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

February 2020



Army

*Justification Book of
Missile Procurement, Army*

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Army • Budget Estimates FY 2021 • Procurement

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Cost Statement

The following Justification Books were prepared at a cost of \$460,860: Aircraft (ACFT), Missile (MSLS), Weapons & Tracked Combat Vehicles (WTCV), Ammunition (AMMO), Other Procurement Army (OPA) 1 - Tactical & Support Vehicles, Other Procurement Army (OPA) 2 – Communications & Electronics, Other Procurement Army (OPA) 3 & 4 - Other Support Equipment & Spares, Research, Development, Test and Evaluation (RDTE) for: Budget Activity 1, Budget Activity 2, Budget Activity 3, Budget Activity 4, Budget Activity 5A, Budget Activity 5B, Budget Activity 6, Budget Activity 7, and Budget Activity 8.

MISSILE PROCUREMENT, ARMY

Appropriation Language

For construction, procurement, production, modification, and modernization of Missiles, equipment, including ordnance, spare parts, and accessories therefore; specialized equipment; expansion of public and private plants, including the land necessary therefore and such lands and interests therein, may be acquired, and construction prosecuted therein prior to approval of title; and procurement and installation of equipment, appliances, and machine tools in public and private plants; reserve plant and Government and contractor-owned equipment layaway; \$4,332,600,000 to remain available for obligation until September 30, 2023.

The Fiscal Year (FY) 2021 Overseas Contingency Operations funding can be separated into the following categories:

- OCO for Direct War Costs (\$431,921,000): Direct War costs are those combat or direct combat support costs that will not continue to be expended once combat operations end at major contingency locations.
- OCO for Enduring Requirements (\$449,671,000): OCO for Enduring Requirements are enduring in-theater and in-CONUS costs that will likely remain after combat operations cease, and have previously been funded in OCO.

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Department of the Army
 FY 2021 President's Budget
 Exhibit P-1 FY 2021 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

15 Jan 2020

Appropriation	FY 2019 (Base + OCO)	FY 2020 Base Enacted	FY 2020 OCO Enacted	FY 2020 Emergency
Missile Procurement, Army	4,896,060	2,995,673	1,423,589	
Total Department of the Army	4,896,060	2,995,673	1,423,589	

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15 Jan 2020

<u>Appropriation</u>	<u>FY 2020 Total Enacted</u>	<u>FY 2021 Base</u>	<u>FY 2021 OCO for Base Requirements</u>	<u>FY 2021 OCO for Direct War and Enduring Costs</u>
Missile Procurement, Army	4,419,262	3,491,507		881,592
Total Department of the Army	4,419,262	3,491,507		881,592

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Department of the Army
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Total Obligational Authority
(Dollars in Thousands)

15 Jan 2020

<u>Appropriation</u>	<u>FY 2021 Total OCO</u>	<u>FY 2021 Total (Base + OCO)</u>
Missile Procurement, Army	881,592	4,373,099
Total Department of the Army	881,592	4,373,099

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Department of the Army
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 (Dollars in Thousands)

15 Jan 2020

Appropriation: Missile Procurement, Army

<u>Budget Activity</u>	<u>FY 2019 (Base + OCO)</u>	<u>FY 2020 Base Enacted</u>	<u>FY 2020 OCO Enacted</u>	<u>FY 2020 Emergency</u>
02. Other Missiles	3,521,758	2,443,813	1,082,558	
03. Modification of Missiles	1,338,946	514,823	341,031	
04. Spares and Repair Parts	27,737	26,444		
05. Support Equipment and Facilities	7,619	10,593		
Total Missile Procurement, Army	4,896,060	2,995,673	1,423,589	

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15 Jan 2020

Appropriation: Missile Procurement, Army

Budget Activity -----	FY 2020 Total Enacted -----	FY 2021 Base -----	FY 2021 OCO for Base Requirements -----	FY 2021 OCO for Direct War and Enduring Costs -----
02. Other Missiles	3,526,371	2,721,591		783,158
03. Modification of Missiles	855,854	755,848		98,434
04. Spares and Repair Parts	26,444	5,090		
05. Support Equipment and Facilities	10,593	8,978		
Total Missile Procurement, Army	4,419,262	3,491,507		881,592

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15 Jan 2020

Appropriation: Missile Procurement, Army

<u>Budget Activity</u>	<u>FY 2021 Total OCO</u>	<u>FY 2021 Total (Base + OCO)</u>
02. Other Missiles	783,158	3,504,749
03. Modification of Missiles	98,434	854,282
04. Spares and Repair Parts		5,090
05. Support Equipment and Facilities		8,978
Total Missile Procurement, Army	881,592	4,373,099

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15 Jan 2020

Appropriation: 2032A Missile Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2019 (Base + OCO)		FY 2020 Base Enacted		FY 2020 OCO Enacted		FY 2020 Emergency		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 02: Other Missiles											
Surface-to-Air Missile System											
1	System Integration and Test Procurement	A		105,395		107,157					U
2	M-SHORAD - Procurement	A			10	75,000	22	158,300			U
3	MSE Missile		240	1,131,276	138	664,499	9	37,938			U
4	PRECISION STRIKE MISSILE (PRSM)	A									U
5	INDIRECT FIRE PROTECTION CAPABILITY INC 2-I	A		197,822		9,337					U
Air-To-Surface Missile System											
6	Hellfire Sys Summary	A	2034	193,674	2298	189,284	2604	236,265			U
7	Joint Air-to-Ground MSLS (JAGM)		721	256,462	494	199,295					U
8	Long Range Precision Munition	A									U
Anti-Tank/Assault Missile Sys											
9	Javelin (AAWS-M) System Summary		1247	245,485	672	138,405	25	4,389			U
10	TOW 2 System Summary	A	1228	(139,011)	1460	(118,458)					U
	Less: Advance Procurement (PY)			(-19,949)							U
				119,062		118,458					
11	Guided MLRS Rocket (GMLRS)		7668	975,507	5124	744,810	3087	431,596			U
12	MLRS Reduced Range Practice Rockets (RRPR)		2214	20,964	2982	27,555					U
13	High Mobility Artillery Rocket System (HIMARS)		17	171,138							U
14	ARMY TACTICAL MSL SYS (ATACMS) - SYS SUM	B			131	170,013	101	130,770			U

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Department of the Army
 FY 2021 President's Budget
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 (Dollars in Thousands)

15 Jan 2020

Appropriation: 2032A Missile Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2020		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 02: Other Missiles											
Surface-to-Air Missile System											
1	System Integration and Test Procurement	A		107,157							U
2	M-SHORAD - Procurement	A	32	233,300	50	378,654			22	158,300	U
3	MSE Missile		147	702,437	122	603,188			46	176,585	U
4	PRECISION STRIKE MISSILE (PRSM)	A			30	49,941					U
5	INDIRECT FIRE PROTECTION CAPABILITY INC 2-I	A		9,337		106,261					U
Air-To-Surface Missile System											
6	Hellfire Sys Summary	A	4902	425,549	428	91,225			3090	236,265	U
7	Joint Air-to-Ground MSLS (JAGM)		494	199,295	657	213,397					U
8	Long Range Precision Munition	A				45,307					U
Anti-Tank/Assault Missile Sys											
9	Javelin (AAWS-M) System Summary		697	142,794	773	190,325					U
10	TOW 2 System Summary	A	1460	(118,458)	1405	(121,074)					U
	Less: Advance Procurement (PY)										U
				118,458		121,074					
11	Guided MLRS Rocket (GMLRS)		8211	1,176,406	5384	850,157			904	127,015	U
12	MLRS Reduced Range Practice Rockets (RRPR)		2982	27,555	3270	30,836					U
13	High Mobility Artillery Rocket System (HIMARS)				5	41,226					U
14	ARMY TACTICAL MSL SYS (ATACMS) - SYS SUM	B	232	300,783							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	
Budget Activity 02: Other Missiles							
Surface-to-Air Missile System							
1	System Integration and Test Procurement	A					U
2	M-SHORAD - Procurement	A	22	158,300	72	536,954	U
3	MSE Missile		46	176,585	168	779,773	U
4	PRECISION STRIKE MISSILE (PRSM)	A			30	49,941	U
5	INDIRECT FIRE PROTECTION CAPABILITY INC 2-I	A				106,261	U
Air-To-Surface Missile System							
6	Hellfire Sys Summary	A	3090	236,265	3518	327,490	U
7	Joint Air-to-Ground MSLS (JAGM)				657	213,397	U
8	Long Range Precision Munition	A				45,307	U
Anti-Tank/Assault Missile Sys							
9	Javelin (AAWS-M) System Summary				773	190,325	U
10	TOW 2 System Summary	A			1405	(121,074)	U
	Less: Advance Procurement (PY)						U
						121,074	
11	Guided MLRS Rocket (GMLRS)		904	127,015	6288	977,172	U
12	MLRS Reduced Range Practice Rockets (RRPR)				3270	30,836	U
13	High Mobility Artillery Rocket System (HIMARS)				5	41,226	U
14	ARMY TACTICAL MSL SYS (ATACMS) - SYS SUM	B					U

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Appropriation: 2032A Missile Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2019 (Base + OCO)		FY 2020 Base Enacted		FY 2020 OCO Enacted		FY 2020 Emergency		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
15	LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)	A	1225	104,973			1130	83,300			U
Total Other Missiles				3,521,758		2,443,813		1,082,558			
Budget Activity 03: Modification of Missiles											

Modifications											
16	Patriot Mods			323,228		278,716					U
17	ATACMS MODS	A		397,236		80,320					U
18	GMLRS MOD	A		266		5,094					U
19	Stinger Mods			94,756		81,615		7,500			U
20	AVENGER MODS			31,093		14,107					U
21	ITAS/TOW Mods			3,173		3,469					U
22	MLRS Mods			478,998		39,019		333,531			U
23	HIMARS Modifications			10,196		12,483					U
Total Modification of Missiles				1,338,946		514,823		341,031			
Budget Activity 04: Spares and Repair Parts											

Spares and Repair Parts											
24	Spares And Repair Parts			27,737		26,444					U
Total Spares and Repair Parts				27,737		26,444					

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Appropriation: 2032A Missile Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2020 Total Enacted		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	
15	LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)	A	1130	83,300					1130	84,993	U
Total Other Missiles				3,526,371		2,721,591				783,158	
Budget Activity 03: Modification of Missiles											
Modifications											
16	Patriot Mods			278,716		278,050					U
17	ATACMS MODS	A		80,320		141,690				78,434	U
18	GMLRS MOD	A		5,094							U
19	Stinger Mods			89,115							U
20	AVENGER MODS			14,107		13,942					U
21	ITAS/TOW Mods			3,469		5,666					U
22	MLRS Mods			372,550		310,419				20,000	U
23	HIMARS Modifications			12,483		6,081					U
Total Modification of Missiles				855,854		755,848				98,434	
Budget Activity 04: Spares and Repair Parts											
Spares and Repair Parts											
24	Spares And Repair Parts			26,444		5,090					U
Total Spares and Repair Parts				26,444		5,090					

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Appropriation: 2032A Missile Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2021 Total OCO		FY 2021 Total (Base + OCO)		S e c
			Quantity	Cost	Quantity	Cost	
15	LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)	A	1130	84,993	1130	84,993	U
Total Other Missiles				783,158		3,504,749	
<u>Budget Activity 03: Modification of Missiles</u>							
Modifications							
16	Patriot Mods					278,050	U
17	ATACMS MODS	A		78,434		220,124	U
18	GMLRS MOD	A					U
19	Stinger Mods						U
20	AVENGER MODS					13,942	U
21	ITAS/TOW Mods					5,666	U
22	MLRS Mods			20,000		330,419	U
23	HIMARS Modifications					6,081	U
Total Modification of Missiles				98,434		854,282	
<u>Budget Activity 04: Spares and Repair Parts</u>							
Spares and Repair Parts							
24	Spares And Repair Parts					5,090	U
Total Spares and Repair Parts						5,090	

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Line No	Item Nomenclature	Ident Code	FY 2019 (Base + OCO) Quantity Cost	FY 2020 Base Enacted Quantity Cost	FY 2020 OCO Enacted Quantity Cost	FY 2020 Emergency Quantity Cost	S e c -
<u>Budget Activity 05: Support Equipment and Facilities</u>							
Support Equipment & Facilities							
25	Air Defense Targets		6,417	10,593			U
26	Production Base Support		1,202				U
Total Support Equipment and Facilities			7,619	10,593			
Total Missile Procurement, Army			4,896,060	2,995,673	1,423,589		

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Appropriation: 2032A Missile Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2020 Total Enacted		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	
<u>Budget Activity 05: Support Equipment and Facilities</u>											
Support Equipment & Facilities											
25	Air Defense Targets			10,593		8,978					U
26	Production Base Support										U
Total Support Equipment and Facilities				10,593		8,978					
Total Missile Procurement, Army				4,419,262		3,491,507				881,592	

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Appropriation: 2032A Missile Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2021 Total OCO		FY 2021 Total (Base + OCO)		S e c
			Quantity	Cost	Quantity	Cost	
<u>Budget Activity 05: Support Equipment and Facilities</u>							
Support Equipment & Facilities							
25	Air Defense Targets				8,978		U
26	Production Base Support						U
Total Support Equipment and Facilities					8,978		
Total Missile Procurement, Army			881,592		4,373,099		

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Appropriation 2032A: Missile Procurement, Army

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2	02	10	8082C14300	M-SHORAD - Procurement.....	3
3	02	10	8260C53101	MSE Missile.....	11
4	02	10	8540C29600	PRECISION STRIKE MISSILE (PRSM).....	23
5	02	10	8930C61001	INDIRECT FIRE PROTECTION CAPABILITY INC 2-I.....	30
6	02	10	8930C61001	INDIRECT FIRE PROTECTION CAPABILITY INC 2-I, Advance Procurement.....	37
7	02	20	1338C70000	Hellfire Sys Summary.....	41
8	02	20	2605C70302	Joint Air-to-Ground MSLS (JAGM).....	51
9	02	20	2607C71300	Long Range Precision Munition.....	61
10	02	30	0648CC0007	Javelin (AAWS-M) System Summary.....	65
11	02	30	2104C59300	TOW 2 System Summary.....	77
12	02	30	2104C59300	TOW 2 System Summary, Advance Procurement.....	87
13	02	30	6005C64400	Guided MLRS Rocket (GMLRS).....	91
14	02	30	6060C65405	MLRS Reduced Range Practice Rockets (RRPR).....	103
15	02	30	6200C02901	High Mobility Artillery Rocket System (HIMARS).....	113
16	02	30	6472C98510	ARMY TACTICAL MSL SYS (ATACMS) - SYS SUM.....	117

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Appropriation 2032A: Missile Procurement, Army

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19	03	10	1823CA6700	ATACMS MODS.....	164
20	03	10	1824C57701	GMLRS MOD.....	169
21	03	10	2684C20000	Stinger Mods.....	171
22	03	10	2690CE8710	AVENGER MODS.....	173
23	03	10	3972C61700	ITAS/TOW Mods.....	186
24	03	10	6552C67500	MLRS Mods.....	191
25	03	10	6580C67501	HIMARS Modifications.....	201

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Appropriation 2032A: Missile Procurement, Army

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26	04	10	1242CA0250	Spares And Repair Parts.....	206

Appropriation 2032A: Missile Procurement, Army

Line #	BA	BSA	Line Item Number	Line Item Title	Page
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28	05	10	4662CA0100	Production Base Support.....	215

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ATACMS MODS	1823CA6700	19	03	10.....	164
AVENGER MODS	2690CE8710	22	03	10.....	173
Air Defense Targets	1242C93000	27	05	10.....	209
GMLRS MOD	1824C57701	20	03	10.....	169
Guided MLRS Rocket (GMLRS)	6005C64400	13	02	30.....	91
HIMARS Modifications	6580C67501	25	03	10.....	201
Hellfire Sys Summary	1338C70000	7	02	20.....	41
High Mobility Artillery Rocket System (HIMARS)	6200C02901	15	02	30.....	113
INDIRECT FIRE PROTECTION CAPABILITY INC 2-I	8930C61001	5	02	10.....	30
INDIRECT FIRE PROTECTION CAPABILITY INC 2-I, Advance Procurement	8930C61001	6	02	10.....	37
ITAS/TOW Mods	3972C61700	23	03	10.....	186
Javelin (AAWS-M) System Summary	0648CC0007	10	02	30.....	65
Joint Air-to-Ground MSLS (JAGM)	2605C70302	8	02	20.....	51
LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)	6870C88001	17	02	30.....	119
Long Range Precision Munition	2607C71300	9	02	20.....	61
M-SHORAD - Procurement	8082C14300	2	02	10.....	3

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Line Item Title	Line Item Number	Line #	BA	BSA	Page
MLRS Mods	6552C67500	24	03	10.....	191
MLRS Reduced Range Practice Rockets (RRPR)	6060C65405	14	02	30.....	103
MSE Missile	8260C53101	3	02	10.....	11
PRECISION STRIKE MISSILE (PRSM)	8540C29600	4	02	10.....	23
Patriot Mods	0962C50700	18	03	10.....	127
Production Base Support	4662CA0100	28	05	10.....	215
Spares And Repair Parts	1242CA0250	26	04	10.....	206
Stinger Mods	2684C20000	21	03	10.....	171
System Integration and Test Procurement	7153C50016	1	02	10.....	1
TOW 2 System Summary	2104C59300	11	02	30.....	77
TOW 2 System Summary, Advance Procurement	2104C59300	12	02	30.....	87

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Exhibit P-1M, Procurement Programs - Modification Summary
(Listing by Model)

Lookup Matrix by Model

Model: Various		
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
C50700	Patriot Mods	No

Model: ATACMS		
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
CA6700	ATACMS MODS	No

Model: Avenger Basic and Slew-to-Cue Systems		
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
CE8710	AVENGER MODS	No

Model: NA		
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
C61700	ITAS/TOW Mods	No

Model: M270A1		
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
C67500	MLRS Mods	No

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Exhibit P-1M, Procurement Programs - Modification Summary
(Listing by Model)

Model:	M142 High Mobility Artillery Rocket System	
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
C67501	HIMARS Modifications	No

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Exhibit P-1M, Procurement Programs - Modification Summary
(Funding for Modifications)

Funding (\$ M)

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
Exhibit P-3a										
Patriot Mods	4,162.964	323.228	278.716	278.050	-	278.050	223.174	232.559	168.392	178.539
ATACMS MODS	522.737	397.236	80.320	141.690	78.434	220.124	-	-	-	-
AVENGER MODS	161.230	31.093	14.107	13.942	-	13.942	11.381	-	-	-
ITAS/TOW Mods	1,792.822	3.173	3.469	5.666	-	5.666	-	-	-	-
MLRS Mods	606.945	478.998	372.550	310.419	20.000	330.419	277.623	207.159	165.712	165.062
HIMARS Modifications	235.062	10.196	12.483	6.081	-	6.081	7.292	9.700	17.402	29.968
Totals (Total Obligation Authority)										
Total Obligation Authority	7,481.760	1,243.924	761.645	755.848	98.434	854.282	519.470	449.418	351.506	373.569

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

Appropriation / Budget Activity / Budget Sub Activity:
 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 10: Surface-to-Air Missile System **P-1 Line Item Number / Title:**
 7153C50016 / System Integration and Test Procurement

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 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>)	503.504	105.395	107.157	-	-	-	-	-	-	-	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	503.504	105.395	107.157	-	-	-	-	-	-	-	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	503.504	105.395	107.157	-	-	-	-	-	-	-	Continuing	Continuing

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

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

Description:

- System Integration and Test Procurement line (formerly Lower Tier Air and Missile Defense (LTAMD)) supports the Field Surveillance Program (FSP), PAC-3 Missile Support Center (P3MSC), International Engineering Services Program (IESP), Integrated Logistics Support (ILS), US Unique Engineering Services (ES), and System Engineering Program Management (SEPM) activities. The mission of the PATRIOT Advanced Capability-3 (PAC-3) Missile Field Surveillance Program (FSP) is required to ensure that the reliability, performance, and safety of fielded PAC-3 missiles remain within the classified system specification for the life of the system. Initial FSP tasks confirm the quality of design, materials, procedures, and processes used in the manufacture of the system. After missile deployment, results from surveillance firings, inspections, functional tests, Storage and Aging Programs, and depot level missile maintenance processing provide the data required for the assessment of reliability, performance, and safety of the missile stockpile. This includes PAC-3 missile tooling and test equipment. The PAC-3 missile is fielded under the Certified Round Concept. Under this approved concept, the PAC-3 missile is capable of being placed in extended storage as part of war reserve stocks or deployed in operational units for variable periods and then fired without intervening tests or checkouts. In accordance with the Certified Round Concept, the reliability/performance of the missile is certified by the Lower Tier Project Office (LTPO) to be at an acceptable level for a stated period of time or corrective action is taken.
- The certification of reliability is made possible through the use of the PAC-3 Missile Support Center (P3MSC) contract to use technical support and knowledge of the testing of discrete lots of component parts, subassemblies and assemblies which the prime contractor Lockheed Martin Missiles and Fire Control (LMMFC) provides as the only source of technical knowledge, expertise, and facilities to perform FSP activities and process PAC-3 missiles.
- The PATRIOT International Engineering Services Program provides continuing engineering support for system software and hardware for the life of the PATRIOT Air Defense System for US and international partners. The Engineering Services Program is designed to standardize and improve the PATRIOT system within the performance envelope described in the system specification. The support provided under this program includes PATRIOT software maintenance, Post Deployment Build 8/8.x(PDB-8/8.x), engineering support for PATRIOT peculiar hardware, government furnished equipment, logistics, technical data package, trainers, US Unique ES, and integrated diagnostics support system. This is accomplished through the investigation, analysis, and development of solutions to identified problems. Modifications to hardware are engineered for manufacturing implementation and retrofit of fielded hardware through the modification process. The Dismounted Patriot Information Coordination Central (D-PICC) effort is an example of rehosting tactical Patriot software maintained via engineering services to a smaller, more mobile hardware configuration that will allow flexible, tailorable deployment options by freeing up Battalion level ICC's.
- Systems Engineering and Project Management support encompasses the overall planning, management, and control of the PATRIOT Weapon System. Includes all Engineering and Program Management disciplines and activities. Program office core employee labor costs moved from Procurement to OMA in FY19 as part of an OSD auditability directive.
- Logistics Recurring includes all aspects of Integrated Logistics Support (ILS) management, e.g., maintenance support, facilities, personnel, training, testing, and fielding.
- Supports procuring, fielding, and supporting materiel solutions to counter cybersecurity and electronic warfare shortcomings to all elements of the Lower Tier Battle Space.

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 10: Surface-to-Air Missile System	P-1 Line Item Number / Title: 7153C50016 / System Integration and Test Procurement
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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 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	105.395	107.157	-	-	-	-	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	105.395	107.157	-	-	-	-	-	-	-

Justification:
 Beginning FY21, C50016 / System Integration and Test Procurement funding will be realigned to C50700 / Patriot Mods and C53101 / MSE Missile.

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

Appropriation / Budget Activity / Budget Sub Activity:
2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 10: Surface-to-Air Missile System

P-1 Line Item Number / Title:
8082C14300 / M-SHORAD - Procurement

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604117A

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>)	-	-	32	50	22	72	36	-	15	25	Continuing	Continuing
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	-	233.300	378.654	158.300	536.954	330.738	80.412	436.129	728.215	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	-	233.300	378.654	158.300	536.954	330.738	80.412	436.129	728.215	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	-	233.300	378.654	158.300	536.954	330.738	80.412	436.129	728.215	Continuing	Continuing

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	7,290.625	7,573.080	7,195.455	7,457.694	9,187.167	-	29,075.267	29,128.600	Continuing	Continuing

Description:

FY 2021 funding totals include \$378.654M for Base and \$158.300M for Overseas Contingency Operations (OCO).

M-SHORAD is an Air Defense weapon system consisting of multiple ground-to-air missile launchers, sensors and a gun on a Stryker A1 combat vehicle. M-SHORAD provides the Army improved capabilities for defense of maneuver formations and other tactical echelons from low altitude air attack and surveillance. Adaptive threats have developed a suite of airborne threat capabilities, supported by an integrated mix of surface-to-air and surface-to-surface shooters that threaten the ability of maneuver forces to conduct operations. Specifically, maneuver formations require the improved M-SHORAD air defense identification and defeat capabilities to counter Fixed Wing (FW), Rotary Wing (RW), Unmanned Aircraft Systems (UAS) and Rocket, Artillery and Mortar (RAM) threats.

The M-SHORAD capability will be provided through a multi-phase approach with a rapidly fielded Initial M-SHORAD system (supported by an Army Approved Directed Requirement) and an enduring M-SHORAD (supported by a Joint Requirements Oversight Council approved Capability Development Document (CDD) that will field the full capability. First, the Army will field the Initial M-SHORAD solution based on a FY 2018 Directed Requirement, which was informed by the FY 2017 M-SHORAD Demonstration. This system will provide the capability to identify, track, and neutralize or destroy low-altitude air threats to include FW, RW, and Group 3 UAS while keeping pace and surviving with the maneuver Brigades. The Initial M-SHORAD will be fielded to four M-SHORAD battalions. In addition, the Rapid Capabilities and Critical Technologies Office (RCCTO) will transition the Directed Energy M-SHORAD (DE M-SHORAD) to the M-SHORAD Product Office in 1QFY23. DE M-SHORAD will provide the long term capability to counter a broader range of FW, RW, UAS and RAM threats.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	-	32	50	22	72	36	-	15	25
Total Obligation Authority	-	233.300	378.654	158.300	536.954	330.738	80.412	436.129	728.215
Total:									
Secondary Distribution									
Quantity	-	32	50	22	72	36	-	15	25
Total Obligation Authority	-	233.300	378.654	158.300	536.954	330.738	80.412	436.129	728.215

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 10: Surface-to-Air Missile System **P-1 Line Item Number / Title:** 8082C14300 / M-SHORAD - Procurement

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604117A

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-5	C14301 / Maneuver - Short Range Air Defense (M-SHORAD)	P-5a, P-21	A		- / -	- / -	32 / 233.300	50 / 378.654	22 / 158.300	72 / 536.954
P-40	Total Gross/Weapon System Cost				- / -	- / -	32 / 233.300	50 / 378.654	22 / 158.300	72 / 536.954

*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 Base procurement funding in the amount of \$378.654 million and OCO procurement funding of \$158.300M supports the production and delivery of 72 Initial M-SHORAD systems and Initial Spares
 The 72 total systems provide Initial M-SHORAD systems for the second and third M-SHORAD equipped Battalions. These quantities are required in order to meet the Full Operational Capability requirement specified in the Directed Requirement.
 This program is an Air Missile and Defense (AMD) Cross Functional Team (CFT) priority and is part of the Army Integrated Air and Missile Defense (IAMD) architecture, M-SHORAD C14301.

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Exhibit P-5, Cost Analysis: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10	P-1 Line Item Number / Title: 8082C14300 / M-SHORAD - Procurement	Item Number / Title [DODIC]: C14301 / Maneuver - Short Range Air Defense (M-SHORAD)

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
Procurement Quantity (Units in Each)				-	-	32	50	22	72
Gross/Weapon System Cost (\$ in Millions)				-	-	233.300	378.654	158.300	536.954
Less PY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)				-	-	233.300	378.654	158.300	536.954
Plus CY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)				-	-	233.300	378.654	158.300	536.954
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>									
Initial Spares (\$ in Millions)				-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)				-	-	7,290.625	7,573.080	7,195.455	7,457.694

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
Initial M-SHORAD ^(†)	-	-	-	-	-	-	6,909.750	32	221.112	7,117.020	50	355.851	7,117.045	22	156.575	7,117.028	72	512.426
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	221.112	-	-	355.851	-	-	156.575	-	-	512.426
Non Recurring Cost																		
Non-Recurring Production	-	-	-	-	-	-	-	-	4.264	-	-	4.067	-	-	-	-	-	4.067
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	-	-	-	4.264	-	-	4.067	-	-	-	-	-	4.067
<i>Subtotal: Flyaway Cost</i>	-	-	-	-	-	-	-	-	225.376	-	-	359.918	-	-	156.575	-	-	516.493
Hardware Cost																		
Recurring Cost																		
Training Devices	-	-	-	-	-	-	-	-	1.162	-	-	2.400	-	-	-	-	-	2.400
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	1.162	-	-	2.400	-	-	-	-	-	2.400
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	-	-	-	1.162	-	-	2.400	-	-	-	-	-	2.400
Package Fielding Cost																		
Recurring Cost																		
Fielding	-	-	-	-	-	-	-	-	1.024	-	-	3.064	-	-	-	-	-	3.064
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	1.024	-	-	3.064	-	-	-	-	-	3.064
<i>Subtotal: Package Fielding Cost</i>	-	-	-	-	-	-	-	-	1.024	-	-	3.064	-	-	-	-	-	3.064
Support - Acceptance Testing Cost																		

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Exhibit P-5, Cost Analysis: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10	P-1 Line Item Number / Title: 8082C14300 / M-SHORAD - Procurement	Item Number / Title [DODIC]: C14301 / Maneuver - Short Range Air Defense (M-SHORAD)

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Acceptance Test	-	-	-	-	-	-	-	-	1.375	-	-	2.750	-	-	-	-	-	2.750
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	-	-	-	-	-	-	1.375	-	-	2.750	-	-	-	-	-	2.750
Support - Initial Spares and Repair Parts Cost																		
Initial Spares and Repair Parts	-	-	-	-	-	-	-	-	2.177	-	-	5.434	-	-	1.725	-	-	7.159
<i>Subtotal: Support - Initial Spares and Repair Parts Cost</i>	-	-	-	-	-	-	-	-	2.177	-	-	5.434	-	-	1.725	-	-	7.159
Support - Logistics Cost																		
Integrated Logistics Support	-	-	-	-	-	-	-	-	-	-	-	1.264	-	-	-	-	-	1.264
<i>Subtotal: Support - Logistics Cost</i>	-	-	-	-	-	-	-	-	-	-	-	1.264	-	-	-	-	-	1.264
Support - Program Management Cost																		
Government Management	-	-	-	-	-	-	-	-	2.186	-	-	3.824	-	-	-	-	-	3.824
<i>Subtotal: Support - Program Management Cost</i>	-	-	-	-	-	-	-	-	2.186	-	-	3.824	-	-	-	-	-	3.824
Gross/Weapon System Cost	-	-	-	-	-	-	7,290.625	32	233.300	7,573.080	50	378.654	7,195.455	22	158.300	7,457.694	72	536.954

Remarks:
FY 2021 Procurement funding procures 72 systems @ unit cost of \$ \$7,117,028

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	32	50	22	72
	Total Obligation Authority	-	233.300	378.654	158.300	536.954
Total:	Quantity	-	32	50	22	72
Secondary Distribution	Total Obligation Authority	-	233.300	378.654	158.300	536.954

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

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Exhibit P-5a, Procurement History and Planning: PB 2021 Army							Date: February 2020					
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10			P-1 Line Item Number / Title: 8082C14300 / M-SHORAD - Procurement				Item Number / Title [DODIC]: C14301 / Maneuver - Short Range Air Defense (M-SHORAD)					

Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
Initial M-SHORAD ^(†)		2020	Initial M-SHORAD / TBD	SS / FFP	TBD	Jul 2020	Jul 2021	32	6,909.750	N		
Initial M-SHORAD ^(†)	✓	2021	Initial M-SHORAD / TBD	Option / FFP	HSV	Jan 2021	Jan 2022	22	7,117.045	N		
Initial M-SHORAD ^(†)		2021	Initial M-SHORAD / TBD	Option / FFP	HSV	Jan 2021	May 2022	50	7,117.020	N		

^(†) indicates the presence of a P-21

Remarks:

FY2021 Procurement funding procures 72 Systems @ unit cost of \$7,117,028

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Exhibit P-21, Production Schedule: PB 2021 Army															Date: February 2020									
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10										P-1 Line Item Number / Title: 8082C14300 / M-SHORAD - Procurement										Item Number / Title [DODIC]: C14301 / Maneuver - Short Range Air Defense (M-SHORAD)				

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2020												Fiscal Year 2021												B A L A N C E																			
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020												Calendar Year 2021																														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P																		
Initial M-SHORAD																																																	
	1	2020	ARMY	32	0	32																							A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	4	20
	1	2021	ARMY	50	0	50																																										50	
✓	1	2021	ARMY	22	0	22																																										22	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P																			

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Exhibit P-21, Production Schedule: PB 2021 Army															Date: February 2020														
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10										P-1 Line Item Number / Title: 8082C14300 / M-SHORAD - Procurement										Item Number / Title [DODIC]: C14301 / Maneuver - Short Range Air Defense (M-SHORAD)									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2022													Fiscal Year 2023													BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022													Calendar Year 2023													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
Initial M-SHORAD																																	
	1	2020	ARMY	32	12	20	6	6	6	2																			0				
	1	2021	ARMY	50	0	50	-	-	-	-	-	-	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	2	0				
✓	1	2021	ARMY	22	0	22	-	-	-	4	6	6	6															0					
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10		P-1 Line Item Number / Title: 8082C14300 / M-SHORAD - Procurement
		Item Number / Title [DODIC]: C14301 / Maneuver - Short Range Air Defense (M-SHORAD)

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2021	1-8-5 For 2021	MAX For 2021	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Initial M-SHORAD - TBD	2	6	9	0	3	6	9	0	3	6	9

Remarks:
FY2021 Procurement funding procures 72 Systems @ unit cost of \$ \$7,117,028

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

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

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

Appropriation / Budget Activity / Budget Sub Activity:
 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 10: Surface-to-Air Missile System **P-1 Line Item Number / Title:**
 8260C53101 / MSE Missile

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604865A, 0603869A, 0604869A, 0605456A

Line Item MDAP/MAIS Code: 492

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>)	4,092.880	1,131.276	702.437	603.188	176.585	779.773	765.887	1,008.835	908.799	804.295	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	4,092.880	1,131.276	702.437	603.188	176.585	779.773	765.887	1,008.835	908.799	804.295	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	4,092.880	1,131.276	702.437	603.188	176.585	779.773	765.887	1,008.835	908.799	804.295	Continuing	Continuing

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	4,443.952	4,713.650	4,778.483	4,944.164	3,838.804	4,641.506	6,329.645	7,154.858	7,971.921	9,244.770	Continuing	Continuing

Description:

Note: Beginning FY21, funds from System Integration and Test Procurement / C50016 will be realigned into MSE Missile / C53101.

The MSE Missile line supports the procurement of missiles, Field Surveillance Program (FSP), PAC-3 Missile Support Center (P3MSC), Integrated Logistics Support (ILS), US Unique Engineering Services (ES), and System Engineering Program Management (SEPM) activities.

