0.468	- / -	- / -	- / -	- / -	- / -	- / 1.814
<b>Modification Item 11 of 47:</b> Co-Site ECP901												
B Kits												
Recurring												
Co-Site ECP901:EQUIPMENT Group B (Active)	34 / 16.519	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 16.519
<i>Subtotal: Recurring</i>	- / 16.519	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 16.519
<i>Subtotal: Co-Site ECP901</i>	- / 16.519	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 16.519
<b>Modification Item 12 of 47:</b> Data Transfer Unit Upgrade												
B Kits												
Recurring												
Data Transfer Unit Upgrade:EQUIPMENT Group B (Active)	25 / 0.500	26 / 0.520	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	51 / 1.020
<i>Subtotal: Recurring</i>	- / 0.500	- / 0.520	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.020
<i>Subtotal: Data Transfer Unit Upgrade</i>	- / 0.500	- / 0.520	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.020
<b>Modification Item 13 of 47:</b> Drive Tube ECP929												



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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020			
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> CV-22				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0401318F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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													
Drive Tube ECP929:EQUIPMENT Group B (Active)	10 / 0.563	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.563	
<i>Subtotal: Recurring</i>	- / 0.563	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.563	
<i>Subtotal: Drive Tube ECP929</i>	- / 0.563	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.563	
<b>Modification Item 14 of 47:</b> Electric Power System Upgrade (GCU)													
B Kits													
Recurring													
Electric Power System Upgrade (GCU):EQUIPMENT Group B (Active)	- / -	- / -	- / -	- / -	- / -	- / -	45 / 1.890	33 / 1.386	26 / 1.092	- / -	- / -	104 / 4.368	
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.890	- / 1.386	- / 1.092	- / -	- / -	- / 4.368	
<i>Subtotal: Electric Power System Upgrade (GCU)</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.890	- / 1.386	- / 1.092	- / -	- / -	- / 4.368	
<b>Modification Item 15 of 47:</b> Engine Thermo-Couple Wiring Harness ECP1075													
B Kits													
Recurring													
Engine Thermo-Couple Wiring Harness ECP1075:EQUIPMENT Group B (Active)	21 / 0.324	11 / 0.176	11 / 0.177	7 / 0.116	- / -	7 / 0.116	- / -	- / -	- / -	- / -	- / -	50 / 0.793	
<i>Subtotal: Recurring</i>	- / 0.324	- / 0.176	- / 0.177	- / 0.116	- / -	- / 0.116	- / -	- / -	- / -	- / -	- / -	- / 0.793	
<i>Subtotal: Engine Thermo-Couple Wiring Harness ECP1075</i>	- / 0.324	- / 0.176	- / 0.177	- / 0.116	- / -	- / 0.116	- / -	- / -	- / -	- / -	- / -	- / 0.793	
<b>Modification Item 16 of 47:</b> Flight Control System (FCS) Upgrade													
B Kits													
Recurring													
Flight Control System (FCS) Upgrade:EQUIPMENT Group B (Active)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	33 / 28.050	33 / 28.050	
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 28.050	- / 28.050	
<i>Subtotal: Flight Control System (FCS) Upgrade</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 28.050	- / 28.050	
<b>Modification Item 17 of 47:</b> Fuel Jettison ECP906													
B Kits													
Recurring													
Fuel Jettison ECP906:EQUIPMENT Group B (Active)	26 / 10.212	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 10.212	

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<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5				<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods						<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> CV-22				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0401318F				
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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: Recurring</i>	- / 10.212	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.212
<i>Subtotal: Fuel Jettison ECP906</i>	- / 10.212	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.212
<b>Modification Item 18 of 47: Fwd Looking Infrared Systems Electronics Unit (FLIR SEU)</b>												
B Kits												
Recurring												
Fwd Looking Infrared Systems Electronics Unit (FLIR SEU):EQUIPMENT Group B (Active)	51 / 2.059	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	51 / 2.059
<i>Subtotal: Recurring</i>	- / 2.059	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.059
<i>Subtotal: Fwd Looking Infrared Systems Electronics Unit (FLIR SEU)</i>	- / 2.059	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.059
<b>Modification Item 19 of 47: GAU-21 Gun</b>												
B Kits												
Recurring												
GAU-21 Gun:EQUIPMENT Group B (Active)	100 / 2.007	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	100 / 2.007
<i>Subtotal: Recurring</i>	- / 2.007	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.007
<i>Subtotal: GAU-21 Gun</i>	- / 2.007	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.007
<b>Modification Item 20 of 47: Gen 5 Radio ECP866R1</b>												
A Kits												
Recurring												
Gen 5 Radio ECP866R1:INSTALL KITS Group A (Active)	39 / 11.896	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	39 / 11.896
<i>Subtotal: Recurring</i>	- / 11.896	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.896
B Kits												
Recurring												
Gen 5 Radio ECP866R1:EQUIPMENT Group B (Active)	39 / 0.066	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	39 / 0.066
<i>Subtotal: Recurring</i>	- / 0.066	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.066
<i>Subtotal: Gen 5 Radio ECP866R1</i>	- / 11.962	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.962
<b>Modification Item 21 of 47: Gen 6 Radio (MUOS)</b>												
B Kits												
Recurring												
Gen 6 Radio (MUOS):EQUIPMENT Group B (Active)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 4.152	12 / 4.152	- / -	28 / 9.688
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.152	- / 4.152	- / -	- / 17.992

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<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods					<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> CV-22				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0401318F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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: Gen 6 Radio (MUOS)</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.152	- / 4.152	- / -	- / 9.688	- / 17.992	
<b>Modification Item 22 of 47:</b> Gimbal Ring Joint Redesign ECP1001													
B Kits													
Recurring													
Gimbal Ring Joint Redesign ECP1001:EQUIPMENT Group B (Active)	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.540	12 / 0.540	12 / 0.540	- / -	16 / 0.720	52 / 2.340	
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.540	- / 0.540	- / 0.540	- / -	- / 0.720	- / 2.340	
<i>Subtotal: Gimbal Ring Joint Redesign ECP1001</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.540	- / 0.540	- / 0.540	- / -	- / 0.720	- / 2.340	
<b>Modification Item 23 of 47:</b> GPS M-Code Upgrade													
B Kits													
Recurring													
GPS M-Code Upgrade:EQUIPMENT Group B (Active)	- / -	- / -	- / -	- / -	- / -	- / -	12 / 2.040	12 / 2.040	12 / 2.040	12 / 2.040	4 / 0.680	52 / 8.840	
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.040	- / 2.040	- / 2.040	- / 2.040	- / 0.680	- / 8.840	
<i>Subtotal: GPS M-Code Upgrade</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.040	- / 2.040	- / 2.040	- / 2.040	- / 0.680	- / 8.840	
<b>Modification Item 24 of 47:</b> HF Radio (BLOS) ECP1041													
B Kits													
Recurring													
HF Radio (BLOS) ECP1041:EQUIPMENT Group B (Active)	22 / 3.493	11 / 2.910	6 / 1.172	6 / 1.172	- / -	6 / 1.172	6 / 1.172	- / -	- / -	- / -	- / -	51 / 9.919	
<i>Subtotal: Recurring</i>	- / 3.493	- / 2.910	- / 1.172	- / 1.172	- / -	- / 1.172	- / 1.172	- / -	- / -	- / -	- / -	- / 9.919	
<i>Subtotal: HF Radio (BLOS) ECP1041</i>	- / 3.493	- / 2.910	- / 1.172	- / 1.172	- / -	- / 1.172	- / 1.172	- / -	- / -	- / -	- / -	- / 9.919	
<b>Modification Item 25 of 47:</b> IIS/Engine Air Particle Solution													
B Kits													
Recurring													
IIS/Engine Air Particle Solution:EQUIPMENT Group B (Active)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 5.040	36 / 56.920	
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.040	- / 56.920	- / 61.960	
<i>Subtotal: IIS/Engine Air Particle Solution</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.040	- / 56.920	- / 61.960	
<b>Modification Item 26 of 47:</b> Improved Engine Infrared Suppressor (IRS)													

