

UNCLASSIFIED

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

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 3405A02112 / EMARSS SEMA Mods (MIP)
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	13.669	77.997	51.279	20.448	-	20.448	3.859	2.632	1.903	1.940	-	173.727
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	13.669	77.997	51.279	20.448	-	20.448	3.859	2.632	1.903	1.940	-	173.727
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	13.669	77.997	51.279	20.448	-	20.448	3.859	2.632	1.903	1.940	-	173.727

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

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

Description:

The Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS) is the Army's next generation C-12 based, direct support, manned airborne intelligence collection, processing, and targeting support system. It provides a persistent capability to detect, locate, classify/identify, and track surface targets with a high degree of timeliness and accuracy. EMARSS will be assigned to the U.S. Army Intelligence and Security Command's Aerial Exploitation Battalions, providing Aerial Intelligence, Surveillance and Reconnaissance support to combatant commanders. The Army Acquisition Objective for EMARSS is 36 systems, with an Army Procurement Objective of 24, to include the following variants: eight (8) EMARSS-G (Geo-INT); four (4) EMARSS-V (Vehicle and Dismount Exploitation Radar, VaDER); eight (8) EMARSS-M (Multi-INT); and four (4) EMARSS-S (SIGINT).

The budget line supports the conversion of Special Electronic Mission Aircraft (SEMA) Government-owned Quick Reaction Capability (QRC) Aerial Intelligence Surveillance & Reconnaissance (AISR) systems: Liberty Project Aircraft (LPA), Constant Hawk (CH) and Tactical Operations (TACOP), VaDER (Vehicle and Dismount exploitation Radar) into Enhanced Medium Altitude Reconnaissance and Surveillance Systems (EMARSS) Capabilities Production Document (CPD) compliant systems. It provides for the following: the procurement of replacement and spare engines; procurement and associated testing of civil and military aircraft equipment; and integration/installation of ISR Mission Equipment Package (MEP). These modifications address all Department of Defense (DoD) mandated safety equipment to current and evolving international and Army Standards. These modifications ensure continued worldwide deployment capability and safe operations. Lastly, this line supports future mods in service.

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

Secondary Distribution	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	77.997	51.279	20.448	-	20.448	3.859	2.632	1.903	1.940
Total:									
Quantity	-	-	-	-	-	-	-	-	-

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

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 3405A02112 / EMARSS SEMA Mods (MIP)
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Secondary Distribution	Total Obligation Authority	77.997	51.279	20.448	-	20.448	3.859	2.632	1.903	1.940

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

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 3405A02112 / EMARSS SEMA Mods (MIP)
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	A02112 / EMARSS SEMA Modifications (Unclassified)				- / 13.669	- / 77.997	- / 51.279	- / 20.448	- / -	- / 20.448
P-40	Total Gross/Weapon System Cost				- / 13.669	- / 77.997	- / 51.279	- / 20.448	- / -	- / 20.448

Exhibits Schedule					FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	A02112 / EMARSS SEMA Modifications (Unclassified)				- / 3.859	- / 2.632	- / 1.903	- / 1.940	- / -	- / 173.727
P-40	Total Gross/Weapon System Cost				- / 3.859	- / 2.632	- / 1.903	- / 1.940	- / -	- / 173.727

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

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

Justification:
 FY19 Base Procurement dollars in the amount of \$20.448 million supports the procurement of high/hot kits and mods in service. High hot kits include PT6A-67A engines, light weight composite propellers, light weight lithium ion batteries and anti-lock braking system which are designed to increase endurance, increase safety, and reduce risk in the extreme environmental conditions of high altitude combined with hot temperature conditions. High/hot kits will increase operational capability by allowing the aircraft to carry more fuel, which equates to more time on station. Mods in service includes Blue Force Tracking-Aviation (BFT-AVN) to BFT-2 conversion, APX-123 Transponder to APX-119 Transponder and Aviation Survivability Equipment (ASE) integration.

All COMPO 1 Active. In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

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Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 3405A02112 / EMARSS SEMA Mods (MIP)	Modification Number / Title: A02112 / EMARSS SEMA Modifications

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	13.669	77.997	51.279	20.448	-	20.448	3.859	2.632	1.903	1.940	-	173.727
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	13.669	77.997	51.279	20.448	-	20.448	3.859	2.632	1.903	1.940	-	173.727
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	13.669	77.997	51.279	20.448	-	20.448	3.859	2.632	1.903	1.940	-	173.727

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

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

Description:

The Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS) is the Army's next generation C-12 based, direct support, manned airborne intelligence collection, processing, and targeting support system. It provides a persistent capability to detect, locate, classify/identify, and track surface targets with a high degree of timeliness and accuracy. EMARSS will be assigned to the U.S. Army Intelligence and Security Command's Aerial Exploitation Battalions, providing Aerial Intelligence, Surveillance and Reconnaissance support to combatant commanders. The Army Acquisition Objective for EMARSS is 36 systems, with an Army Procurement Objective (APO) of 24, to include the following variants: eight (8) EMARSS-G (Geo-INT); four (4) EMARSS-V (Vehicle and Dismount Exploitation Radar, VaDER); eight (8) EMARSS-M (Multi-INT); and four (4) EMARSS-S (SIGINT).