The PATRIOT Advanced Capability 3 (PAC-3) Missile Segment Enhancement (MSE) is a high velocity hit-to-kill, surface-to-air missile capable of intercepting tactical ballistic missiles, air breathing threats, cruise missiles, and unmanned aerial systems. The PAC-3 MSE represents the next generation PAC-3 missile which provides expanded battlespace performance against evolving threats and has been fully integrated into the PATRIOT system for US and international partners. The PAC-3 MSE is an agile, lethal interceptor providing substantial missile capabilities when combined with critical ground system improvements. Additionally, the PAC-3 MSE enhances Insensitive Munitions (IM) through a less sensitive, increased performance lethality enhancer, the addition of armor and a thermally initiated venting system. A single canister design provides enhanced warfighter and logistics flexibility, and facilitates improved IM performance for greater warfighter safety.

The PATRIOT Advanced Capability-3 (PAC-3) Missile Field Surveillance Program (FSP) is required to ensure that the reliability, performance, and safety of fielded missiles in the PATRIOT family remain within the classified system specification for the life of the system. Initial FSP tasks confirm the quality of design, materials, tooling and test equipment procedures, and processes used in the manufacture of the PATRIOT Family of Missiles (PFoM). After missile deployment, results from surveillance firings, inspections, functional tests, Storage and Aging Programs, and depot level missile maintenance processing provide the data required for the assessment of reliability, performance, and safety of the missile stockpile. The PFoM are fielded under the Certified Round Concept. Under this approved concept, the missiles are capable of being placed in extended storage as part of war reserve stocks or deployed in operational units for variable periods and then fired without intervening tests or checkouts. In accordance with the Certified Round Concept, the reliability/performance of the missile is certified by the Lower Tier Project Office (LTPO) to be at an acceptable level for a stated period of time or corrective action is taken.

The certification of reliability is made possible through the use of the PAC-3 Missile Support Center (P3MSC) contract to use technical support and knowledge of the testing of discrete lots of component parts, subassemblies and assemblies which the prime contractor Lockheed Martin Missiles and Fire Control (LMMFC) provides as the only source of technical knowledge, expertise, and facilities to perform FSP activities and process PFoM.

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Exhibit P-40, Budget Line Item Justification: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 10: Surface-to-Air Missile System		P-1 Line Item Number / Title: 8260C53101 / MSE Missile
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0604865A, 0603869A, 0604869A, 0605456A

Line Item MDAP/MAIS Code: 492
 Systems Engineering and Project Management support encompasses the overall planning, management, and control of the PATRIOT Weapon System. Includes all Engineering and Program Management disciplines and activities.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	1,131.276	702.437	603.188	176.585	779.773	765.887	1,008.835	908.799	804.295
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	1,131.276	702.437	603.188	176.585	779.773	765.887	1,008.835	908.799	804.295

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

Appropriation / Budget Activity / Budget Sub Activity:
 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 10: Surface-to-Air Missile System **P-1 Line Item Number / Title:**
 8260C53101 / MSE Missile

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604865A, 0603869A, 0604869A, 0605456A

Line Item MDAP/MAIS Code: 492

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-5	C53101 / MSE Missile	P-5a, P-21			- / 4,092.880	- / 1,131.276	- / 702.437	- / 603.188	- / 176.585	- / 779.773
P-40	Total Gross/Weapon System Cost				- / 4,092.880	- / 1,131.276	- / 702.437	- / 603.188	- / 176.585	- / 779.773

*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 procurement dollars in the amount of \$779.773 million support the production of 168 Missile Segment Enhancement (MSE) missiles, 32 Launcher Mod Kits (LMK), Missile Round Trainers (MRT), Empty Round Trainers (ERT), Field Surveillance Program (FSP), supporting equipment, ancillary missile items, PAC-3 Missile Support Center (P3MSC), Obsolescence, Organic NRC, System Engineering/Program Management (SE/PM), and Government/Software Engineering.

In FY 2021, \$0.978 million in Reimbursable Manpower for this line has been realigned from Reimbursable Civilian Funding to Direct Operations and Maintenance. Program support costs have been accurately updated to reflect the realignments

Army Acquisition Objective (AAO) is 3376.

Program Office core employee labor costs moved from Procurement to Operations and Maintenance, Army (OMA) as part of an OSD auditability directive starting in FY19. Government/Software Engineering (USG support) includes government administration costs.

*Unit prices reflect an assessed yearly Foreign Military Sales (FMS) procurement of PAC-3 missile variants. In the event FMS procurements do not occur at this level, the budgeted missile unit price may not be achievable.

**Quantities will be procured at an optimized rate utilizing price advantage created through contract negotiation, Firm Fixed Price Incentive Fee (FFPIF) contract ceiling liability reduction through price determination, other service procurement, and/or foreign military sales (FMS) to increase the Army procurement of MSE Missiles.

***Anticipate transitioning from Fixed Price Incentive Fee (FFPIF) to Firm Fixed Price (FFP) in FY21, assuming analysis of FY13-19 cost data demonstrates stable program costs.

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Exhibit P-5, Cost Analysis: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10	P-1 Line Item Number / Title: 8260C53101 / MSE Missile	Item Number / Title [DODIC]: C53101 / MSE Missile

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	4,092.880	1,131.276	702.437	603.188	176.585	779.773
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	4,092.880	1,131.276	702.437	603.188	176.585	779.773
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	4,092.880	1,131.276	702.437	603.188	176.585	779.773

(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)	4,443.952	4,713.650	4,778.483	4,944.164	3,838.804	4,641.506

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
Missile Hardware ^(†)	3,991.114	869	3,468.278	3,733.398	274	1,022.951	4,117.265	147	605.238	3,852.656	122	470.024	3,838.804	46	176.585	3,848.863	168	646.609
Field Surveillance	-	-	41.863	-	-	6.096	-	-	5.949	-	-	18.732	-	-	-	-	-	18.732
PAC-3 Missile Support Center (P3MSC)	-	-	22.364	-	-	3.900	-	-	3.899	-	-	10.501	-	-	-	-	-	10.501
Obsolescence	-	-	84.725	-	-	22.049	-	-	8.597	-	-	22.032	-	-	-	-	-	22.032
Launcher Mod Kit (LMK)	-	-	63.088	247.500	40	9.900	247.585	41	10.151	253.094	32	8.099	-	-	-	253.094	32	8.099
Heater Kits	-	-	2.500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Msl Round Trainer / Empty Round Trainer	-	-	122.438	-	-	43.700	-	-	45.695	-	-	49.701	-	-	-	-	-	49.701
Initial Production Facilitation	-	-	88.313	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Government/Software Engineering	-	-	31.540	-	-	9.600	-	-	9.701	-	-	9.699	-	-	-	-	-	9.699
Sys Engrg/Proj Mgmt (SE/PM) Contractor	-	-	167.771	-	-	13.080	-	-	13.207	-	-	13.401	-	-	-	-	-	13.401
Subtotal: Recurring Cost	-	-	4,092.880	-	-	1,131.276	-	-	702.437	-	-	602.189	-	-	176.585	-	-	778.774
Non Recurring Cost																		
Organic	-	-	-	-	-	-	-	-	-	-	-	0.999	-	-	-	-	-	0.999
Subtotal: Non Recurring Cost	-	-	-	-	-	-	-	-	-	-	-	0.999	-	-	-	-	-	0.999
Subtotal: Flyaway Cost	-	-	4,092.880	-	-	1,131.276	-	-	702.437	-	-	603.188	-	-	176.585	-	-	779.773

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Exhibit P-5, Cost Analysis: PB 2021 Army												Date: February 2020					
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10						P-1 Line Item Number / Title: 8260C53101 / MSE Missile						Item Number / Title [DODIC]: C53101 / MSE Missile					
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:					

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Gross/Weapon System Cost	4,443.952	-	4,092.880	4,713.650	-	1,131.276	4,778.483	-	702.437	4,944.164	-	603.188	3,838.804	-	176.585	4,641.506	-	779.773

Remarks:
Beginning FY21, funds from System Integration and Test Procurement / C50016 will be realigned into MSE Missile / C53101.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	1,131.276	702.437	603.188	176.585	779.773
Total:	Quantity	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	1,131.276	702.437	603.188	176.585	779.773

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

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Exhibit P-5a, Procurement History and Planning: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10	P-1 Line Item Number / Title: 8260C53101 / MSE Missile	Item Number / Title [DODIC]: C53101 / MSE Missile
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
Missile Hardware ^(†)		2015	LMMFC / Dallas, TX	SS / FPIF	AMCOM, RSA, AL	Jul 2015	Jan 2017	108	4,425.000	Y		May 2014
Missile Hardware ^(†)		2016	LMMFC / Dallas, TX	SS / FPIF	AMCOM, RSA, AL	Dec 2015	Aug 2018	112	3,940.180	Y		May 2014
Missile Hardware ^(†)		2017	LMMFC / Dallas, TX	SS / FPIF	AMCOM, RSA, AL	Dec 2016	Oct 2019	170	4,266.530	Y		Dec 2015
Missile Hardware ^(†)		2018	LMMFC / Dallas, TX	SS / FPIF	AMCOM, RSA, AL	Dec 2017	Jul 2020	387	3,793.380	Y		Dec 2015
Missile Hardware ^(†)		2019	LMMFC / Dallas, TX	SS / FPIF	AMCOM, RSA, AL	Dec 2018	Jun 2021	274	3,733.398	Y		Dec 2015
Missile Hardware ^(†)		2020	LMMFC / Dallas, TX	SS / FPIF	AMCOM, RSA, AL	Dec 2019	Jun 2022	147	4,117.265	Y		Jun 2017
Missile Hardware ^(†)		2021	LMMFC / Dallas, TX	SS / FFP	AMCOM, RSA, AL	Dec 2020	Jun 2023	168	3,848.863	Y		Jun 2017

^(†) indicates the presence of a P-21

Remarks:

Anticipate transitioning from FPIF to FFP in FY21, assuming analysis of FY13-19 cost data demonstrates stable program costs.
Exhibit P-21, Production Schedule is subject to change.

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Exhibit P-21, Production Schedule: PB 2021 Army Date: February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10	P-1 Line Item Number / Title: 8260C53101 / MSE Missile	Item Number / Title [DODIC]: C53101 / MSE Missile
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Cost Elements <i>(Units in Each)</i>					Fiscal Year 2015												Fiscal Year 2016												B A L A N C E						
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	Calendar Year 2015												Calendar Year 2016																
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L		A U G	S E P				
Missile Hardware																																			
Prior Years Deliveries: 92																																			
	1	2015	ARMY	108	0	108											A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	108		
	1	2016	ARMY	112	0	112																						A	-	-	-	-	-	-	112
	1	2017	ARMY	170	0	170																												170	
	1	2018	ARMY	387	0	387																												387	
	1	2019	ARMY	274	0	274																												274	
	1	2020	ARMY	147	0	147																												147	
	1	2021	ARMY	168	0	168																												168	

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Exhibit P-21, Production Schedule: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10	P-1 Line Item Number / Title: 8260C53101 / MSE Missile	Item Number / Title [DODIC]: C53101 / MSE Missile
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Cost Elements <i>(Units in Each)</i>					Fiscal Year 2017													Fiscal Year 2018													B A L A N C E		
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017													Calendar Year 2018													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
Missile Hardware																																	
Prior Years Deliveries: 92																																	
	1	2015	ARMY	108	0	108	-	-	-	10	2	3	3	17	12	12	14	12	12	11										0			
	1	2016	ARMY	112	0	112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	10	94		
	1	2017	ARMY	170	0	170			A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	170			
	1	2018	ARMY	387	0	387															A	-	-	-	-	-	-	-	-	387			
	1	2019	ARMY	274	0	274																								274			
	1	2020	ARMY	147	0	147																								147			
	1	2021	ARMY	168	0	168																								168			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10 **P-1 Line Item Number / Title:** 8260C53101 / MSE Missile **Item Number / Title [DODIC]:** C53101 / MSE Missile

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2019														Fiscal Year 2020														BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019														Calendar Year 2020														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
Missile Hardware																																			
Prior Years Deliveries: 92																																			
1		2015	ARMY	108	108	0																												0	
1		2016	ARMY	112	18	94	10	10	10	10	10	12	8	10	14																			0	
1		2017	ARMY	170	0	170	-	-	-	-	-	-	-	-	-	-	-	22	22	21	21	21	21	21	21								0		
1		2018	ARMY	387	0	387	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34	34	34			285	
1		2019	ARMY	274	0	274			A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			274	
1		2020	ARMY	147	0	147																												147	
1		2021	ARMY	168	0	168																													168
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10 **P-1 Line Item Number / Title:** 8260C53101 / MSE Missile **Item Number / Title [DODIC]:** C53101 / MSE Missile

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2021													Fiscal Year 2022													BALANCE	
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021													Calendar Year 2022													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
Missile Hardware																																	
Prior Years Deliveries: 92																																	
1	2015	ARMY		108	108	0																							0				
1	2016	ARMY		112	112	0																							0				
1	2017	ARMY		170	170	0																							0				
1	2018	ARMY		387	102	285	36	36	36	36	36	35	35	35															0				
1	2019	ARMY		274	0	274	-	-	-	-	-	-	-	25	25	25	25	25	25	25	25	25	25	24					0				
1	2020	ARMY		147	0	147	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	12	15	12	93		
1	2021	ARMY		168	0	168			A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	168				
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10 **P-1 Line Item Number / Title:** 8260C53101 / MSE Missile **Item Number / Title [DODIC]:** C53101 / MSE Missile

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2023												Fiscal Year 2024												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	Calendar Year 2023												Calendar Year 2024												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
Missile Hardware																															
Prior Years Deliveries: 92																															
1		2015	ARMY	108	108	0																							0		
1		2016	ARMY	112	112	0																							0		
1		2017	ARMY	170	170	0																							0		
1		2018	ARMY	387	387	0																							0		
1		2019	ARMY	274	274	0																							0		
1		2020	ARMY	147	54	93	15	12	15	12	15	12	12																0		
1		2021	ARMY	168	0	168	-	-	-	-	-	-	-	-	14	14	14	14	14	14	14	14	14	14	14	14	14	14	0		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10		P-1 Line Item Number / Title: 8260C53101 / MSE Missile
		Item Number / Title [DODIC]: C53101 / MSE Missile

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2021	1-8-5 For 2021	MAX For 2021	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	LMMFC - Dallas, TX	72	300	350	0	6	18	24	0	6	18	24

Remarks:
The PAC-3 MSE production line includes deliveries for both US and Foreign Military Sales (FMS). Gaps between scheduled US missile deliveries are attributed to FMS. FMS and US combine to provide significant production line continuity and buying power efficiencies. Production Rates reflect annual production capacity.

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

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

Appropriation / Budget Activity / Budget Sub Activity:
2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 10: Surface-to-Air Missile System

P-1 Line Item Number / Title:
8540C29600 / PRECISION STRIKE MISSILE (PRSM)

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0607134A

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>)	-	-	-	30	-	30	110	178	350	350	-	1,018
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	-	-	49.941	-	49.941	168.416	210.058	335.088	309.906	-	1,073.409
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	-	-	49.941	-	49.941	168.416	210.058	335.088	309.906	-	1,073.409
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	-	-	49.941	-	49.941	168.416	210.058	335.088	309.906	-	1,073.409

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	1,664.700	-	1,664.700	1,531.055	1,180.101	957.394	885.446	-	1,054.429

Description:

Precision Strike Missile (PrSM), formerly known as Long Range Precision Fires (LRPF), is the Army's next generation surface-to-surface missile that replaces and improves upon Army Tactical Missile System (ATACMS) capabilities. PrSM requirements include: max range of greater than 400km, specified lethality against the designated target set, a Launch Pod Missile Container (LPMC) that holds two missiles, survivability in a threat environment, and compatibility with the existing launcher platforms (M270A2 Multiple Launch Rocket System (MLRS) and M142 High Mobility Artillery Rocket System (HIMARS)). PrSM will meet cluster and insensitive munition requirements and is being designed with an open system architecture that provides the capability for future growth to counter new and emerging threats. The mission of the PrSM System is to attack/neutralize/suppress/destroy targets using missile delivered indirect precision fires. PrSM will provide Joint Force Commanders with a 24/7, all-weather capability to attack critical and time sensitive area and point targets including threat air defense, missile launchers, command and control centers, assembly/ staging areas and high payoff targets at all depths of the multi-domain battlefield. PrSM will counter the enemy's ability to conduct combat maneuver and air defense operations.

The current Army Acquisition Objective is 2,422 PrSM missiles.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	30	-	30	110	178	350	350
	Total Obligation Authority	-	-	49.941	-	49.941	168.416	210.058	335.088	309.906
Total: Secondary Distribution	Quantity	-	-	30	-	30	110	178	350	350
	Total Obligation Authority	-	-	49.941	-	49.941	168.416	210.058	335.088	309.906

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 10: Surface-to-Air Missile System **P-1 Line Item Number / Title:** 8540C29600 / PRECISION STRIKE MISSILE (PRSM)

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0607134A

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-5	C29850 / PrSM Baseline	P-5a, P-21			- / -	- / -	- / -	30 / 49.941	- / -	30 / 49.941
P-40	Total Gross/Weapon System Cost				- / -	- / -	- / -	30 / 49.941	- / -	30 / 49.941

*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 Base procurement dollars in the amount of \$49.941M supports the production of 30 Urgent Material Release (UMR) PrSM missiles with Launch Pod Missile Containers (LPMC).
 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.
 This program supports the Long Range Precision Fires Cross Functional Team (CFT).
 PRECISION STRIKE MISSILE (PRSM) is a new start in FY2021.

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Exhibit P-5, Cost Analysis: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10	P-1 Line Item Number / Title: 8540C29600 / PRECISION STRIKE MISSILE (PRSM)	Item Number / Title [DODIC]: C29850 / PrSM Baseline
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	30	-	30
Gross/Weapon System Cost <i>(\$ in Millions)</i>	-	-	-	49.941	-	49.941
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	-	-	-	49.941	-	49.941
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	-	-	-	49.941	-	49.941

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

Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-
Gross/Weapon System Unit Cost <i>(\$ in Thousands)</i>	-	-	-	1,664.700	-	1,664.700

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
Recurring Production ^(†)	-	-	-	-	-	-	-	-	-	1,664.700	30	49.941	-	-	-	1,664.700	30	49.941
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	49.941	-	-	-	-	-	49.941
<i>Subtotal: Flyaway Cost</i>	-	-	-	-	-	-	-	-	-	-	-	49.941	-	-	-	-	-	49.941
Gross/Weapon System Cost	-	-	-	-	-	-	-	-	-	1,664.700	30	49.941	-	-	-	1,664.700	30	49.941

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army					
Quantity	-	-	30	-	30
Total Obligation Authority	-	-	49.941	-	49.941
Total:					
Quantity	-	-	30	-	30
Total Obligation Authority	-	-	49.941	-	49.941

(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10	P-1 Line Item Number / Title: 8540C29600 / PRECISION STRIKE MISSILE (PRSM)	Item Number / Title [DODIC]: C29850 / PrSM Baseline
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
Recurring Production ^(†)		2021	TBD / TBD	C / FFP	Aviation and Missile Command	Jul 2021	Oct 2022	30	1,664.700	N		Jul 2020

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2021 Army	Date: February 2020
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Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10	P-1 Line Item Number / Title: 8540C29600 / PRECISION STRIKE MISSILE (PRSM)	Item Number / Title [DODIC]: C29850 / PrSM Baseline
--	--	---

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2021												Fiscal Year 2022												BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021												Calendar Year 2022												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
Recurring Production																															
	1	2021	ARMY	30	0	30																							30		

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Exhibit P-21, Production Schedule: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10 **P-1 Line Item Number / Title:** 8540C29600 / PRECISION STRIKE MISSILE (PRSM) **Item Number / Title [DODIC]:** C29850 / PrSM Baseline

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2023												Fiscal Year 2024												BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	Calendar Year 2023												Calendar Year 2024												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
Recurring Production																															
	1	2021	ARMY	30	0	30	2	2	2	3	3	3	3	3	3	2	2	2											0		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2021 Army								Date: February 2020				
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10				P-1 Line Item Number / Title: 8540C29600 / PRECISION STRIKE MISSILE (PRSM)				Item Number / Title [DODIC]: C29850 / PrSM Baseline				
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2021	1-8-5 For 2021	MAX For 2021	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	TBD - TBD	2	3	5	0	10	15	25	0	10	15	25

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

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

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

Appropriation / Budget Activity / Budget Sub Activity:
2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 10: Surface-to-Air Missile System

P-1 Line Item Number / Title:
8930C61001 / INDIRECT FIRE PROTECTION CAPABILITY INC 2-I

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

Line Item MDAP/MAIS Code: 473

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>)	-	12	-	-	-	-	12	-	36	36	Continuing	Continuing
Gross/Weapon System Cost (<i>\$ in Millions</i>)	41.003	166.536	40.623	106.261	-	106.261	237.803	392.134	368.447	274.566	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	31.286	-	-	-	-	-	-	-	Continuing	Continuing
Net Procurement (P-1) (<i>\$ in Millions</i>)	41.003	166.536	9.337	106.261	-	106.261	237.803	392.134	368.447	274.566	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	31.286	-	-	-	-	-	-	-	-	Continuing	Continuing
Total Obligation Authority (<i>\$ in Millions</i>)	41.003	197.822	9.337	106.261	-	106.261	237.803	392.134	368.447	274.566	Continuing	Continuing

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	13,878.000	-	-	-	-	19,816.917	-	10,234.639	7,626.833	Continuing	Continuing

Description:

The Indirect Fire Protection Capability Increment 2 (IFPC Inc 2) will provide a ground-based weapon system designed to acquire, track, engage, and defeat Cruise Missiles (CM), Unmanned Aircraft Systems (UAS), and Rocket, Artillery, and Mortar (RAM) threats. The IFPC Inc 2 system consists of a launcher and interceptor integrated with the Army Integrated Air and Missile Defense (AIAMD) open systems architecture, IAMD Battle Command System (IBCS), and the Sentinel sensor to support the Threshold CM and UAS defeat mission. The Objective counter-RAM mission employs both alternative kinetic and non-kinetic defeat solutions.

In Fiscal Year (FY) 2018, the Army evaluated alternative strategies to address an Army interim CM defense (CMD) capability at critical strategic fixed site locations while continuing the development of an IFPC capability. On 5 December 2019, the Army signed a contract with the Israeli Missile Defense Organization (IMDO) for two Interim CMD (Iron Dome) Batteries. For each of the interim capability's Iron Dome Batteries, the Army intends to employ a configuration that matches the Israeli Firing Unit.

Concurrently with the Interim CMD assessment, the Army will develop a launcher and interceptor solution that is integrated with the IBSC and the Sentinel sensor. The Army's decision for the IFPC Inc 2 capability will decide between an U.S. industry-based CMD launcher/interceptor and a componentized Iron Dome launcher/TAMIR-class interceptor. The Army will utilize a tailored acquisition approach to evaluate new capability and provide residual operational capability in FY 2023 and then transition into procurement and field by FY 2025.

FY 2021 Base dollars in the amount of \$106.387 million are designated for procurement of the IFPC Inc 2 system.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	12	-	-	-	-	12	-	36	36
Total Obligation Authority	197.822	9.337	106.261	-	106.261	237.803	392.134	368.447	274.566
Total:									
Secondary Distribution									
Quantity	12	-	-	-	-	12	-	36	36
Total Obligation Authority	197.822	9.337	106.261	-	106.261	237.803	392.134	368.447	274.566

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 10: Surface-to-Air Missile System **P-1 Line Item Number / Title:** 8930C61001 / INDIRECT FIRE PROTECTION CAPABILITY INC 2-I

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

Line Item MDAP/MAIS Code: 473

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-5	C62001 / IFPC Inc 2-I Block 1 Missile 1				- / 41.003	- / 166.536	- / -	- / -	- / -	- / -
P-5	C62002 / IFPC INC 2-I BLOCK 1 SYSTEM				- / -	12 / 0.000	- / 40.623	- / 106.261	- / -	- / 106.261
P-40	Total Gross/Weapon System Cost				- / 41.003	12 / 166.536	- / 40.623	- / 106.261	- / -	- / 106.261

*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:
 As reported in Oct 2018, the Army will rapidly field an interim capability with the Israeli Iron Dome. Concurrently, the Army will integrate an IFPC capability of a launcher and interceptor leveraging the Army Integrated Air and Missile Defense (AIAMD) open systems architecture and IAMD Battle Command System (IBCS) as the Fire Control component, and US sensor (Sentinel).

 The Army approved a Directed Requirement to initiate procurement of the Israeli Iron Dome Missile System for an Interim CMD capability on 9 Feb 2019. Congress approved Above Threshold Reprogramming (ATR) actions to align IFPC FY 2018 and 2019 Procurement to fund the Interim CMD (Iron Dome) purchase and to repurpose the FY 2019 RDTE funds in May 2019.

 To support the Interim CMD requirement, the Army has signed a 10 U.S. code, paragraph 2373 procurement contract to procure two interim Iron Dome batteries for technical evaluation, assessment of operational utility, and safety evaluation. The Army is analyzing the availability of the IFPC Inc 2 materiel solution for a residual operational capability in the FY 2023/2024 timeframe mitigating the requirement for additional Interim CMD (Iron Dome) procurements. If continued assessment is determined to be necessary, the Army will procure two additional Interim CMD firing units through a modification to the 2373 procurement contract in FY 2021/2022 to meet the FY 2019 NDAA intent of a second set of Interim CMD units by FY 2023.

 To inform the IFPC solution, the Army verified technology readiness of interceptor alternatives in FY 2018 and received proposals for technology readiness assessments on launcher alternatives in FY 2019. These actions will inform the IFPC materiel solution decision. The Army will continue launcher and interceptor integration and testing to support the IFPC Inc 2 Production Decision planned for 1QFY2024 and unit fielding in FY 2025. A limited procurement is anticipated starting in FY 2023 to support the FY 2025 fielding.

 In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-81), 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.

 This program supports the Air and Missile Defense Cross Functional Team (CFT).

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Exhibit P-5, Cost Analysis: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10	P-1 Line Item Number / Title: 8930C61001 / INDIRECT FIRE PROTECTION CAPABILITY INC 2-I	Item Number / Title [DODIC]: C62001 / IFPC Inc 2-I Block 1 Missile 1

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	41.003	166.536	-	-	-	-
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	41.003	166.536	-	-	-	-
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	41.003	166.536	-	-	-	-

(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)	244.065	2,191.263	-	-	-	-

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
TAMIR Missiles and Associated Magazines	163.315	165	26.947	163.040	75	12.228	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	26.947	-	-	12.228	-	-	-	-	-	-	-	-	-	-	-	-
Non Recurring Cost																		
Iron Dome Missile firing Unit with Prime Mover	-	-	-	1,900.083	12	22.801	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	22.801	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Flyaway Cost</i>	-	-	26.947	-	-	35.029	-	-	-	-	-	-	-	-	-	-	-	-
Hardware Cost																		
Non Recurring Cost																		
Iron Dome ELM-2084 Multi-Mission Radar	-	-	-	25,374.500	2	50.749	-	-	-	-	-	-	-	-	-	-	-	-
Iron Dome Battle Manangement Center	-	-	-	3,240.000	2	6.480	-	-	-	-	-	-	-	-	-	-	-	-
Iron Dome Communications Shelter with Prime Mover	-	-	-	3,553.500	2	7.107	-	-	-	-	-	-	-	-	-	-	-	-
Iron Dome Radar Control Shelter &	-	-	-	5,582.500	2	11.165	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10	P-1 Line Item Number / Title: 8930C61001 / INDIRECT FIRE PROTECTION CAPABILITY INC 2-I	Item Number / Title [DODIC]: C62001 / IFPC Inc 2-I Block 1 Missile 1

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Generator with Prime Mover																		
Iron Dome Ammunition & Maintenance Vehicles	-	-	-	3,420.500	2	6.841	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	82.342	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	82.342	-	-	-	-	-	-	-	-	-	-	-	-
Package Fielding Cost																		
Non Recurring Cost																		
Initial Repair Parts/ Support Equipment	-	-	-	-	-	23.225	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	23.225	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Package Fielding Cost</i>	-	-	-	-	-	23.225	-	-	-	-	-	-	-	-	-	-	-	-
Support - Congressional Adjustments Cost																		
Congressional Rescission	-	-	5.182	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Congressional Adjustments Cost</i>	-	-	5.182	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - Government Furnished Materials Cost																		
Government Furnished Materials	-	-	8.874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Government Furnished Materials Cost</i>	-	-	8.874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - Program Management Cost																		
Contractor Management	-	-	-	-	-	25.940	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Program Management Cost</i>	-	-	-	-	-	25.940	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	244.065	-	41.003	2,191.263	-	166.536	-	-	-	-	-	-	-	-	-	-	-	-

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-

UNCLASSIFIED

Exhibit P-5, Cost Analysis: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10	P-1 Line Item Number / Title: 8930C61001 / INDIRECT FIRE PROTECTION CAPABILITY INC 2-I	Item Number / Title [DODIC]: C62001 / IFPC Inc 2-I Block 1 Missile 1

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
	Total Obligation Authority	166.536	-	-	-	-
Total:	Quantity	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	166.536	-	-	-	-

UNCLASSIFIED

Exhibit P-5, Cost Analysis: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10	P-1 Line Item Number / Title: 8930C61001 / INDIRECT FIRE PROTECTION CAPABILITY INC 2-I	Item Number / Title [DODIC]: C62002 / IFPC INC 2-I BLOCK 1 SYSTEM

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	12	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	-	0.000	40.623	106.261	-	106.261
Less PY Advance Procurement (\$ in Millions)	-	-	31.286	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	0.000	9.337	106.261	-	106.261
Plus CY Advance Procurement (\$ in Millions)	-	31.286	-	-	-	-
Total Obligation Authority (\$ in Millions)	-	31.286	9.337	106.261	-	106.261

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

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

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Non Recurring Cost																		
TAMIR Missiles and Associated Magazines	-	-	-	-	-	-	-	-	-	169.825	240	40.758	-	-	-	169.825	240	40.758
Iron Dome Launcher	-	-	-	-	-	-	2,607.167	12	31.286	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	-	-	-	31.286	-	-	40.758	-	-	-	-	-	40.758
Subtotal: Hardware Cost	-	-	-	-	-	-	-	-	31.286	-	-	40.758	-	-	-	-	-	40.758
Support - Fielding Cost																		
Fielding	-	-	-	-	-	-	396.500	12	4.758	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Fielding Cost</i>	-	-	-	-	-	-	-	-	4.758	-	-	-	-	-	-	-	-	-
Support - Government Furnished Materials Cost																		
Government Furnished Materials	-	-	-	-	-	-	-	-	-	-	-	40.492	-	-	-	-	-	40.492
<i>Subtotal: Support - Government Furnished Materials Cost</i>	-	-	-	-	-	-	-	-	-	-	-	40.492	-	-	-	-	-	40.492
Support - Logistics Cost																		
Integrated Logistics Support	-	-	-	-	-	-	-	-	-	-	-	25.011	-	-	-	-	-	25.011
<i>Subtotal: Support - Logistics Cost</i>	-	-	-	-	-	-	-	-	-	-	-	25.011	-	-	-	-	-	25.011
Support - Program Management Cost																		

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Exhibit P-5, Cost Analysis: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10	P-1 Line Item Number / Title: 8930C61001 / INDIRECT FIRE PROTECTION CAPABILITY INC 2-I	Item Number / Title [DODIC]: C62002 / IFPC INC 2-I BLOCK 1 SYSTEM
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Government Management	-	-	-	-	-	-	-	-	4.579	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Program Management Cost</i>	-	-	-	-	-	-	-	-	4.579	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	-	-	-	-	12	0.000	-	-	40.623	-	-	106.261	-	-	-	-	-	106.261

Remarks:
FY 2019 funding of \$31.286M was realigned from Advance Procurement to Base Procurement as part of Above Threshold Reprogramming (ATR) 19-04 to procure a portion of the FY 2019 Interim CMD (Iron Dome) hardware.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	12	-	-	-	-
	Total Obligation Authority	31.286	9.337	106.261	-	106.261
Total:	Quantity	12	-	-	-	-
Secondary Distribution	Total Obligation Authority	31.286	9.337	106.261	-	106.261

UNCLASSIFIED

Exhibit P-40, Advance Procurement Budget Line Item Justification: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 10: Surface-to-Air Missile System	P-1 Line Item Number / Title: 8930C61001 / INDIRECT FIRE PROTECTION CAPABILITY INC 2-I
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Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: 473

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
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	31.286	-	-	-	-	-	-	-	-	Continuing	Continuing
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	31.286	-	-	-	-	-	-	-	-	Continuing	Continuing
Total Obligation Authority (<i>\$ in Millions</i>)	-	31.286	-	-	-	-	-	-	-	-	Continuing	Continuing

Description:

The Indirect Fire Protection Capability Increment 2 (IFPC Inc 2) will provide a ground-based weapon system designed to acquire, track, engage, and defeat Cruise Missiles (CM), Unmanned Aircraft Systems (UAS), and Rocket, Artillery, and Mortar (RAM) threats. The IFPC Inc 2 system consists of a launcher and interceptor integrated with the Army Integrated Air and Missile Defense (AIAMD) open systems architecture, IAMD Battle Command System (IBCS), and the Sentinel sensor to support the Threshold CM and UAS defeat mission. The Objective counter-RAM mission employs both alternative kinetic and non-kinetic defeat solutions.

In Fiscal Year (FY) 2018, the Army evaluated alternative strategies to address an Army interim CM defense (CMD) capability at critical strategic fixed site locations while continuing the development of an IFPC capability. On 5 December 2019, the Army signed a contract with the Israeli Missile Defense Organization (IMDO) for two Interim CMD (Iron Dome) Batteries. For each of the interim capability's Iron Dome Batteries, the Army intends to employ a configuration that matches the Israeli Firing Unit.

Concurrently with the Interim CMD assessment, the Army will develop a launcher and interceptor solution that is integrated with the IBCS and the Sentinel sensor. The Army's decision for the IFPC Inc 2 capability will decide between an U.S. industry-based CMD launcher/interceptor and a componentized Iron Dome launcher/TAMIR-class interceptor. The Army will utilize a tailored acquisition approach to evaluate new capability and provide residual operational capability in FY 2023 and then transition into procurement and field by FY 2025.

No acquisition of Advance Procurement items is planned for FY 2021 funds.

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Exhibit P-40, Advance Procurement Budget Line Item Justification: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 10: Surface-to-Air Missile System	P-1 Line Item Number / Title: 8930C61001 / INDIRECT FIRE PROTECTION CAPABILITY INC 2-I
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Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: 473

Exhibits Schedule				Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-10	C62002 / IFPC INC 2-I BLOCK 1 SYSTEM			- / -	12 / 31.286	- / -	- / -	- / -	- / -
P-40	Total Gross/Weapon System Cost			- / -	12 / 31.286	- / -	- / -	- / -	- / -

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

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

Justification:
 No acquisition of advance procurement items is planned for FY 2021 funds.