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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> CV-22				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0401318F				
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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												
Improved Engine Infrared Suppressor (IRS):EQUIPMENT Group B (Active)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 6.096	12 / 6.096	6 / 3.046	22 / 11.178	52 / 26.416
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.096	- / 6.096	- / 3.046	- / 11.178	- / 26.416
<i>Subtotal: Improved Engine Infrared Suppressor (IRS)</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.096	- / 6.096	- / 3.046	- / 11.178	- / 26.416
<b>Modification Item 27 of 47:</b> Link 16												
B Kits												
Recurring												
Link 16:EQUIPMENT Group B (Active)	- / -	- / -	- / -	- / -	20 / 6.290	20 / 6.290	- / -	- / -	- / -	- / -	- / -	20 / 6.290
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / -	- / 6.290	- / 6.290	- / -	- / -	- / -	- / -	- / -	- / 6.290
<i>Subtotal: Link 16</i>	- / -	- / -	- / -	- / -	- / 6.290	- / 6.290	- / -	- / -	- / -	- / -	- / -	- / 6.290
<b>Modification Item 28 of 47:</b> MCOI CAPRE												
B Kits												
Recurring												
MCOI CAPRE:EQUIPMENT Group B (Active)	28 / 0.303	12 / 0.132	12 / 0.132	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	52 / 0.567
<i>Subtotal: Recurring</i>	- / 0.303	- / 0.132	- / 0.132	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.567
<i>Subtotal: MCOI CAPRE</i>	- / 0.303	- / 0.132	- / 0.132	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.567
<b>Modification Item 29 of 47:</b> MCOI ECP873												
B Kits												
Recurring												
MCOI ECP873:EQUIPMENT Group B (Active)	5 / 2.651	12 / 6.475	12 / 6.475	12 / 6.200	- / -	12 / 6.200	- / -	- / -	- / -	- / -	- / -	41 / 21.801
<i>Subtotal: Recurring</i>	- / 2.651	- / 6.475	- / 6.475	- / 6.200	- / -	- / 6.200	- / -	- / -	- / -	- / -	- / -	- / 21.801
<i>Subtotal: MCOI ECP873</i>	- / 2.651	- / 6.475	- / 6.475	- / 6.200	- / -	- / 6.200	- / -	- / -	- / -	- / -	- / -	- / 21.801
<b>Modification Item 30 of 47:</b> Mode 5 APX-119 ECP935												
B Kits												
Recurring												
Mode 5 APX-119 ECP935:EQUIPMENT Group B (Active)	36 / 2.288	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	36 / 2.288
<i>Subtotal: Recurring</i>	- / 2.288	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.288
<i>Subtotal: Mode 5 APX-119 ECP935</i>	- / 2.288	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.288
<b>Modification Item 31 of 47:</b> Modular Avionics - Cyber												

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<b>Exhibit P-3a, Individual Modification: PB 2021 Air Force</b>										<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods					<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> CV-22				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0401318F				
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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												
Modular Avionics - Cyber:EQUIPMENT Group B (Active)	- / -	- / -	- / -	- / -	- / -	- / -	12 / 9.000	12 / 9.000	12 / 9.000	- / -	16 / 12.000	52 / 39.000
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.000	- / 9.000	- / 9.000	- / -	- / 12.000	- / 39.000
<i>Subtotal: Modular Avionics - Cyber</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.000	- / 9.000	- / 9.000	- / -	- / 12.000	- / 39.000
<b>Modification Item 32 of 47: Nacelle Improvements</b>												
B Kits												
Recurring												
Nacelle Improvements:EQUIPMENT Group B (Active)	- / -	- / -	1 / 9.700	12 / 58.000	- / -	12 / 58.000	12 / 62.000	12 / 52.000	12 / 45.000	3 / 10.500	- / -	52 / 237.200
<i>Subtotal: Recurring</i>	- / -	- / -	- / 9.700	- / 58.000	- / -	- / 58.000	- / 62.000	- / 52.000	- / 45.000	- / 10.500	- / -	- / 237.200
<i>Subtotal: Nacelle Improvements</i>	- / -	- / -	- / 9.700	- / 58.000	- / -	- / 58.000	- / 62.000	- / 52.000	- / 45.000	- / 10.500	- / -	- / 237.200
<b>Modification Item 33 of 47: Nose Landing Gear ECP869</b>												
B Kits												
Recurring												
Nose Landing Gear ECP869:EQUIPMENT Group B (Active)	14 / 0.091	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.091
<i>Subtotal: Recurring</i>	- / 0.091	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.091
<i>Subtotal: Nose Landing Gear ECP869</i>	- / 0.091	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.091
<b>Modification Item 34 of 47: O2N2 Concentrator Sieve Bed Correction ECP1107</b>												
B Kits												
Recurring												
O2N2 Concentrator Sieve Bed Correction ECP1107:EQUIPMENT Group B (Active)	15 / 0.230	10 / 0.124	10 / 0.127	10 / 0.129	- / -	10 / 0.129	7 / 0.090	- / -	- / -	- / -	- / -	52 / 0.700
<i>Subtotal: Recurring</i>	- / 0.230	- / 0.124	- / 0.127	- / 0.129	- / -	- / 0.129	- / 0.090	- / -	- / -	- / -	- / -	- / 0.700
<i>Subtotal: O2N2 Concentrator Sieve Bed Correction ECP1107</i>	- / 0.230	- / 0.124	- / 0.127	- / 0.129	- / -	- / 0.129	- / 0.090	- / -	- / -	- / -	- / -	- / 0.700
<b>Modification Item 35 of 47: PRGB Atmospheric Protection ECP992</b>												
B Kits												
Recurring												

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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> CV-22				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0401318F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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)	
PRGB Atmospheric Protection ECP992:EQUIPMENT Group B (Active)	33 / 0.206	18 / 0.112	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	51 / 0.318	
<i>Subtotal: Recurring</i>	- / 0.206	- / 0.112	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.318	
<i>Subtotal: PRGB Atmospheric Protection ECP992</i>	- / 0.206	- / 0.112	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.318	
<b>Modification Item 36 of 47:</b> PRGB Input Quill/Clutch Redesign													
B Kits													
Recurring													
PRGB Input Quill/Clutch Redesign:EQUIPMENT Group B (Active)	- / -	- / -	- / -	12 / 0.600	- / -	12 / 0.600	12 / 0.600	12 / 0.600	12 / 0.600	12 / 0.600	4 / 0.200	- / -	52 / 2.600
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / 0.600	- / -	- / 0.600	- / 0.600	- / 0.600	- / 0.600	- / 0.600	- / 0.200	- / -	- / 2.600
<i>Subtotal: PRGB Input Quill/Clutch Redesign</i>	- / -	- / -	- / -	- / 0.600	- / -	- / 0.600	- / 0.600	- / 0.600	- / 0.600	- / 0.600	- / 0.200	- / -	- / 2.600
<b>Modification Item 37 of 47:</b> Prop Rotor Hub Spring & Drive Link Impr													
B Kits													
Recurring													
Prop Rotor Hub Spring & Drive Link Impr:EQUIPMENT Group B (Active)	1 / 0.222	10 / 2.226	- / -	2 / 0.446	- / -	2 / 0.446	12 / 2.672	12 / 2.672	12 / 2.672	12 / 2.672	3 / 0.668	- / -	52 / 11.578
<i>Subtotal: Recurring</i>	- / 0.222	- / 2.226	- / -	- / 0.446	- / -	- / 0.446	- / 2.672	- / 2.672	- / 2.672	- / 2.672	- / 0.668	- / -	- / 11.578
<i>Subtotal: Prop Rotor Hub Spring &amp; Drive Link Impr</i>	- / 0.222	- / 2.226	- / -	- / 0.446	- / -	- / 0.446	- / 2.672	- / 2.672	- / 2.672	- / 2.672	- / 0.668	- / -	- / 11.578
<b>Modification Item 38 of 47:</b> Rudder Reliability ECP1020													
B Kits													
Recurring													
Rudder Reliability ECP1020:EQUIPMENT Group B (Active)	38 / 0.143	8 / 0.046	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 0.189
<i>Subtotal: Recurring</i>	- / 0.143	- / 0.046	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.189
<i>Subtotal: Rudder Reliability ECP1020</i>	- / 0.143	- / 0.046	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.189
<b>Modification Item 39 of 47:</b> Satcom Antenna Mounting ECP901R2													
B Kits													
Recurring													
Satcom Antenna Mounting ECP901R2:EQUIPMENT Group B (Active)	15 / 0.035	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.035