The budget line supports the conversion of Special Electronic Mission Aircraft (SEMA) Government-owned Quick Reaction Capability (QRC) Aerial Intelligence Surveillance & Reconnaissance (AISR) systems: Liberty Project Aircraft (LPA), Constant Hawk (CH) and Tactical Operations (TACOP), VaDER (Vehicle and Dismount exploitation Radar) into Enhanced Medium Altitude Reconnaissance and Surveillance Systems (EMARSS) Capabilities Production Document (CPD) compliant systems. It provides for the following: the procurement of replacement and spare engines; procurement and associated testing of civil and military aircraft equipment; and integration/installation of ISR Mission Equipment Package (MEP). These modifications address all Department of Defense (DoD) mandated safety equipment to current and evolving international and Army Standards. These modifications ensure continued worldwide deployment capability and safe operations. Lastly, this line supports future mods in service.

The APO quantity of 24 is funded as follows: Aerial Common Sensor (ACS) (MIP) (A02005) FY14-FY16 modified 16. EMARSS SEMA Mods (MIP) (A02112) and EMARSS Payloads (MIP) (AZ2054) FY17 forward, will modify the remaining 8.

Secondary Distribution		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	77.997	51.279	20.448	-	20.448	3.859	2.632	1.903	1.940
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	77.997	51.279	20.448	-	20.448	3.859	2.632	1.903	1.940

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Exhibit P-3a, Individual Modification: PB 2019 Army										Date: February 2018			
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 3405A02112 / EMARSS SEMA Mods (MIP)						Modification Number / Title: A02112 / EMARSS SEMA Modifications			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: EMARSS				Modification Type: Unclassified				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Procurement													
<i>Modification Item 1 of 1:</i> EMARSS SEMA Modifications													
A Kits													
Recurring													
EMARSS Performance Enhancements	- / -	- / 23.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 23.100	
PMO and SETA Support	- / 4.676	- / 1.182	- / 1.528	- / 1.738	- / -	- / 1.738	- / 0.328	- / 0.224	- / 0.162	- / 0.165	- / 0.000	- / 10.003	
Initial Spares	- / 0.330	- / 1.575	- / 0.528	- / 0.974	- / -	- / 0.974	- / -	- / -	- / -	- / -	- / 0.000	- / 3.407	
Testing	- / 0.255	- / 1.325	- / 0.608	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 2.188	
<i>Subtotal: Recurring</i>	- / 5.261	- / 27.182	- / 2.664	- / 2.712	- / -	- / 2.712	- / 0.328	- / 0.224	- / 0.162	- / 0.165	- / -	- / 38.698	
<i>Subtotal: EMARSS SEMA Modifications</i>	- / 5.261	- / 27.182	- / 2.664	- / 2.712	- / -	- / 2.712	- / 0.328	- / 0.224	- / 0.162	- / 0.165	- / -	- / 38.698	
<i>Subtotal: Procurement, All Modification Items</i>	- / 5.261	- / 27.182	- / 2.664	- / 2.712	- / -	- / 2.712	- / 0.328	- / 0.224	- / 0.162	- / 0.165	- / -	- / 38.698	
Installation													
<i>Modification Item 1 of 1:</i> EMARSS SEMA Modifications	2 / 8.408	5 / 50.815	3 / 48.615	- / 17.736	- / -	- / 17.736	- / 3.531	- / 2.408	- / 1.741	- / 1.775	- / -	10 / 135.029	
<i>Subtotal: Installation</i>	2 / 8.408	5 / 50.815	3 / 48.615	0 / 17.736	0 / 0.000	0 / 17.736	0 / 3.531	0 / 2.408	0 / 1.741	0 / 1.775	- / -	10 / 135.029	
Total													
Total Cost (Procurement + Support + Installation)	13.669	77.997	51.279	20.448	-	20.448	3.859	2.632	1.903	1.940	-	173.727	

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Exhibit P-3a, Individual Modification: PB 2019 Army		Date: February 2018
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 3405A02112 / EMARSS SEMA Mods (MIP)	Modification Number / Title: A02112 / EMARSS SEMA Modifications

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 1: EMARSS SEMA Modifications

Manufacturer Information

Manufacturer Name: L3 MID	Manufacturer Location: Greenville, TX
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 12

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

Installation Information

Method of Implementation: EMARSS Modifications

Installation Cost	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	2 / 8.408	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 8.408
FY 2017	- / -	5 / 50.815	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 50.815
FY 2018	- / -	- / -	3 / 48.615	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 48.615
FY 2019	- / -	- / -	- / -	0 / 17.736	- / -	0 / 17.736	- / -	- / -	- / -	- / -	- / -	0 / 17.736
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	0 / 3.531	- / -	- / -	- / -	- / -	0 / 3.531
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 2.408	- / -	- / -	- / -	0 / 2.408
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.741	- / -	- / -	0 / 1.741
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.775	- / -	0 / 1.775
To Complete	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -
Total	2 / 8.408	5 / 50.815	3 / 48.615	0 / 17.736	0 / 0.000	0 / 17.736	0 / 3.531	0 / 2.408	0 / 1.741	0 / 1.775	- / -	10 / 135.029

Installation Schedule

	PYS	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				TC	Tot								
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4										
In	2	-	1	2	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10		
Out	-	-	2	-	-	-	1	2	2	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10