In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-81), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

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Exhibit P-10, Advance Procurement Requirements Analysis (page 1 - Budget Funding Justification): PB 2021 Army					Date: February 2020	
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10		P-1 Line Item Number / Title: 8930C61001 / INDIRECT FIRE PROTECTION CAPABILITY INC 2-I			P-5 Number / Title: C62002 / IFPC INC 2-I BLOCK 1 SYSTEM	
First System (2021) Award Date: April 2019		First System (2021) Completion Date: December 2020			Interval Between Systems: 12 Months	
IFPC INC 2-I BLOCK 1 SYSTEM		Production Leadtime <i>(Months)</i>	Prior Years <i>(Each)</i>	FY 2019 <i>(Each)</i>	FY 2020 <i>(Each)</i>	FY 2021 <i>(Each)</i>
Quantity			-	12	-	-
Cost Elements		When Required <i>(Months)</i>	Prior Years <i>(\$ M)</i>	FY 2019 <i>(\$ M)</i>	FY 2020 <i>(\$ M)</i>	FY 2021 <i>(\$ M)</i>
Other						
ATR - Realign to Base for Iron Dome Procurement		-	-	31.286	-	-
<i>Total: Other</i>			-	31.286	-	-
Total Advance Procurement/Obligation Authority			-	31.286	-	-

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Exhibit P-10, Advance Procurement Requirements Analysis (page 2 - Budget Funding Justification): PB 2021 Army						Date: February 2020	
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 10		P-1 Line Item Number / Title: 8930C61001 / INDIRECT FIRE PROTECTION CAPABILITY INC 2-I			P-5 Number / Title: C62002 / IFPC INC 2-I BLOCK 1 SYSTEM		
		FY 2021					
Cost Elements	QPA (Each)	Production Leadtime (Months)	Unit Cost (\$ K)	Contract Forecast Date	2021 Qty (Each)	For FY	Total Cost Request (\$ M)
Other							
ATR - Realign to Base for Iron Dome Procurement		-					-
<i>Total: Other</i>							-
Total Advance Procurement/Obligation Authority							-

Description:

FY 2017 Advance Procurement of MML materials for \$19.319 million was Rescinded by NDAA FY2018.

FY 2019 Advance Procurement of MML materials for \$31.286 million was realigned to Base Procurement funding to support the Procurement of the Interim CMD (Iron Dome) capability.

No acquisition of Advance Procurement items is planned for FY 2021 funds.

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 20: Air-To-Surface Missile System **P-1 Line Item Number / Title:** 1338C70000 / Hellfire Sys Summary

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0203802A, 0210109A

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>)	74,479	2,034	4,902	428	3,090	3,518	1,154	1,410	44	-	Continuing	Continuing
Gross/Weapon System Cost (<i>\$ in Millions</i>)	4,450.256	193.674	425.549	91.225	236.265	327.490	147.329	182.703	36.216	15.765	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	44.275	-	-	-	-	-	-	-	-	-	-	44.275
Net Procurement (P-1) (<i>\$ in Millions</i>)	4,405.981	193.674	425.549	91.225	236.265	327.490	147.329	182.703	36.216	15.765	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	44.275	-	-	-	-	-	-	-	-	-	-	44.275
Total Obligation Authority (<i>\$ in Millions</i>)	4,450.256	193.674	425.549	91.225	236.265	327.490	147.329	182.703	36.216	15.765	Continuing	Continuing

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	59.752	95.218	86.811	213.143	76.461	93.090	127.668	129.577	823.091	-	Continuing	Continuing

Description:

The HELLFIRE II and Longbow family of air-to-ground missiles (all variants) provide attack helicopters and unmanned aircraft systems (UAS) with point-target precision strike capability to defeat heavy, advanced armor, individual hard point and non-traditional targets. HELLFIRE II Missiles use a semi-active laser terminal guidance and are the primary armaments of the AH-64 Apache, Army UAS and Special Operations aircraft. The HELLFIRE II includes Electro-Optical Countermeasure capability, warhead improvements and an updated electronic fuze. The AGM-114R HELLFIRE II family of missiles replaces all other HELLFIRE II missile configurations (K/N/M/P) except HELLFIRE II Longbow. HELLFIRE II procurement funding supports the entire HELLFIRE II and HELLFIRE Longbow systems to include resolution of obsolescence, end-of-life buys, safety, insensitive munitions, reliability, weapon integration activities, test sets, engineering changes, facilitization, production ramp-up activities and production issues. This missile is compatible on all current force UAS and rotary wing platforms.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	2,034	4,902	428	3,090	3,518	1,154	1,410	44	-
Total Obligation Authority	193.674	425.549	91.225	236.265	327.490	147.329	182.703	36.216	15.765
Total:									
Secondary Distribution									
Quantity	2,034	4,902	428	3,090	3,518	1,154	1,410	44	-
Total Obligation Authority	193.674	425.549	91.225	236.265	327.490	147.329	182.703	36.216	15.765

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 20: Air-To-Surface Missile System **P-1 Line Item Number / Title:** 1338C70000 / Hellfire Sys Summary

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0203802A, 0210109A

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-5	C70100 / LASER HELLFIRE MSL (BASIC/IHW/HFII)	P-5a, P-21			74,479 / 4,450.256	2,034 / 193.674	4,902 / 425.549	428 / 91.225	3,090 / 236.265	3,518 / 327.490
P-40	Total Gross/Weapon System Cost				74,479 / 4,450.256	2,034 / 193.674	4,902 / 425.549	428 / 91.225	3,090 / 236.265	3,518 / 327.490

*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:
 FY2021 funding totals include \$91.225M in Base with a quantity of 428 and \$236.265M in OCO with a quantity of 3,090.
 FY2021 All-up Round Unit Cost is based on a total qty of 7,659 missiles across all Customers. The Air-to-Ground Missile Systems (AGMS) Family of Munitions Production Capacity of 11,000 is shared by all customers (Army, AF, Navy, & FMS) and all AGMS missile variants (HF, JAGM, & Trainers). FY2021 has an available capacity of 3,341 AGMS missiles. Total procurement quantities decreased due to a \$153M reduction to the Army FY2021 budget and a \$48M reduction to the AF FY2021 budget.

 The Army intends to convert any price advantage created through contract negotiations, other service procurement and/or Foreign Military sales (FMS) to increase the Army procurement of HELLFIRE II missiles.

 The historical Army Acquisition Objective was 34,292.

 HELLFIRE Product Office is the Procuring Agency for all Services.

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

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Exhibit P-5, Cost Analysis: PB 2021 Army													Date: February 2020								
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 20						P-1 Line Item Number / Title: 1338C70000 / Hellfire Sys Summary						Item Number / Title [DODIC]: C70100 / LASER HELLFIRE MSL (BASIC/IHW/HFII)									
ID Code (A=Service Ready, B=Not Service Ready) :									MDAP/MAIS Code:												
Resource Summary				Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
Procurement Quantity (<i>Units in Each</i>)				74,479			2,034			4,902			428			3,090			3,518		
Gross/Weapon System Cost (<i>\$ in Millions</i>)				4,450.256			193.674			425.549			91.225			236.265			327.490		
Less PY Advance Procurement (<i>\$ in Millions</i>)				-			-			-			-			-			-		
Net Procurement (P-1) (<i>\$ in Millions</i>)				4,450.256			193.674			425.549			91.225			236.265			327.490		
Plus CY Advance Procurement (<i>\$ in Millions</i>)				-			-			-			-			-			-		
Total Obligation Authority (<i>\$ in Millions</i>)				4,450.256			193.674			425.549			91.225			236.265			327.490		
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																					
Initial Spares (<i>\$ in Millions</i>)				-			-			-			-			-			-		
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)				59.752			95.218			86.811			213.143			76.461			93.090		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																					
Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total					
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)			
Flyaway Cost																					
Recurring Cost																					
All-up Rounds ^(†)	45.544	74,479	3,392.067	78.228	2,034	159.116	72.094	5,112	368.544	76.460	428	32.725	76.461	3,090	236.265	76.461	3,518	268.990			
Engineering Services	-	-	496.779	-	-	1.159	-	-	31.591	-	-	29.387	-	-	-	-	-	29.387			
Acceptance Testing	-	-	86.954	-	-	1.795	-	-	2.086	-	-	1.499	-	-	-	-	-	1.499			
<i>Subtotal: Recurring Cost</i>	-	-	<i>3,975.800</i>	-	-	<i>162.070</i>	-	-	<i>402.221</i>	-	-	<i>63.611</i>	-	-	<i>236.265</i>	-	-	<i>299.876</i>			
<i>Subtotal: Flyaway Cost</i>	-	-	<i>3,975.800</i>	-	-	<i>162.070</i>	-	-	<i>402.221</i>	-	-	<i>63.611</i>	-	-	<i>236.265</i>	-	-	<i>299.876</i>			
Support - Fielding Cost																					
Fielding	-	-	39.367	-	-	6.119	-	-	4.982	-	-	5.141	-	-	-	-	-	5.141			
<i>Subtotal: Support - Fielding Cost</i>	-	-	<i>39.367</i>	-	-	<i>6.119</i>	-	-	<i>4.982</i>	-	-	<i>5.141</i>	-	-	-	-	-	<i>5.141</i>			
Support - Production Engineering Cost																					
Production Engineering	-	-	195.259	-	-	13.547	-	-	9.984	-	-	15.502	-	-	-	-	-	15.502			
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	<i>195.259</i>	-	-	<i>13.547</i>	-	-	<i>9.984</i>	-	-	<i>15.502</i>	-	-	-	-	-	<i>15.502</i>			
Support - Program Management Cost																					
Government Management	-	-	239.839	-	-	11.938	-	-	8.364	-	-	6.971	-	-	-	-	-	6.971			
<i>Subtotal: Support - Program Management Cost</i>	-	-	<i>239.839</i>	-	-	<i>11.938</i>	-	-	<i>8.364</i>	-	-	<i>6.971</i>	-	-	-	-	-	<i>6.971</i>			
Gross/Weapon System Cost	59.752	74,479	4,450.256	95.218	2,034	193.674	86.811	4,902	425.549	213.143	428	91.225	76.461	3,090	236.265	93.090	3,518	327.490			

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Exhibit P-5, Cost Analysis: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 20	P-1 Line Item Number / Title: 1338C70000 / Hellfire Sys Summary	Item Number / Title [DODIC]: C70100 / LASER HELLFIRE MSL (BASIC/IHW/HFII)

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

Remarks:
Fixed Price Incentive Fee (FPIF)

The production unit cost is based on all Services' base and Overseas Contingency Operations (OCO) quantity requirements known at this time. Above quantities are Army only. Total quantities include procurement by US Air Force, US Navy, US Army and FMS cases. Excess capacity will determine future FMS quantity availability. All procurement of Hellfire II AGM-114R missiles are reflected on the P21.

Exhibit P-5: Program Management and Production Engineering costs are allocated to services on a pro-rata share of quantities procured.

FY21 Program Management and Production Engineering costs increased based on the pro-rata share of these costs due to a \$153M reduction in the Army FY2021 funding and a \$48M reduction in the AF FY2021 funding.

Based on contract structure, all customers pay the same Unit Cost for the same configuration.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	2,034	4,902	428	3,090	3,518
	Total Obligation Authority	193.674	425.549	91.225	236.265	327.490
Total:	Quantity	2,034	4,902	428	3,090	3,518
Secondary Distribution	Total Obligation Authority	193.674	425.549	91.225	236.265	327.490

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

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Exhibit P-5a, Procurement History and Planning: PB 2021 Army							Date: February 2020					
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 20			P-1 Line Item Number / Title: 1338C70000 / Hellfire Sys Summary				Item Number / Title [DODIC]: C70100 / LASER HELLFIRE MSL (BASIC/IHW/HFII)					

Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
All-up Rounds		2016	HELLFIRE Sys Limited Liability / Orlando	SS / FPIF	Redstone Arsenal, AL	Feb 2017	Mar 2019	113	175.000	Y		Dec 2013
All-up Rounds		2016	HF Sys Limited Liability / Orlando	SS / FPIF	Redstone Arsenal, AL	Feb 2017	Mar 2019	270	121.000	Y		Dec 2013
All-up Rounds ^(†)		2017	Lockheed Missile and Fire Ctrl / Orlando	SS / FPIF	Redstone Arsenal, AL	Sep 2017	Oct 2019	4,362	74.160	Y		Dec 2013
All-up Rounds ^(†)	✓	2017	Lockheed Missile and Fire Ctrl / Orlando	SS / FPIF	Redstone Arsenal, AL	Sep 2017	Oct 2019	1,323	74.160	Y		Dec 2013
All-up Rounds ^(†)		2018	Lockheed Missile and Fire Ctrl / Orlando	SS / FPIF	Redstone Arsenal, AL	Sep 2018	Oct 2020	5,233	69.764	Y		Dec 2016
All-up Rounds ^(†)		2019	Lockheed Missile and Fire Ctrl / Orlando	SS / FPIF	Redstone Arsenal, AL	Apr 2019	Oct 2021	2,034	78.228	Y		Dec 2016
All-up Rounds ^(†)		2020	Lockheed Missile and Fire Ctrl / Orlando	SS / FPIF	Redstone Arsenal, AL	May 2020	Oct 2022	5,112	72.094	Y		Dec 2016
All-up Rounds ^(†)	✓	2021	Lockheed Missile and Fire Ctrl / Orlando	SS / FPIF	Redstone Arsenal, AL	May 2021	Oct 2023	3,090	76.461	Y		Dec 2016
All-up Rounds ^(†)		2021	Lockheed Missile and Fire Ctrl / Orlando	SS / FPIF	Redstone Arsenal, AL	May 2021	Oct 2023	428	76.460	Y		Dec 2016

^(†) indicates the presence of a P-21

Remarks:
Fixed Price Incentive Fee (FPIF)

The production unit cost is based on all Services' base and Overseas Contingency Operations (OCO) quantity requirements known at this time. Above quantities are Army only. Total quantities include procurement by US Air Force, US Navy, US Army and FMS cases. Excess capacity will determine future FMS quantity availability. All procurement of Hellfire II AGM-114R missiles are reflected on the P21.

See Exhibit P-5 for Unit Cost. Program Management, Production Engineering and unit cost may change based on quantities procured by all Services and Foreign Military Sales (FMS) customers.

Based on contract structure all customers pay the same Unit Cost for the same configuration.

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Exhibit P-21, Production Schedule: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 20		P-1 Line Item Number / Title: 1338C70000 / Hellfire Sys Summary
		Item Number / Title [DODIC]: C70100 / LASER HELLFIRE MSL (BASIC/IHW/HFII)

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2017													Fiscal Year 2018													B A L A N C E																
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017													Calendar Year 2018																											
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P																	
All-up Rounds																																															
Prior Years Deliveries: 63178																																															
	1	2017	ARMY	4,362	0	4,362																								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,362	
	1	2017	FMS (+)	965	0	965																								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	965
	1	2017	Total	5,327	0	5,327																								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,327	
✓	1	2017	ARMY	1,323	0	1,323																								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,323
	1	2018	ARMY	5,233	0	5,233																																								A -	5,233
	1	2018	FMS (+)	71	0	71																																								A -	71
	1	2018	Total	5,304	0	5,304																																							-	5,304	
	1	2019	ARMY	2,034	0	2,034																																								2,034	
	1	2019	FMS (+)	208	0	208																																								208	
	1	2019	Total	2,242	0	2,242																																								2,242	
	1	2020	AF (+)	3,859	0	3,859																																								3,859	
	1	2020	ARMY	5,112	0	5,112																																								5,112	
	1	2020	FMS (+)	681	0	681																																								681	
	1	2020	Total	9,652	0	9,652																																								9,652	
	1	2021	AF (+)	2,687	0	2,687																																								2,687	
	1	2021	ARMY	428	0	428																																								428	
	1	2021	Total Base	3,115	0	3,115																																								3,115	
✓	1	2021	ARMY	3,090	0	3,090																																								3,090	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P																	

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Exhibit P-21, Production Schedule: PB 2021 Army																							Date: February 2020										
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 20										P-1 Line Item Number / Title: 1338C70000 / Hellfire Sys Summary										Item Number / Title [DODIC]: C70100 / LASER HELLFIRE MSL (BASIC/IHW/HFII)													
Cost Elements (Units in Each)					Fiscal Year 2019													Fiscal Year 2020													B A L A N C E		
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019													Calendar Year 2020													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
All-up Rounds																																	
Prior Years Deliveries: 63178																																	
	1	2017	ARMY	4,362	0	4,362	-	-	-	-	-	-	-	-	-	-	-	-	-	364	364	364	364	364	364	364	364	364	364	363	359	0	
	1	2017	FMS (†)	965	0	965	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	965	
	1	2017	Total	5,327	0	5,327	-	-	-	-	-	-	-	-	-	-	-	-	-	364	364	364	364	364	364	364	364	364	363	359	965		
✓	1	2017	ARMY	1,323	0	1,323	-	-	-	-	-	-	-	-	-	-	-	-	-	111	111	111	111	111	111	111	111	111	111	102	0		
	1	2018	ARMY	5,233	0	5,233	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,233		
	1	2018	FMS (†)	71	0	71	-	-	-	-	-	-	-	-	-	-	-	-	-	6	6	6	6	6	6	6	6	6	6	5	0		
	1	2018	Total	5,304	0	5,304	-	-	-	-	-	-	-	-	-	-	-	-	-	6	6	6	6	6	6	6	6	6	6	5	5,233		
	1	2019	ARMY	2,034	0	2,034														A -	-	-	-	-	-	-	-	-	-	-	2,034		
	1	2019	FMS (†)	208	0	208														A -	-	-	-	-	-	-	-	-	-	-	208		
	1	2019	Total	2,242	0	2,242														-	-	-	-	-	-	-	-	-	-	-	2,242		
	1	2020	AF (†)	3,859	0	3,859																						A -	-	-	-	3,859	
	1	2020	ARMY	5,112	0	5,112																						A -	-	-	-	5,112	
	1	2020	FMS (†)	681	0	681																						A -	-	-	-	681	
	1	2020	Total	9,652	0	9,652														-	-	-	-	-	-	-	-	-	-	-	9,652		
	1	2021	AF (†)	2,687	0	2,687																									2,687		
	1	2021	ARMY	428	0	428																									428		
	1	2021	Total Base	3,115	0	3,115														-	-	-	-	-	-	-	-	-	-	-	3,115		
✓	1	2021	ARMY	3,090	0	3,090																									3,090		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2021 Army															Date: February 2020														
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 20										P-1 Line Item Number / Title: 1338C70000 / Hellfire Sys Summary										Item Number / Title [DODIC]: C70100 / LASER HELLFIRE MSL (BASIC/IHW/HFII)									

Cost Elements (Units in Each)						Fiscal Year 2021														Fiscal Year 2022														BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021														Calendar Year 2022														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
All-up Rounds																																			
Prior Years Deliveries: 63178																																			
	1	2017	ARMY	4,362	4,362	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
	1	2017	FMS (+)	965	0	965	81	81	81	81	81	80	80	80	80	80	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
	1	2017	Total	5,327	4,362	965	81	81	81	81	81	80	80	80	80	80	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
✓	1	2017	ARMY	1,323	1,323	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
	1	2018	ARMY	5,233	0	5,233	437	436	436	436	436	436	436	436	436	436	436	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
	1	2018	FMS (+)	71	71	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
	1	2018	Total	5,304	71	5,233	437	436	436	436	436	436	436	436	436	436	436	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
	1	2019	ARMY	2,034	0	2,034	-	-	-	-	-	-	-	-	-	-	-	170	170	170	170	170	170	169	169	169	169	169	169	169	169	0			
	1	2019	FMS (+)	208	0	208	-	-	-	-	-	-	-	-	-	-	-	18	18	18	18	17	17	17	17	17	17	17	17	17	17	0			
	1	2019	Total	2,242	0	2,242	-	-	-	-	-	-	-	-	-	-	188	188	188	188	187	187	186	186	186	186	186	186	186	186	0				
	1	2020	AF (+)	3,859	0	3,859	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,859			
	1	2020	ARMY	5,112	0	5,112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,112			
	1	2020	FMS (+)	681	0	681	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	681			
	1	2020	Total	9,652	0	9,652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9,652				
	1	2021	AF (+)	2,687	0	2,687	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,687			
	1	2021	ARMY	428	0	428	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	428			
	1	2021	Total Base	3,115	0	3,115	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,115				
✓	1	2021	ARMY	3,090	0	3,090	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,090			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2021 Army															Date: February 2020														
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 20										P-1 Line Item Number / Title: 1338C70000 / Hellfire Sys Summary										Item Number / Title [DODIC]: C70100 / LASER HELLFIRE MSL (BASIC/IHW/HFII)									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2023															Fiscal Year 2024															BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	Calendar Year 2023															Calendar Year 2024															
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P							
All-up Rounds																																					
Prior Years Deliveries: 63178																																					
	1	2017	ARMY	4,362	4,362	0																														0	
	1	2017	FMS (†)	965	965	0																														0	
	1	2017	Total	5,327	5,327	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
✓	1	2017	ARMY	1,323	1,323	0																													0		
	1	2018	ARMY	5,233	5,233	0																														0	
	1	2018	FMS (†)	71	71	0																														0	
	1	2018	Total	5,304	5,304	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
	1	2019	ARMY	2,034	2,034	0																														0	
	1	2019	FMS (†)	208	208	0																														0	
	1	2019	Total	2,242	2,242	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
	1	2020	AF (†)	3,859	0	3,859	322	322	322	322	322	322	321	321	321	321																				0	
	1	2020	ARMY	5,112	0	5,112	426	426	426	426	426	426	426	426	426	426																			0		
	1	2020	FMS (†)	681	0	681	57	57	57	57	57	57	57	57	56	56	56																		0		
	1	2020	Total	9,652	0	9,652	805	805	805	805	805	805	804	804	803	803	803	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
	1	2021	AF (†)	2,687	0	2,687	-	-	-	-	-	-	-	-	-	-	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	223		0		
	1	2021	ARMY	428	0	428	-	-	-	-	-	-	-	-	-	-	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	32		0			
	1	2021	Total Base	3,115	0	3,115	-	-	-	-	-	-	-	-	-	260	260	260	260	260	260	260	260	260	260	260	260	260	260	255		0					
✓	1	2021	ARMY	3,090	0	3,090	-	-	-	-	-	-	-	-	-	258	258	258	258	258	258	258	258	258	258	258	258	258	258	258	252		0				
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P							

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Exhibit P-21, Production Schedule: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 20		P-1 Line Item Number / Title: 1338C70000 / Hellfire Sys Summary
Item Number / Title [DODIC]: C70100 / LASER HELLFIRE MSL (BASIC/IHW/HFII)		

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2021	1-8-5 For 2021	MAX For 2021	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Lockheed Missile and Fire Ctrl - Orlando	3,600	6,000	11,000	5	12	24	36	5	12	24	36

Remarks:

Yearly Minimum Sustainment Rate (MSR) = 3,600 missiles.
 Yearly Economical Production Rate (1-8-5) = 6,000 missiles.
 Yearly Maximum Production Rate (MPR) = 11,000 missiles.

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

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

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

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

Appropriation / Budget Activity / Budget Sub Activity:
2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 20: Air-To-Surface Missile System

P-1 Line Item Number / Title:
2605C70302 / Joint Air-to-Ground MSLS (JAGM)

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0605450A

Line Item MDAP/MAIS Code: 355

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>)	1,272	721	494	657	-	657	294	603	544	548	-	5,133
Gross/Weapon System Cost (<i>\$ in Millions</i>)	313.244	256.462	199.295	213.397	-	213.397	165.494	213.375	208.607	206.140	-	1,776.014
Less PY Advance Procurement (<i>\$ in Millions</i>)	64.456	-	-	-	-	-	-	-	-	-	-	64.456
Net Procurement (P-1) (<i>\$ in Millions</i>)	248.788	256.462	199.295	213.397	-	213.397	165.494	213.375	208.607	206.140	-	1,711.558
Plus CY Advance Procurement (<i>\$ in Millions</i>)	64.456	-	-	-	-	-	-	-	-	-	-	64.456
Total Obligation Authority (<i>\$ in Millions</i>)	313.244	256.462	199.295	213.397	-	213.397	165.494	213.375	208.607	206.140	-	1,776.014

(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>)	246.261	355.703	403.431	324.805	-	324.805	562.905	353.856	383.469	376.168	-	345.999

Description:

The Joint Air-to-Ground Missile (JAGM) program is an Army-led, Acquisition Category (ACAT) IC Major Defense Acquisition Program (MDAP) with joint interest with the U.S. Marine Corps (USMC), U.S. Navy, and U.S. Air Force. The JAGM is the next generation of aviation-launched, fire and forget missiles to replace all variants of HELLFIRE. The JAGM multi-mode Guidance Section is integrated with the combat proven HELLFIRE II (AGM-114R) propulsion, warhead, and control section. JAGM will be used by joint service aircraft for destruction of high value stationary, moving, and relocatable land and maritime targets from standoff range in day, night, adverse weather, and obscured battlefield conditions. The program's threshold platforms are the U.S. Army AH-64E Apache and USMC AH-1Z. JAGM procurement funding supports the entire JAGM system to include resolution of obsolescence, training devices for tactical training, safety, reliability, weapon integration activities, test sets, engineering services, facilitization, production ramp-up activities and production issues.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	721	494	657	-	657	294	603	544	548
Total Obligation Authority	256.462	199.295	213.397	-	213.397	165.494	213.375	208.607	206.140
Total:									
Secondary Distribution									
Quantity	721	494	657	-	657	294	603	544	548
Total Obligation Authority	256.462	199.295	213.397	-	213.397	165.494	213.375	208.607	206.140

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 20: Air-To-Surface Missile System **P-1 Line Item Number / Title:** 2605C70302 / Joint Air-to-Ground MSLS (JAGM)

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0605450A

Line Item MDAP/MAIS Code: 355

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-5	C70302 / Joint Air-to-Ground MSLS (JAGM)	P-5a, P-21			1,272 / 313.244	721 / 256.462	494 / 199.295	657 / 213.397	- / -	657 / 213.397
P-40	Total Gross/Weapon System Cost				1,272 / 313.244	721 / 256.462	494 / 199.295	657 / 213.397	- / -	657 / 213.397

*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 procurement dollars in the amount of \$213.397M supports the procurement of 657 missiles and Project Management Cost and Engineering Services funding.
 The Army intends to convert any price advantage created through contract negotiations and/or other service procurement to increase the Army procurement of JAGM missiles.
 The JAGM Product Office is the procurement agent for all services.
 The Army Acquisition Objective is 20,303.
 In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

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Exhibit P-5, Cost Analysis: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 20	P-1 Line Item Number / Title: 2605C70302 / Joint Air-to-Ground MSLS (JAGM)	Item Number / Title [DODIC]: C70302 / Joint Air-to-Ground MSLS (JAGM)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	1,272	721	494	657	-	657
Gross/Weapon System Cost (\$ in Millions)	313.244	256.462	199.295	213.397	-	213.397
Less PY Advance Procurement (\$ in Millions)	64.456	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	248.788	256.462	199.295	213.397	-	213.397
Plus CY Advance Procurement (\$ in Millions)	64.456	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	313.244	256.462	199.295	213.397	-	213.397

(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)	246.261	355.703	403.431	324.805	-	324.805

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
All Up Rounds (AUR) ^(†)	175.361	1,272	223.059	223.569	721	161.193	201.368	494	99.476	203.965	657	134.005	-	-	-	203.965	657	134.005
Engineering Services	-	-	17.631	-	-	19.016	-	-	17.235	-	-	20.419	-	-	-	-	-	20.419
Guidance Section Long Lead Items	-	-	38.600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acceptance Testing	-	-	-	-	-	1.224	-	-	1.915	-	-	1.953	-	-	-	-	-	1.953
Subtotal: Recurring Cost	-	-	279.290	-	-	181.433	-	-	118.626	-	-	156.377	-	-	-	-	-	156.377
Non Recurring Cost																		
HELLFIRE Backend Long Lead Items	-	-	25.856	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tooling and Test Equipment	-	-	-	-	-	6.785	-	-	7.334	-	-	5.284	-	-	-	-	-	5.284
Subtotal: Non Recurring Cost	-	-	25.856	-	-	6.785	-	-	7.334	-	-	5.284	-	-	-	-	-	5.284
Subtotal: Flyaway Cost	-	-	305.146	-	-	188.218	-	-	125.960	-	-	161.661	-	-	-	-	-	161.661
Support - Fielding Cost																		
Fielding	-	-	-	-	-	0.890	-	-	0.875	-	-	0.893	-	-	-	-	-	0.893
Subtotal: Support - Fielding Cost	-	-	-	-	-	0.890	-	-	0.875	-	-	0.893	-	-	-	-	-	0.893
Support - Initial Spares and Repair Parts Cost																		

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Exhibit P-5, Cost Analysis: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 20	P-1 Line Item Number / Title: 2605C70302 / Joint Air-to-Ground MSLS (JAGM)	Item Number / Title [DODIC]: C70302 / Joint Air-to-Ground MSLS (JAGM)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Initial Spares and Repair Parts	-	-	-	-	-	-	-	-	1.926	-	-	1.206	-	-	-	-	-	1.206
<i>Subtotal: Support - Initial Spares and Repair Parts Cost</i>	-	-	-	-	-	-	-	-	1.926	-	-	1.206	-	-	-	-	-	1.206
Support - Non-Recurring Support Cost																		
Facilitization	-	-	-	-	-	20.438	-	-	19.985	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Non-Recurring Support Cost</i>	-	-	-	-	-	20.438	-	-	19.985	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	4.621	-	-	28.063	-	-	21.826	-	-	19.695	-	-	-	-	-	19.695
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	4.621	-	-	28.063	-	-	21.826	-	-	19.695	-	-	-	-	-	19.695
Support - Program Management Cost																		
Government Management	-	-	3.477	-	-	14.938	-	-	12.055	-	-	13.932	-	-	-	-	-	13.932
<i>Subtotal: Support - Program Management Cost</i>	-	-	3.477	-	-	14.938	-	-	12.055	-	-	13.932	-	-	-	-	-	13.932
Support - System Test and Evaluation Cost																		
Test and Evaluation Support	-	-	-	-	-	3.915	-	-	16.668	-	-	16.010	-	-	-	-	-	16.010
<i>Subtotal: Support - System Test and Evaluation Cost</i>	-	-	-	-	-	3.915	-	-	16.668	-	-	16.010	-	-	-	-	-	16.010
Gross/Weapon System Cost	246.261	1,272	313.244	355.703	721	256.462	403.431	494	199.295	324.805	657	213.397	-	-	-	324.805	657	213.397

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	721	494	657	-	657
	Total Obligation Authority	256.462	199.295	213.397	-	213.397
Total:	Quantity	721	494	657	-	657
Secondary Distribution	Total Obligation Authority	256.462	199.295	213.397	-	213.397

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

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Exhibit P-5a, Procurement History and Planning: PB 2021 Army							Date: February 2020					
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 20			P-1 Line Item Number / Title: 2605C70302 / Joint Air-to-Ground MSLS (JAGM)				Item Number / Title [DODIC]: C70302 / Joint Air-to-Ground MSLS (JAGM)					

Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
All Up Rounds (AUR) ^(†)		2017	Lockheed Martin / Orlando	C / FPIF	Redstone Arsenal, AL	Aug 2018	Dec 2018	373	165.980	Y		Feb 2015
All Up Rounds (AUR) ^(†)		2018	Lockheed Martin / Orlando	C / FPIF	Redstone Arsenal, AL	Sep 2018	Dec 2019	899	170.284	Y		Feb 2015
All Up Rounds (AUR) ^(†)		2019	Lockheed Martin / Orlando	C / FPIF	Redstone Arsenal, AL	Nov 2019	Dec 2021	721	223.569	Y		Aug 2018
All Up Rounds (AUR) ^(†)		2020	Lockheed Martin / Orlando	SS / FPIF	Redstone Arsenal, AL	Nov 2020	Oct 2022	494	201.368	Y		Jun 2019
All Up Rounds (AUR) ^(†)		2021	Lockheed Martin / Orlando	SS / FPIF	Redstone Arsenal, AL	May 2021	Oct 2023	657	203.965	Y		Jun 2019

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2021 Army												Date: February 2020											
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 20						P-1 Line Item Number / Title: 2605C70302 / Joint Air-to-Ground MSLS (JAGM)						Item Number / Title [DODIC]: C70302 / Joint Air-to-Ground MSLS (JAGM)											

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2018												Fiscal Year 2019												B A L A N C E					
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEP T P R I O R T O 1 O C T 2 0 1 7	BAL D U E A S O F 1 O C T	Calendar Year 2018												Calendar Year 2019																
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P				
All Up Rounds (AUR)																																			
1	2017	ARMY		373	0	373											A	-	-	-	-	13	19	-	96	32	30	30	30	30	30	31	62		
1	2017	NAVY (‡)		104	0	104											A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	104	
1	2017	Total		477	0	477											-	-	-	-	-	13	19	-	96	32	30	30	30	30	30	31	166		
1	2018	ARMY		899	0	899											A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	899	
1	2019	ARMY		721	0	721																													721
1	2019	NAVY (‡)		75	0	75																													75
1	2019	Total		796	0	796																													796
1	2020	AF (‡)		60	0	60																													60
1	2020	ARMY		494	0	494																													494
1	2020	NAVY (‡)		320	0	320																													320
1	2020	Total		874	0	874																													874
1	2021	ARMY		657	0	657																													657
1	2021	NAVY (‡)		203	0	203																													203
1	2021	Total		860	0	860																													860
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2021 Army															Date: February 2020														
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 20										P-1 Line Item Number / Title: 2605C70302 / Joint Air-to-Ground MSLS (JAGM)										Item Number / Title [DODIC]: C70302 / Joint Air-to-Ground MSLS (JAGM)									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2020														Fiscal Year 2021														BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020														Calendar Year 2021														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
All Up Rounds (AUR)																																			
1		2017	ARMY	373	311	62	31	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
1		2017	NAVY (‡)	104	0	104	-	-	-	50	48	-	-	-	-	-	-	-	-	2	2	2	-	-	-	-	-	-	-	-	-	0			
1		2017	Total	477	311	166	31	31	-	50	48	-	-	-	-	-	-	-	-	2	2	2	-	-	-	-	-	-	-	-	0				
1		2018	ARMY	899	0	899	-	-	50	-	2	50	50	50	50	50	50	50	50	33	33	33	33	33	33	33	33	33	33	33	67				
1		2019	ARMY	721	0	721		A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	721				
1		2019	NAVY (‡)	75	0	75		A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	75				
1		2019	Total	796	0	796		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	796				
1		2020	AF (‡)	60	0	60														A -	-	-	-	-	-	-	-	-	-	-	60				
1		2020	ARMY	494	0	494														A -	-	-	-	-	-	-	-	-	-	-	494				
1		2020	NAVY (‡)	320	0	320														A -	-	-	-	-	-	-	-	-	-	-	320				
1		2020	Total	874	0	874														-	-	-	-	-	-	-	-	-	-	-	874				
1		2021	ARMY	657	0	657																									657				
1		2021	NAVY (‡)	203	0	203																									203				
1		2021	Total	860	0	860																									860				

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Exhibit P-21, Production Schedule: PB 2021 Army															Date: February 2020														
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 20										P-1 Line Item Number / Title: 2605C70302 / Joint Air-to-Ground MSLS (JAGM)										Item Number / Title [DODIC]: C70302 / Joint Air-to-Ground MSLS (JAGM)									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2022														Fiscal Year 2023														BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022														Calendar Year 2023														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
All Up Rounds (AUR)																																			
1		2017	ARMY	373	373	0																													0
1		2017	NAVY (‡)	104	104	0																													0
1		2017	Total	477	477	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
1		2018	ARMY	899	832	67	33	34																											0
1		2019	ARMY	721	0	721	-	-	60	60	60	60	60	60	60	60	60	60	61																0
1		2019	NAVY (‡)	75	0	75	-	-	8	7	8	7	8	7	8	7	8	7	-	-															0
1		2019	Total	796	0	796	-	-	68	67	68	67	68	67	68	67	68	67	60	61	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
1		2020	AF (‡)	60	0	60	-	-	-	-	-	-	-	-	-	-	-	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	0	
1		2020	ARMY	494	0	494	-	-	-	-	-	-	-	-	-	-	-	42	41	41	41	41	41	41	41	41	41	41	41	41	41	41	42	0	
1		2020	NAVY (‡)	320	0	320	-	-	-	-	-	-	-	-	-	-	-	27	27	27	26	26	26	26	26	26	26	26	26	26	26	31	0		
1		2020	Total	874	0	874	-	-	-	-	-	-	-	-	-	-	74	73	73	72	72	72	72	72	72	72	72	72	72	72	78	0			
1		2021	ARMY	657	0	657	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	657		
1		2021	NAVY (‡)	203	0	203	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	203		
1		2021	Total	860	0	860	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	860		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2021 Army															Date: February 2020														
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 20										P-1 Line Item Number / Title: 2605C70302 / Joint Air-to-Ground MSLS (JAGM)										Item Number / Title [DODIC]: C70302 / Joint Air-to-Ground MSLS (JAGM)									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2024														Fiscal Year 2025														BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	Calendar Year 2024														Calendar Year 2025														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
All Up Rounds (AUR)																																			
1	2017	ARMY		373	373	0																								0					
1	2017	NAVY (‡)		104	104	0																								0					
1	2017	Total		477	477	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0					
1	2018	ARMY		899	899	0																								0					
1	2019	ARMY		721	721	0																								0					
1	2019	NAVY (‡)		75	75	0																								0					
1	2019	Total		796	796	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0					
1	2020	AF (‡)		60	60	0																								0					
1	2020	ARMY		494	494	0																								0					
1	2020	NAVY (‡)		320	320	0																								0					
1	2020	Total		874	874	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0					
1	2021	ARMY		657	0	657	55	55	55	55	55	55	55	55	55	55	55	52												0					
1	2021	NAVY (‡)		203	0	203	17	17	17	17	17	17	17	17	17	17	16													0					
1	2021	Total		860	0	860	72	72	72	72	72	72	72	72	72	72	68	-	-	-	-	-	-	-	-	-	-	-	-	0					
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 20		P-1 Line Item Number / Title: 2605C70302 / Joint Air-to-Ground MSLS (JAGM)
		Item Number / Title [DODIC]: C70302 / Joint Air-to-Ground MSLS (JAGM)

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2021	1-8-5 For 2021	MAX For 2021	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Lockheed Martin - Orlando	600	1,200	2,400	5	12	24	36	5	12	24	36

Remarks:
FY 2020 total quantities includes Navy and Air Force purchases. FY 2021 total quantities includes Navy purchases.