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<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5					<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods					<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> CV-22				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0401318F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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: Recurring</i>	- / 0.035	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.035	
<i>Subtotal: Satcom Antenna Mounting ECP901R2</i>	- / 0.035	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.035	
<b>Modification Item 40 of 47:</b> Satcom Beefy Cables Retrofit ECP901R2													
B Kits													
Recurring													
Satcom Beefy Cables Retrofit ECP901R2:EQUIPMENT Group B (Active)	26 / 0.136	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 0.136	
<i>Subtotal: Recurring</i>	- / 0.136	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.136	
<i>Subtotal: Satcom Beefy Cables Retrofit ECP901R2</i>	- / 0.136	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.136	
<b>Modification Item 41 of 47:</b> Satcom Egg Beater Antenna ECP901R2													
B Kits													
Recurring													
Satcom Egg Beater Antenna ECP901R2:EQUIPMENT Group B (Active)	27 / 0.599	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	27 / 0.599	
<i>Subtotal: Recurring</i>	- / 0.599	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.599	
<i>Subtotal: Satcom Egg Beater Antenna ECP901R2</i>	- / 0.599	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.599	
<b>Modification Item 42 of 47:</b> Satcom Troop Commander Panel ECP901R2													
B Kits													
Recurring													
Satcom Troop Commander Panel ECP901R2:EQUIPMENT Group B (Active)	20 / 0.018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 0.018	
<i>Subtotal: Recurring</i>	- / 0.018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.018	
<i>Subtotal: Satcom Troop Commander Panel ECP901R2</i>	- / 0.018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.018	
<b>Modification Item 43 of 47:</b> Shaft Driven Compressor (SDC) Improvement													
B Kits													
Recurring													
Shaft Driven Compressor (SDC) Improvement:EQUIPMENT Group B (Active)	- / -	- / -	- / -	15 / 0.450	- / -	15 / 0.450	15 / 0.450	15 / 0.450	7 / 0.210	- / -	- / -	52 / 1.560	
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / 0.450	- / -	- / 0.450	- / 0.450	- / 0.450	- / 0.210	- / -	- / -	- / 1.560	
<i>Subtotal: Shaft Driven Compressor (SDC) Improvement</i>	- / -	- / -	- / -	- / 0.450	- / -	- / 0.450	- / 0.450	- / 0.450	- / 0.210	- / -	- / -	- / 1.560	

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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> CV-22				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0401318F				
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Modification Item 44 of 47:</b> Swashplate Actuator ECP980												
B Kits												
Recurring												
Swashplate Actuator ECP980:EQUIPMENT Group B (Active)	46 / 0.074	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 0.074
<i>Subtotal: Recurring</i>	- / 0.074	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.074
<i>Subtotal: Swashplate Actuator ECP980</i>	- / 0.074	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.074
<b>Modification Item 45 of 47:</b> Troop Seat Pin ECP1167												
B Kits												
Recurring												
Troop Seat Pin ECP1167:EQUIPMENT Group B (Active)	- / -	- / -	21 / 0.116	31 / 0.171	- / -	31 / 0.171	- / -	- / -	- / -	- / -	- / -	52 / 0.287
<i>Subtotal: Recurring</i>	- / -	- / -	- / 0.116	- / 0.171	- / -	- / 0.171	- / -	- / -	- / -	- / -	- / -	- / 0.287
<i>Subtotal: Troop Seat Pin ECP1167</i>	- / -	- / -	- / 0.116	- / 0.171	- / -	- / 0.171	- / -	- / -	- / -	- / -	- / -	- / 0.287
<b>Modification Item 46 of 47:</b> Upper and Lower Rod Ends (Formerly Pitch Link)												
B Kits												
Recurring												
Upper and Lower Rod Ends (Formerly Pitch Link):EQUIPMENT Group B (Active)	- / -	- / -	- / -	10 / 0.800	- / -	10 / 0.800	12 / 0.960	12 / 0.960	16 / 1.280	- / -	- / -	50 / 4.000
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / 0.800	- / -	- / 0.800	- / 0.960	- / 0.960	- / 1.280	- / -	- / -	- / 4.000
<i>Subtotal: Upper and Lower Rod Ends (Formerly Pitch Link)</i>	- / -	- / -	- / -	- / 0.800	- / -	- / 0.800	- / 0.960	- / 0.960	- / 1.280	- / -	- / -	- / 4.000
<b>Modification Item 47 of 47:</b> Wiring Harness ECP915												
B Kits												
Recurring												
Wiring Harness ECP915:EQUIPMENT Group B (Active)	35 / 0.608	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	35 / 0.608
<i>Subtotal: Recurring</i>	- / 0.608	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.608
<i>Subtotal: Wiring Harness ECP915</i>	- / 0.608	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.608
<i>Subtotal: Procurement, All Modification Items</i>	- / 110.138	- / 16.080	- / 30.127	- / 83.398	- / 6.290	- / 89.688	- / 105.505	- / 93.058	- / 85.600	- / 21.640	- / 125.968	- / 677.804
<b>Support (All Modification Items)</b>												
GROUP A: TOTAL NONRECURRING	- / 59.836	- / 11.094	- / 10.762	- / 9.268	- / -	- / 9.268	- / 11.175	- / 15.362	- / 20.058	- / 6.109	- / 48.275	- / 191.939