(†) Delivery rows marked with this symbol indicate that they are funded through a separate Line Item. See the respective components' exhibits for details, including the full delivery schedule.
"A" in the Delivery Schedule indicates the Contract Award Date.

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

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 20: Air-To-Surface Missile System	P-1 Line Item Number / Title: 2607C71300 / Long Range Precision Mmunition
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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 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>)	-	-	-	45.307	-	45.307	-	-	-	-	-	45.307
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	-	-	45.307	-	45.307	-	-	-	-	-	45.307
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	-	-	45.307	-	45.307	-	-	-	-	-	45.307

(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 LRPM will provide Army Aviation with improved and longer range weapons, sub-systems, and munitions that can rapidly respond in a combat environment improving the survivability of the warfighters and weapon systems in an anti-access/area denial (A2/AD) and positioning, navigation, and timing (PNT) denied environment. The ability to interoperate and coordinate with other weapon systems and munitions at long ranges and adapt to changing threats is a core concept of the Army Aviation Weapons Sub-Systems and Munitions (AAWSSM) program.

The Spike Non-line of Sight (NLOS) directed requirement will federate an existing production system to the Apache AH-64 as an interim solution that will provide longer stand-off ranges in an anti-access/area denial (A2/AD) environment until a more effective integrated Army Aviation Weapons Sub-Systems and Munitions (AAWSSM) LRPM solution can be developed.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	45.307	-	45.307	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	45.307	-	45.307	-	-	-

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 20: Air-To-Surface Missile System **P-1 Line Item Number / Title:** 2607C71300 / Long Range Precision Munition

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

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 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-5	C71304 / LRPM-INTERIM				- / -	- / -	- / -	- / 45.307	- / -	- / 45.307
P-40	Total Gross/Weapon System Cost				- / -	- / -	- / -	- / 45.307	- / -	- / 45.307

*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 procurement dollars in the amount of \$45.307 million supports the Army Directed Requirement, Spike Non-Line of Sight (NLOS), for Army AH-64D/E: procurement of 205 missiles, Project Management Cost, and Engineering Services funding.

 The Army intends to convert any price advantage created through contract negotiations and/or other service procurement to increase the Army procurement of Spike Non-Line of Sight (SPIKE NLOS) Missiles.

 Long Range Precision Munition is a new start in FY2021.

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Exhibit P-5, Cost Analysis: PB 2021 Army													Date: February 2020							
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 20						P-1 Line Item Number / Title: 2607C71300 / Long Range Precision Munition						Item Number / Title [DODIC]: C71304 / LRPM-INTERIM								
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:										
Resource Summary				Prior Years		FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total						
Procurement Quantity (<i>Units in Each</i>)				-		-		-		-		-		-						
Gross/Weapon System Cost (<i>\$ in Millions</i>)				-		-		-		45.307		-		45.307						
Less PY Advance Procurement (<i>\$ in Millions</i>)				-		-		-		-		-		-						
Net Procurement (P-1) (<i>\$ in Millions</i>)				-		-		-		45.307		-		45.307						
Plus CY Advance Procurement (<i>\$ in Millions</i>)				-		-		-		-		-		-						
Total Obligation Authority (<i>\$ in Millions</i>)				-		-		-		45.307		-		45.307						
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																				
Initial Spares (<i>\$ in Millions</i>)				-		-		-		-		-		-		-				
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)				-		-		-		-		-		-		-				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																				
Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total				
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)		
Flyaway Cost																				
Recurring Cost																				
All Up Rounds	-	-	-	-	-	-	-	-	-	210.000	205	43.050	-	-	-	210.000	205	43.050		
Recurring Engineering	-	-	-	-	-	-	-	-	-	-	-	0.548	-	-	-	-	-	0.548		
Acceptance Testing	-	-	-	-	-	-	-	-	-	-	-	0.026	-	-	-	-	-	0.026		
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	43.624	-	-	-	-	-	43.624		
<i>Subtotal: Flyaway Cost</i>	-	-	-	-	-	-	-	-	-	-	-	43.624	-	-	-	-	-	43.624		
Support - Fielding Cost																				
Fielding	-	-	-	-	-	-	-	-	-	-	-	0.343	-	-	-	-	-	0.343		
<i>Subtotal: Support - Fielding Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.343	-	-	-	-	-	0.343		
Support - Program Management Cost																				
Government Management	-	-	-	-	-	-	-	-	-	-	-	1.340	-	-	-	-	-	1.340		
<i>Subtotal: Support - Program Management Cost</i>	-	-	-	-	-	-	-	-	-	-	-	1.340	-	-	-	-	-	1.340		
Gross/Weapon System Cost	-	-	-	-	-	-	-	-	-	-	-	45.307	-	-	-	-	-	45.307		
Secondary Distribution						FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
Army						Quantity			-			-			-			-		
						Total Obligation Authority						-			-			45.307		

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Exhibit P-5, Cost Analysis: PB 2021 Army				Date: February 2020		
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 20		P-1 Line Item Number / Title: 2607C71300 / Long Range Precision Munition		Item Number / Title [DODIC]: C71304 / LRPM-INTERIM		
ID Code (A=Service Ready, B=Not Service Ready) :			MDAP/MAIS Code:			
Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Total:	Quantity	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	-	-	45.307	-	45.307

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/ Assault Missile Sys	P-1 Line Item Number / Title: 0648CC0007 / Javelin (AAWS-M) System Summary
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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: 0604611A
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Line Item MDAP/MAIS Code: 280

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>)	31,400	1,247	697	773	-	773	520	752	1,157	1,193	-	37,739
Gross/Weapon System Cost (<i>\$ in Millions</i>)	5,110.934	245.485	142.794	190.325	-	190.325	137.638	167.949	229.197	238.660	-	6,462.982
Less PY Advance Procurement (<i>\$ in Millions</i>)	100.622	-	-	-	-	-	-	-	-	-	-	100.622
Net Procurement (P-1) (<i>\$ in Millions</i>)	5,010.312	245.485	142.794	190.325	-	190.325	137.638	167.949	229.197	238.660	-	6,362.360
Plus CY Advance Procurement (<i>\$ in Millions</i>)	100.622	-	-	-	-	-	-	-	-	-	-	100.622
Total Obligation Authority (<i>\$ in Millions</i>)	5,110.934	245.485	142.794	190.325	-	190.325	137.638	167.949	229.197	238.660	-	6,462.982

(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>)	162.769	196.860	204.869	246.216	-	246.216	264.688	223.336	198.096	200.050	-	171.255

Description:

Javelin provides the United States Army and United States Marine Corps (USMC) a man-portable, fire-and-forget, medium-range missile with enhanced situational awareness and precision direct-fire effects to defeat armored vehicles, fortifications, and soft targets in a range of military operations. Javelin has a high kill rate against a variety of targets at extended ranges under day/night, battlefield obscurants, adverse weather and multiple counter-measure conditions. The system's soft launch feature permits firing from a fighting position or an enclosure. Javelin uses a modular design to allow the system to evolve to meet changing threats and requirements via both software and hardware upgrades. The system consists of a reusable Command Launch Unit (CLU) with a built-in-test (BIT), and a modular missile encased in a disposable launch tube assembly. The system also includes training devices for tactical training and classroom training. Javelin's fire-and-forget technology allows the gunner to fire and immediately take cover, to move to another fighting position, or to reload. The Javelin provides enhanced lethality through the use of a tandem multi-purpose warhead which will defeat all known armor threats. It is effective against both stationary and moving targets. This system also provides defensive capability against attacking/hovering helicopters. In current conflicts the CLU is being used as a stand-alone surveillance and target acquisition asset. The Army is the lead for this joint program with the USMC.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	1,247	697	773	-	773	520	752	1,157	1,193
	Total Obligation Authority	245.485	142.794	190.325	-	190.325	137.638	167.949	229.197	238.660
Total: Secondary Distribution	Quantity	1,247	697	773	-	773	520	752	1,157	1,193
	Total Obligation Authority	245.485	142.794	190.325	-	190.325	137.638	167.949	229.197	238.660

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

Appropriation / Budget Activity / Budget Sub Activity:
2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/
Assault Missile Sys **P-1 Line Item Number / Title:**
0648CC0007 / Javelin (AAWS-M) System Summary

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604611A

Line Item MDAP/MAIS Code: 280

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-5	H06102 / JAVELIN (AAWS-M)	P-5a, P-21			31,400 / 5,110.934	1,112 / 222.985	697 / 142.794	763 / 165.355	- / -	763 / 165.355
P-5	H06103 / Javelin Lightweight Command Launch Unit (CLU)	P-5a			- / -	135 / 22.500	- / -	10 / 24.970	- / -	10 / 24.970
P-40	Total Gross/Weapon System Cost				31,400 / 5,110.934	1,247 / 245.485	697 / 142.794	773 / 190.325	- / -	773 / 190.325

*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:
H06102 FY2021 Base procurement dollars in the amount of \$165.355 million supports the production of 763 missiles and the non-recurring expenses for the G-model production cut-in.
H06103 FY2021 Base procurement dollars in the amount of \$24.970 million supports initial production facilitization and low-rate initial production of 10 Lightweight CLUs.

The estimated missile unit prices for FY21 and prior are based on combined United States Army, other services, and FMS procurements of 850 missile per year.

The Army intends to convert any price advantage created through contract negotiations, other service procurement, and/or foreign military sales to increase the Army procurement of Javelin missiles and/or Lightweight CLUs, and/or address obsolescence, modernization, cost reduction, and production initiatives.

In accordance with Section 1815 of the FY2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

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Exhibit P-5, Cost Analysis: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30		P-1 Line Item Number / Title: 0648CC0007 / Javelin (AAWS-M) System Summary
		Item Number / Title [DODIC]: H06102 / JAVELIN (AAWS-M)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (<i>Units in Each</i>)	31,400	1,112	697	763	-	763
Gross/Weapon System Cost (<i>\$ in Millions</i>)	5,110.934	222.985	142.794	165.355	-	165.355
Less PY Advance Procurement (<i>\$ in Millions</i>)	100.622	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	5,010.312	222.985	142.794	165.355	-	165.355
Plus CY Advance Procurement (<i>\$ in Millions</i>)	100.622	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	5,110.934	222.985	142.794	165.355	-	165.355

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	162.769	200.526	204.869	216.717	-	216.717

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
All Up Round ⁽¹⁾	102.884	30,981	3,187.449	143.794	1,161	166.945	177.565	672	119.324	175.203	763	133.680	-	-	-	175.203	763	133.680
Engineering Services	-	-	164.051	-	-	7.396	-	-	8.121	-	-	8.248	-	-	-	-	-	8.248
Engineering Change Orders	-	-	11.604	-	-	0.136	-	-	1.008	-	-	0.101	-	-	-	-	-	0.101
Acceptance Testing	-	-	58.200	-	-	1.023	-	-	1.043	-	-	1.161	-	-	-	-	-	1.161
Production Engineering	-	-	113.312	-	-	4.336	-	-	4.837	-	-	4.934	-	-	-	-	-	4.934
Publications/Technical Data	-	-	2.760	-	-	0.076	-	-	0.078	-	-	0.079	-	-	-	-	-	0.079
CLU Retrofits	160.923	520	83.680	-	-	39.149	170.000	25	4.250	-	-	-	-	-	-	-	-	-
Advanced Procurement	-	-	100.622	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	3,721.678	-	-	219.061	-	-	138.661	-	-	148.203	-	-	-	-	-	148.203
Non Recurring Cost																		
IM Compliance	-	-	-	-	-	-	-	-	-	-	-	3.172	-	-	-	-	-	3.172
G-Model Production Facilitization	-	-	-	-	-	-	-	-	-	-	-	9.908	-	-	-	-	-	9.908
Subtotal: Non Recurring Cost	-	-	-	-	-	-	-	-	-	-	-	13.080	-	-	-	-	-	13.080
Subtotal: Flyaway Cost	-	-	3,721.678	-	-	219.061	-	-	138.661	-	-	161.283	-	-	-	-	-	161.283
Support - Program Management Cost																		

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Exhibit P-5, Cost Analysis: PB 2021 Army												Date: February 2020					
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30						P-1 Line Item Number / Title: 0648CC0007 / Javelin (AAWS-M) System Summary						Item Number / Title [DODIC]: H06102 / JAVELIN (AAWS-M)					
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:					

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Government Management	-	-	1,389.256	-	-	3.924	-	-	4.133	-	-	4.072	-	-	-	-	-	4.072
<i>Subtotal: Support - Program Management Cost</i>	-	-	1,389.256	-	-	3.924	-	-	4.133	-	-	4.072	-	-	-	-	-	4.072
Gross/Weapon System Cost	162.769	31,400	5,110.934	200.526	1,112	222.985	204.869	697	142.794	216.717	763	165.355	-	-	-	216.717	763	165.355

Remarks:
 The estimated missile unit prices for FY21 and prior are based on combined United States Army, other services, and FMS procurements of 850 missile per year.
 FY19 CLU Retrofit funds were used to execute a lifetime buy of materials no longer in production.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	1,112	697	763	-	763
	Total Obligation Authority	222.985	142.794	165.355	-	165.355
Total:	Quantity	1,112	697	763	-	763
Secondary Distribution	Total Obligation Authority	222.985	142.794	165.355	-	165.355

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

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Exhibit P-5a, Procurement History and Planning: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30	P-1 Line Item Number / Title: 0648CC0007 / Javelin (AAWS-M) System Summary	Item Number / Title [DODIC]: H06102 / JAVELIN (AAWS-M)
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
All Up Round ^(†)		2019	JJV All Up Round / Tucson AZ Orlando FL	SS / FFP	AMCOM, Redstone Arsenal, AL	Sep 2019	Jul 2021	1,161	143.794	Y		Aug 2018
All Up Round ^(†)		2020	JJV All Up Round / Tucson AZ Orlando FL	SS / FFP	AMCOM, Redstone Arsenal, AL	Apr 2020	Feb 2022	672	177.565	Y		Aug 2018
All Up Round ^(†)		2021	JJV All Up Round / Tucson AZ Orlando FL	SS / FFP	AMCOM, Redstone Arsenal, AL	Apr 2021	Feb 2023	763	175.203	Y		Oct 2019

^(†) indicates the presence of a P-21

Remarks:

JJV: Javelin Joint Venture (includes Raytheon in Tucson, AZ and Lockheed Martin in Orlando, FL)
 SS: Sole Source
 FFP: Firm Fixed Price
 AMCOM: Aviation and Missile Command

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Exhibit P-21, Production Schedule: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30	P-1 Line Item Number / Title: 0648CC0007 / Javelin (AAWS-M) System Summary	Item Number / Title [DODIC]: H06102 / JAVELIN (AAWS-M)
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Cost Elements <i>(Units in Each)</i>					Fiscal Year 2019													Fiscal Year 2020													BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019													Calendar Year 2020													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
All Up Round																																	
Prior Years Deliveries: 30981																																	
	1	2019	ARMY	1,161	0	1,161																								1,161			
	1	2019	MC (‡)	11	0	11																								11			
	1	2019	NAVSEA (‡)	13	0	13																								13			
	1	2019	Total	1,185	0	1,185																								1,185			
	1	2020	ARMY	672	0	672																								672			
	1	2020	FMS (‡)	81	0	81																								81			
	1	2020	MC (‡)	97	0	97																								97			
	1	2020	Total	850	0	850																								850			
	1	2021	ARMY	763	0	763																								763			
	1	2021	MC (‡)	95	0	95																								95			
	1	2021	Total	858	0	858																								858			

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Exhibit P-21, Production Schedule: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30 **P-1 Line Item Number / Title:** 0648CC0007 / Javelin (AAWS-M) System Summary **Item Number / Title [DODIC]:** H06102 / JAVELIN (AAWS-M)

Cost Elements <i>(Units in Each)</i>				Fiscal Year 2021														Fiscal Year 2022												BALANCE			
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021														Calendar Year 2022												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P		
All Up Round																																	
Prior Years Deliveries: 30981																																	
	1	2019	ARMY	1,161	0	1,161	-	-	-	-	-	-	-	-	-	166	166	166	166	166	166	165	-	-					0				
	1	2019	MC (‡)	11	0	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11					0				
	1	2019	NAVSEA (‡)	13	0	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	-					0					
	1	2019	Total	1,185	0	1,185	-	-	-	-	-	-	-	-	-	166	166	166	166	166	166	165	13	11	-	-	-	-	0				
	1	2020	ARMY	672	0	672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56	56	71	33	12	64	64	64	252			
	1	2020	FMS (‡)	81	0	81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40	41	-	-	-	-	-	0				
	1	2020	MC (‡)	97	0	97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38	59	-	-	0				
	1	2020	Total	850	0	850	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	96	97	71	71	71	64	64	64	252			
	1	2021	ARMY	763	0	763																							763				
	1	2021	MC (‡)	95	0	95																							95				
	1	2021	Total	858	0	858																							858				
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30 **P-1 Line Item Number / Title:** 0648CC0007 / Javelin (AAWS-M) System Summary **Item Number / Title [DODIC]:** H06102 / JAVELIN (AAWS-M)

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2023												Fiscal Year 2024												BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	Calendar Year 2023												Calendar Year 2024												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
All Up Round																															
Prior Years Deliveries: 30981																															
	1	2019	ARMY	1,161	1,161	0																							0		
	1	2019	MC (‡)	11	11	0																							0		
	1	2019	NAVSEA (‡)	13	13	0																							0		
	1	2019	Total	1,185	1,185	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
	1	2020	ARMY	672	420	252	63	63	63	63																			0		
	1	2020	FMS (‡)	81	81	0	-	-	-	-																			0		
	1	2020	MC (‡)	97	97	0	-	-	-	-																			0		
	1	2020	Total	850	598	252	63	63	63	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
	1	2021	ARMY	763	0	763	-	-	-	-	72	72	72	22	27	72	72	72	72	72	72	66							0		
	1	2021	MC (‡)	95	0	95	-	-	-	-	-	-	-	50	45	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
	1	2021	Total	858	0	858	-	-	-	-	72	72	72	72	72	72	72	72	72	72	72	66	-	-	-	-	-	0			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30	P-1 Line Item Number / Title: 0648CC0007 / Javelin (AAWS-M) System Summary	Item Number / Title [DODIC]: H06102 / JAVELIN (AAWS-M)
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2021	1-8-5 For 2021	MAX For 2021	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	JJV All Up Round - Tucson AZ Orlando FL	850	2,100	6,480	11	3	23	26	6	3	29	32

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

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

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Exhibit P-5, Cost Analysis: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30	P-1 Line Item Number / Title: 0648CC0007 / Javelin (AAWS-M) System Summary	Item Number / Title [DODIC]: H06103 / Javelin Lightweight Command Launch Unit (CLU)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity <i>(Units in Each)</i>	-	135	-	10	-	10
Gross/Weapon System Cost <i>(\$ in Millions)</i>	-	22.500	-	24.970	-	24.970
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	-	22.500	-	24.970	-	24.970
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	-	22.500	-	24.970	-	24.970

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

Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-
Gross/Weapon System Unit Cost <i>(\$ in Thousands)</i>	-	166.667	-	2,497.000	-	2,497.000

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
Light Weight CLU Production ^(†)	-	-	-	-	-	-	-	-	-	418.000	10	4.180	-	-	-	418.000	10	4.180
Engineering Services	-	-	-	-	-	-	-	-	-	-	-	1.377	-	-	-	-	-	1.377
Engineering Change Orders	-	-	-	-	-	-	-	-	-	-	-	0.004	-	-	-	-	-	0.004
Acceptance Testing	-	-	-	-	-	-	-	-	-	-	-	0.400	-	-	-	-	-	0.400
CLU Retrofits (Block 0 to Block 1)	-	-	-	-	-	22.500	-	-	-	-	-	-	-	-	-	-	-	-
Fielding	-	-	-	-	-	-	-	-	-	-	-	0.173	-	-	-	-	-	0.173
Training Devices	-	-	-	-	-	-	-	-	-	-	-	0.871	-	-	-	-	-	0.871
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	22.500	-	-	-	-	-	7.005	-	-	-	-	-	7.005
Non Recurring Cost																		
Initial Production Facilitization	-	-	-	-	-	-	-	-	-	-	-	17.965	-	-	-	-	-	17.965
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	17.965	-	-	-	-	-	17.965
<i>Subtotal: Flyaway Cost</i>	-	-	-	-	-	22.500	-	-	-	-	-	24.970	-	-	-	-	-	24.970
Gross/Weapon System Cost	-	-	-	166.667	135	22.500	-	-	-	2,497.000	10	24.970	-	-	-	2,497.000	10	24.970

Remarks:

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Exhibit P-5, Cost Analysis: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30	P-1 Line Item Number / Title: 0648CC0007 / Javelin (AAWS-M) System Summary	Item Number / Title [DODIC]: H06103 / Javelin Lightweight Command Launch Unit (CLU)

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

H06103 FY2021 Base procurement dollars in the amount of \$24.970 million supports initial production facilitization and low-rate initial production of 10 Lightweight CLUs.

Lightweight CLU unit prices will be reduced significantly once full-rate production is achieved, and will be further reduced by combining Army procurement quantities with other U.S. services and foreign military sales quantities.

FY19 CLU Retrofit funds were used to execute a lifetime buy of materials no longer in production.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	135	-	10	-	10
	Total Obligation Authority	22.500	-	24.970	-	24.970
Total:	Quantity	135	-	10	-	10
Secondary Distribution	Total Obligation Authority	22.500	-	24.970	-	24.970

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

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Exhibit P-5a, Procurement History and Planning: PB 2021 Army								Date: February 2020				
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30			P-1 Line Item Number / Title: 0648CC0007 / Javelin (AAWS-M) System Summary					Item Number / Title [DODIC]: H06103 / Javelin Lightweight Command Launch Unit (CLU)				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
Light Weight CLU Production		2021	JJV Lightweight CLU / Tucson AZ Orlando FL	SS / FFP	AMCOM, Redstone Arsenal AL	Jun 2021	Jun 2023	10	418.000	N		Oct 2019

Remarks:
 JJV: Javelin Joint Venture (includes Raytheon in Tucson, AZ and Lockheed Martin in Orlando, FL)
 SS: Sole Source
 FFP: Firm Fixed Price
 AMCOM: Aviation and Missile Command

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

Appropriation / Budget Activity / Budget Sub Activity:
2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/
Assault Missile Sys **P-1 Line Item Number / Title:**
2104C59300 / TOW 2 System Summary

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 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>)	172,869	1,228	1,460	1,405	-	1,405	774	1,453	1,729	1,657	-	182,575
Gross/Weapon System Cost (<i>\$ in Millions</i>)	3,511.267	119.062	127.907	131.574	-	131.574	90.708	153.176	178.104	176.010	-	4,487.808
Less PY Advance Procurement (<i>\$ in Millions</i>)	187.649	19.949	19.949	10.500	-	10.500	-	-	-	-	-	238.047
Net Procurement (P-1) (<i>\$ in Millions</i>)	3,323.618	99.113	107.958	121.074	-	121.074	90.708	153.176	178.104	176.010	-	4,249.761
Plus CY Advance Procurement (<i>\$ in Millions</i>)	207.598	19.949	10.500	-	-	-	-	-	-	-	-	238.047
Total Obligation Authority (<i>\$ in Millions</i>)	3,531.216	119.062	118.458	121.074	-	121.074	90.708	153.176	178.104	176.010	-	4,487.808

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	20.312	96.956	87.608	93.647	-	93.647	117.194	105.421	103.010	106.222	-	24.581

Description:

TOW missiles (BGM-71 Series) are combat proven munitions that provide heavy anti-armor/assault capability to the Army's Infantry Brigade Combat Teams (IBCT), Stryker Brigade Combat Teams (SBCT) and Armor Brigade Combat Teams (ABCT). TOW missiles continue to be used as the weapon of choice in precision combat engagements. TOW missiles are also the primary heavy anti-armor/ assault missile for the U.S. Marine Corps (USMC) and more than 43 allied nations. Warfighters also employ TOW missiles against buildings and field fortifications, taking advantage of the missile's precision assault capabilities.

The TOW Weapon System includes the ITAS launcher, TOW missiles, and associated tactical training aids/devices. The ITAS is a combat proven TOW missile launcher that provides long-range, lethal anti-armor and precision assault fires capability for Active, Reserve, and National Guard component Infantry and SBCT across a spectrum of operational environments. The USMC employs the TOW missile from its ITAS derived M41A7 Saber launchers, ATGM vehicles, and AH-1W Cobra helicopters.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	1,228	1,460	1,405	-	1,405	774	1,453	1,729	1,657
	Total Obligation Authority	119.062	118.458	121.074	-	121.074	90.708	153.176	178.104	176.010
Total: Secondary Distribution	Quantity	1,228	1,460	1,405	-	1,405	774	1,453	1,729	1,657
	Total Obligation Authority	119.062	118.458	121.074	-	121.074	90.708	153.176	178.104	176.010

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

Appropriation / Budget Activity / Budget Sub Activity:
2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/
Assault Missile Sys **P-1 Line Item Number / Title:**
2104C59300 / TOW 2 System Summary

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

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 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-5	C59403 / TOW Family of Missiles	P-5a, P-21			172,869 / 3,511.267	1,228 / 119.062	1,460 / 127.907	1,405 / 131.574	- / -	1,405 / 131.574
P-40	Total Gross/Weapon System Cost				172,869 / 3,511.267	1,228 / 119.062	1,460 / 127.907	1,405 / 131.574	- / -	1,405 / 131.574

*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 funding in the amount of \$121.074 million procures 905 TOW 2B Aero and 500 TOW Bunker Buster missiles, supports the TOW Missile combat inventory at levels required by the US Army's Total Munitions Requirement for FY 24, and is the final year of the FY17-21 Multi-year contract.

The Army intends to convert any price advantage created through contract negotiations, other service procurement, and/or foreign military sales to increase the Army procurement of TOW missiles and to mitigate safety and obsolescence issues.

IAW Section 1815 of the FY08 NDAA, this item is necessary for use by the active components and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses and providing military support to civil authorities.

The FY21 Army TOW 2B missile unit price estimate assumes a total of 1,198 USMC and FMS missiles as follows:

FY 21 USMC:
 TOW 2A/2A Practice: 448

FY 21 FMS:
 TOW 2B Aero: 500
 TOW 2A: 250

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Exhibit P-5, Cost Analysis: PB 2021 Army													Date: February 2020								
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30						P-1 Line Item Number / Title: 2104C59300 / TOW 2 System Summary						Item Number / Title [DODIC]: C59403 / TOW Family of Missiles									
ID Code (A=Service Ready, B=Not Service Ready) :									MDAP/MAIS Code:												
Resource Summary				Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
Procurement Quantity (<i>Units in Each</i>)				172,869			1,228			1,460			1,405			-			1,405		
Gross/Weapon System Cost (<i>\$ in Millions</i>)				3,511.267			119.062			127.907			131.574			-			131.574		
Less PY Advance Procurement (<i>\$ in Millions</i>)				187.649			19.949			19.949			10.500			-			10.500		
Net Procurement (P-1) (<i>\$ in Millions</i>)				3,323.618			99.113			107.958			121.074			-			121.074		
Plus CY Advance Procurement (<i>\$ in Millions</i>)				207.598			19.949			10.500			-			-			-		
Total Obligation Authority (<i>\$ in Millions</i>)				3,531.216			119.062			118.458			121.074			-			121.074		
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																					
Initial Spares (<i>\$ in Millions</i>)				-			-			-			-			-			-		
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)				20.312			96.956			87.608			93.647			-			93.647		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																					
Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total					
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)			
Flyaway Cost																					
Recurring Cost																					
Missile Contract ^(†)	19.860	172,404	3,423.943	86.722	1,228	106.495	78.455	1,460	114.545	79.873	1,405	112.222	-	-	-	79.873	1,405	112.222			
<i>Subtotal: Recurring Cost</i>	-	-	3,423.943	-	-	106.495	-	-	114.545	-	-	112.222	-	-	-	-	-	112.222			
Non Recurring Cost																					
Counter Active Protection System (CAPS) Obsolescence	-	-	-	-	-	-	-	-	-	-	-	4.725	-	-	-	-	-	4.725			
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	4.725	-	-	-	-	-	4.725			
<i>Subtotal: Flyaway Cost</i>	-	-	3,423.943	-	-	106.495	-	-	114.545	-	-	116.947	-	-	-	-	-	116.947			
Support - Acceptance Testing Cost																					
Acceptance Test	-	-	12.934	-	-	4.557	-	-	4.650	-	-	4.743	-	-	-	-	-	4.743			
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	12.934	-	-	4.557	-	-	4.650	-	-	4.743	-	-	-	-	-	4.743			
Support - Program Management Cost																					
Government Management	-	-	47.993	-	-	5.285	-	-	5.933	-	-	6.120	-	-	-	-	-	6.120			
<i>Subtotal: Support - Program Management Cost</i>	-	-	47.993	-	-	5.285	-	-	5.933	-	-	6.120	-	-	-	-	-	6.120			
Support - System Engineering Cost																					
System Engineering	-	-	26.397	-	-	2.725	-	-	2.779	-	-	3.764	-	-	-	-	-	3.764			
<i>Subtotal: Support - System Engineering Cost</i>	-	-	26.397	-	-	2.725	-	-	2.779	-	-	3.764	-	-	-	-	-	3.764			

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Exhibit P-5, Cost Analysis: PB 2021 Army												Date: February 2020					
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30						P-1 Line Item Number / Title: 2104C59300 / TOW 2 System Summary						Item Number / Title [DODIC]: C59403 / TOW Family of Missiles					
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:					

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Gross/Weapon System Cost	20.312	172,869	3,511.267	96.956	1,228	119.062	87.608	1,460	127.907	93.647	1,405	131.574	-	-	-	93.647	1,405	131.574

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

Cost Element Breakout	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Missile Contract	19.860	172,404	3,423.943	86.722	1,228	106.495	78.455	1,460	114.545	79.873	1,405	112.222	-	-	-	79.873	1,405	112.222
All configurations (FY 19 and prior)	19.860	172,404	3,423.943	86.722	1,228	106.495	-	-	-	-	-	-	-	-	-	-	-	-
2B Aero	-	-	-	-	-	-	90.695	960	87.067	93.640	905	84.744	-	-	-	93.640	905	84.744
Bunker Buster	-	-	-	-	-	-	54.956	500	27.478	54.956	500	27.478	-	-	-	54.956	500	27.478

Remarks:

The Multi-Year (MY) portion of the TOW Contract (FY17-21) includes only the TOW Bunker Buster variant, with a constant unit price of \$54,956.

TOW 2B Aero missiles are procured as single year options under the TOW Five-Year MY Contract (FY17-21). The estimated FY21 TOW 2B Aero unit price increases from FY20 to FY21 due to a budget reduction resulting in fewer missiles procured.

USMC is currently procuring the TOW 2A Practice missile variant which has a different unit cost than the Army's TOW 2B Aero and TOW Bunker Buster variants.

The FY21 Army TOW 2B missile unit price estimate assumes a total of 1,198 USMC and FMS missiles as follows:

FY 21 USMC:
TOW 2A/2A Practice: 448

FY 21 FMS:
TOW 2B Aero: 500
TOW 2A: 250

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	1,228	1,460	1,405	-	1,405
	Total Obligation Authority	119.062	118.458	121.074	-	121.074
Total:	Quantity	1,228	1,460	1,405	-	1,405
Secondary Distribution	Total Obligation Authority	119.062	118.458	121.074	-	121.074

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Exhibit P-5, Cost Analysis: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30	P-1 Line Item Number / Title: 2104C59300 / TOW 2 System Summary	Item Number / Title [DODIC]: C59403 / TOW Family of Missiles
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
^(†) indicates the presence of a P-5a		

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Exhibit P-5a, Procurement History and Planning: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30	P-1 Line Item Number / Title: 2104C59300 / TOW 2 System Summary	Item Number / Title [DODIC]: C59403 / TOW Family of Missiles
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
Missile Contract ^(†)		2019	Raytheon / Tucson	SS / FPIF	AMCOM, Redstone Arsenal, AL	May 2019	Sep 2020	1,228	86.722	Y		
Missile Contract ^(†)		2020	Raytheon / Tucson	SS / FPIF	AMCOM, Redstone Arsenal, AL	Mar 2020	Jul 2021	1,460	78.455	Y		
Missile Contract ^(†)		2021	Raytheon / Tucson	SS / FPIF	AMCOM, Redstone Arsenal, AL	Mar 2021	Jul 2022	1,405	79.873	Y		

^(†) indicates the presence of a P-21

Remarks:

Raytheon is currently the only industry source that is both facilitized and qualified to produce TOW missiles.

AMCOM Aviation and Missile Command
 SS Sole Source
 FPIF Fixed Price Incentive Firm Target
 MY Multi-Year

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Exhibit P-21, Production Schedule: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30 **P-1 Line Item Number / Title:** 2104C59300 / TOW 2 System Summary **Item Number / Title [DODIC]:** C59403 / TOW Family of Missiles

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2019													Fiscal Year 2020													B A L A N C E		
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019													Calendar Year 2020													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
Missile Contract																																	
Prior Years Deliveries: 172404																																	
1	2019	ARMY	1,228	0	1,228																									175	1,053		
1	2019	FMS (†)	787	0	787																										787		
1	2019	MC (†)	704	0	704																										704		
1	2019	Total	2,719	0	2,719																								175	2,544			
1	2020	ARMY	1,460	0	1,460																										1,460		
1	2020	FMS (†)	750	0	750																										750		
1	2020	MC (†)	500	0	500																										500		
1	2020	Total	2,710	0	2,710																										2,710		
1	2021	ARMY	1,405	0	1,405																										1,405		
1	2021	FMS (†)	750	0	750																										750		
1	2021	MC (†)	448	0	448																										448		
1	2021	Total	2,603	0	2,603																										2,603		

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Exhibit P-21, Production Schedule: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30 **P-1 Line Item Number / Title:** 2104C59300 / TOW 2 System Summary **Item Number / Title [DODIC]:** C59403 / TOW Family of Missiles

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2021													Fiscal Year 2022													BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021													Calendar Year 2022													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
Missile Contract																																	
Prior Years Deliveries: 172404																																	
	1	2019	ARMY	1,228	175	1,053	175	175	175	175	175	178	-	-	-	-																0	
	1	2019	FMS (+)	787	0	787	-	87	100	100	100	100	75	75	75	75																0	
	1	2019	MC (+)	704	0	704	-	-	-	-	-	-	125	225	225	129																0	
	1	2019	Total	2,719	175	2,544	175	262	275	275	275	278	200	300	300	204	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
	1	2020	ARMY	1,460	0	1,460	-	-	-	-	-	-	-	-	125	175	175	175	175	175	175	175	175	110	-	-	-				0		
	1	2020	FMS (+)	750	0	750	-	-	-	-	-	-	-	-	-	50	50	75	75	75	75	75	75	75	75	75	50				0		
	1	2020	MC (+)	500	0	500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	157	175	168				0		
	1	2020	Total	2,710	0	2,710	-	-	-	-	-	-	-	125	225	225	250	250	250	250	250	250	185	232	250	218	-	-	-	0			
	1	2021	ARMY	1,405	0	1,405																						175	175	175	880		
	1	2021	FMS (+)	750	0	750																									750		
	1	2021	MC (+)	448	0	448																									448		
	1	2021	Total	2,603	0	2,603																						175	175	175	2,078		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30 **P-1 Line Item Number / Title:** 2104C59300 / TOW 2 System Summary **Item Number / Title [DODIC]:** C59403 / TOW Family of Missiles

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2023													Fiscal Year 2024													BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	Calendar Year 2023													Calendar Year 2024													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
Missile Contract																																	
Prior Years Deliveries: 172404																																	
1	2019	ARMY		1,228	1,228	0																											0
1	2019	FMS (+)		787	787	0																											0
1	2019	MC (+)		704	704	0																											0
1	2019	Total		2,719	2,719	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
1	2020	ARMY		1,460	1,460	0																											0
1	2020	FMS (+)		750	750	0																											0
1	2020	MC (+)		500	500	0																											0
1	2020	Total		2,710	2,710	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
1	2021	ARMY		1,405	525	880	175	175	175	175	180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		0	
1	2021	FMS (+)		750	0	750	-	-	-	125	125	175	125	100	100																	0	
1	2021	MC (+)		448	0	448	-	-	-	-	-	-	150	150	148																	0	
1	2021	Total		2,603	525	2,078	175	175	175	300	305	175	275	250	248	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2021 Army	Date: February 2020
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Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30	P-1 Line Item Number / Title: 2104C59300 / TOW 2 System Summary	Item Number / Title [DODIC]: C59403 / TOW Family of Missiles
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2021	1-8-5 For 2021	MAX For 2021	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Raytheon - Tucson	2,100	7,200	16,800	3	2	16	18	3	2	16	18

Remarks:
Multiyear contracts do not follow the Production Lead Time shown for annual year contracts.

10 U.S. Code #2431 and DoD Financial Mgt Reg Vol 2B, Ch4 mandate Production Rates be defined in terms of "budget year."

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

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

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

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Exhibit P-40, Advance Procurement Budget Line Item Justification: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/ Assault Missile Sys	P-1 Line Item Number / Title: 2104C59300 / TOW 2 System Summary
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Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Gross/Weapon System Cost (<i>\$ in Millions</i>)	207.598	19.949	10.500	-	-	-	-	-	-	-	-	238.047
Net Procurement (P-1) (<i>\$ in Millions</i>)	207.598	19.949	10.500	-	-	-	-	-	-	-	-	238.047
Total Obligation Authority (<i>\$ in Millions</i>)	207.598	19.949	10.500	-	-	-	-	-	-	-	-	238.047

Description:

TOW missiles (BGM-71 Series) are combat proven munitions that provide heavy anti-armor/assault capability to the Army's Infantry Brigade Combat Teams (IBCT), Stryker Brigade Combat Teams (SBCT) and Armor Brigade Combat Teams (ABCT). TOW missiles continue to be used as the weapon of choice in precision combat engagements. TOW missiles are also the primary heavy anti-armor/ assault missile for the U.S. Marine Corps (USMC) and more than 43 allied nations. Warfighters also employ TOW missiles against buildings and field fortifications, taking advantage of the missile's precision assault capabilities.

The TOW Weapon System includes the ITAS launcher, TOW missiles, and associated tactical training aids/devices. The ITAS is a combat proven TOW missile launcher that provides long-range, lethal anti-armor and precision assault fires capability for Active, Reserve, and National Guard component Infantry and SBCT across a spectrum of operational environments. The USMC employs the TOW missile from its ITAS derived M41A7 Saber launchers, ATGM vehicles, and AH-1W Cobra helicopters.

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Exhibit P-40, Advance Procurement Budget Line Item Justification: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/ Assault Missile Sys	P-1 Line Item Number / Title: 2104C59300 / TOW 2 System Summary
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Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Exhibits Schedule				Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-10	C59403 / TOW Family of Missiles			172,869 / 207.598	1,228 / 19.949	1,460 / 10.500	1,405 / -	- / -	1,405 / -
P-40	Total Gross/Weapon System Cost			172,869 / 207.598	1,228 / 19.949	1,460 / 10.500	1,405 / -	- / -	1,405 / -

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

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

Justification:

FY21 is the last year of the FY17-21 Multi-year contract and has no advanced procurement.

The Army intends to convert any price advantage created through contract negotiations, other service procurement, and/or foreign military sales to increase the Army procurement of TOW missiles, and to mitigate safety and obsolescence.

IAW Section 1815 of the FY08 NDAA, this item is necessary for use by the active components and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

The FY21 Army TOW 2B missile unit price estimate assumes a total of 1,198 USMC and FMS missiles as follows:

FY 21 USMC:
 TOW 2A/2A Practice: 448

FY 21 FMS:
 TOW 2B Aero: 500
 TOW 2A: 250

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Exhibit P-10, Advance Procurement Requirements Analysis (page 1 - Budget Funding Justification): PB 2021 Army					Date: February 2020		
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30			P-1 Line Item Number / Title: 2104C59300 / TOW 2 System Summary			P-5 Number / Title: C59403 / TOW Family of Missiles	
First System (2021) Award Date: December 2017		First System (2021) Completion Date: July 2018			Interval Between Systems: 12 Months		
TOW Family of Missiles		Production Leadtime <i>(Months)</i>	Prior Years <i>(Each)</i>	FY 2019 <i>(Each)</i>	FY 2020 <i>(Each)</i>	FY 2021 <i>(Each)</i>	
Quantity			172,869	1,228	1,460	1,405	
Cost Elements		When Required <i>(Months)</i>	Prior Years <i>(\$ M)</i>	FY 2019 <i>(\$ M)</i>	FY 2020 <i>(\$ M)</i>	FY 2021 <i>(\$ M)</i>	
Other							
Warhead		14	94.342	7.942	6.923	-	
Launch Motor		14	11.399	0.838	0.730	-	
Flight Motor		12	3.299	0.158	0.138	-	
2B Sensor		18	57.143	7.902	-	-	
Gyro		13	19.047	1.433	1.249	-	
Flight Motor Case Kit		10	4.319	0.325	0.283	-	
Control Surface Actuator		14	11.271	0.848	0.739	-	
Beacon Shutter Actuator		11	6.778	0.503	0.438	-	
<i>Total: Other</i>			<i>207.598</i>	<i>19.949</i>	<i>10.500</i>	<i>-</i>	
Total Advance Procurement/Obligation Authority			207.598	19.949	10.500	-	

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Exhibit P-10, Advance Procurement Requirements Analysis (page 2 - Budget Funding Justification): PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30	P-1 Line Item Number / Title: 2104C59300 / TOW 2 System Summary	P-5 Number / Title: C59403 / TOW Family of Missiles
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Cost Elements	QPA <i>(Each)</i>	FY 2021					Total Cost Request <i>(\$ M)</i>
		Production Leadtime <i>(Months)</i>	Unit Cost <i>(\$ K)</i>	Contract Forecast Date	2021 Qty <i>(Each)</i>	For FY	
Other							
Warhead	-						-
Launch Motor	-						-
Flight Motor	-						-
2B Sensor	-						-
Gyro	-						-
Flight Motor Case Kit	-						-
Control Surface Actuator	-						-
Beacon Shutter Actuator	-						-
<i>Total: Other</i>							-
Total Advance Procurement/Obligation Authority							-

Description:
FY21 is the last year of the FY17-21 Multi-year contract and has no advanced procurement.

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/ Assault Missile Sys	P-1 Line Item Number / Title: 6005C64400 / Guided MLRS Rocket (GMLRS)
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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: 0603778A, 0205778A
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Line Item MDAP/MAIS Code: 260

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>)	34,546	7,668	8,211	5,384	904	6,288	5,478	6,564	6,312	5,808	Continuing	Continuing
Gross/Weapon System Cost (<i>\$ in Millions</i>)	4,367.629	975.507	1,176.406	850.157	127.015	977.172	808.559	984.484	990.005	960.079	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	4,367.629	975.507	1,176.406	850.157	127.015	977.172	808.559	984.484	990.005	960.079	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	4,367.629	975.507	1,176.406	850.157	127.015	977.172	808.559	984.484	990.005	960.079	Continuing	Continuing

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	126.429	127.218	143.272	157.904	140.503	155.403	147.601	149.982	156.845	165.303	Continuing	Continuing

Description:

Guided Multiple Launch Rocket System (GMLRS) rockets are surface-to-surface artillery rockets fired from the Multiple Launch Rocket System (MLRS) and High Mobility Artillery Rocket System (HIMARS) launchers. GMLRS rockets provide 24/7, all-weather precision fires to engage both area and point targets at short, medium, and long ranges. The U.S. Marine Corps also procures GMLRS rockets through the Army project office.

The GMLRS Program currently consists of multiple variants: GMLRS Dual Purpose Improved Conventional Munition (DPICM) is a cluster munition that replaced the shorter range MLRS rockets to engage area or imprecisely located targets. GMLRS DPICM Production was terminated in response to the June 2008 Department of Defense (DoD) Cluster Munitions Policy. GMLRS Unitary utilizes a 200 pound high explosive warhead to engage point targets with limited collateral damage. GMLRS Alternative Warhead (AW) was developed as a non-cluster munition to engage the same target sets as DPICM. GMLRS Unitary and AW are currently in full rate production. An Engineering Change Proposal (ECP) is currently in process to extend the range of GMLRS rockets.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
	Quantity	7,668	8,211	5,384	904	6,288	5,478	6,564	6,312
	Total Obligation Authority	975.507	1,176.406	850.157	127.015	977.172	808.559	984.484	990.005
Total:	Quantity	7,668	8,211	5,384	904	6,288	5,478	6,564	6,312
Secondary Distribution	Total Obligation Authority	975.507	1,176.406	850.157	127.015	977.172	808.559	984.484	990.005

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

Appropriation / Budget Activity / Budget Sub Activity:
2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/
Assault Missile Sys **P-1 Line Item Number / Title:**
6005C64400 / Guided MLRS Rocket (GMLRS)

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0603778A, 0205778A

Line Item MDAP/MAIS Code: 260

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-5	C65404 / GUIDED MLRS ROCKET (GMLRS)	P-5a, P-21			34,522 / 4,363.463	7,668 / 975.507	8,211 / 1,175.915	5,384 / 849.661	904 / 127.015	6,288 / 976.676
P-40a	C65406 / GMLRS Training Devices				24 / 4.166	- / -	- / 0.491	- / 0.496	- / -	- / 0.496
P-40	Total Gross/Weapon System Cost				34,546 / 4,367.629	7,668 / 975.507	8,211 / 1,176.406	5,384 / 850.157	904 / 127.015	6,288 / 977.172

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

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

Justification:
The FY 2021 Base procurement dollars in the amount of \$850.157 million support the procurement of 5,384 rockets. FY 2021 OCO procurement dollars in the amount of \$127.015 million support the acquisition of 904 GMLRS rockets for the United States Army. \$0.496 million of Base procurement dollars support the acquisition of equipment and support to ensure Guided Multiple Launch Rocket Common Training Device alignment with the production configuration. The actual missile buy quantities are subject to the mix between AW and Unitary warheads, standard versus extended range configurations, replacement pod cut-in, and replacement pod/Extended Range ECP tooling capacity ramp-up. In FY 2021, the Army requires 618 Unitary and 5,670 Alternative Warhead variants in support of the Army's Total Munitions Requirement (TMR). TMR quantities are evaluated and adjusted annually. As of July, 2019, the TMR showed requirements for Unitary of 14,351 and for AW of 62,259.

GMLRS has benefited from the availability of 30 year old M-26 pods that are repurposed for current GMLRS production. Due to dwindling supply of these pods, procurement of replacement pods must begin around FY 2022. \$70 million of FY2021 funds are used to procure tooling and new production for these efforts.

The AAO is 140,004.

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

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Exhibit P-5, Cost Analysis: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30	P-1 Line Item Number / Title: 6005C64400 / Guided MLRS Rocket (GMLRS)	Item Number / Title [DODIC]: C65404 / GUIDED MLRS ROCKET (GMLRS)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	34,522	7,668	8,211	5,384	904	6,288
Gross/Weapon System Cost (\$ in Millions)	4,363.463	975.507	1,175.915	849.661	127.015	976.676
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	4,363.463	975.507	1,175.915	849.661	127.015	976.676
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	4,363.463	975.507	1,175.915	849.661	127.015	976.676

(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)	126.397	127.218	143.212	157.812	140.503	155.324

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
Tactical GMLRS Hardware ^(†)	109.928	34,546	3,797.566	122.689	7,668	940.782	139.097	8,211	1,142.126	139.130	5,384	749.078	139.102	904	125.748	139.126	6,288	874.826
Ind Maint/Init Prod Fac	-	-	116.722	-	-	4.857	-	-	4.954	-	-	70.000	-	-	-	-	-	70.000
Production Verification Testing	-	-	64.271	-	-	6.671	-	-	5.109	-	-	6.772	-	-	1.137	-	-	7.909
First Destination Transportation	-	-	5.328	-	-	1.053	-	-	1.140	-	-	0.773	-	-	0.130	-	-	0.903
Production Engineering Support	-	-	178.354	-	-	12.585	-	-	12.836	-	-	13.093	-	-	-	-	-	13.093
Spares	-	-	2.913	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	<i>4,165.154</i>	-	-	<i>965.948</i>	-	-	<i>1,166.165</i>	-	-	<i>839.716</i>	-	-	<i>127.015</i>	-	-	<i>966.731</i>
<i>Subtotal: Flyaway Cost</i>	-	-	<i>4,165.154</i>	-	-	<i>965.948</i>	-	-	<i>1,166.165</i>	-	-	<i>839.716</i>	-	-	<i>127.015</i>	-	-	<i>966.731</i>
Support - Engineering Change Proposals Cost																		
Engineering Change Proposals	-	-	111.429	-	-	6.035	-	-	6.156	-	-	6.279	-	-	-	-	-	6.279
<i>Subtotal: Support - Engineering Change Proposals Cost</i>	-	-	<i>111.429</i>	-	-	<i>6.035</i>	-	-	<i>6.156</i>	-	-	<i>6.279</i>	-	-	-	-	-	<i>6.279</i>
Support - Program Management Cost																		
Government Management	-	-	86.880	-	-	3.523	-	-	3.594	-	-	3.666	-	-	-	-	-	3.666

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Exhibit P-5, Cost Analysis: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30	P-1 Line Item Number / Title: 6005C64400 / Guided MLRS Rocket (GMLRS)	Item Number / Title [DODIC]: C65404 / GUIDED MLRS ROCKET (GMLRS)
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Support - Program Management Cost</i>	-	-	86.880	-	-	3.523	-	-	3.594	-	-	3.666	-	-	-	-	-	3.666
Gross/Weapon System Cost	126.397	34,522	4,363.463	127.218	7,668	975.507	143.212	8,211	1,175.915	157.812	5,384	849.661	140.503	904	127.015	155.324	6,288	976.676

Remarks:

The Army fully transitions to Insensitive Munitions Propulsion System Motors (IMPS) for all rockets beginning in FY 2020. This transition, coupled with increased procurement of the more expensive AW variant to support the Army's TMR leads to an overall unit cost growth.

In FY 2021, it will be necessary to procure tooling for production of new pods and for ER GMLRS. \$70 million of FY 2021 funds are used to procure tooling for these efforts.

Costs for Engineering Change Proposals covers activities associated with resolving manufacturing-related changes that arise due to emerging statutory and regulatory requirements, planned and unplanned parts obsolescence, supply chain disruptions, cost reduction initiatives, quality improvement, and studies and investigations. Some of the currently known issues that must be resolved include obsolescence of certain components within the safe arm fuze, proximity sensor, guidance set, and motor material.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	7,668	8,211	5,384	904	6,288
	Total Obligation Authority	975.507	1,175.915	849.661	127.015	976.676
Total:	Quantity	7,668	8,211	5,384	904	6,288
Secondary Distribution	Total Obligation Authority	975.507	1,175.915	849.661	127.015	976.676

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

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Exhibit P-5a, Procurement History and Planning: PB 2021 Army							Date: February 2020				
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30			P-1 Line Item Number / Title: 6005C64400 / Guided MLRS Rocket (GMLRS)				Item Number / Title [DODIC]: C65404 / GUIDED MLRS ROCKET (GMLRS)				

Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
Tactical GMLRS Hardware ^(†)		2015	Lockheed Martin M.&F.C Sys. / Dallas, TX	SS / FPIF	Aviation and Missile Command	Jun 2015	Jun 2016	450	125.576	N		Feb 2013
Tactical GMLRS Hardware ^(†)		2016	Lockheed Martin M.&F.C Sys. / Dallas, TX	SS / FPIF	Aviation and Missile Command	May 2016	May 2017	1,572	138.800	N		Feb 2016
Tactical GMLRS Hardware ^(†)		2017	Lockheed Martin M.&F.C Sys. / Dallas, TX	SS / FPIF	Aviation and Missile Command	May 2017	Jul 2018	2,970	112.270	N		Feb 2016
Tactical GMLRS Hardware ^(†)		2018	Lockheed Martin M.&F.C Sys. / Dallas, TX	SS / FPIF	Aviation and Missile Command	Apr 2018	Aug 2019	6,528	151.746	N		Feb 2017
Tactical GMLRS Hardware ^(†)		2019	Lockheed Martin M.&F.C Sys. / Dallas, TX	SS / FPIF	Aviation and Missile Command	Mar 2019	Aug 2020	7,668	122.689	N		Feb 2017
Tactical GMLRS Hardware ^(†)		2020	Lockheed Martin M.&F.C Sys. / Dallas, TX	SS / FPIF	Aviation and Missile Command	Mar 2020	Aug 2021	8,211	139.097	N		Feb 2017
Tactical GMLRS Hardware ^(†)		2021	Lockheed Martin M.&F.C Sys. / Dallas, TX	SS / FPIF	Aviation and Missile Command	Mar 2021	Aug 2022	6,288	139.126	N		May 2019

^(†) indicates the presence of a P-21

Remarks:
 Lockheed Martin is currently the industry source that is both facilitated and qualified to produce the GMLRS rocket.
 FY19 and FY20 annual production contracts are options on the FY18 base contract.
 FY21 annual production is planned to be an Indefinite Delivery Indefinite Quantity (IDIQ) contract type.

*Sole Source/Fixed Price Incentive Firm
 **Aviation and Missile Command, Redstone Arsenal, Alabama

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Exhibit P-21, Production Schedule: PB 2021 Army																Date: February 2020							
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30										P-1 Line Item Number / Title: 6005C64400 / Guided MLRS Rocket (GMLRS)										Item Number / Title [DODIC]: C65404 / GUIDED MLRS ROCKET (GMLRS)			

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2015																Fiscal Year 2016												B A L A N C E		
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	Calendar Year 2015																Calendar Year 2016												
							O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S					
							C	O	E	A	E	A	P	A	U	U	U	E	C	O	V	E	A	E	A	P	A	U	U	U	E				
Tactical GMLRS Hardware																																			
Prior Years Deliveries: 23026																																			
1		2015	ARMY	450	0	450											A	-													42	42	42	36	288
1		2015	FMS (+)	390	0	390											A	-											30	30	30	36	264		
1		2015	MC (+)	60	0	60											A	-											6	6	6	6	36		
1	2015	Total		900	0	900											-	-											78	78	78	78	588		
1		2016	ARMY	1,572	0	1,572																													1,572
1		2016	FMS (+)	492	0	492																													492
1		2016	MC (+)	90	0	90																													90
1	2016	Total		2,154	0	2,154																													2,154
1		2017	ARMY	2,970	0	2,970																													2,970
1		2017	FMS (+)	60	0	60																													60
1		2017	MC (+)	336	0	336																													336
1	2017	Total		3,366	0	3,366																													3,366
1		2018	ARMY	6,528	0	6,528																													6,528
1		2018	FMS (+)	96	0	96																													96
1		2018	MC (+)	372	0	372																													372
1	2018	Total		6,996	0	6,996																													6,996
1		2019	ARMY	7,668	0	7,668																													7,668
1		2019	FMS (+)	462	0	462																													462
1		2019	MC (+)	222	0	222																													222
1	2019	Total		8,352	0	8,352																													8,352
1		2020	ARMY	8,211	0	8,211																													8,211
1		2021	ARMY	6,288	0	6,288																													6,288
1		2021	FMS (+)	612	0	612																													612
1		2021	MC (+)	330	0	330																													330
1	2021	Total		7,230	0	7,230																													7,230

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Exhibit P-21, Production Schedule: PB 2021 Army																							Date: February 2020										
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30										P-1 Line Item Number / Title: 6005C64400 / Guided MLRS Rocket (GMLRS)										Item Number / Title [DODIC]: C65404 / GUIDED MLRS ROCKET (GMLRS)													
Cost Elements (Units in Each)						Fiscal Year 2017													Fiscal Year 2018													BALANCE	
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017													Calendar Year 2018													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
Tactical GMLRS Hardware																																	
Prior Years Deliveries: 23026																																	
1	2015	ARMY	450	162	288	36	36	36	36	36	36	36	36																	0			
1	2015	FMS (+)	390	126	264	36	36	30	30	30	30	36	36																	0			
1	2015	MC (+)	60	24	36	6	6	6	6	6	6	-	-																	0			
1	2015	Total	900	312	588	78	78	72	72	72	72	72	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
1	2016	ARMY	1,572	0	1,572	-	-	-	-	-	-	-	156	156	156	156	156	156	102	96	96	96	90							0			
1	2016	FMS (+)	492	0	492	-	-	-	-	-	-	-	36	36	36	42	42	42	42	42	42	48	42	42						0			
1	2016	MC (+)	90	0	90	-	-	-	-	-	-	-	12	12	12	6	6	6	6	6	6	6	6							0			
1	2016	Total	2,154	0	2,154	-	-	-	-	-	-	-	204	204	204	204	204	204	204	150	144	150	144	138	-	-	-	-	0				
1	2017	ARMY	2,970	0	2,970								A -	-	-	-	-	-	-	-	-	-	-	-	-	252	252	252	2,214				
1	2017	FMS (+)	60	0	60								A -	-	-	-	-	-	-	-	-	-	-	-	-	60	-	-	0				
1	2017	MC (+)	336	0	336								A -	-	-	-	-	-	-	-	-	-	-	-	-	24	24	24	264				
1	2017	Total	3,366	0	3,366								-	-	-	-	-	-	-	-	-	-	-	-	-	336	276	276	2,478				
1	2018	ARMY	6,528	0	6,528																									6,528			
1	2018	FMS (+)	96	0	96																									96			
1	2018	MC (+)	372	0	372																									372			
1	2018	Total	6,996	0	6,996																									6,996			
1	2019	ARMY	7,668	0	7,668																									7,668			
1	2019	FMS (+)	462	0	462																									462			
1	2019	MC (+)	222	0	222																									222			
1	2019	Total	8,352	0	8,352																									8,352			
1	2020	ARMY	8,211	0	8,211																									8,211			
1	2021	ARMY	6,288	0	6,288																									6,288			
1	2021	FMS (+)	612	0	612																									612			
1	2021	MC (+)	330	0	330																									330			
1	2021	Total	7,230	0	7,230																									7,230			
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				

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Exhibit P-21, Production Schedule: PB 2021 Army																							Date: February 2020										
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30										P-1 Line Item Number / Title: 6005C64400 / Guided MLRS Rocket (GMLRS)										Item Number / Title [DODIC]: C65404 / GUIDED MLRS ROCKET (GMLRS)													
Cost Elements (Units in Each)						Fiscal Year 2019													Fiscal Year 2020													BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019													Calendar Year 2020													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
Tactical GMLRS Hardware																																	
Prior Years Deliveries: 23026																																	
1	2015	ARMY		450	450	0																								0			
1	2015	FMS (+)		390	390	0																								0			
1	2015	MC (+)		60	60	0																								0			
1	2015	Total		900	900	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
1	2016	ARMY		1,572	1,572	0																								0			
1	2016	FMS (+)		492	492	0																								0			
1	2016	MC (+)		90	90	0																								0			
1	2016	Total		2,154	2,154	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
1	2017	ARMY		2,970	756	2,214	246	246	246	246	246	246	246	246																0			
1	2017	FMS (+)		60	60	0	-	-	-	-	-	-	-	-																0			
1	2017	MC (+)		336	72	264	24	30	30	30	30	30	30	30																0			
1	2017	Total		3,366	888	2,478	270	276	276	276	276	276	276	276	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
1	2018	ARMY		6,528	0	6,528	-	-	-	-	-	-	-	-	546	546	546	546	546	546	546	546	540	540	540	540				0			
1	2018	FMS (+)		96	0	96	-	-	-	-	-	-	-	-	12	12	12	12	6	6	6	6	6	6	6	6				0			
1	2018	MC (+)		372	0	372	-	-	-	-	-	-	-	-	36	36	30	30	30	30	30	30	30	30	30	30				0			
1	2018	Total		6,996	0	6,996	-	-	-	-	-	-	-	-	594	594	588	588	582	582	582	582	576	576	576	576	-	-	0				
1	2019	ARMY		7,668	0	7,668									A	-	-	-	-	-	-	-	-	-	-	-	642	642	6,384				
1	2019	FMS (+)		462	0	462									A	-	-	-	-	-	-	-	-	-	-	-	30	36	396				
1	2019	MC (+)		222	0	222									A	-	-	-	-	-	-	-	-	-	-	-	24	18	180				
1	2019	Total		8,352	0	8,352									-	-	-	-	-	-	-	-	-	-	-	-	696	696	6,960				
1	2020	ARMY		8,211	0	8,211																							8,211				
1	2021	ARMY		6,288	0	6,288																							6,288				
1	2021	FMS (+)		612	0	612																							612				
1	2021	MC (+)		330	0	330																							330				
1	2021	Total		7,230	0	7,230																							7,230				
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2021 Army															Date: February 2020									
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30										P-1 Line Item Number / Title: 6005C64400 / Guided MLRS Rocket (GMLRS)										Item Number / Title [DODIC]: C65404 / GUIDED MLRS ROCKET (GMLRS)				

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2021														Fiscal Year 2022														BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021														Calendar Year 2022															
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P						
Tactical GMLRS Hardware																																				
Prior Years Deliveries: 23026																																				
1	2015	ARMY		450	450	0																														0
1	2015	FMS (+)		390	390	0																														0
1	2015	MC (+)		60	60	0																														0
1	2015	Total		900	900	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
1	2016	ARMY		1,572	1,572	0																														0
1	2016	FMS (+)		492	492	0																														0
1	2016	MC (+)		90	90	0																														0
1	2016	Total		2,154	2,154	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
1	2017	ARMY		2,970	2,970	0																														0
1	2017	FMS (+)		60	60	0																														0
1	2017	MC (+)		336	336	0																														0
1	2017	Total		3,366	3,366	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
1	2018	ARMY		6,528	6,528	0																														0
1	2018	FMS (+)		96	96	0																														0
1	2018	MC (+)		372	372	0																														0
1	2018	Total		6,996	6,996	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
1	2019	ARMY		7,668	1,284	6,384	642	642	642	642	636	636	636	636	636	636																				0
1	2019	FMS (+)		462	66	396	36	36	36	36	42	42	42	42	42	42																				0
1	2019	MC (+)		222	42	180	18	18	18	18	18	18	18	18	18	18																				0
1	2019	Total		8,352	1,392	6,960	696	696	696	696	696	696	696	696	696	696	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
1	2020	ARMY		8,211	0	8,211	-	-	-	-	-	-	-	-	-	690	684	684	684	684	684	684	684	684	684	684	684	684	684	681					0	
1	2021	ARMY		6,288	0	6,288					A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	528	528				5,232	
1	2021	FMS (+)		612	0	612					A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54	54				504		
1	2021	MC (+)		330	0	330					A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30				270		
1	2021	Total		7,230	0	7,230					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	612	612				6,006		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P						

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Exhibit P-21, Production Schedule: PB 2021 Army																				Date: February 2020									
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30										P-1 Line Item Number / Title: 6005C64400 / Guided MLRS Rocket (GMLRS)										Item Number / Title [DODIC]: C65404 / GUIDED MLRS ROCKET (GMLRS)									

Cost Elements (Units in Each)						Fiscal Year 2023														Fiscal Year 2024														BALANCE			
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	Calendar Year 2023														Calendar Year 2024																
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P							
Tactical GMLRS Hardware																																					
Prior Years Deliveries: 23026																																					
1	2015	ARMY		450	450	0																															0
1	2015	FMS (+)		390	390	0																															0
1	2015	MC (+)		60	60	0																															0
1	2015	Total		900	900	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
1	2016	ARMY		1,572	1,572	0																															0
1	2016	FMS (+)		492	492	0																															0
1	2016	MC (+)		90	90	0																															0
1	2016	Total		2,154	2,154	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
1	2017	ARMY		2,970	2,970	0																															0
1	2017	FMS (+)		60	60	0																															0
1	2017	MC (+)		336	336	0																															0
1	2017	Total		3,366	3,366	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
1	2018	ARMY		6,528	6,528	0																															0
1	2018	FMS (+)		96	96	0																															0
1	2018	MC (+)		372	372	0																															0
1	2018	Total		6,996	6,996	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
1	2019	ARMY		7,668	7,668	0																															0
1	2019	FMS (+)		462	462	0																															0
1	2019	MC (+)		222	222	0																															0
1	2019	Total		8,352	8,352	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
1	2020	ARMY		8,211	8,211	0																															0
1	2021	ARMY		6,288	1,056	5,232	528	528	522	522	522	522	522	522	522	522																				0	
1	2021	FMS (+)		612	108	504	54	54	54	54	48	48	48	48	48	48																				0	
1	2021	MC (+)		330	60	270	30	30	30	30	24	24	24	24	24																					0	
1	2021	Total		7,230	1,224	6,006	612	612	606	606	600	594	594	594	594	594	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P							

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Exhibit P-21, Production Schedule: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30		P-1 Line Item Number / Title: 6005C64400 / Guided MLRS Rocket (GMLRS)
		Item Number / Title [DODIC]: C65404 / GUIDED MLRS ROCKET (GMLRS)

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2021	1-8-5 For 2021	MAX For 2021	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Lockheed Martin M.&F.C Sys. - Dallas, TX	2,160	10,002	10,002	0	2	16	18	0	5	15	20

Remarks:
 In the years prior to FY 2020, the GMLRS program shares a production line with Low Cost Reduced Range Practice Rockets (LCRRPR). Any months that show production gaps in years prior to FY 2020 were utilized to manufacture LCRRPR. After FY 2020, LCRRPR will move to its own production line and GMLRS will be delivered on a monthly schedule with no gaps.