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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> CV-22				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0401318F					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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)	
PMA - Contractor Services	- / 125.739	- / 16.251	- / 13.550	- / 14.225	- / -	- / 14.225	- / 5.990	- / 6.775	- / 17.295	- / 6.840	- / 141.075	- / 1107.740	
Mod of Spares	- / 1.936	- / 1.270	- / 0.250	- / 0.500	- / -	- / 0.500	- / 0.500	- / 1.225	- / 1.325	- / 1.578	- / 10.000	- / 18.584	
Data	- / 10.000	- / 2.500	- / 0.500	- / 1.000	- / -	- / 1.000	- / 5.700	- / 2.875	- / 3.268	- / 0.500	- / 19.105	- / 35.448	
SIM/TRAINER	25 / 34.561	4 / 7.412	5 / 6.989	5 / 5.478	- / -	5 / 5.478	5 / 6.445	5 / 6.455	5 / 6.725	5 / 5.195	25 / 44.196	84 / 123.456	
SUPPORT-EQUIP	- / 8.363	- / 2.573	- / 0.500	- / 1.500	- / -	- / 1.500	- / 2.500	- / 2.500	- / 2.500	- / 1.000	- / 17.500	- / 28.936	
OTHER GOVT	- / 134.377	- / 19.061	- / 17.956	- / 18.331	- / -	- / 18.331	- / 19.173	- / 19.578	- / 10.067	- / 8.825	- / 144.475	- / 1141.843	
<i>Subtotal: Support</i>	<i>25 / 174.812</i>	<i>4 / 40.161</i>	<i>5 / 30.507</i>	<i>5 / 30.302</i>	<i>- / -</i>	<i>5 / 30.302</i>	<i>5 / 41.483</i>	<i>5 / 44.770</i>	<i>5 / 51.238</i>	<i>5 / 30.047</i>	<i>25 / 204.626</i>	<i>84 / 647.946</i>	
<b>Installation</b>													
<b>Modification Item 1 of 47:</b> AC Bus Tie Impr/Manual Override Switches	34 / 0.306	17 / 0.335	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	51 / 0.641	
<b>Modification Item 3 of 47:</b> Advanced Threat Warning System (JUON config)	22 / 3.592	- / -	5 / 0.734	12 / 1.764	- / -	12 / 1.764	27 / 3.969	- / -	- / -	- / -	- / -	66 / 10.059	
<b>Modification Item 4 of 47:</b> Advanced Threat Warning System (Series 2)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.840	12 / 0.840	8 / 0.560	19 / 5.592	51 / 7.832	
<b>Modification Item 8 of 47:</b> Blk C ECP901	21 / 3.329	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	21 / 3.329	
<b>Modification Item 10 of 47:</b> Cockpit Voice Recorder/K-VADR ECP964	5 / 0.088	11 / 0.198	11 / 0.198	12 / 0.144	- / -	12 / 0.144	13 / 0.156	- / -	- / -	- / -	- / -	52 / 0.784	
<b>Modification Item 11 of 47:</b> Co-Site ECP901	31 / 1.415	3 / 0.163	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 1.578	
<b>Modification Item 15 of 47:</b> Engine Thermo-Couple Wiring Harness ECP1075	10 / 0.209	11 / 0.240	11 / 0.256	11 / 0.267	- / -	11 / 0.267	7 / 0.174	- / -	- / -	- / -	- / -	50 / 1.146	
<b>Modification Item 17 of 47:</b> Fuel Jettison ECP906	26 / 3.679	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 3.679	
<b>Modification Item 20 of 47:</b> Gen 5 Radio ECP866R1	10 / 0.131	10 / 0.137	10 / 0.128	9 / 0.118	- / -	9 / 0.118	- / -	- / -	- / -	- / -	- / -	39 / 0.514	
<b>Modification Item 21 of 47:</b> Gen 6 Radio (MUOS)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.108	12 / 0.108	28 / 0.248	52 / 0.464	
<b>Modification Item 22 of 47:</b> Gimbal Ring Joint Redesign ECP1001	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.042	12 / 0.042	12 / 0.042	16 / 0.060	52 / 0.186	
<b>Modification Item 24 of 47:</b> HF Radio (BLOS) ECP1041	11 / 0.355	11 / 0.620	11 / 0.574	6 / 0.318	- / -	6 / 0.318	12 / 0.700	- / -	- / -	- / -	- / -	51 / 2.567	
<b>Modification Item 29 of 47:</b> MCOI ECP873	5 / 0.329	- / -	- / -	12 / 3.296	- / -	12 / 3.296	12 / 3.745	12 / 3.745	- / -	- / -	- / -	41 / 11.115	
<b>Modification Item 32 of 47:</b> Nacelle Improvements	- / -	- / -	- / -	1 / 0.700	- / -	1 / 0.700	12 / 6.200	12 / 6.200	12 / 6.200	12 / 6.200	3 / 1.550	52 / 27.050	
<b>Modification Item 33 of 47:</b> Nose Landing Gear ECP869	14 / 0.098	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.098	
<b>Modification Item 37 of 47:</b> Prop Rotor Hub Spring & Drive Link Impr	- / -	- / -	11 / 0.534	- / -	- / -	- / -	1 / 0.057	13 / 0.624	12 / 0.576	12 / 0.576	3 / 0.144	52 / 2.511	
<b>Modification Item 38 of 47:</b> Rudder Reliability ECP1020	32 / 0.513	4 / 0.115	10 / 0.291	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 0.919	
<b>Modification Item 39 of 47:</b> Satcom Antenna Mounting ECP901R2	15 / 0.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.100	

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force										<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5				<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods						<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>					
<b>Models of Systems Affected:</b> CV-22				<b>Modification Type:</b> Capability Improvement				<b>Related RDT&amp;E PEs:</b> 0401318F				
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Modification Item 40 of 47:</b> Satcom Beefy Cables Retrofit ECP901R2	23 / 0.331	3 / 0.011	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 0.342
<b>Modification Item 41 of 47:</b> Satcom Egg Beater Antenna ECP901R2	23 / 0.066	4 / 0.013	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	27 / 0.079
<b>Modification Item 42 of 47:</b> Satcom Troop Commander Panel ECP901R2	20 / 0.110	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 0.110
<b>Modification Item 43 of 47:</b> Shaft Driven Compressor (SDC) Improvement	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.075	15 / 0.075	15 / 0.075	7 / 0.035	- / -	52 / 0.260
<b>Modification Item 47 of 47:</b> Wiring Harness ECP915	35 / 1.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	35 / 1.500
<i>Subtotal: Installation</i>	<i>337 / 16.151</i>	<i>74 / 1.832</i>	<i>69 / 2.715</i>	<i>63 / 6.607</i>	<i>- / -</i>	<i>63 / 6.607</i>	<i>99 / 15.076</i>	<i>76 / 11.526</i>	<i>75 / 7.841</i>	<i>63 / 7.521</i>	<i>69 / 7.594</i>	<i>925 / 76.863</i>
<b>Total</b>												
<b>Total Cost (Procurement + Support + Installation)</b>	<b>301.101</b>	<b>58.073</b>	<b>63.349</b>	<b>120.307</b>	<b>6.290</b>	<b>126.597</b>	<b>162.064</b>	<b>149.354</b>	<b>144.679</b>	<b>59.208</b>	<b>338.188</b>	<b>1,402.613</b>

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 3010F / 05 / 5 **P-1 Line Item Number / Title:** V02200 / CV-22 Mods **Modification Number / Title:** 8790 / Block 20 Upgrade

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

**Modification Item 1 of 47:** AC Bus Tie Impr/Manual Override Switches

**Manufacturer Information**

Manufacturer Name: Bell-Boeing Manufacturer Location: Amarillo TX

Administrative Leadtime (in Months): 6 Production Leadtime (in Months): 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	34 / 0.306	17 / 0.335	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	51 / 0.641
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	34 / 0.306	17 / 0.335	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	51 / 0.641

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	34	6	6	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	51
Out	34	-	6	6	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	51

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods			<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A				<b>MDAP/MAIS Code:</b>			
<b>Modification Item 2 of 47:</b> Advanced Multifunctional Display							
<b>Manufacturer Information</b>							
Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime (in Months): 4				Production Leadtime (in Months): 12			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates				Feb 2022	Feb 2023	Feb 2024	
Delivery Dates				Feb 2023	Feb 2024	Feb 2025	
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 52		

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods	<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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**Modification Item 3 of 47:** Advanced Threat Warning System (JUON config)

**Manufacturer Information**

Manufacturer Name: Northrop Grumman	Manufacturer Location: Falls Church, VA
Administrative Leadtime (in Months): 7	Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	May 2019	May 2020	May 2021	May 2022			
Delivery Dates	May 2020	May 2021	May 2022	May 2023			

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	22 / 3.592	- / -	5 / 0.734	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	27 / 4.326
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	12 / 1.764	- / -	12 / 1.764	- / -	- / -	- / -	- / -	- / -	12 / 1.764
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	15 / 2.205	- / -	- / -	- / -	- / -	15 / 2.205
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	12 / 1.764	- / -	- / -	- / -	- / -	12 / 1.764
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	22 / 3.592	- / -	5 / 0.734	12 / 1.764	- / -	12 / 1.764	27 / 3.969	- / -	- / -	- / -	- / -	66 / 10.059

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	22	-	-	-	-	-	-	2	3	-	-	6	6	-	-	13	14	-	-	-	-	-	-	-	-	-	-	-	-	0	66
Out	19	3	-	-	-	-	-	-	2	3	-	-	6	6	-	-	13	14	-	-	-	-	-	-	-	-	-	-	-	0	66

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 3010F / 05 / 5 **P-1 Line Item Number / Title:** V02200 / CV-22 Mods **Modification Number / Title:** 8790 / Block 20 Upgrade

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

**Modification Item 4 of 47:** Advanced Threat Warning System (Series 2)

**Manufacturer Information**

Manufacturer Name: Northrup Grumman Manufacturer Location: Falls Church, VA

Administrative Leadtime (in Months): 7 Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates				May 2022	May 2023	May 2024	
Delivery Dates				May 2023	May 2024	May 2025	

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.840	- / -	- / -	- / -	12 / 0.840
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.840	4 / 0.280	- / -	16 / 1.120
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.280	12 / 0.560	16 / 0.840
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 5.032	7 / 5.032
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.840	12 / 0.840	8 / 0.560	19 / 5.592	51 / 7.832

**Installation Schedule**

PYS	FY 2019	FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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			
In	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	6	-	-	6	6	-	-	4	4	19	51	
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	6	-	-	6	6	-	-	4	4	23	51

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods			<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 5 of 47:</b> ARC 210 Upgrade 1990A							
<b>Manufacturer Information</b>							
Manufacturer Name: Unknown				Manufacturer Location: Unknown			
Administrative Leadtime (in Months): 7				Production Leadtime (in Months): 12			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates			May 2021	May 2022	May 2023	May 2024	
Delivery Dates			May 2022	May 2023	May 2024	May 2025	
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 45		

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods			<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 6 of 47:</b> Auto Dependent Surveillance-Broadcast ADSB/Out							
<b>Manufacturer Information</b>							
Manufacturer Name: iGATM				Manufacturer Location: Hanscom, MA			
Administrative Leadtime (in Months): 5				Production Leadtime (in Months): 12			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 51		



**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods		<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A				<b>MDAP/MAIS Code:</b>			
<b>Modification Item 7 of 47:</b> Auxillary Power Unit (APU) K8/K9 Improvement							
<b>Manufacturer Information</b>							
Manufacturer Name: Bell-Boeing				Manufacturer Location: Amarillo TX			
Administrative Leadtime (in Months): 2				Production Leadtime (in Months): 12			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates				Dec 2022	Dec 2023	Dec 2024	Dec 2025
Delivery Dates				Dec 2023	Dec 2024	Dec 2025	Dec 2026
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 52		

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 3010F / 05 / 5 **P-1 Line Item Number / Title:** V02200 / CV-22 Mods **Modification Number / Title:** 8790 / Block 20 Upgrade

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

**Modification Item 8 of 47:** Blk C ECP901

**Manufacturer Information**

Manufacturer Name: Bell-Boeing Manufacturer Location: Amarillo TX

Administrative Leadtime (in Months): 2 Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	21 / 3.329	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	21 / 3.329
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	21 / 3.329	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	21 / 3.329

**Installation Schedule**

PYS	FY 2019	FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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						
In	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	21
Out	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	21

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods		<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A				<b>MDAP/MAIS Code:</b>			
<b>Modification Item 9 of 47:</b> Coanda Valve Reliability Improvement							
<b>Manufacturer Information</b>							
Manufacturer Name: Bell-Boeing				Manufacturer Location: Amarillo TX			
Administrative Leadtime (in Months): 7				Production Leadtime (in Months): 12			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates				May 2022	May 2023		
Delivery Dates				May 2023	May 2024		
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 52		

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods	<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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**Modification Item 10 of 47:** Cockpit Voice Recorder/K-VADR ECP964

**Manufacturer Information**

Manufacturer Name: Bell-Boeing	Manufacturer Location: Amarillo TX
Administrative Leadtime (in Months): 1	Production Leadtime (in Months): 2

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Nov 2018	Nov 2019	Nov 2020				
Delivery Dates	Jan 2019	Jan 2020	Jan 2021				

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	5 / 0.088	11 / 0.198	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 0.286
FY 2019	- / -	- / -	11 / 0.198	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 0.198
FY 2020	- / -	- / -	- / -	12 / 0.144	- / -	12 / 0.144	- / -	- / -	- / -	- / -	- / -	12 / 0.144
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	13 / 0.156	- / -	- / -	- / -	- / -	13 / 0.156
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	5 / 0.088	11 / 0.198	11 / 0.198	12 / 0.144	- / -	12 / 0.144	13 / 0.156	- / -	- / -	- / -	- / -	52 / 0.784

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	5	-	3	3	5	-	3	3	5	-	3	3	6	-	3	3	7	-	-	-	-	-	-	-	-	-	-	-	-	0	52
Out	5	-	-	3	3	5	-	3	3	5	-	3	3	6	-	3	3	7	-	-	-	-	-	-	-	-	-	-	-	0	52

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 3010F / 05 / 5 **P-1 Line Item Number / Title:** V02200 / CV-22 Mods **Modification Number / Title:** 8790 / Block 20 Upgrade

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

**Modification Item 11 of 47:** Co-Site ECP901

**Manufacturer Information**

Manufacturer Name: Bell-Boeing Manufacturer Location: Amarillo TX

Administrative Leadtime (in Months): 2 Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	31 / 1.415	3 / 0.163	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 1.578
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	31 / 1.415	3 / 0.163	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 1.578

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	31	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	34
Out	31	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	34

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods			<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 12 of 47:</b> Data Transfer Unit Upgrade							
<b>Manufacturer Information</b>							
Manufacturer Name: Bell-Boeing				Manufacturer Location: Amarillo TX			
Administrative Leadtime (in Months): 4				Production Leadtime (in Months): 12			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates	Feb 2019						
Delivery Dates	Feb 2020						
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 51		

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods			<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 13 of 47:</b> Drive Tube ECP929							
<b>Manufacturer Information</b>							
Manufacturer Name: Bell-Boeing				Manufacturer Location: Amarillo TX			
Administrative Leadtime (in Months): 2				Production Leadtime (in Months): 3			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 10		

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods			<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 14 of 47:</b> Electric Power System Upgrade (GCU)							
<b>Manufacturer Information</b>							
Manufacturer Name: Bell-Boeing				Manufacturer Location: Amarillo, TX			
Administrative Leadtime (in Months): 2				Production Leadtime (in Months): 12			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates				Dec 2021	Dec 2022	Dec 2023	
Delivery Dates				Dec 2022	Dec 2023	Dec 2024	
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 104		



**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 3010F / 05 / 5 **P-1 Line Item Number / Title:** V02200 / CV-22 Mods **Modification Number / Title:** 8790 / Block 20 Upgrade

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

**Modification Item 15 of 47:** Engine Thermo-Couple Wiring Harness ECP1075

**Manufacturer Information**

Manufacturer Name: Bell-Boeing Manufacturer Location: Amarillo TX

Administrative Leadtime (in Months): 2 Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Dec 2018	Dec 2019	Dec 2020				
Delivery Dates	Dec 2019	Dec 2020	Dec 2021				

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	10 / 0.209	11 / 0.240	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	21 / 0.449
FY 2019	- / -	- / -	11 / 0.256	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 0.256
FY 2020	- / -	- / -	- / -	11 / 0.267	- / -	11 / 0.267	- / -	- / -	- / -	- / -	- / -	11 / 0.267
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	7 / 0.174	- / -	- / -	- / -	- / -	7 / 0.174
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	10 / 0.209	11 / 0.240	11 / 0.256	11 / 0.267	- / -	11 / 0.267	7 / 0.174	- / -	- / -	- / -	- / -	50 / 1.146