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

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

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

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30 **P-1 Line Item Number / Title:** 6005C64400 / Guided MLRS Rocket (GMLRS) **Aggregated Items Title:** C65406 / GMLRS Training Devices

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
			Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
GMLRS Training Devices																				
C65406 / GMLRS Training Devices			173.583	24	4.166	-	-	-	-	-	0.491	-	-	0.496	-	-	-	-	-	0.496
<i>Secondary Distribution</i>																				
Army				-	-	-	-	-	-	-	0.491		-	0.496		-	-	-	-	0.496
Subtotal: GMLRS Training Devices			-	-	4.166	-	-	-	-	-	0.491	-	-	0.496	-	-	-	-	-	0.496
Total			-	-	4.166	-	-	-	-	-	0.491	-	-	0.496	-	-	-	-	-	0.496

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

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

Appropriation / Budget Activity / Budget Sub Activity:
2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/
Assault Missile Sys **P-1 Line Item Number / Title:**
6060C65405 / MLRS Reduced Range Practice Rockets (RRPR)

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0210602A

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>)	46,293	2,214	2,982	3,270	-	3,270	3,372	3,144	3,234	3,168	Continuing	Continuing
Gross/Weapon System Cost (<i>\$ in Millions</i>)	282.364	20.964	27.555	30.836	-	30.836	32.418	30.944	32.405	32.397	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	282.364	20.964	27.555	30.836	-	30.836	32.418	30.944	32.405	32.397	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	282.364	20.964	27.555	30.836	-	30.836	32.418	30.944	32.405	32.397	Continuing	Continuing

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	6.099	9.469	9.240	9.430	-	9.430	9.614	9.842	10.020	10.226	Continuing	Continuing

Description:

The Multiple Launch Rocket System (MLRS) Low Cost Reduced Range Practice Rocket (LCRRPR) is the only live training rocket that meets the annual certification and pre-deployment requirements for Active and National Guard High Mobility Artillery Rocket System (HIMARS) and M270/M270A1 MLRS launcher units. The critical validated requirement for launcher units ensures units can achieve and maintain combat readiness. HIMARS and M270A1 Battalions are organic and attached to modular Fires Brigades supporting Brigade Combat Teams (BCTs), Joint Expeditionary Force, and Joint Special Operations Force combatant commanders. The training rocket has an inert payload section and blunt nose for inducing reduced range for use at multiple facilities in the United States and foreign countries.

LCRRPRs are manufactured by Lockheed Martin in Camden, Arkansas and Letterkenny Munitions Center (LEMC) in Chambersburg, Pennsylvania. LEMC provides an organic dual source. The LCRRPR program includes the cost to Download/Demate (DL/DM) the M26 pod and rocket motor for production reuse. Total cost also includes Bunker Storage and the procurement of Performance Oriented Packaging (POP) boxes, M-26 Rocket Motor Reclamation contract, and RRPR obsolescence.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	1,554	2,088	2,286	-	2,286	2,352	2,202	2,262	2,214
	Total Obligation Authority	14.715	19.294	21.597	-	21.597	22.670	21.733	22.727	22.686
ANG	Quantity	660	894	984	-	984	1,020	942	972	954
	Total Obligation Authority	6.249	8.261	9.239	-	9.239	9.748	9.211	9.678	9.711
Total:	Quantity	2,214	2,982	3,270	-	3,270	3,372	3,144	3,234	3,168
Secondary Distribution	Total Obligation Authority	20.964	27.555	30.836	-	30.836	32.418	30.944	32.405	32.397

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/ Assault Missile Sys **P-1 Line Item Number / Title:** 6060C65405 / MLRS Reduced Range Practice Rockets (RRPR)

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0210602A

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-5	C65405 / MLRS Reduced Range Practice Rockets (RRPR)	P-5a, P-21			46,293 / 282.364	2,214 / 20.964	2,982 / 27.555	3,270 / 30.836	- / -	3,270 / 30.836
P-40	Total Gross/Weapon System Cost				46,293 / 282.364	2,214 / 20.964	2,982 / 27.555	3,270 / 30.836	- / -	3,270 / 30.836

*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:
 FY2021 Base procurement dollars in the amount of \$30.836 million support the procurement of 3,270 LCRRPRs which are required to maintain the practice rocket inventory for Standards in Training Commission (STRC) requirements.

In FY 2021, \$0.326 million in Reimbursable Manpower for this line has been realigned from Reimbursable Civilian Funding to Direct Operations and Maintenance. Program support costs have been accurately updated to reflect the realignments

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

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Exhibit P-5, Cost Analysis: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30	P-1 Line Item Number / Title: 6060C65405 / MLRS Reduced Range Practice Rockets (RRPR)	Item Number / Title [DODIC]: C65405 / MLRS Reduced Range Practice Rockets (RRPR)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity <i>(Units in Each)</i>	46,293	2,214	2,982	3,270	-	3,270
Gross/Weapon System Cost <i>(\$ in Millions)</i>	282.364	20.964	27.555	30.836	-	30.836
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	282.364	20.964	27.555	30.836	-	30.836
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	282.364	20.964	27.555	30.836	-	30.836

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

Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-
Gross/Weapon System Unit Cost <i>(\$ in Thousands)</i>	6.099	9.469	9.240	9.430	-	9.430

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
Reduced Range Practice Rocket (LCRRPR) ^(f)	4.692	46,293	217.210	7.524	2,214	16.659	7.494	2,982	22.348	7.694	3,270	25.158	-	-	-	7.694	3,270	25.158
Warheads Govt Furnished Equip (GFE)	-	-	24.692	-	-	1.906	-	-	2.617	-	-	2.954	-	-	-	-	-	2.954
Production Verification Testing	-	-	3.720	-	-	0.075	-	-	0.077	-	-	0.079	-	-	-	-	-	0.079
First Destination Transportation	-	-	1.375	-	-	0.145	-	-	0.199	-	-	0.224	-	-	-	-	-	0.224
Production Engineering Support	-	-	17.571	-	-	1.595	-	-	1.719	-	-	1.807	-	-	-	-	-	1.807
<i>Subtotal: Recurring Cost</i>	-	-	<i>264.568</i>	-	-	<i>20.380</i>	-	-	<i>26.960</i>	-	-	<i>30.222</i>	-	-	-	-	-	<i>30.222</i>
<i>Subtotal: Flyaway Cost</i>	-	-	<i>264.568</i>	-	-	<i>20.380</i>	-	-	<i>26.960</i>	-	-	<i>30.222</i>	-	-	-	-	-	<i>30.222</i>
Support - Production Engineering Cost																		
Production Engineering	-	-	6.279	-	-	0.495	-	-	0.505	-	-	0.520	-	-	-	-	-	0.520
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	<i>6.279</i>	-	-	<i>0.495</i>	-	-	<i>0.505</i>	-	-	<i>0.520</i>	-	-	-	-	-	<i>0.520</i>
Support - Program Management Cost																		
Government Management	-	-	11.518	-	-	0.089	-	-	0.091	-	-	0.094	-	-	-	-	-	0.094

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Exhibit P-5, Cost Analysis: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30	P-1 Line Item Number / Title: 6060C65405 / MLRS Reduced Range Practice Rockets (RRPR)	Item Number / Title [DODIC]: C65405 / MLRS Reduced Range Practice Rockets (RRPR)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Support - Program Management Cost</i>	-	-	11.518	-	-	0.089	-	-	0.091	-	-	0.094	-	-	-	-	-	0.094
Gross/Weapon System Cost	6.099	46,293	282.364	9.469	2,214	20.964	9.240	2,982	27.555	9.430	3,270	30.836	-	-	-	9.430	3,270	30.836

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	1,554	2,088	2,286	-	2,286
	Total Obligation Authority	14.715	19.294	21.597	-	21.597
ANG	Quantity	660	894	984	-	984
	Total Obligation Authority	6.249	8.261	9.239	-	9.239
Total: Secondary Distribution	Quantity	2,214	2,982	3,270	-	3,270
	Total Obligation Authority	20.964	27.555	30.836	-	30.836

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

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Exhibit P-5a, Procurement History and Planning: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30	P-1 Line Item Number / Title: 6060C65405 / MLRS Reduced Range Practice Rockets (RRPR)	Item Number / Title [DODIC]: C65405 / MLRS Reduced Range Practice Rockets (RRPR)
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
Reduced Range Practice Rocket (LCRRPR) ^(†)		2016	Lockheed Martin / Dallas, TX	SS / FPIF	AMCOM,RSA,AL	May 2016	May 2017	3,954	7.060	Y		Feb 2016
Reduced Range Practice Rocket (LCRRPR) ^(†)		2016	Letterkenny Munitions Center / Chambersburg, PA	MIPR	LEMC, PA	Jan 2017	Feb 2017	276	5.650	Y		
Reduced Range Practice Rocket (LCRRPR) ^(†)		2017	Lockheed Martin / Dallas, TX	SS / FPIF	AMCOM,RSA,AL	May 2017	Jul 2018	1,362	8.660	Y		Feb 2016
Reduced Range Practice Rocket (LCRRPR) ^(†)		2017	Letterkenny Munitions Center / Chambersburg, PA	MIPR	LEMC, PA	Mar 2018	Apr 2018	342	5.850	Y		
Reduced Range Practice Rocket (LCRRPR) ^(†)		2018	Lockheed Martin / Dallas, TX	SS / FPIF	AMCOM,RSA,AL	Apr 2018	Aug 2019	3,078	8.770	Y		Feb 2017
Reduced Range Practice Rocket (LCRRPR) ^(†)		2018	Letterkenny Munitions Center / Chambersburg, PA	MIPR	LEMC, PA	Mar 2019	Apr 2019	342	5.920	Y		
Reduced Range Practice Rocket (LCRRPR) ^(†)		2019	Lockheed Martin / Dallas, TX	SS / FPIF	AMCOM,RSA,AL	Mar 2019	Aug 2020	1,542	8.900	Y		Feb 2018
Reduced Range Practice Rocket (LCRRPR) ^(†)		2019	Letterkenny Munitions Center / Chambersburg, PA	MIPR	LEMC, PA	Feb 2019	Apr 2020	672	6.040	Y		
Reduced Range Practice Rocket (LCRRPR) ^(†)		2020	Lockheed Martin / Dallas, TX	SS / FPIF	AMCOM,RSA,AL	Mar 2020	Aug 2021	1,446	9.080	Y		Feb 2019
Reduced Range Practice Rocket (LCRRPR) ^(†)		2020	Letterkenny Munitions Center / Chambersburg, PA	MIPR	LEMC, PA	Mar 2020	Apr 2021	1,536	6.160	Y		
Reduced Range Practice Rocket (LCRRPR) ^(†)		2021	Lockheed Martin / Dallas, TX	SS / FPIF	AMCOM, RSA, AL	Mar 2021	Aug 2022	1,577	9.260	Y		Feb 2020
Reduced Range Practice Rocket (LCRRPR) ^(†)		2021	Letterkenny Munitions Center / Chambersburg, PA	MIPR	LEMC, PA	Mar 2021	Apr 2022	1,693	6.280	Y		

^(†) indicates the presence of a P-21

Remarks:
Lockheed Martin is currently the industry source that is both facilitated and qualified to produce the Low Cost Reduced Range Practice Rocket (LCRRPR). Letterkenny Munitions Center (LEMC) has been established as the organic source that is both facilitated and qualified to produce the LCRRPR.

Footnote: Letterkenny Munitions Center (LEMC) Rocket Motor Inspection System (RMIS) Return on Investment (ROI) - Yielded 16 Additional Pods in FY17 and FY18 not reflected in the P-Form.

* SS (Sole Source) / FPIF (Fixed Price Incentive Firm)

** AMCOM (Aviation and Missile Command), RSA (Redstone Arsenal), AL

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Exhibit P-21, Production Schedule: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30	P-1 Line Item Number / Title: 6060C65405 / MLRS Reduced Range Practice Rockets (RRPR)	Item Number / Title [DODIC]: C65405 / MLRS Reduced Range Practice Rockets (RRPR)
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Cost Elements (Units in Each)						Fiscal Year 2016												Fiscal Year 2017												B A L A N C E																					
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016												Calendar Year 2017																																
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P																				
Reduced Range Practice Rocket (LCRRPR)																																																			
Prior Years Deliveries: 36939																																																			
1	2016	ARMY		3,954	0	3,954																																													
1	2016	MC (†)		648	0	648																																													
1	2016	Total		4,602	0	4,602																																													
2	2016	ARMY		276	0	276																																													
1	2017	ARMY		1,362	0	1,362																																													
1	2017	MC (†)		648	0	648																																													
1	2017	Total		2,010	0	2,010																																													
2	2017	ARMY		342	0	342																																													
1	2018	ARMY		3,078	0	3,078																																													
1	2018	MC (†)		648	0	648																																													
1	2018	Total		3,726	0	3,726																																													
2	2018	ARMY		342	0	342																																													
1	2019	ARMY		1,542	0	1,542																																													
1	2019	MC (†)		648	0	648																																													
1	2019	Total		2,190	0	2,190																																													
2	2019	ARMY		672	0	672																																													
1	2020	ARMY		1,446	0	1,446																																													
1	2020	MC (†)		648	0	648																																													
1	2020	Total		2,094	0	2,094																																													
2	2020	ARMY		1,536	0	1,536																																													
1	2021	ARMY		1,577	0	1,577																																													
2	2021	ARMY		1,693	0	1,693																																													
<table border="0" style="width: 100%; font-size: 8px;"> <tr> <td>O C T</td> <td>N O V</td> <td>D E C</td> <td>J A N</td> <td>F E B</td> <td>M A R</td> <td>A P R</td> <td>M A Y</td> <td>J U N</td> <td>J U L</td> <td>A U G</td> <td>S E P</td> <td>O C T</td> <td>N O V</td> <td>D E C</td> <td>J A N</td> <td>F E B</td> <td>M A R</td> <td>A P R</td> <td>M A Y</td> <td>J U N</td> <td>J U L</td> <td>A U G</td> <td>S E P</td> </tr> </table>																												O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P
O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P																												

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Exhibit P-21, Production Schedule: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30	P-1 Line Item Number / Title: 6060C65405 / MLRS Reduced Range Practice Rockets (RRPR)	Item Number / Title [DODIC]: C65405 / MLRS Reduced Range Practice Rockets (RRPR)
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Cost Elements <i>(Units in Each)</i>					Fiscal Year 2018													Fiscal Year 2019													B A L A N C E				
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEP T P R I O R T O 1 O C T 2 0 1 7	BAL D U E A S O F 1 O C T	Calendar Year 2018													Calendar Year 2019															
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
Reduced Range Practice Rocket (LCRRPR)																																			
Prior Years Deliveries: 36939																																			
1	2016	ARMY		3,954	1,647	2,307	330	330	330	330	329	329	329																						0
1	2016	MC (+)		648	270	378	54	54	54	54	54	54	54																						0
1	2016	Total		4,602	1,917	2,685	384	384	384	384	383	383	383	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
2	2016	ARMY		276	184	92	23	23	23																										0
1	2017	ARMY		1,362	0	1,362	-	-	-	-	-	-	-	-	113	113	113	114	114	114	114	114	114	113	113	113								0	
1	2017	MC (+)		648	0	648	-	-	-	-	-	-	-	-	54	54	54	54	54	54	54	54	54	54	54	54								0	
1	2017	Total		2,010	0	2,010	-	-	-	-	-	-	-	167	167	167	168	168	168	168	168	168	167	167	167	-	-	-	-	-	-	-	0		
2	2017	ARMY		342	0	342																													0
1	2018	ARMY		3,078	0	3,078																													2,566
1	2018	MC (+)		648	0	648																													540
1	2018	Total		3,726	0	3,726																													3,106
2	2018	ARMY		342	0	342																													171
1	2019	ARMY		1,542	0	1,542																													1,542
1	2019	MC (+)		648	0	648																													648
1	2019	Total		2,190	0	2,190																													2,190
2	2019	ARMY		672	0	672																													672
1	2020	ARMY		1,446	0	1,446																													1,446
1	2020	MC (+)		648	0	648																													648
1	2020	Total		2,094	0	2,094																													2,094
2	2020	ARMY		1,536	0	1,536																													1,536
1	2021	ARMY		1,577	0	1,577																													1,577
2	2021	ARMY		1,693	0	1,693																													1,693

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Exhibit P-21, Production Schedule: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30	P-1 Line Item Number / Title: 6060C65405 / MLRS Reduced Range Practice Rockets (RRPR)	Item Number / Title [DODIC]: C65405 / MLRS Reduced Range Practice Rockets (RRPR)
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2020													Fiscal Year 2021													BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020													Calendar Year 2021													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
Reduced Range Practice Rocket (LCRRPR)																																	
Prior Years Deliveries: 36939																																	
1	2016	ARMY	3,954	3,954	0																								0				
1	2016	MC (+)	648	648	0																								0				
1	2016	Total	4,602	4,602	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
2	2016	ARMY	276	276	0																								0				
1	2017	ARMY	1,362	1,362	0																								0				
1	2017	MC (+)	648	648	0																								0				
1	2017	Total	2,010	2,010	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
2	2017	ARMY	342	342	0																								0				
1	2018	ARMY	3,078	512	2,566	256	257	257	257	257	257	256	256	256														0					
1	2018	MC (+)	648	108	540	54	54	54	54	54	54	54	54	54														0					
1	2018	Total	3,726	620	3,106	310	311	311	311	311	311	310	310	310	-	-	-	-	-	-	-	-	-	-	-	-	-	0					
2	2018	ARMY	342	171	171	29	29	29	28	28	28																	0					
1	2019	ARMY	1,542	0	1,542	-	-	-	-	-	-	-	-	129	129	129	129	129	128	128	128	128	128	128	129			0					
1	2019	MC (+)	648	0	648	-	-	-	-	-	-	-	54	54	54	54	54	54	54	54	54	54	54	-	-			0					
1	2019	Total	2,190	0	2,190	-	-	-	-	-	-	-	54	54	183	183	183	183	182	182	182	182	182	128	129	-	-	0					
2	2019	ARMY	672	0	672	-	-	-	-	-	56	56	56	56	56	56	56	56	56	56	56							0					
1	2020	ARMY	1,446	0	1,446						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120	121	1,205					
1	2020	MC (+)	648	0	648						A -	-	-	-	-	-	-	-	-	-	-	-	-	54	54	54	54	378					
1	2020	Total	2,094	0	2,094						-	-	-	-	-	-	-	-	-	-	-	-	-	54	54	54	174	175	1,583				
2	2020	ARMY	1,536	0	1,536						A -	-	-	-	-	-	-	-	-	-	-	-	-	128	128	128	128	768					
1	2021	ARMY	1,577	0	1,577																							1,577					
2	2021	ARMY	1,693	0	1,693																							1,693					
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				

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Exhibit P-21, Production Schedule: PB 2021 Army																		Date: February 2020											
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30										P-1 Line Item Number / Title: 6060C65405 / MLRS Reduced Range Practice Rockets (RRPR)										Item Number / Title [DODIC]: C65405 / MLRS Reduced Range Practice Rockets (RRPR)									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2022														Fiscal Year 2023														BALANCE	
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022														Calendar Year 2023														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
Reduced Range Practice Rocket (LCRRPR)																																			
Prior Years Deliveries: 36939																																			
1	2016	ARMY		3,954	3,954	0																													0
1	2016	MC (†)		648	648	0																													0
1	2016	Total		4,602	4,602	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
2	2016	ARMY		276	276	0																													0
1	2017	ARMY		1,362	1,362	0																													0
1	2017	MC (†)		648	648	0																													0
1	2017	Total		2,010	2,010	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
2	2017	ARMY		342	342	0																													0
1	2018	ARMY		3,078	3,078	0																													0
1	2018	MC (†)		648	648	0																													0
1	2018	Total		3,726	3,726	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
2	2018	ARMY		342	342	0																													0
1	2019	ARMY		1,542	1,542	0																													0
1	2019	MC (†)		648	648	0																													0
1	2019	Total		2,190	2,190	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
2	2019	ARMY		672	672	0																													0
1	2020	ARMY		1,446	241	1,205	121	121	121	121	120	120	120	120	120																				0
1	2020	MC (†)		648	270	378	54	54	54	54	54	54	-	-	-																				0
1	2020	Total		2,094	511	1,583	175	175	175	175	174	174	120	120	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
2	2020	ARMY		1,536	768	768	128	128	128	128	128																								0
1	2021	ARMY		1,577	0	1,577	-	-	-	-	-	-	-	-	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	125			0	
2	2021	ARMY		1,693	0	1,693	-	-	-	-	-	141	141	141	141	141	141	141	141	141	141	141	141	141	141	141	141	141	141	141				0	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30		P-1 Line Item Number / Title: 6060C65405 / MLRS Reduced Range Practice Rockets (RRPR)
		Item Number / Title [DODIC]: C65405 / MLRS Reduced Range Practice Rockets (RRPR)

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2021	1-8-5 For 2021	MAX For 2021	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Lockheed Martin - Dallas, TX	504	9,216	11,520	0	4	16	20	0	4	16	20
2	Letterkenny Munitions Center - Chambersburg, PA	504	1,500	1,968	0	2	12	14	0	4	12	16

Remarks:
 There are no production gaps during months that Low Cost Reduced Range Practice Rockets (LCRRPRs) are not being produced as Guided Multiple Launch Rocket System (GMLRS) Rocket production continues. Continued production of LCRRPRs at Camden, Arkansas mitigates shared production costs with GMLRS and Army Tactical Missile System (ATACMS). The plans are to relocate LCRRPR production to M33 resulting in LCRRPRs no longer sharing a production line with GMLRS.

(†) Delivery rows marked with this symbol indicate that they are funded through a separate Line Item. See the respective components' exhibits for details, including the full delivery schedule.
 "A" in the Delivery Schedule indicates the Contract Award Date.
Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/ Assault Missile Sys	P-1 Line Item Number / Title: 6200C02901 / High Mobility Artillery Rocket System (HIMARS)
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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: 0210608A, 0603778A
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Line Item MDAP/MAIS Code: 367

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>)	411	17	-	5	-	5	11	5	-	-	-	449
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,861.090	171.138	-	41.226	-	41.226	88.979	41.228	-	-	-	2,203.661
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,861.090	171.138	-	41.226	-	41.226	88.979	41.228	-	-	-	2,203.661
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,861.090	171.138	-	41.226	-	41.226	88.979	41.228	-	-	-	2,203.661

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	4,528.200	10,066.941	-	8,245.200	-	8,245.200	8,089.000	8,245.600	-	-	-	4,907.931

Description:

The M142 High Mobility Artillery Rocket System (HIMARS) launcher is a full spectrum, combat proven, all weather, 24/7 lethal and responsive, precision strike weapon system. HIMARS provides critical missile precision strike, operational shaping fires, counter-fire, and close support destructive and suppressive fires. HIMARS is a C-130 or C-17 transportable, wheeled, indirect fire, rocket/misile launcher capable of firing one pod of precision rockets/missiles from the current and future Multiple Launch Rocket System (MLRS) Family of Munitions (MFOM), to include the Guided Multiple Launch Rocket System-Unitary (GMLRS-U), GMLRS Alternative Warhead, the Army Tactical Missile System (ATACMS) and future MFOM to include the Extended Range (ER) GMLRS, and the Precision Strike Missile (PrSM). In FY2017, the Army directed the program office to produce additional HIMARS launchers in an effort called HIMARS Fleet Expansion. Army Acquisition Objective (AAO) is 363 HIMARS launchers. HIMARS Fleet Expansion will increase the Army Acquisition Objective to 425, but may be increased contingent on Army requirements.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	17	-	5	-	5	11	5	-
	Total Obligation Authority	171.138	-	41.226	-	41.226	88.979	41.228	-
Total: Secondary Distribution	Quantity	17	-	5	-	5	11	5	-
	Total Obligation Authority	171.138	-	41.226	-	41.226	88.979	41.228	-

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/ Assault Missile Sys **P-1 Line Item Number / Title:** 6200C02901 / High Mobility Artillery Rocket System (HIMARS)

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0210608A, 0603778A

Line Item MDAP/MAIS Code: 367

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-5	C03000 / HIMARS LAUNCHER				411 / 1,861.090	17 / 171.138	- / -	5 / 41.226	- / -	5 / 41.226
P-40	Total Gross/Weapon System Cost				411 / 1,861.090	17 / 171.138	- / -	5 / 41.226	- / -	5 / 41.226

*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:

FY2021 Base procurement dollars in the amount of \$41.226 million supports the procurement of 5 M142 HIMARS launchers and associated equipment. This is an increase of \$41.266 million from PB2020. This increase reflects a change in Army priorities to buy more HIMARS launchers. Obsolescence with the Universal Fire Control System (UFCS) required the program office to make a lifetime buy of UFCS in FY2019 to support FY2021 and future launchers. This decreases the unit cost per launcher since the UFCS is not included in the FY2021-2023 costs. With projected FMS sales, cost savings realized from economies of scale decreases the overall estimated unit price for FY2021. The Army intends to convert any price advantage created through contract negotiations, other service procurement, and/or foreign military sales to support additional HIMARS launchers and Fleet Expansion.

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

UNCLASSIFIED

Exhibit P-5, Cost Analysis: PB 2021 Army											Date: February 2020						
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30						P-1 Line Item Number / Title: 6200C02901 / High Mobility Artillery Rocket System (HIMARS)						Item Number / Title [DODIC]: C03000 / HIMARS LAUNCHER					
ID Code (A=Service Ready, B=Not Service Ready) :											MDAP/MAIS Code:						
Resource Summary				Prior Years		FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total			
Procurement Quantity (Units in Each)				411		17		-		5		-		5			
Gross/Weapon System Cost (\$ in Millions)				1,861.090		171.138		-		41.226		-		41.226			
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-			
Net Procurement (P-1) (\$ in Millions)				1,861.090		171.138		-		41.226		-		41.226			
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-			
Total Obligation Authority (\$ in Millions)				1,861.090		171.138		-		41.226		-		41.226			
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																	
Initial Spares (\$ in Millions)				-		-		-		-		-		-		-	
Gross/Weapon System Unit Cost (\$ in Thousands)				4,528.200		10,066.941		-		8,245.200		-		8,245.200			

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
Launcher	2,865.681	411	1,177.795	7,609.353	17	129.359	-	-	-	4,244.800	5	21.224	-	-	-	4,244.800	5	21.224
Carrier	-	-	189.532	597.625	24	14.343	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	1,367.327	-	-	143.702	-	-	-	-	-	21.224	-	-	-	-	-	21.224
Non Recurring Cost																		
European Deterrence Initiative Production Restart - Obsolescence Mitigation	-	-	74.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Non Recurring Cost	-	-	74.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Flyaway Cost	-	-	1,441.727	-	-	143.702	-	-	-	-	-	21.224	-	-	-	-	-	21.224
Support - Fielding Cost																		
Fielding	-	-	69.479	-	-	6.049	-	-	-	-	-	2.856	-	-	-	-	-	2.856
Subtotal: Support - Fielding Cost	-	-	69.479	-	-	6.049	-	-	-	-	-	2.856	-	-	-	-	-	2.856
Support - Operational/Site Activation Cost																		
System Assembly, Installation and Checkout on Site	-	-	28.410	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Support - Operational/Site Activation Cost	-	-	28.410	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: PB 2021 Army												Date: February 2020					
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30						P-1 Line Item Number / Title: 6200C02901 / High Mobility Artillery Rocket System (HIMARS)						Item Number / Title [DODIC]: C03000 / HIMARS LAUNCHER					

ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:							
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Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Support - Peculiar Support Equipment Cost																		
Support and Handling Equipment	-	-	38.237	-	-	1.070	-	-	-	-	-	2.131	-	-	-	-	-	2.131
<i>Subtotal: Support - Peculiar Support Equipment Cost</i>	-	-	38.237	-	-	1.070	-	-	-	-	-	2.131	-	-	-	-	-	2.131
Support - Production Engineering Cost																		
Production Engineering	-	-	103.257	-	-	11.399	-	-	-	-	-	9.992	-	-	-	-	-	9.992
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	103.257	-	-	11.399	-	-	-	-	-	9.992	-	-	-	-	-	9.992
Support - Program Management Cost																		
Government Management	-	-	22.856	-	-	1.267	-	-	-	-	-	3.238	-	-	-	-	-	3.238
<i>Subtotal: Support - Program Management Cost</i>	-	-	22.856	-	-	1.267	-	-	-	-	-	3.238	-	-	-	-	-	3.238
Support - System Engineering Cost																		
System Engineering	-	-	124.587	-	-	6.259	-	-	-	-	-	1.455	-	-	-	-	-	1.455
<i>Subtotal: Support - System Engineering Cost</i>	-	-	124.587	-	-	6.259	-	-	-	-	-	1.455	-	-	-	-	-	1.455
Support - System Test and Evaluation Cost																		
Test and Evaluation Support	-	-	32.537	-	-	1.392	-	-	-	-	-	0.330	-	-	-	-	-	0.330
<i>Subtotal: Support - System Test and Evaluation Cost</i>	-	-	32.537	-	-	1.392	-	-	-	-	-	0.330	-	-	-	-	-	0.330
Gross/Weapon System Cost	4,528.200	411	1,861.090	10,066.941	17	171.138	-	-	-	8,245.200	5	41.226	-	-	-	8,245.200	5	41.226

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	17	-	5	-	5
	Total Obligation Authority	171.138	-	41.226	-	41.226
Total:	Quantity	17	-	5	-	5
Secondary Distribution	Total Obligation Authority	171.138	-	41.226	-	41.226

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/ Assault Missile Sys	P-1 Line Item Number / Title: 6472C98510 / ARMY TACTICAL MSL SYS (ATACMS) - SYS SUM
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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: 0203802A
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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>)	1,279	0	232	-	-	-	-	-	-	-	Continuing	Continuing
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,266.402	-	300.783	-	-	-	-	-	-	-	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	75.067	-	-	-	-	-	-	-	-	-	-	75.067
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,191.335	-	300.783	-	-	-	-	-	-	-	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	75.067	-	-	-	-	-	-	-	-	-	-	75.067
Total Obligation Authority (<i>\$ in Millions</i>)	1,266.402	-	300.783	-	-	-	-	-	-	-	Continuing	Continuing

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	990.150	-	1,296.478	-	-	-	-	-	-	-	Continuing	Continuing

Description:

NOTE: All funds for this program were previously included in CA6700 ATACMS Mods in support of New Missiles.

There is no funding for FY 2021.

Army Tactical Missile System (ATACMS) is the United States (U.S.) Army's primary 24/7, all weather, and surface-to-surface artillery precision missile used by current and future Combatant Commanders to shape the battlefield with long-range fires against hard and soft stationary targets in open, complex, and urban environments. The missile provides the Combatant Commanders with a 24/7 all-weather 300 kilometers (km) long-range fires capability to attack high-payoff, time-sensitive targets without placing aircraft and crews at risk. It's precision accuracy, along with the absence of potential duds and reduced lethal radii, mitigate the warfighter's collateral damage concerns against hard and soft targets in complex and urban environments.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	-	232	-	-	-	-	-	-	-
Total Obligation Authority	-	300.783	-	-	-	-	-	-	-
Total:									
Secondary Distribution									
Quantity	-	232	-	-	-	-	-	-	-
Total Obligation Authority	-	300.783	-	-	-	-	-	-	-

Justification:

There is no funding for FY 2021.

Procurement dollars moved from ATACMS Mods (1823CA6700) funding line.

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Exhibit P-40, Budget Line Item Justification: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/ Assault Missile Sys		P-1 Line Item Number / Title: 6472C98510 / ARMY TACTICAL MSL SYS (ATACMS) - SYS SUM
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0203802A
Line Item MDAP/MAIS Code: N/A		
<p>In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.</p> <p>This program supports the Long Range Precision Fires Cross Functional Team (CFT), ATACMS BLK 1A (C98501).</p>		

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/ Assault Missile Sys	P-1 Line Item Number / Title: 6870C88001 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)
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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: 0203802A
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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>)	859	1,225	1,130	-	1,130	1,130	-	-	-	-	-	4,344
Gross/Weapon System Cost (<i>\$ in Millions</i>)	78.427	104.973	83.300	-	84.993	84.993	-	-	-	-	-	351.693
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	78.427	104.973	83.300	-	84.993	84.993	-	-	-	-	-	351.693
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	78.427	104.973	83.300	-	84.993	84.993	-	-	-	-	-	351.693

(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>)	91.300	85.692	73.717	-	75.215	75.215	-	-	-	-	-	80.961

Description:

Lethal Miniature Aerial Missile System (LMAMS) is a single man-portable/operable, light-weight organic, beyond line-of-sight, precision guided, loitering aerial missile system capable of locating and engaging obscured and/or fleeting enemy targets who otherwise cannot be engaged by typical direct fire weapon systems. Front and Side Look High Resolution Electro-Optical (day) and Front Look Infrared (night) cameras allow the Warfighter to have eyes on the target for positive identification. LMAMS Wave-Off capability allows the operator to wave-off or re-direct the LMAMS flight path prior to impact, if necessary. The system is comprised of a fire control unit, launcher, missile, and a modular payload capable of high lethality against unprotected Combatant Personnel and producing casualties against Personnel in Soft Skinned Vehicles. LMAMS has the ability to be employed in less than two minutes.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	1,225	1,130	-	1,130	1,130	-	-	-	-
Total Obligation Authority	104.973	83.300	-	84.993	84.993	-	-	-	-
Total:	1,225	1,130	-	1,130	1,130	-	-	-	-
Secondary Distribution	104.973	83.300	-	84.993	84.993	-	-	-	-

UNCLASSIFIED

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 02: Other Missiles / BSA 30: Anti-Tank/ Assault Missile Sys **P-1 Line Item Number / Title:** 6870C88001 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0203802A

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-5	C88022 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)	P-5a, P-21			859 / 78.427	1,225 / 104.973	1,130 / 83.300	- / -	1,130 / 84.993	1,130 / 84.993
P-40	Total Gross/Weapon System Cost				859 / 78.427	1,225 / 104.973	1,130 / 83.300	- / -	1,130 / 84.993	1,130 / 84.993

*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:
 LMAMS capability is required to fulfill JUONs and maintain asset inventory in support of Joint Urgent Operational Need CC-0556, AC-0008, AF-0009, Operational Need Statement 17-22331, and other emerging urgent requirements.

 FY2021 OCO procurement dollars in the amount of \$84.993 million procures 1130 All Up Rounds (AUR), 38 Fire Control Units, 7 Multi-Pack Launchers, 190 Inert Training Rounds, 38 Training Simulators, and supporting equipment.

 The Army intends to convert any price advantage created through contract negotiations, other service procurement, and/or foreign military sales to increase the Army procurement of LMAMS missiles and/or to mitigate safety and obsolescence issues.