**Installation Schedule**

PYS	FY 2019	FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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						
In	10	3	3	3	2	3	3	3	2	3	3	3	2	3	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	0	50
Out	7	3	3	3	3	2	3	3	3	2	3	3	3	2	3	3	1	-	-	-	-	-	-	-	-	-	-	-	-	0	50

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods		<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A				<b>MDAP/MAIS Code:</b>			
<b>Modification Item 16 of 47:</b> Flight Control System (FCS) Upgrade							
<b>Manufacturer Information</b>							
Manufacturer Name: Unknown				Manufacturer Location: Unknown			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 0			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 33		

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 3010F / 05 / 5 **P-1 Line Item Number / Title:** V02200 / CV-22 Mods **Modification Number / Title:** 8790 / Block 20 Upgrade

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

**Modification Item 17 of 47:** Fuel Jettison ECP906

**Manufacturer Information**

Manufacturer Name: Bell-Boeing Manufacturer Location: Amarillo TX

Administrative Leadtime (in Months): 2 Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	26 / 3.679	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 3.679
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	26 / 3.679	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 3.679

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	26
Out	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	26

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods		<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A				<b>MDAP/MAIS Code:</b>			
<b>Modification Item 18 of 47:</b> Fwd Looking Infrared Systems Electronics Unit (FLIR SEU)							
<b>Manufacturer Information</b>							
Manufacturer Name: Bell-Boeing				Manufacturer Location: Amarillo TX			
Administrative Leadtime (in Months): 1				Production Leadtime (in Months): 12			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 51		

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods			<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 19 of 47:</b> GAU-21 Gun							
<b>Manufacturer Information</b>							
Manufacturer Name: Specialty CNC Incorporated				Manufacturer Location: Bloomington IN			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 0			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 100		

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods	<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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**Modification Item 20 of 47:** Gen 5 Radio ECP866R1

**Manufacturer Information**

Manufacturer Name: Bell-Boeing	Manufacturer Location: Amarillo TX
Administrative Leadtime (in Months): 1	Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	10 / 0.131	10 / 0.137	10 / 0.128	9 / 0.118	- / -	9 / 0.118	- / -	- / -	- / -	- / -	- / -	39 / 0.514
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	10 / 0.131	10 / 0.137	10 / 0.128	9 / 0.118	- / -	9 / 0.118	- / -	- / -	- / -	- / -	- / -	39 / 0.514

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	10	3	3	3	1	3	3	3	1	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	39
Out	9	1	3	3	3	1	3	3	3	1	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	39

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods	<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade
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**ID Code** (A=Service Ready, B=Not Service Ready) : A **MDAP/MAIS Code:**

**Modification Item 21 of 47:** Gen 6 Radio (MUOS)

**Manufacturer Information**

Manufacturer Name: TBD Manufacturer Location: Patuxent River, MD

Administrative Leadtime (in Months): 6 Production Leadtime (in Months): 10

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates					Apr 2023	Apr 2024	
Delivery Dates					Feb 2024	Feb 2025	

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.108	- / -	- / -	12 / 0.108
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.108	- / -	12 / 0.108
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	28 / 0.248	28 / 0.248
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.108	12 / 0.108	28 / 0.248	52 / 0.464

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	6	-	3	3	6	28	52
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	6	-	3	3	34	52

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods	<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade
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**ID Code** (A=Service Ready, B=Not Service Ready) : A **MDAP/MAIS Code:**

**Modification Item 22 of 47:** Gimbal Ring Joint Redesign ECP1001

**Manufacturer Information**

Manufacturer Name: Bell-Boeing Manufacturer Location: Amarillo TX

Administrative Leadtime (in Months): 2 Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates				Dec 2021	Dec 2022	Dec 2023	
Delivery Dates				Dec 2022	Dec 2023	Dec 2024	

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.042	- / -	- / -	- / -	12 / 0.042
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.042	- / -	- / -	12 / 0.042
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.042	- / -	12 / 0.042
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 0.060	16 / 0.060
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.042	12 / 0.042	12 / 0.042	16 / 0.060	52 / 0.186

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	3	3	3	3	3	3	3	3	3	16	52
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	3	3	3	3	3	3	3	3	19	52



**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods			<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 23 of 47:</b> GPS M-Code Upgrade							
<b>Manufacturer Information</b>							
Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime (in Months): 6				Production Leadtime (in Months): 12			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates				Apr 2022	Apr 2023	Apr 2024	Apr 2025
Delivery Dates				Apr 2023	Apr 2024	Apr 2025	Apr 2026
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 52		

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods	<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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**Modification Item 24 of 47:** HF Radio (BLOS) ECP1041

**Manufacturer Information**

Manufacturer Name: Bell-Boeing	Manufacturer Location: Amarillo TX
Administrative Leadtime (in Months): 8	Production Leadtime (in Months): 11

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jun 2019	Jun 2020	Jun 2021	Jun 2022			
Delivery Dates	May 2020	May 2021	May 2022	May 2023			

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	11 / 0.355	11 / 0.620	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	22 / 0.975
FY 2019	- / -	- / -	11 / 0.574	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 0.574
FY 2020	- / -	- / -	- / -	6 / 0.318	- / -	6 / 0.318	- / -	- / -	- / -	- / -	- / -	6 / 0.318
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.350	- / -	- / -	- / -	- / -	6 / 0.350
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.350	- / -	- / -	- / -	- / -	6 / 0.350
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	11 / 0.355	11 / 0.620	11 / 0.574	6 / 0.318	- / -	6 / 0.318	12 / 0.700	- / -	- / -	- / -	- / -	51 / 2.567

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	11	-	-	6	5	-	-	6	5	-	-	3	3	-	-	6	6	-	-	-	-	-	-	-	-	-	-	-	-	0	51
Out	5	6	-	-	6	5	-	-	6	5	-	-	3	3	-	-	6	6	-	-	-	-	-	-	-	-	-	-	-	0	51

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods			<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 25 of 47:</b> IIS/Engine Air Particle Solution							
<b>Manufacturer Information</b>							
Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime (in Months): 5				Production Leadtime (in Months): 3			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							Mar 2025
Delivery Dates							Jun 2025
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate						<b>Installation Quantity:</b> 39	

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods		<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A				<b>MDAP/MAIS Code:</b>			
<b>Modification Item 26 of 47:</b> Improved Engine Infrared Suppressor (IRS)							
<b>Manufacturer Information</b>							
Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime ( <i>in Months</i> ): 2				Production Leadtime ( <i>in Months</i> ): 12			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates					Dec 2022	Dec 2023	Dec 2024
Delivery Dates					Dec 2023	Dec 2024	Dec 2025
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 52		

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods			<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 27 of 47:</b> Link 16							
<b>Manufacturer Information</b>							
Manufacturer Name: Unknown				Manufacturer Location: Unknown			
Administrative Leadtime (in Months): 5				Production Leadtime (in Months): 6			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates			Mar 2021				
Delivery Dates			Sep 2021				
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 20		

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods			<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 28 of 47:</b> MCOI CAPRE							
<b>Manufacturer Information</b>							
Manufacturer Name: Prototype Integration Facility				Manufacturer Location: Huntsville AL			
Administrative Leadtime (in Months): 2				Production Leadtime (in Months): 12			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates	Dec 2018	Dec 2019					
Delivery Dates	Dec 2019	Dec 2020					
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 52		

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods	<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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**Modification Item 29 of 47:** MCOI ECP873

**Manufacturer Information**

Manufacturer Name: Elbit Systems	Manufacturer Location: Fort Worth, TX
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Dec 2019	Dec 2020	Dec 2020				
Delivery Dates	Dec 2020	Dec 2021	Dec 2021				

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	5 / 0.329	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.329
FY 2019	- / -	- / -	- / -	12 / 3.296	- / -	12 / 3.296	- / -	- / -	- / -	- / -	- / -	12 / 3.296
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	12 / 3.745	- / -	- / -	- / -	- / -	12 / 3.745
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 3.745	- / -	- / -	- / -	12 / 3.745
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	5 / 0.329	- / -	- / -	12 / 3.296	- / -	12 / 3.296	12 / 3.745	12 / 3.745	- / -	- / -	- / -	41 / 11.115

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	5	-	-	-	-	-	-	-	-	3	3	3	3	3	3	3	3	3	3	3	3	-	-	-	-	-	-	-	-	0	41
Out	3	2	-	-	-	-	-	-	-	-	3	3	3	3	3	3	3	3	3	3	3	3	-	-	-	-	-	-	-	0	41

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods			<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 30 of 47:</b> Mode 5 APX-119 ECP935							
<b>Manufacturer Information</b>							
Manufacturer Name: Raytheon				Manufacturer Location: Aberdeen Proving Grounds MD			
Administrative Leadtime (in Months): 2				Production Leadtime (in Months): 10			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 36		



**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods			<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 31 of 47:</b> Modular Avionics - Cyber							
<b>Manufacturer Information</b>							
Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime (in Months): 5				Production Leadtime (in Months): 12			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates				Mar 2022	Mar 2023	Mar 2024	
Delivery Dates				Mar 2023	Mar 2024	Mar 2025	
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 52		

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 3010F / 05 / 5 **P-1 Line Item Number / Title:** V02200 / CV-22 Mods **Modification Number / Title:** 8790 / Block 20 Upgrade

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

**Modification Item 32 of 47:** Nacelle Improvements

**Manufacturer Information**

Manufacturer Name: Bell-Boeing Manufacturer Location: Amarillo TX

Administrative Leadtime (in Months): 5 Production Leadtime (in Months): 3

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025
Delivery Dates		Jun 2020	Jun 2021	Jun 2022	Jun 2023	Jun 2024	Jun 2025

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	1 / 0.700	- / -	1 / 0.700	- / -	- / -	- / -	- / -	- / -	1 / 0.700
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	12 / 6.200	- / -	- / -	- / -	- / -	12 / 6.200
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 6.200	- / -	- / -	- / -	12 / 6.200
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 6.200	- / -	- / -	12 / 6.200
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 6.200	- / -	12 / 6.200
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 1.550	3 / 1.550
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	- / -	- / -	- / -	1 / 0.700	- / -	1 / 0.700	12 / 6.200	12 / 6.200	12 / 6.200	12 / 6.200	3 / 1.550	52 / 27.050

**Installation Schedule**

PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	-	-	1	-	-	4	4	4	2	4	4	2	2	4	4	2	3	3	3	3	3	3	6	52
Out	0	-	-	-	-	-	-	-	-	-	-	-	1	-	-	4	4	4	2	4	4	2	2	4	4	2	3	3	3	3	6	52	

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods	<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade
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**ID Code** (A=Service Ready, B=Not Service Ready) : A **MDAP/MAIS Code:**

**Modification Item 33 of 47:** Nose Landing Gear ECP869

**Manufacturer Information**

Manufacturer Name: Bell-Boeing Manufacturer Location: Amarillo TX

Administrative Leadtime (in Months): 1 Production Leadtime (in Months): 3

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	14 / 0.098	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.098
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	14 / 0.098	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.098

**Installation Schedule**

PYS	FY 2019	FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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						
In	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	14
Out	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	14

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods		<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A				<b>MDAP/MAIS Code:</b>			
<b>Modification Item 34 of 47:</b> O2N2 Concentrator Sieve Bed Correction ECP1107							
<b>Manufacturer Information</b>							
Manufacturer Name: Bell-Boeing				Manufacturer Location: Amarillo, TX			
Administrative Leadtime (in Months): 5				Production Leadtime (in Months): 3			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates	Mar 2019	Mar 2020	Mar 2021	Mar 2022			
Delivery Dates	Jun 2019	Jun 2020	Jun 2021	Jun 2022			
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 52		

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods			<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 35 of 47:</b> PRGB Atmospheric Protection ECP992							
<b>Manufacturer Information</b>							
Manufacturer Name: Bell-Boeing				Manufacturer Location: Amarillo TX			
Administrative Leadtime (in Months): 6				Production Leadtime (in Months): 18			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates	Apr 2019						
Delivery Dates	Oct 2020						
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 51		

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods			<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 36 of 47:</b> PRGB Input Quill/Clutch Redesign							
<b>Manufacturer Information</b>							
Manufacturer Name: Bell-Boeing				Manufacturer Location: Amarillo TX			
Administrative Leadtime (in Months): 5				Production Leadtime (in Months): 12			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates			Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025
Delivery Dates			Mar 2022	Mar 2023	Mar 2024	Mar 2025	Mar 2026
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 52		

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods	<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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**Modification Item 37 of 47:** Prop Rotor Hub Spring & Drive Link Impr

**Manufacturer Information**

Manufacturer Name: Bell-Boeing	Manufacturer Location: Amarillo TX
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Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 12
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Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Dec 2018		Dec 2020	Dec 2021	Dec 2022	Dec 2023	Dec 2024
Delivery Dates	Dec 2019		Dec 2021	Dec 2022	Dec 2023	Dec 2024	Dec 2025

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 / 0.050	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.050
FY 2019	- / -	- / -	10 / 0.484	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.484
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.057	1 / 0.048	- / -	- / -	- / -	2 / 0.105
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.576	- / -	- / -	- / -	12 / 0.576
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.576	- / -	- / -	12 / 0.576
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.576	- / -	12 / 0.576
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.144	3 / 0.144
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	- / -	- / -	11 / 0.534	- / -	- / -	- / -	1 / 0.057	13 / 0.624	12 / 0.576	12 / 0.576	3 / 0.144	52 / 2.511

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	3	3	3	2	-	-	-	-	-	-	-	1	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Out	0	-	-	-	-	-	3	3	3	2	-	-	-	-	-	-	-	1	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	6	52

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods	<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade
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**ID Code** (A=Service Ready, B=Not Service Ready) : A **MDAP/MAIS Code:**

**Modification Item 38 of 47:** Rudder Reliability ECP1020

**Manufacturer Information**

Manufacturer Name: Bell-Boeing Manufacturer Location: Amarillo TX

Administrative Leadtime (in Months): 2 Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Dec 2018						
Delivery Dates	Dec 2019						

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	32 / 0.513	4 / 0.115	2 / 0.058	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	38 / 0.686
FY 2019	- / -	- / -	8 / 0.233	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 0.233
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	32 / 0.513	4 / 0.115	10 / 0.291	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 0.919

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	32	2	2	-	-	2	2	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	46
Out	26	6	2	2	-	-	2	2	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	46



**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 3010F / 05 / 5 **P-1 Line Item Number / Title:** V02200 / CV-22 Mods **Modification Number / Title:** 8790 / Block 20 Upgrade

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

**Modification Item 39 of 47:** Satcom Antenna Mounting ECP901R2

**Manufacturer Information**

Manufacturer Name: Bell-Boeing Manufacturer Location: Amarillo TX

Administrative Leadtime (in Months): 2 Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	15 / 0.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.100
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	15 / 0.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.100

**Installation Schedule**

PYS	In	Out	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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		
	15		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	15
	15		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	15

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 3010F / 05 / 5 **P-1 Line Item Number / Title:** V02200 / CV-22 Mods **Modification Number / Title:** 8790 / Block 20 Upgrade