UNCLASSIFIED

Exhibit P-5, Cost Analysis: PB 2021 Army													Date: February 2020					
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30						P-1 Line Item Number / Title: 6870C88001 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)						Item Number / Title [DODIC]: C88022 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)						
ID Code (A=Service Ready, B=Not Service Ready) :									MDAP/MAIS Code:									
Resource Summary				Prior Years		FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO		FY 2021 Total	
Procurement Quantity (Units in Each)				859		1,225			1,130			-			1,130		1,130	
Gross/Weapon System Cost (\$ in Millions)				78.427		104.973			83.300			-			84.993		84.993	
Less PY Advance Procurement (\$ in Millions)				-		-			-			-			-		-	
Net Procurement (P-1) (\$ in Millions)				78.427		104.973			83.300			-			84.993		84.993	
Plus CY Advance Procurement (\$ in Millions)				-		-			-			-			-		-	
Total Obligation Authority (\$ in Millions)				78.427		104.973			83.300			-			84.993		84.993	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																		
Initial Spares (\$ in Millions)				-		-			-			-			-		-	
Gross/Weapon System Unit Cost (\$ in Thousands)				91.300		85.692			73.717			-			75.215		75.215	
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
All Up Rounds ^(†)	48.155	889	42.810	54.877	1,225	67.224	57.398	1,130	64.860	-	-	-	56.926	1,130	64.326	56.926	1,130	64.326
Inert Training Missiles	49.409	320	15.811	44.255	200	8.851	44.458	190	8.447	-	-	-	39.837	190	7.569	39.837	190	7.569
Training Simulators	25.410	39	0.991	25.175	40	1.007	25.000	38	0.950	-	-	-	26.105	38	0.992	26.105	38	0.992
Multi-Pack Launcher	-	-	-	81.000	10	0.810	81.000	7	0.567	-	-	-	67.857	7	0.475	67.857	7	0.475
Training Support Equipment	-	-	2.330	-	-	0.465	-	-	1.514	-	-	-	-	-	2.051	-	-	2.051
Fielding	-	-	8.725	-	-	16.268	-	-	3.358	-	-	-	-	-	1.087	-	-	1.087
Fire Control Units	24.824	51	1.266	24.700	40	0.988	25.316	38	0.962	-	-	-	23.289	38	0.885	23.289	38	0.885
<i>Subtotal: Recurring Cost</i>	-	-	71.933	-	-	95.613	-	-	80.658	-	-	-	-	-	77.385	-	-	77.385
Non Recurring Cost																		
Qualify Second Source	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.447	-	-	5.447
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.447	-	-	5.447
<i>Subtotal: Flyaway Cost</i>	-	-	71.933	-	-	95.613	-	-	80.658	-	-	-	-	-	82.832	-	-	82.832
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	1.266	-	-	4.653	-	-	0.799	-	-	-	-	-	0.250	-	-	0.250
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	1.266	-	-	4.653	-	-	0.799	-	-	-	-	-	0.250	-	-	0.250
Support - Program Management Cost																		

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Exhibit P-5, Cost Analysis: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30	P-1 Line Item Number / Title: 6870C88001 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)	Item Number / Title [DODIC]: C88022 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Government Management	-	-	5.228	-	-	4.707	-	-	1.843	-	-	-	-	-	1.911	-	-	1.911
<i>Subtotal: Support - Program Management Cost</i>	-	-	5.228	-	-	4.707	-	-	1.843	-	-	-	-	-	1.911	-	-	1.911
Gross/Weapon System Cost	91.300	859	78.427	85.692	1,225	104.973	73.717	1,130	83.300	-	-	-	75.215	1,130	84.993	75.215	1,130	84.993

Remarks:
Non-Recurring Cost is to qualify Second Source for the LMAMS System.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	1,225	1,130	-	1,130	1,130
	Total Obligation Authority	104.973	83.300	-	84.993	84.993
Total:	Quantity	1,225	1,130	-	1,130	1,130
Secondary Distribution	Total Obligation Authority	104.973	83.300	-	84.993	84.993

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

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Exhibit P-5a, Procurement History and Planning: PB 2021 Army							Date: February 2020				
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30			P-1 Line Item Number / Title: 6870C88001 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)				Item Number / Title [DODIC]: C88022 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)				

Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
All Up Rounds ^(†)	✓	2019	AeroVironment / Simi Valley, CA	SS / FFP	AMCOM, Redstone Arsenal, AL	Jun 2020	Mar 2021	1,225	57.358	Y		
All Up Rounds ^(†)	✓	2020	AeroVironment / Simi Valley, CA	SS / FFP	AMCOM, Redstone Arsenal, AL	Jun 2020	Mar 2021	1,130	57.398	Y		
All Up Rounds ^(†)	✓	2021	AeroVironment / Simi Valley, CA	SS / FFP	AMCOM, Redstone Arsenal, AL	Mar 2021	Mar 2022	1,130	56.926	Y		

^(†) indicates the presence of a P-21

Remarks:
10 U.S. Code #2431 and DoD Financial Mgt Reg
Vol 2B, Ch4 mandate Production Rates be defined in terms of ""budget year.""

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Exhibit P-21, Production Schedule: PB 2021 Army	Date: February 2020
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Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30	P-1 Line Item Number / Title: 6870C88001 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)	Item Number / Title [DODIC]: C88022 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)
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Cost Elements <i>(Units in Each)</i>					Fiscal Year 2020												Fiscal Year 2021												B A L A N C E		
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020												Calendar Year 2021												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L		A U G	S E P

All Up Rounds

Prior Years Deliveries: 889																													
✓	1	2019	ARMY	1,225	0	1,225																							504
✓	1	2020	ARMY	1,130	0	1,130								A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	465
✓	1	2021	ARMY	1,130	0	1,130																							1,130

O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P
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Exhibit P-21, Production Schedule: PB 2021 Army															Date: February 2020														
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30										P-1 Line Item Number / Title: 6870C88001 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)										Item Number / Title [DODIC]: C88022 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2022										Fiscal Year 2023										BALANCE								
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022										Calendar Year 2023																	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R		M A Y	J U N	J U L	A U G	S E P			
All Up Rounds																																		
Prior Years Deliveries: 889																																		
✓	1	2019	ARMY	1,225	721	504	103	103	103	103	92																							0
✓	1	2020	ARMY	1,130	665	465	95	95	95	95	85																							0
✓	1	2021	ARMY	1,130	0	1,130	-	-	-	-	-	95	95	95	95	95	95	95	95	95	95	95	85											0
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				

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Exhibit P-21, Production Schedule: PB 2021 Army							Date: February 2020					
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 02 / 30				P-1 Line Item Number / Title: 6870C88001 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)				Item Number / Title [DODIC]: C88022 / LETHAL MINIATURE AERIAL MISSILE SYSTEM (LMAMS)				
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2021	1-8-5 For 2021	MAX For 2021	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	AeroVironment - Simi Valley, CA	600	1,500	3,000	1	1	5	6	1	1	5	6

Remarks:
Since All Up Rounds are delivered in response to JUONS, neither MSR nor MAX apply to LMAMS.

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

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

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications	P-1 Line Item Number / Title: 0962C50700 / Patriot Mods
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0607865A
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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>)	4,162.964	323.228	278.716	278.050	-	278.050	223.174	232.559	168.392	178.539	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	4,162.964	323.228	278.716	278.050	-	278.050	223.174	232.559	168.392	178.539	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	4,162.964	323.228	278.716	278.050	-	278.050	223.174	232.559	168.392	178.539	Continuing	Continuing

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	46,774.876	8,506.000	14,669.263	27,805.000	-	27,805.000	-	-	-	-	Continuing	Continuing

Description:

Note: Starting in FY21, funds realigned from PE C50016, System Integration and Test Procurement.

The PATRIOT Mods program implements critical capability, readiness and sustainability modifications to the weapon system and maintains Integrated Logistics Support. Required modifications are identified through various means to include: validated requirement documents such as the Capability Production Document (CPD), Capabilities Development Document (CDD), and the Operational Needs Statement (ONS); material changes supported by improved operational effectiveness as identified in the PATRIOT Product Improvement Program (PIP); material deficiencies identified in the field; obsolescence issues; emerging technologies; software improvements related to warfighter machine and crew interface requirements and communication upgrades.

PATRIOT Mods funding supports International Engineering Services Program (IESP); Integrated Logistics Support (ILS); US Unique Engineering Services (ES); System Engineering Program Management (SEPM) activities; Reliability, Availability, and Maintainability (RAM) Mods; Recapitalization (RECAP); Dismounted Patriot Information Coordination Central (DPICCC); Battery Command Post/ Tactical Command System /Computer Software Module (BCP/TCS/CSM) Mod; the Radar Digital Processor-Configuration (RDP-C) upgrade; PATRIOT Maintenance Trainer (PMT); PATRIOT Multi-Echelon Training (PMET); Assured Positioning, Navigation, and Timing (PNT); Test Detachment; Enhanced Launcher Electronic Systems (ELES); SIPRNet/NIPRNet Access Point/Troposcatter (SNAP/TROPO); Digital Sidelobe Canceller (DSLCC); Command Obsolescence Alleviation; 35th Brigade Modification Kits and ADI TPX 57 Obsolescence; MAP/RDP Encryption Compliance; IFF Antenna Redesign; Communications Obsolescence Upgrade; and Report Rocket Classification.

IESP is an international cost share program which allows the current 16 FMS partners to contribute toward common, non-RDTE engineering activities required to sustain PATRIOT capability. This cost share program structure is at a ratio of 2:1 FMS dollars to USD investment. Consolidated funds provide essential engineering services toward enhancing PATRIOT fleet readiness for both the United States Army and International partners. Significant cost avoidance is achieved by sharing expenses that would otherwise be fully funded by the United States to achieve the same result.

RAM modifications provide resolution to field failures which are identified through component analysis, field data collection, obsolescence issues and emerging technologies which are prioritized based on readiness and Operations and Support (O&S) impacts. This effort includes the engineering, acquisition, qualification testing, installation, technical support and training device upgrades associated with modification and design changes which are essential to stabilize the system at the highest readiness posture available and reduction of O&S. Kit quantity is based on expected Engineering Change Proposals (ECPs) to be applied to Major End Items (MEIs). Quantities will be procured at an optimized rate utilizing price advantage created through contract negotiation, other service procurement, and/or foreign military sales into a buy-to-budget procurement strategy.

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Exhibit P-40, Budget Line Item Justification: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 0932A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications		P-1 Line Item Number / Title: 0962C50700 / Patriot Mods
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0607865A
Line Item MDAP/MAIS Code: N/A		
<p>Recapitalization (RECAP) Modifications include critical upgrades including but not limited to: Family of Medium Tactical Vehicles (FMTV), and Depot Maintenance Plant Equipment (DMPE), Harmonic Generator Kits, Post Deployment Build 8 (PDB-8) S/W & H/W, Cryptographic Modernization Kits, Modern Man Station (MMS), Antenna Mast Group (AMG) Cable upgrades, Electronic Power Plant (EPP) C3 Power Distribution Unit (PDU) kits, Information and Coordination Central (ICC) External Time Reference (ETR) kits, and Cooling Liquid Electron Tube (CLET) kits. These modifications are synchronized within the RECAP program. RECAP is a battalion set, resulting in a more supportable, reliable, and capable unit in the force. Quantity represents 1 battalion a year.</p> <p>Dismounted Patriot Information Coordination Central (DPICC) effort rehosts tactical Patriot software maintained via engineering services to a smaller, portable hardware configuration that will allow flexible, tailorable deployment options by freeing up Battalion level ICC's.</p> <p>The Battery Command Post/Tactical Command System/Computer Software Module (BCP/TCS/CSM) effort continues the development of the Capabilities Development Document (CDD) required Battle Management, Command, Control, Communications, Computers, and Intelligence (BMC4I) capability to maintain compatibility with tactical software enhancements, while enhancing and improving the defense design and planning capabilities for the PATRIOT warfighter. This includes systems engineering, software requirements, software design/code/test and independent validation and verification testing. This effort also provides Integrated Logistics Support, required due to the large amount of Commercial Off The Shelf components, of the 62 Battery Command Posts and 17 Tactical Command Systems. Additionally, this effort supports the BCP/TCS/CSM fielding upgrades for each PATRIOT Post Deployment Build updates. Note: Quantities procured and installed in prior years.</p> <p>Patriot Multi-Echelon Training (PMET), Reconfigurable Table Top Trainer (RT3): The PATRIOT Weapons System uses tactical equipment and training aids, devices, simulators, and simulations (TADSS) to conduct multi-level training for both operators and maintenance personnel. This includes both hardware devices and software programs utilized to include; the Patriot Maintenance Trainer (PMT), Reconfigurable Table Top Trainer (RT3) and the Patriot Multi-Echelon Training (PMET). The PMT is a new device being developed and planned for fielding to the Air Defense Artillery Schools at Fort Sill, OK. The PMT trains 14E, 140E, 14T, 94S and 948D 6D tasks. It reduces dependency on tactical equipment by merging physical simulators and virtual simulations replicating a realistic training environment. The PMT will have one instructor station, one radar set, one launching station, and an engagement control station. Some components will be actual physical representations of the tactical hardware while other components will be virtually simulated using state of the art gaming technology of P-MET. The two environments will work seamlessly together to simulate the tactical end items. P-MET is a Microsoft Windows based software application utilizing state of the art gaming technology to train U.S. Army personnel in the proper trouble-shooting techniques to repair and maintain the PATRIOT Missile System. P-MET is the Life Cycle Replacement for the PATRIOT Intermediate Maintenance Institutional Trainer (PIMIT) for Intermediate Maintenance training but is also used for Organizational, NET, and even Depot maintenance training. P-MET is used in an institutional, field and depot environment. P-MET is designed and developed to operate on the RT3. The RT3 provides a flexible training platform that may be configured to support multiple training levels and systems, via removable hard drives. In PATRIOT the RT3 is used to run the PATRIOT tactical embedded training software (re-hosted tactical training software, PATRIOT Conduct of Fire Trainer (PCOFT)) for operations tasks, the P-MET software for maintenance tasks, and the PATRIOT Skills Library (PSL) lessons for both maintenance and operator tasks. Other weapon systems may also use the RT3 platform for training (i.e., C-RAM, THAAD, and JLENS). The RT3 is a Life Cycle Replacement for the PCOFT and the PATRIOT Intermediate Maintenance Institutional Trainer (PIMIT) hardware platforms.</p> <p>SIPRNet/NIPRNet Access Point/Troposcatter (SNAP/TROPO). The SNAP/TROPO program provides units with an organic Beyond Line of Sight (BLOS) capability and completes the 94 AAMDC UMR requirement to support both intra battalion and external battalion communications. Troposcatter terminals allow connectivity between PATRIOT shelters when local terrain or long distances make organic Ultra High Frequency (UHF) Line of Sight (LOS) communications impossible to support fire control quality data exchanges. SNAP terminals allow a PATRIOT shelter without access to any local infrastructure to remotely connect to both SIPRnet and NIPRnet using Ku, Ka, or X band satellites for range extension in response to Operational Need Statements from combatant commands.</p> <p>Command Obsolescence Alleviation supports updates for interoperability and supportability by working obsolescence alleviation and engineering changes.</p> <p>Communications Obsolescence: Task is to replace obsolete PATRIOT communications equipment that is no longer supportable, with modern communications equipment for four PATRIOT Battalions. The fielded PATRIOT communications architecture utilizes obsolete serial technology that is no longer producible or repairable. This process requires modernization at battalion (BN) level to prevent breaking intra-BN communications, addresses the BN specific architecture to facilitate modern external and external communications. These measures will provide an interim solution until transition to AIAMD system architecture is achieved.</p> <p>The Radar Digital Processor-Configuration (RDP-C) replaces obsolete digital processors with single rack commercial off-the-shelf based modern processors. Battery Replaceable Units (BRUs) are reduced from 759 to 56 with 13 power supplies and 18 racks removed. Benefits of the RDP-C include improvement in radar reliability, life cycle cost savings, and capability and growth potential through software</p>		

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications	P-1 Line Item Number / Title: 0962C50700 / Patriot Mods
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0607865A
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Line Item MDAP/MAIS Code: N/A

improvements. The RDP-C modification will enable full AN/TPX-57(v)1 Identification Friend or Foe (IFF) Mode 5 Level 1 and 2 and new Combat Identification capabilities. The enhanced IFF capability allows for expanded target reports from the AN/TPX-57 which will include: National Origin, Platform ID Number (PIN), and GPS position (Level 2). The RDP-C is a prerequisite for migration to an IAMD Netted Sensor. The RDP-C will support efforts to counter emerging threats and growth to the netted sensor concept. This effort includes funding for continued obsolescence mitigation (such as Digital Exciter), kits, and some spares.

Digital Sidelobe Canceller (DSL/C) is an Electronic Counter Measures (ECM) technique used to cancel the interference that is entering the radar via the antenna sidelobes. This is currently being performed using analog hardware in the PATRIOT radar. DSL/C replaces the analog hardware and performs this task digitally in the radars processor. Benefits of the DSL/C include improved Side Lobe Canceller (SLC) Reliability and Maintainability, removal of complicated SLC adjustments, improves radar availability, removes 5 SLC Racks, provides hardware base for improved capability, and eliminates known and future obsolescence in SLC racks.

MAP/RDP Encryption Compliance: The operating systems in Modernized Adjunct Processor (MAP) and Radar Digital Processor (RDP) require upgrade and DoD level certification of the encryption algorithms that protect the contained Critical Program Information.

IFF Antenna Redesign: IFF antenna elements are not supportable. Upgrade circa 1970's design with new technology to mitigate obsolescence, reduce costs, and improve reliability.

Report Rocket Classification: The modern Air and Missile Defense environment contains a wide variety and large quantities of TBM and rocket threats. This task provides situational awareness for operators and allows for greater efficiency in management of interceptor inventories in the complex AMD environment.

The Enhanced Launcher Electronics System (ELES) modification upgrades a PAC-2 Launcher to a PAC-3 Capability. In addition to the ELES modification kit, last time procurement of obsolete components, and obsolescence mitigation (such as Data Link eXTensible- PATRIOT Fiber Optic Modem(DLX-P)) will occur to support the assured producibility of the ELES.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	323.228	278.716	278.050	-	278.050	223.174	232.559	168.392	178.539
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	323.228	278.716	278.050	-	278.050	223.174	232.559	168.392	178.539

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications **P-1 Line Item Number / Title:** 0962C50700 / Patriot Mods

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0607865A

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	C50700 / Patriot Mods (Various)				- / 4,162.964	- / 323.228	- / 278.716	- / 278.050	- / -	- / 278.050
P-40	Total Gross/Weapon System Cost				- / 4,162.964	- / 323.228	- / 278.716	- / 278.050	- / -	- / 278.050

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	C50700 / Patriot Mods (Various)				- / 223.174	- / 232.559	- / 168.392	- / 178.539	Continuing	Continuing
P-40	Total Gross/Weapon System Cost				- / 223.174	- / 232.559	- / 168.392	- / 178.539	Continuing	Continuing

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

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

Justification:
 FY2021 procurement dollars in the amount of \$278.050 million support the modifications for Reliability, Availability, and Maintainability Modifications (RAM Mods), Recapitalization (RECAP), Battery Command Post/ Tactical Command System/ Computer Software Module (BCP/TCS/CSM), Enhanced Launcher Electronics System (ELES), SIPRNet/NIPRNet Access Point/Troposcatter (SNAP/TROPO), PATRIOT Multi-Echelon Training (PMET), IFF Antenna Redesign, MAP/RDP Encryption, Report Rocket Classification, Communications Obsolescence, the IESP, system engineering, program management, and logistics support.

 PATRIOT Mods supports and facilitates enhanced capabilities and integration into the Integrated Air and Missile Defense (IAMD) architecture.

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Exhibit P-3a, Individual Modification: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10	P-1 Line Item Number / Title: 0962C50700 / Patriot Mods	Modification Number / Title: C50700 / Patriot Mods

ID Code (A=Service Ready, B=Not Service Ready) : _____ **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>)	4,162.964	323.228	278.716	278.050	-	278.050	223.174	232.559	168.392	178.539	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	4,162.964	323.228	278.716	278.050	-	278.050	223.174	232.559	168.392	178.539	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	4,162.964	323.228	278.716	278.050	-	278.050	223.174	232.559	168.392	178.539	Continuing	Continuing

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	46,774.876	8,506.000	14,669.263	27,805.000	-	27,805.000	-	-	-	-	Continuing	Continuing

Description:

The PATRIOT weapon system modernization program implements modifications to the weapon system and maintains Integrated Logistics Support. Required modifications are identified through various means, including the following: validated requirements documents such as Capability Production Documents and Operational Needs Statements; material changes identified in the PATRIOT Product Improvement Program (PIP); material deficiencies identified in the field; obsolescence issues; emerging technologies; software improvements; crew interface and communications upgrades.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	323.228	278.716	278.050	-	278.050	223.174	232.559	168.392	178.539
Total:									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	323.228	278.716	278.050	-	278.050	223.174	232.559	168.392	178.539

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Exhibit P-3a, Individual Modification: PB 2021 Army											Date: February 2020		
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10				P-1 Line Item Number / Title: 0962C50700 / Patriot Mods							Modification Number / Title: C50700 / Patriot Mods		
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:					
Models of Systems Affected: Various				Modification Type: Various				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)	
Procurement													
Modification Item 1 of 25: Dismounted Information Coordination Central													
B Kits													
Non-Recurring													
Dismounted Information Coordination Cent	1 / 10.000	1 / 10.000	1 / 10.346	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	
Subtotal: Non-Recurring	1 / 10.000	1 / 10.000	1 / 10.346	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	
Subtotal: Dismounted Information Coordination Central	1 / 10.000	1 / 10.000	1 / 10.346	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	
Modification Item 2 of 25: RAM Mods													
A Kits													
Recurring													
Kit Quantity	6,693 / 686.816	126 / 20.791	144 / 24.573	153 / 23.519	- / -	153 / 23.519	146 / 18.286	141 / 19.738	140 / 17.577	138 / 17.371	Continuing	Continuing	
Training	- / 90.259	- / 15.749	- / 16.650	- / 16.656	- / -	- / 16.656	- / 16.294	- / 17.419	- / 17.620	- / 17.425	Continuing	Continuing	
Training Equipment	- / 29.427	- / 3.151	- / 3.331	- / 3.332	- / -	- / 3.332	- / 3.460	- / 3.485	- / 4.000	- / 3.956	Continuing	Continuing	
Support Equipment	- / 54.215	- / 8.189	- / 8.657	- / 8.661	- / -	- / 8.661	- / 8.993	- / 9.058	- / 9.085	- / 8.985	Continuing	Continuing	
Fielding Support and NET	- / 96.120	- / 13.860	- / 14.652	- / 14.658	- / -	- / 14.658	- / 14.719	- / 15.329	- / 15.500	- / 15.329	Continuing	Continuing	
Integrated Logistics Support	- / 12.028	- / 1.260	- / 1.332	- / 1.332	- / -	- / 1.332	- / 1.383	- / 1.393	- / 1.400	- / 1.384	Continuing	Continuing	
Subtotal: Recurring	6,693 / 968.865	126 / 63.000	144 / 69.195	153 / 68.158	- / -	153 / 68.158	146 / 63.135	141 / 66.422	140 / 65.182	138 / 64.450	Continuing	Continuing	
Subtotal: RAM Mods	6,693 / 968.865	126 / 63.000	144 / 69.195	153 / 68.158	- / -	153 / 68.158	146 / 63.135	141 / 66.422	140 / 65.182	138 / 64.450	Continuing	Continuing	
Modification Item 3 of 25: Recapitalization													
A Kits													
Recurring													
Kit Quantity	15 / 246.400	1 / 13.100	1 / 14.101	1 / 14.104	- / -	1 / 14.104	1 / 14.300	1 / 14.300	1 / 12.300	1 / 12.744	Continuing	Continuing	
Integrated Logistics Support	- / 18.958	- / 1.100	- / 1.100	- / 1.100	- / -	- / 1.100	- / 1.200	- / 1.200	- / 1.200	- / 1.200	Continuing	Continuing	
Subtotal: Recurring	15 / 265.358	1 / 14.200	1 / 15.201	1 / 15.204	- / -	1 / 15.204	1 / 15.500	1 / 15.500	1 / 13.500	1 / 13.944	Continuing	Continuing	
Subtotal: Recapitalization	15 / 265.358	1 / 14.200	1 / 15.201	1 / 15.204	- / -	1 / 15.204	1 / 15.500	1 / 15.500	1 / 13.500	1 / 13.944	Continuing	Continuing	
Modification Item 4 of 25: BCP/TCS/CSM													
A Kits													
Recurring													
Engineering Change Orders	- / 3.615	- / 0.770	- / 0.770	- / 0.770	- / -	- / 0.770	- / 0.770	- / 0.770	- / 0.770	- / 0.770	Continuing	Continuing	
Fielding Support	- / 5.939	- / 0.980	- / 0.980	- / 0.980	- / -	- / 0.980	- / 0.980	- / 0.980	- / 0.980	- / 0.980	Continuing	Continuing	
Obsolescence/Tech Refresh	- / 1.293	- / 0.280	- / 0.280	- / 0.280	- / -	- / 0.280	- / 0.280	- / 0.280	- / 0.280	- / 0.280	Continuing	Continuing	

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Exhibit P-3a, Individual Modification: PB 2021 Army										Date: February 2020			
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10					P-1 Line Item Number / Title: 0962C50700 / Patriot Mods					Modification Number / Title: C50700 / Patriot Mods			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: Various			Modification Type: Various					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)	
Software/Systems Engineering	- / 131.010	- / 10.980	- / 10.980	- / 10.980	- / -	- / 10.980	- / 10.980	- / 10.980	- / 10.980	- / 10.980	Continuing	Continuing	
Integrated Logistics Support	- / 150.190	- / 13.990	- / 13.990	- / 13.990	- / -	- / 13.990	- / 13.990	- / 13.990	- / 12.990	- / 13.990	Continuing	Continuing	
Subtotal: Recurring	- / 192.047	- / 17.000	- / 17.000	- / 17.000	- / -	- / 17.000	- / 17.000	- / 17.000	- / 16.000	- / 17.000	Continuing	Continuing	
Non-Recurring													
BCP Kit Quantity	62 / 29.435	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	62 / 29.435	
TCS Kit Quantity	17 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 0.000	
Subtotal: Non-Recurring	79 / 29.435	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	79 / 29.435	
Subtotal: BCP/TCS/CSM	79 / 121.482	- / 17.000	- / 17.000	- / 17.000	- / -	- / 17.000	- / 17.000	- / 17.000	- / 16.000	- / 17.000	Continuing	Continuing	
Modification Item 5 of 25: Combined Crypto Modification Phase I (CCMPI)													
A Kits													
Recurring													
Kit Quantity	150 / 48.970	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	150 / 48.970	
Kit Quantity (GFE)	- / 1.072	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.072	
Subtotal: Recurring	150 / 50.042	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	150 / 50.042	
Non-Recurring													
Training	- / 10.396	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.396	
Subtotal: Non-Recurring	- / 10.396	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.396	
Subtotal: Combined Crypto Modification Phase I (CCMPI)	150 / 50.438	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	150 / 50.438	
Modification Item 6 of 25: Radar Digital Processor - Configuration (RDP-C)													
A Kits													
Recurring													
Kit Quantity	80 / 240.766	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	80 / 240.766	
Fielding	- / 12.000	- / 2.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 14.000	
Support Equipment	- / 136.942	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 136.942	
Subtotal: Recurring	80 / 289.708	- / 2.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	80 / 291.708	
Subtotal: Radar Digital Processor - Configuration (RDP-C)	80 / 289.708	- / 2.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	80 / 291.708	
Modification Item 7 of 25: Air Defense Artillery School Upgrades/ TADSS													
A Kits													

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Exhibit P-3a, Individual Modification: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10	P-1 Line Item Number / Title: 0962C50700 / Patriot Mods	Modification Number / Title: C50700 / Patriot Mods

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Models of Systems Affected: Various	Modification Type: Various	Related RDT&E PEs:
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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)
Recurring												
Radar Kit Quantity	4 / 96.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 96.000
<i>Subtotal: Recurring</i>	4 / 96.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 96.000
<i>Subtotal: Air Defense Artillery School Upgrades/ TADSS</i>	4 / 96.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 96.000
Modification Item 8 of 25: Modern Manstation (MMS)												
A Kits												
Recurring												
Fielding	- / 17.825	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 17.825
Support Equipment	- / 156.567	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 156.567
<i>Subtotal: Recurring</i>	- / 164.392	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 164.392
Non-Recurring												
Kit Quantity	82 / 55.842	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	82 / 55.842
<i>Subtotal: Non-Recurring</i>	82 / 55.842	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	82 / 55.842
<i>Subtotal: Modern Manstation (MMS)</i>	82 / 120.234	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	82 / 120.234
Modification Item 9 of 25: Enhanced Launcher Electronics System (ELES)												
A Kits												
Recurring												
Kit Quantity	308 / 353.927	38 / 145.278	19 / 73.191	10 / 40.717	- / -	10 / 40.717	- / -	- / -	- / -	- / -	- / -	375 / 613.113
<i>Subtotal: Recurring</i>	308 / 353.927	38 / 145.278	19 / 73.191	10 / 40.717	- / -	10 / 40.717	- / -	- / -	- / -	- / -	- / -	375 / 613.113
<i>Subtotal: Enhanced Launcher Electronics System (ELES)</i>	308 / 353.927	38 / 145.278	19 / 73.191	10 / 40.717	- / -	10 / 40.717	- / -	- / -	- / -	- / -	- / -	375 / 613.113
Modification Item 10 of 25: SNAP/TROPO												
A Kits												
Recurring												
Kit Quantity SNAP	6 / 0.830	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.830
Support	- / 15.811	- / 1.115	- / 1.115	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 18.041
Integrated Logistics Support	- / 12.727	- / 0.633	- / 0.633	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 13.993
Training	- / 10.171	- / 0.002	- / 0.002	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.175
Equipment	- / 10.859	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.859
<i>Subtotal: Recurring</i>	6 / 10.398	- / 1.750	- / 1.750	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 13.898
Non-Recurring												

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Exhibit P-3a, Individual Modification: PB 2021 Army										Date: February 2020			
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10					P-1 Line Item Number / Title: 0962C50700 / Patriot Mods					Modification Number / Title: C50700 / Patriot Mods			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: Various			Modification Type: Various				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)	
Kit Quantity TROPO	26 / 12.884	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 12.884	
<i>Subtotal: Non-Recurring</i>	26 / 12.884	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 12.884	
<i>Subtotal: SNAP/TROPO</i>	32 / 23.282	- / 1.750	- / 1.750	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 26.782	
Modification Item 11 of 25: PATRIOT Maintenance Trainer (PMT)													
A Kits													
Recurring													
Kit Quantity	5 / 72.941	1 / 15.000	1 / 19.500	- / -	- / -	- / -	- / -	- / 8.000	- / 8.000	- / 8.000	Continuing	Continuing	
<i>Subtotal: Recurring</i>	5 / 72.941	1 / 15.000	1 / 19.500	- / -	- / -	- / -	- / -	- / 8.000	- / 8.000	- / 8.000	Continuing	Continuing	
Non-Recurring													
Training Support	- / 14.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 14.000	
<i>Subtotal: Non-Recurring</i>	- / 14.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 14.000	
<i>Subtotal: PATRIOT Maintenance Trainer (PMT)</i>	5 / 76.941	1 / 15.000	1 / 19.500	- / -	- / -	- / -	- / -	- / 8.000	- / 8.000	- / 8.000	Continuing	Continuing	
Modification Item 12 of 25: PATRIOT Multi-Echelon Training (PMET)													
A Kits													
Recurring													
Kit Quantity	16 / 21.180	4 / 5.000	4 / 7.000	4 / 7.000	- / -	4 / 7.000	4 / 7.000	4 / 7.000	4 / 7.000	4 / 7.210	Continuing	Continuing	
<i>Subtotal: Recurring</i>	16 / 21.180	4 / 5.000	4 / 7.000	4 / 7.000	- / -	4 / 7.000	4 / 7.000	4 / 7.000	4 / 7.000	4 / 7.210	Continuing	Continuing	
<i>Subtotal: PATRIOT Multi-Echelon Training (PMET)</i>	16 / 21.180	4 / 5.000	4 / 7.000	4 / 7.000	- / -	4 / 7.000	4 / 7.000	4 / 7.000	4 / 7.000	4 / 7.210	Continuing	Continuing	
Modification Item 13 of 25: Reconfigurable Table Top Trainers (RT3)													
A Kits													
Recurring													
Kit Quantity	489 / 31.338	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	489 / 31.338	
<i>Subtotal: Recurring</i>	489 / 31.338	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	489 / 31.338	
<i>Subtotal: Reconfigurable Table Top Trainers (RT3)</i>	489 / 31.338	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	489 / 31.338	
Modification Item 14 of 25: Assured PNT													
A Kits													
Recurring													
Hardware Integration	798 / 3.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	798 / 3.000	
<i>Subtotal: Recurring</i>	798 / 3.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	798 / 3.000	

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Exhibit P-3a, Individual Modification: PB 2021 Army										Date: February 2020			
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10					P-1 Line Item Number / Title: 0962C50700 / Patriot Mods					Modification Number / Title: C50700 / Patriot Mods			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: Various				Modification Type: Various				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)	
<i>Subtotal: Assured PNT</i>	798 / 3.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	798 / 3.000	
Modification Item 15 of 25: Test Detachment													
A Kits													
Recurring													
Equipment	1 / 56.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 56.000	
<i>Subtotal: Recurring</i>	1 / 56.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 56.000	
<i>Subtotal: Test Detachment</i>	1 / 56.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 56.000	
Modification Item 16 of 25: Digital Sidelobe Canceller (DSLCL)													
A Kits													
Recurring													
Kit Quantity	43 / 96.154	28 / 56.800	10 / 27.428	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	81 / 180.382	
<i>Subtotal: Recurring</i>	43 / 96.154	28 / 56.800	10 / 27.428	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	81 / 180.382	
<i>Subtotal: Digital Sidelobe Canceller (DSLCL)</i>	43 / 96.154	28 / 56.800	10 / 27.428	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	81 / 180.382	
Modification Item 17 of 25: Command Obsolescence Alleviation													
A Kits													
Recurring													
Command Obsolescence Alleviation	- / 5.000	- / 2.000	- / 1.989	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.989	
<i>Subtotal: Recurring</i>	- / 5.000	- / 2.000	- / 1.989	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.989	
<i>Subtotal: Command Obsolescence Alleviation</i>	- / 5.000	- / 2.000	- / 1.989	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.989	
Modification Item 18 of 25: Communications Obsolescence													
A Kits													
Recurring													
Kits	- / -	- / -	1 / 20.906	1 / 30.684	- / -	1 / 30.684	2 / 35.678	1 / 29.000	- / -	- / 9.225	Continuing	Continuing	
<i>Subtotal: Recurring</i>	- / -	- / -	1 / 20.906	1 / 30.684	- / -	1 / 30.684	2 / 35.678	1 / 29.000	- / -	- / 9.225	Continuing	Continuing	
<i>Subtotal: Communications Obsolescence</i>	- / -	- / -	1 / 20.906	1 / 30.684	- / -	1 / 30.684	2 / 35.678	1 / 29.000	- / -	- / 9.225	Continuing	Continuing	
Modification Item 19 of 25: 35th Brigade Modification Kits													
A Kits													
Non-Recurring													