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

**Modification Item 40 of 47:** Satcom Beefy Cables Retrofit ECP901R2

**Manufacturer Information**

Manufacturer Name: Bell-Boeing Manufacturer Location: Amarillo TX

Administrative Leadtime (in Months): 2 Production Leadtime (in Months): 6

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	23 / 0.331	3 / 0.011	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 0.342
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	23 / 0.331	3 / 0.011	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 0.342

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	23	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	26
Out	23	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	26

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 3010F / 05 / 5 **P-1 Line Item Number / Title:** V02200 / CV-22 Mods **Modification Number / Title:** 8790 / Block 20 Upgrade

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

**Modification Item 41 of 47:** Satcom Egg Beater Antenna ECP901R2

**Manufacturer Information**

Manufacturer Name: Bell-Boeing Manufacturer Location: Amarillo TX

Administrative Leadtime (in Months): 3 Production Leadtime (in Months): 3

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	23 / 0.066	4 / 0.013	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	27 / 0.079
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	23 / 0.066	4 / 0.013	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	27 / 0.079

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	23	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	27
Out	23	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	27

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 3010F / 05 / 5 **P-1 Line Item Number / Title:** V02200 / CV-22 Mods **Modification Number / Title:** 8790 / Block 20 Upgrade

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

**Modification Item 42 of 47:** Satcom Troop Commander Panel ECP901R2

**Manufacturer Information**

Manufacturer Name: Bell-Boeing Manufacturer Location: Amarillo TX

Administrative Leadtime (in Months): 2 Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	20 / 0.110	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 0.110
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	20 / 0.110	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 0.110

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	20
Out	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	20

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods	<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade
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**ID Code** (A=Service Ready, B=Not Service Ready) : A **MDAP/MAIS Code:**

**Modification Item 43 of 47:** Shaft Driven Compressor (SDC) Improvement

**Manufacturer Information**

Manufacturer Name: Bell-Boeing Manufacturer Location: Amarillo TX

Administrative Leadtime (in Months): 7 Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			May 2021	May 2022	May 2023	May 2024	
Delivery Dates			May 2022	May 2023	May 2024	May 2025	

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.075	- / -	- / -	- / -	- / -	15 / 0.075
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.075	- / -	- / -	- / -	15 / 0.075
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.075	- / -	- / -	15 / 0.075
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 0.035	- / -	7 / 0.035
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.075	15 / 0.075	15 / 0.075	7 / 0.035	- / -	52 / 0.260

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	0	-	-	-	-	-	-	-	-	-	-	-	-	3	4	4	4	4	4	4	3	3	4	4	4	4	4	3	-	-	0	52
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	3	4	4	4	4	4	4	3	3	4	4	4	4	3	-	-	0	52

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods		<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A				<b>MDAP/MAIS Code:</b>			
<b>Modification Item 44 of 47:</b> Swashplate Actuator ECP980							
<b>Manufacturer Information</b>							
Manufacturer Name: Bell-Boeing				Manufacturer Location: Amarillo TX			
Administrative Leadtime (in Months): 7				Production Leadtime (in Months): 12			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 46		

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods			<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 45 of 47:</b> Troop Seat Pin ECP1167							
<b>Manufacturer Information</b>							
Manufacturer Name: Bell-Boeing				Manufacturer Location: Amarillo TX			
Administrative Leadtime (in Months): 1				Production Leadtime (in Months): 12			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates		Nov 2019	Nov 2021				
Delivery Dates		Nov 2020	Nov 2022				
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 52		

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods			<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 46 of 47:</b> Upper and Lower Rod Ends (Formerly Pitch Link)							
<b>Manufacturer Information</b>							
Manufacturer Name: Bell-Boeing				Manufacturer Location: Amarillo TX			
Administrative Leadtime (in Months): 5				Production Leadtime (in Months): 12			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates			Mar 2021	Mar 2022	Mar 2023	Mar 2024	
Delivery Dates			Mar 2022	Mar 2023	Mar 2024	Mar 2025	
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 50		



**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5	<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods	<b>Modification Number / Title:</b> 8790 / Block 20 Upgrade
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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**Modification Item 47 of 47:** Wiring Harness ECP915

**Manufacturer Information**

Manufacturer Name: Bell-Boeing	Manufacturer Location: Amarillo TX
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Administrative Leadtime (in Months): 4	Production Leadtime (in Months): 3
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Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Contract Field Team

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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	35 / 1.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	35 / 1.500
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	35 / 1.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	35 / 1.500

**Installation Schedule**

PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	35
Out	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	35

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 3010F / 05 / 5 **P-1 Line Item Number / Title:** V02200 / CV-22 Mods **Modification Number / Title:** 1 / Low Cost Modifications

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

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	19.406	1.999	1.999	1.999	0.000	1.999	1.999	1.999	1.999	1.999	9.995	43.394
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	19.406	1.999	1.999	1.999	0.000	1.999	1.999	1.999	1.999	1.999	9.995	43.394
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>19.406</b>	<b>1.999</b>	<b>1.999</b>	<b>1.999</b>	<b>0.000</b>	<b>1.999</b>	<b>1.999</b>	<b>1.999</b>	<b>1.999</b>	<b>1.999</b>	<b>9.995</b>	<b>43.394</b>

*(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 Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

**Description:**

This funds low cost modifications for CV-22 weapon system and training devices that are necessary to maintain operational safety, suitability, and effectiveness.

Milestone/Development Status

N/A

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**Exhibit P-3a, Individual Modification:** PB 2021 Air Force **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 3010F / 05 / 5 **P-1 Line Item Number / Title:** V02200 / CV-22 Mods **Modification Number / Title:** 1 / Low Cost Modifications

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

**Models of Systems Affected:** CV-22 **Modification Type:** Other **Related RDT&E PEs:** 0401318F

Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	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>Procurement</b>												
<i>Modification Item 1 of 1:</i> LCM												
A Kits												
Recurring												
LCM:INSTALL KITS Group A (Active)	0 / 19.406	- / 1.999	- / 1.999	- / 1.999	- / -	- / 1.999	- / 1.999	- / 1.999	- / 1.999	- / 1.999	- / 1.999	0 / 43.394
<i>Subtotal: Recurring</i>	- / 19.406	- / 1.999	- / 1.999	- / 1.999	- / -	- / 1.999	- / 1.999	- / 1.999	- / 1.999	- / 1.999	- / 1.999	- / 43.394
<i>Subtotal: LCM</i>	- / 19.406	- / 1.999	- / 1.999	- / 1.999	- / -	- / 1.999	- / 1.999	- / 1.999	- / 1.999	- / 1.999	- / 1.999	- / 43.394
<i>Subtotal: Procurement, All Modification Items</i>	- / 19.406	- / 1.999	- / 1.999	- / 1.999	- / -	- / 1.999	- / 1.999	- / 1.999	- / 1.999	- / 1.999	- / 1.999	- / 43.394
<b>Installation</b>												
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>												
<b>Total Cost (Procurement + Support + Installation)</b>	<b>19.406</b>	<b>1.999</b>	<b>1.999</b>	<b>1.999</b>	<b>0.000</b>	<b>1.999</b>	<b>1.999</b>	<b>1.999</b>	<b>1.999</b>	<b>1.999</b>	<b>1.999</b>	<b>43.394</b>

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Air Force						<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 3010F / 05 / 5			<b>P-1 Line Item Number / Title:</b> V02200 / CV-22 Mods			<b>Modification Number / Title:</b> 1 / Low Cost Modifications	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 1 of 1:</b> LCM							
<b>Manufacturer Information</b>							
Manufacturer Name: Bell-Boeing				Manufacturer Location: Amarillo TX			
Administrative Leadtime (in Months): 0				Production Leadtime (in Months): 0			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates							
Delivery Dates							
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Org/Intermediate					<b>Installation Quantity:</b> 0		