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Exhibit P-3a, Individual Modification: PB 2021 Army										Date: February 2020		
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10				P-1 Line Item Number / Title: 0962C50700 / Patriot Mods				Modification Number / Title: C50700 / Patriot Mods				
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:					
Models of Systems Affected: Various			Modification Type: Various				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)
Modification Kits	- / -	- / -	- / -	- / -	- / -	- / -	- / -	56 / 15.200	- / -	- / -	- / -	56 / 15.200
<i>Subtotal: Non-Recurring</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	56 / 15.200	- / -	- / -	- / -	56 / 15.200
<i>Subtotal: 35th Brigade Modification Kits</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	56 / 15.200	- / -	- / -	- / -	56 / 15.200
Modification Item 20 of 25: ADI TPX 57 Obsolescence												
A Kits												
Non-Recurring												
ADI TPX	- / -	- / -	- / -	- / -	- / -	- / -	- / -	169 / 8.000	- / -	- / -	- / -	169 / 8.000
<i>Subtotal: Non-Recurring</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	169 / 8.000	- / -	- / -	- / -	169 / 8.000
<i>Subtotal: ADI TPX 57 Obsolescence</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	169 / 8.000	- / -	- / -	- / -	169 / 8.000
Modification Item 21 of 25: MAP/RDP Encryption Compliance												
A Kits												
Non-Recurring												
Certification	- / -	- / -	- / 11.999	- / 11.996	- / -	- / 11.996	- / -	- / -	- / -	- / -	- / -	- / 23.995
<i>Subtotal: Non-Recurring</i>	- / -	- / -	- / 11.999	- / 11.996	- / -	- / 11.996	- / -	- / -	- / -	- / -	- / -	- / 23.995
<i>Subtotal: MAP/RDP Encryption Compliance</i>	- / -	- / -	- / 11.999	- / 11.996	- / -	- / 11.996	- / -	- / -	- / -	- / -	- / -	- / 23.995
Modification Item 22 of 25: IFF Antenna Redesign												
A Kits												
Non-Recurring												
Kits	- / -	- / -	18 / 8.000	9 / 4.000	- / -	9 / 4.000	- / -	- / -	- / -	- / -	- / -	27 / 12.000
<i>Subtotal: Non-Recurring</i>	- / -	- / -	18 / 8.000	9 / 4.000	- / -	9 / 4.000	- / -	- / -	- / -	- / -	- / -	27 / 12.000
<i>Subtotal: IFF Antenna Redesign</i>	- / -	- / -	18 / 8.000	9 / 4.000	- / -	9 / 4.000	- / -	- / -	- / -	- / -	- / -	27 / 12.000
Modification Item 23 of 25: Report Rocket Classification												
A Kits												
Non-Recurring												
Kits	- / -	- / -	- / 4.011	- / 6.000	- / -	- / 6.000	- / 6.000	- / 8.000	- / -	- / -	- / -	- / 24.011
<i>Subtotal: Non-Recurring</i>	- / -	- / -	- / 4.011	- / 6.000	- / -	- / 6.000	- / 6.000	- / 8.000	- / -	- / -	- / -	- / 24.011
<i>Subtotal: Report Rocket Classification</i>	- / -	- / -	- / 4.011	- / 6.000	- / -	- / 6.000	- / 6.000	- / 8.000	- / -	- / -	- / -	- / 24.011
Modification Item 24 of 25: International Engineering Services Program (IESP)												
A Kits												

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Exhibit P-3a, Individual Modification: PB 2021 Army											Date: February 2020	
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10				P-1 Line Item Number / Title: 0962C50700 / Patriot Mods					Modification Number / Title: C50700 / Patriot Mods			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:					
Models of Systems Affected: Various			Modification Type: Various				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)
Recurring												
International Engineering Services Prog	- / -	- / -	- / -	- / 59.000	- / -	- / 59.000	- / 60.000	- / 40.000	- / 40.410	- / 40.410	Continuing	Continuing
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / 59.000	- / -	- / 59.000	- / 60.000	- / 40.000	- / 40.410	- / 40.410	Continuing	Continuing
<i>Subtotal: International Engineering Services Program (IESP)</i>	- / -	- / -	- / -	- / 59.000	- / -	- / 59.000	- / 60.000	- / 40.000	- / 40.410	- / 40.410	Continuing	Continuing
Modification Item 25 of 25: Logistics Recurring												
A Kits												
Recurring												
Logistics Support	- / -	- / -	- / -	- / 27.091	- / -	- / 27.091	- / 27.561	- / 27.137	- / 27.000	- / 27.000	Continuing	Continuing
<i>Subtotal: Recurring</i>	- / -	- / -	- / -	- / 27.091	- / -	- / 27.091	- / 27.561	- / 27.137	- / 27.000	- / 27.000	Continuing	Continuing
<i>Subtotal: Logistics Recurring</i>	- / -	- / -	- / -	- / 27.091	- / -	- / 27.091	- / 27.561	- / 27.137	- / 27.000	- / 27.000	Continuing	Continuing
<i>Subtotal: Procurement, All Modification Items</i>	8,796 / 2,588.907	199 / 322.028	199 / 277.516	178 / 276.850	- / -	178 / 276.850	153 / 221.874	372 / 231.259	145 / 167.092	143 / 177.239	Continuing	Continuing
Installation												
Modification Item 2 of 25: RAM Mods	6,654 / 151.613	130 / -	137 / -	149 / -	- / -	149 / -	149 / -	144 / -	140 / -	- / -	Continuing	Continuing
Modification Item 3 of 25: Recapitalization	15 / 227.830	1 / 1.200	1 / 1.200	1 / 1.200	- / -	1 / 1.200	1 / 1.300	1 / 1.300	1 / 1.300	1 / 1.300	Continuing	Continuing
Modification Item 4 of 25: BCP/TCS/CSM	79 / 1,192.582	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
Modification Item 5 of 25: Combined Crypto Modification Phase I (CCMPI)	150 / 2.032	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
<i>Subtotal: Installation</i>	6,898 / 1,574.057	131 / 1.200	138 / 1.200	150 / 1.200	- / -	150 / 1.200	150 / 1.300	145 / 1.300	141 / 1.300	1 / 1.300	Continuing	Continuing
Total												
Total Cost (Procurement + Support + Installation)	4,162.964	323.228	278.716	278.050	-	278.050	223.174	232.559	168.392	178.539	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2021 Army					Date: February 2020		
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 0962C50700 / Patriot Mods			Modification Number / Title: C50700 / Patriot Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 1 of 25: Dismounted Information Coordination Central							
Manufacturer Information							
Manufacturer Name: N/A				Manufacturer Location: N/A			
Administrative Leadtime (in Months):				Production Leadtime (in Months):			
Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							
Installation Information							
Method of Implementation (Organic): Engineering Services (Included in unit cost)					Installation Quantity: 0		

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Exhibit P-3a, Individual Modification: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10	P-1 Line Item Number / Title: 0962C50700 / Patriot Mods	Modification Number / Title: C50700 / Patriot Mods

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 2 of 25: RAM Mods

Manufacturer Information

Manufacturer Name: Raytheon	Manufacturer Location: Andover, MA
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	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023	Dec 2024
Delivery Dates	Feb 2020	Feb 2021	Feb 2022	Feb 2023	Feb 2024	Feb 2025	Feb 2026

Installation Information

Method of Implementation: Lead Logistics Fielding Team (Included in unit cost)

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	6,654 / 151.613	64 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
FY 2019	- / -	66 / 0.000	65 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	131 / 0.000
FY 2020	- / -	- / -	72 / 0.000	72 / 0.000	- / -	72 / 0.000	- / -	- / -	- / -	- / -	- / -	144 / 0.000
FY 2021	- / -	- / -	- / -	77 / 0.000	- / -	77 / 0.000	76 / 0.000	- / -	- / -	- / -	- / -	153 / 0.000
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	73 / 0.000	73 / 0.000	- / -	- / -	- / -	146 / 0.000
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	71 / 0.000	70 / 0.000	- / -	- / -	141 / 0.000
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	70 / 0.000	- / -	- / -	70 / 0.000
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	70 / 0.000	70 / 0.000
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6,535 / 0.000	6,535 / 0.000
Total	6,654 / 151.613	130 / 0.000	137 / 0.000	149 / 0.000	- / -	149 / 0.000	149 / 0.000	144 / 0.000	140 / 0.000	- / -	Continuing	Continuing

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	6,792	32	33	33	33	32	32	32	31	31	41	41	40	40	37	36	36	36	37	37	37	35	35	35	36	-	-	-	-	6,614	14,254
Out	6,723	32	32	33	33	33	32	32	32	31	31	41	41	40	40	37	36	36	36	37	37	35	35	35	36	-	-	-	-	6,688	14,254

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10	P-1 Line Item Number / Title: 0962C50700 / Patriot Mods	Modification Number / Title: C50700 / Patriot Mods
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 3 of 25: Recapitalization

Manufacturer Information

Manufacturer Name: Various	Manufacturer Location: Various
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Administrative Leadtime (in Months): 6	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	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, PM Office, contractor team (Included in unit cost)

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 / 226.730	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
FY 2019	1 / 1.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
FY 2020	- / -	1 / 1.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
FY 2021	- / -	- / -	1 / 1.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
FY 2022	- / -	- / -	- / -	1 / 1.200	- / -	1 / 1.200	- / -	- / -	- / -	- / -	Continuing	Continuing
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.300	- / -	- / -	- / -	Continuing	Continuing
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.300	- / -	- / -	Continuing	Continuing
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.300	- / -	Continuing	Continuing
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.300	Continuing	Continuing
Total	15 / 227.830	1 / 1.200	1 / 1.200	1 / 1.200	- / -	1 / 1.200	1 / 1.300	1 / 1.300	1 / 1.300	1 / 1.300	Continuing	Continuing

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	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	11	32
Out	14	-	1	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	12	32

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10	P-1 Line Item Number / Title: 0962C50700 / Patriot Mods	Modification Number / Title: C50700 / Patriot Mods
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 4 of 25: BCP/TCS/CSM

Manufacturer Information

Manufacturer Name: Various Manufacturer Location: Various

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

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

Installation Information

Method of Implementation: Various (Included in unit cost)

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	79 / 1,192.582	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	79 / 1,192.582	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing

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	79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	79
Out	79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	79

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Exhibit P-3a, Individual Modification: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10	P-1 Line Item Number / Title: 0962C50700 / Patriot Mods	Modification Number / Title: C50700 / Patriot Mods

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 5 of 25: Combined Crypto Modification Phase I (CCMPI)

Manufacturer Information

Manufacturer Name: OGA	Manufacturer Location: N/A
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: LEAD Logistics Fielding Team (Included in unit cost)

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	150 / 2.032	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	150 / 2.032	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing

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	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	150
Out	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	150

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2021 Army						Date: February 2020	
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 0962C50700 / Patriot Mods			Modification Number / Title: C50700 / Patriot Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 6 of 25: Radar Digital Processor - Configuration (RDP-C)							
Manufacturer Information							
Manufacturer Name: Raytheon				Manufacturer Location: Andover, MA			
Administrative Leadtime (in Months): 8				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 (Organic): Depot, PM Office, contractor team (Included in unit cost)					Installation Quantity: 0		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2021 Army						Date: February 2020	
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 0962C50700 / Patriot Mods			Modification Number / Title: C50700 / Patriot Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 7 of 25: Air Defense Artillery School Upgrades/ TADSS							
Manufacturer Information							
Manufacturer Name: PM Office, contractor team				Manufacturer Location: Various			
Administrative Leadtime (in Months): 6				Production Leadtime (in Months): 18			
Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							
Installation Information							
Method of Implementation (Organic): PM fielding team					Installation Quantity: 0		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2021 Army					Date: February 2020		
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 0962C50700 / Patriot Mods			Modification Number / Title: C50700 / Patriot Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 8 of 25: Modern Manstation (MMS)							
Manufacturer Information							
Manufacturer Name: Raytheon				Manufacturer Location: Andover, MA			
Administrative Leadtime (in Months): 6				Production Leadtime (in Months): 15			
Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							
Installation Information							
Method of Implementation (Organic): Various (Included in unit cost)					Installation Quantity: 0		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2021 Army						Date: February 2020	
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 0962C50700 / Patriot Mods			Modification Number / Title: C50700 / Patriot Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 9 of 25: Enhanced Launcher Electronics System (ELES)							
Manufacturer Information							
Manufacturer Name: Various				Manufacturer Location: Various			
Administrative Leadtime (<i>in Months</i>): 3				Production Leadtime (<i>in Months</i>): 18			
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	Jun 2020	Jun 2021	Jun 2022				
Installation Information							
Method of Implementation (Organic): Fielding Team (Included in unit cost)					Installation Quantity: 10		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2021 Army						Date: February 2020	
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 0962C50700 / Patriot Mods			Modification Number / Title: C50700 / Patriot Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 10 of 25: SNAP/TROPO							
Manufacturer Information							
Manufacturer Name: TeleCommunication Systems (TCS)				Manufacturer Location: Tampa, FL			
Administrative Leadtime (<i>in Months</i>): 1				Production Leadtime (<i>in Months</i>): 9			
Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							
Installation Information							
Method of Implementation (Organic): Depot, PM, contractor team					Installation Quantity: 0		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2021 Army					Date: February 2020		
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10		P-1 Line Item Number / Title: 0962C50700 / Patriot Mods			Modification Number / Title: C50700 / Patriot Mods		
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:			
Modification Item 11 of 25: PATRIOT Maintenance Trainer (PMT)							
Manufacturer Information							
Manufacturer Name: Raytheon				Manufacturer Location: Tewksbury, MA			
Administrative Leadtime (in Months): 4				Production Leadtime (in Months): 4			
Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Feb 2020			Feb 2023	Feb 2024	Feb 2025
Delivery Dates		Jun 2020			Jun 2023	Jun 2024	Jun 2025
Installation Information							
Method of Implementation (Organic): PM Office, Contractor Team					Installation Quantity: 0		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2021 Army						Date: February 2020	
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 0962C50700 / Patriot Mods			Modification Number / Title: C50700 / Patriot Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 12 of 25: PATRIOT Multi-Echelon Training (PMET)							
Manufacturer Information							
Manufacturer Name: Raytheon				Manufacturer Location: Tewksbury, MA			
Administrative Leadtime (in Months): 4				Production Leadtime (in Months): 4			
Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Feb 2019	Feb 2020	Feb 2021	Feb 2022	Feb 2023	Feb 2024	Feb 2025
Delivery Dates	May 2019	May 2020	May 2021	May 2022	May 2023	May 2024	May 2025
Installation Information							
Method of Implementation (Organic): PM Office, Contractor Team (Included in unit cost)						Installation Quantity: 0	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2021 Army					Date: February 2020		
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 0962C50700 / Patriot Mods			Modification Number / Title: C50700 / Patriot Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 13 of 25: Reconfigurable Table Top Trainers (RT3)							
Manufacturer Information							
Manufacturer Name: Raytheon				Manufacturer Location: Tewksbury, MA			
Administrative Leadtime (in Months): 3				Production Leadtime (in Months): 9			
Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Dec 2018						
Delivery Dates	Oct 2019						
Installation Information							
Method of Implementation (Organic): PM Office, Contractor Team (Included in unit cost)					Installation Quantity: 0		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2021 Army						Date: February 2020	
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 0962C50700 / Patriot Mods			Modification Number / Title: C50700 / Patriot Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 14 of 25: Assured PNT							
Manufacturer Information							
Manufacturer Name: Raytheon				Manufacturer Location: Tewksbury, MA			
Administrative Leadtime (in Months): 4				Production Leadtime (in Months): 14			
Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							
Installation Information							
Method of Implementation (Organic): Logistics Fielding Team (Included in unit cost)						Installation Quantity: 0	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2021 Army						Date: February 2020	
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 0962C50700 / Patriot Mods			Modification Number / Title: C50700 / Patriot Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 15 of 25: Test Detachment							
Manufacturer Information							
Manufacturer Name: Various				Manufacturer Location: Various			
Administrative Leadtime (in Months): 4				Production Leadtime (in Months): 8			
Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							
Installation Information							
Method of Implementation (Organic): WSMR PM owned test bed personnel					Installation Quantity: 0		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2021 Army						Date: February 2020	
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 0962C50700 / Patriot Mods			Modification Number / Title: C50700 / Patriot Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 16 of 25: Digital Sidelobe Cancellor (DSLCL)							
Manufacturer Information							
Manufacturer Name: Raytheon				Manufacturer Location: Tewksbury, MA			
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 2019	Jan 2020					
Delivery Dates	Jul 2020	Jul 2021					
Installation Information							
Method of Implementation (Organic): Depot, PM Office, Contractor Team (Included in unit cost)					Installation Quantity: 0		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2021 Army						Date: February 2020	
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 0962C50700 / Patriot Mods			Modification Number / Title: C50700 / Patriot Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 17 of 25: Command Obsolescence Alleviation							
Manufacturer Information							
Manufacturer Name: Various				Manufacturer Location: Various			
Administrative Leadtime (in Months): 8				Production Leadtime (in Months): 5			
Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							
Installation Information							
Method of Implementation (Organic): PM Office, Contractor Team (Included in unit cost)					Installation Quantity: 0		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2021 Army						Date: February 2020	
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 0962C50700 / Patriot Mods			Modification Number / Title: C50700 / Patriot Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 18 of 25: Communications Obsolescence							
Manufacturer Information							
Manufacturer Name: Raytheon				Manufacturer Location: Andover, MA			
Administrative Leadtime (in Months): 3				Production Leadtime (in Months): 5			
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 2025
Delivery Dates		Jun 2020	Jun 2021	Jun 2022	Jun 2023		Jun 2025
Installation Information							
Method of Implementation (Organic): TBD					Installation Quantity: 0		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2021 Army						Date: February 2020	
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 0962C50700 / Patriot Mods			Modification Number / Title: C50700 / Patriot Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 19 of 25: 35th Brigade Modification Kits							
Manufacturer Information							
Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime (in Months):				Production Leadtime (in Months):			
Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							
Installation Information							
Method of Implementation (Organic): TBD					Installation Quantity: 0		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2021 Army					Date: February 2020		
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 0962C50700 / Patriot Mods			Modification Number / Title: C50700 / Patriot Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 20 of 25: ADI TPX 57 Obsolescence							
Manufacturer Information							
Manufacturer Name: TBD				Manufacturer Location: TBD			
Administrative Leadtime (in Months):				Production Leadtime (in Months):			
Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							
Installation Information							
Method of Implementation (Organic): TBD					Installation Quantity: 0		

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Exhibit P-3a, Individual Modification: PB 2021 Army						Date: February 2020	
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 0962C50700 / Patriot Mods			Modification Number / Title: C50700 / Patriot Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 21 of 25: MAP/RDP Encryption Compliance							
Manufacturer Information							
Manufacturer Name: Raytheon				Manufacturer Location: Andover, MA			
Administrative Leadtime (in Months): 4				Production Leadtime (in Months): 5			
Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Jan 2020	Jan 2021				
Delivery Dates		Jun 2020	Jun 2021				
Installation Information							
Method of Implementation (Organic): Contractor Team (Included in unit cost), PM Fielding Team					Installation Quantity: 0		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2021 Army					Date: February 2020		
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 0962C50700 / Patriot Mods			Modification Number / Title: C50700 / Patriot Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 22 of 25: IFF Antenna Redesign							
Manufacturer Information							
Manufacturer Name: Raytheon				Manufacturer Location: Andover, MA			
Administrative Leadtime (in Months): 4				Production Leadtime (in Months):			
Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates		Jan 2020	Jan 2021				
Delivery Dates		Feb 2021	Feb 2022				
Installation Information							
Method of Implementation (Organic): PM Fielding Team (Included in Fielding cost)					Installation Quantity: 0		

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Exhibit P-3a, Individual Modification: PB 2021 Army						Date: February 2020	
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 0962C50700 / Patriot Mods			Modification Number / Title: C50700 / Patriot Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 23 of 25: Report Rocket Classification							
Manufacturer Information							
Manufacturer Name: Raytheon				Manufacturer Location: Andover, MA			
Administrative Leadtime (in Months): 4				Production Leadtime (in Months): 5			
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		
Delivery Dates		Jun 2020	Jun 2021	Jun 2022	Jun 2023		
Installation Information							
Method of Implementation (Organic): PM Fielding Team (Included in Fielding cost)					Installation Quantity: 0		

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Exhibit P-3a, Individual Modification: PB 2021 Army						Date: February 2020	
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 0962C50700 / Patriot Mods			Modification Number / Title: C50700 / Patriot Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 24 of 25: International Engineering Services Program (IESP)							
Manufacturer Information							
Manufacturer Name: Multiple				Manufacturer Location: Various			
Administrative Leadtime (in Months):				Production Leadtime (in Months):			
Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							
Installation Information							
Method of Implementation (Organic): Various					Installation Quantity: 0		

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Exhibit P-3a, Individual Modification: PB 2021 Army						Date: February 2020	
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 0962C50700 / Patriot Mods			Modification Number / Title: C50700 / Patriot Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 25 of 25: Logistics Recurring							
Manufacturer Information							
Manufacturer Name: Logistics				Manufacturer Location: Huntsville, AL			
Administrative Leadtime (in Months):				Production Leadtime (in Months):			
Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							
Installation Information							
Method of Implementation (Organic): Various					Installation Quantity: 0		

UNCLASSIFIED

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications	P-1 Line Item Number / Title: 1823CA6700 / ATACMS MODS
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0203802A
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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>)	522.737	397.236	80.320	141.690	78.434	220.124	-	-	-	-	-	1,220.417
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	522.737	397.236	80.320	141.690	78.434	220.124	-	-	-	-	-	1,220.417
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	522.737	397.236	80.320	141.690	78.434	220.124	-	-	-	-	-	1,220.417

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	1,138.861	1,171.788	1,070.933	1,034.234	1,120.486	1,063.401	-	-	-	-	-	1,130.016

Description:

ATACMS is the United States (U.S.) Army's primary 24/7, all weather, and surface-to-surface artillery precision missile used by current and future Combatant Commanders to shape the battlefield with long-range fires against hard and soft stationary targets in open, complex, and urban environments. The missile provides the Combatant Commanders with a 24/7 all-weather 300 kilometers (km) long-range fires capability to attack high-payoff, time-sensitive targets. ATACMS continues as the Commanders long range precision missile until fielding of the Army's objective system, Precision Strike Missile.

This procurement is related to the qualification program funded under Program Element (PE) 0203802A.

Block (BLK) I/IA missiles are aging beyond their service life and have warheads that are non-compliant with the Department of Defense (DoD) cluster munitions (CM) policy. This modification is performed as a Service Life Extension Program (SLEP) and will convert expired assets into Unitary HOB missiles with a reset 10 year service life. This modification replaces the existing M74 bomblets with a policy compliant unitary warhead, updates electronics and propellants, and adds a proximity sensor. This effort effectively brings the expired inventory back into service while meeting the DoD CM policy. Multi-mode seeker kits are also added for CD ATACMS missiles to engage moving maritime and land targets.

ATACMS modifications performed by Lockheed Martin Missiles and Fire Control, Grand Prairie, TX will stop production after 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
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	397.236	80.320	141.690	78.434	220.124	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	397.236	80.320	141.690	78.434	220.124	-	-	-

UNCLASSIFIED

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications **P-1 Line Item Number / Title:** 1823CA6700 / ATACMS MODS

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0203802A

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	CA6700 / ATACMS MODS (Unclassified)				- / 522.737	- / 397.236	- / 80.320	- / 141.690	- / 78.434	- / 220.124
P-40	Total Gross/Weapon System Cost				- / 522.737	- / 397.236	- / 80.320	- / 141.690	- / 78.434	- / 220.124

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	CA6700 / ATACMS MODS (Unclassified)				- / -	- / -	- / -	- / -	- / -	- / 1,220.417
P-40	Total Gross/Weapon System Cost				- / -	- / -	- / -	- / -	- / -	- / 1,220.417

*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 Base procurement dollars in the amount of \$141.690 million and FY 2021 OCO procurement dollars in the amount of 78.434 million supports the modification of up to 202 total (126 Base & 76 OCO) expired Army Tactical Missile System (ATACMS) missiles into Unitary height-of-burst missiles with a reset 10 year service life. In response to a Land Based Anti-Ship Missile Operation Needs Statement (ONS 17-22222) to engage moving maritime and land targets, U.S. Army will utilize the ATACMS missile to provide a near-term capability to the Combatant Commands. Pending completion of an ongoing OSD demonstration project using the ATACMS missile to engage moving maritime and land targets, and milestone decision authority approval, multi-mode seeker kits will be procured for this modification to deliver Cross Domain ATACMS missiles. Procurement of the multi-mode seeker kit hardware and associated integration and checkout, if approved, would reduce the 202 total quantity down to a total quantity of 102. Modification tasks include download/de-mate of existing ATACMS missiles, pod update and refresh, obsolescence updated electronics & cables, re-grained propellant, unitary warhead, proximity sensor, and multi-mode seeker kits (if approved). Additional supporting tasks include bunker storage, follow-on production testing (FPT), Stockpile Reliability Program (SRP), production tooling, Government System Engineering/Program Management (SEPM), obsolescence, and software.

Other Non-Recurring costs include production tooling, obsolescence, and engineering changes.

Modification costs in FY 2021 include components, installation costs, and acceptance test in the unit price at the time of contract award.

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 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10	P-1 Line Item Number / Title: 1823CA6700 / ATACMS MODS	Modification Number / Title: CA6700 / ATACMS MODS

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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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>)	522.737	397.236	80.320	141.690	78.434	220.124	-	-	-	-	-	1,220.417
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	522.737	397.236	80.320	141.690	78.434	220.124	-	-	-	-	-	1,220.417
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	522.737	397.236	80.320	141.690	78.434	220.124	-	-	-	-	-	1,220.417

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	1,138.861	1,171.788	1,070.933	1,034.234	1,120.486	1,063.401	-	-	-	-	-	1,130.016

Description:

ATACMS is the United States (U.S.) Army's primary 24/7, all weather, and surface-to-surface artillery precision missile used by current and future Combatant Commanders to shape the battlefield with long-range fires against hard and soft stationary targets in open, complex, and urban environments. The missile provides the Combatant Commanders with a 24/7 all-weather 300 kilometers (km) long-range fires capability to attack high-payoff, time-sensitive targets. ATACMS continues as the Commanders long range precision missile until fielding of the Army's objective system, Precision Strike Missile.

This procurement is related to the qualification program funded under Program Element (PE) 0203802A.

Block (BLK) I/IA missiles are aging beyond their service life and have warheads that are non-compliant with the Department of Defense (DoD) cluster munitions (CM) policy. This modification is performed as a Service Life Extension Program (SLEP) and will convert expired assets into Unitary HOB missiles with a reset 10 year service life. This modification replaces the existing M74 bomblets with a policy compliant unitary warhead, updates electronics and propellants, and adds a proximity sensor. This effort effectively brings the expired inventory back into service while meeting the DoD CM policy. Multi-mode seeker kits are also added for CD ATACMS missiles to engage moving maritime and land targets.

ATACMS modifications performed by Lockheed Martin Missiles and Fire Control, Grand Prairie, TX will stop production after 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
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	397.236	80.320	141.690	78.434	220.124	-	-	-	-
Total:									
Secondary Distribution									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	397.236	80.320	141.690	78.434	220.124	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2021 Army										Date: February 2020		
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10				P-1 Line Item Number / Title: 1823CA6700 / ATACMS MODS						Modification Number / Title: CA6700 / ATACMS MODS		
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:					
Models of Systems Affected: ATACMS				Modification Type: Unclassified				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)
Procurement												
<i>Modification Item 1 of 1:</i> Unitary HOB												
A Kits												
Recurring												
Kit Quantity	459 / 360.689	339 / 315.168	75 / 61.661	126 / 116.678	76 / 64.622	202 / 181.300	- / -	- / -	- / -	- / -	- / -	1,075 / 918.818
Contractor/Government SEPM	- / 36.362	- / 22.242	- / 5.160	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 63.764
Government SEPM	- / -	- / -	- / -	- / 12.111	- / -	- / 12.111	- / -	- / -	- / -	- / -	- / -	- / 12.111
<i>Subtotal: Recurring</i>	<i>459 / 397.051</i>	<i>339 / 337.410</i>	<i>75 / 66.821</i>	<i>126 / 118.789</i>	<i>76 / 64.622</i>	<i>202 / 183.411</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>1,075 / 984.693</i>
Non-Recurring												
Other Non-Recurring	- / 66.432	- / 22.575	- / 3.501	- / 5.917	- / 3.568	- / 9.485	- / -	- / -	- / -	- / -	- / -	- / 101.993
<i>Subtotal: Non-Recurring</i>	<i>- / 66.432</i>	<i>- / 22.575</i>	<i>- / 3.501</i>	<i>- / 5.917</i>	<i>- / 3.568</i>	<i>- / 9.485</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 101.993</i>
<i>Subtotal: Unitary HOB</i>	<i>459 / 463.483</i>	<i>339 / 359.985</i>	<i>75 / 70.322</i>	<i>126 / 124.706</i>	<i>76 / 68.190</i>	<i>202 / 192.896</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>1,075 / 1,086.686</i>
<i>Subtotal: Procurement, All Modification Items</i>	<i>459 / 463.483</i>	<i>339 / 359.985</i>	<i>75 / 70.322</i>	<i>126 / 124.706</i>	<i>76 / 68.190</i>	<i>202 / 192.896</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>1,075 / 1,086.686</i>
Installation												
<i>Modification Item 1 of 1:</i> Unitary HOB	459 / 59.254	339 / 37.251	75 / 9.998	126 / 16.984	76 / 10.244	202 / 27.228	- / -	- / -	- / -	- / -	- / -	1,075 / 133.731
<i>Subtotal: Installation</i>	<i>459 / 59.254</i>	<i>339 / 37.251</i>	<i>75 / 9.998</i>	<i>126 / 16.984</i>	<i>76 / 10.244</i>	<i>202 / 27.228</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>1,075 / 133.731</i>
Total												
Total Cost (Procurement + Support + Installation)	522.737	397.236	80.320	141.690	78.434	220.124	-	-	-	-	-	1,220.417

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10	P-1 Line Item Number / Title: 1823CA6700 / ATACMS MODS	Modification Number / Title: CA6700 / ATACMS MODS

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

Manufacturer Information

Manufacturer Name: Lockheed Martin	Manufacturer Location: Camden, AR
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 17

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

Installation Information

Method of Implementation: TBD

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	459 / 59.254	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	459 / 59.254
FY 2019	- / -	339 / 37.251	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	339 / 37.251
FY 2020	- / -	- / -	75 / 9.998	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	75 / 9.998
FY 2021	- / -	- / -	- / -	126 / 16.984	76 / 10.244	202 / 27.228	- / -	- / -	- / -	- / -	- / -	202 / 27.228
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	459 / 59.254	339 / 37.251	75 / 9.998	126 / 16.984	76 / 10.244	202 / 27.228	- / -	- / -	- / -	- / -	- / -	1,075 / 133.731

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	459	-	-	339	-	-	-	75	-	-	-	202	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,075
Out	-	-	39	40	40	40	75	75	75	75	84	85	85	85	19	19	19	18	51	51	50	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,075

UNCLASSIFIED

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications	P-1 Line Item Number / Title: 1824C57701 / GMLRS MOD
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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 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>)	2	1	14	-	-	-	-	-	-	-	Continuing	Continuing
Gross/Weapon System Cost (<i>\$ in Millions</i>)	6.247	0.266	5.094	-	-	-	-	-	-	-	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	6.247	0.266	5.094	-	-	-	-	-	-	-	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	6.247	0.266	5.094	-	-	-	-	-	-	-	Continuing	Continuing

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	3,123.500	266.000	363.857	-	-	-	-	-	-	-	Continuing	Continuing

Description:

FY 2021 funding totals include \$0.0M for Base and \$0.0M for Overseas Contingency Operations (OCO).

This effort shall be complete in FY 2020. No further funding is required.

GMLRS rockets are surface-to-surface artillery rockets fired from the Multiple Launch Rocket System (MLRS) and High Mobility Artillery Rocket System (HIMARS) launchers. GMLRS rockets provide 24/7, all-weather precision fires to engage both area and point targets at short, medium, and long ranges.

The GMLRS Program currently consists of multiple variants: GMLRS Dual Purpose Improved Conventional Munition (DPICM) is a cluster munition that replaced the shorter range MLRS rockets to engage area or imprecisely located targets. GMLRS DPICM Production was terminated in response to the June 2008 Department of Defense (DoD) Cluster Munitions Policy. GMLRS Unitary utilizes a 200 pound high explosive warhead to engage point targets with limited collateral damage. GMLRS Alternative Warhead (AW) was developed as a non-cluster munition to engage the same target sets as DPICM. GMLRS Unitary and AW are currently in full rate production.

The U.S. Army manages all three variants as part of the GMLRS Program. This modification program along with all GMLRS rockets are produced on a common production line by Lockheed Martin in Camden, Arkansas.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	1	14	-	-	-	-	-	-
	Total Obligation Authority	0.266	5.094	-	-	-	-	-	-
Total: Secondary Distribution	Quantity	1	14	-	-	-	-	-	-
	Total Obligation Authority	0.266	5.094	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications		P-1 Line Item Number / Title: 1824C57701 / GMLRS MOD
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		

Justification:
No funds are requested for FY 2021.

UNCLASSIFIED

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications	P-1 Line Item Number / Title: 2684C20000 / Stinger 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: 0203801A
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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>)	294.711	94.756	89.115	-	-	-	-	-	-	-	-	478.582
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	294.711	94.756	89.115	-	-	-	-	-	-	-	-	478.582
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	294.711	94.756	89.115	-	-	-	-	-	-	-	-	478.582

(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>)	181.026	54.995	55.009	-	-	-	-	-	-	-	-	96.275

Description:

The Stinger Block I missile is an advanced, fire-and-forget, short-range, man-portable, shoulder-fired and platform mounted guided missile system that provides the maneuver force and point defense assets air defense protection. Stinger's mission is to provide the force with low-altitude air defense against Fixed Wing (FW) and Rotary Wing (RW) Aircraft, Unmanned Aircraft Systems (UAS) and Cruise Missiles (CM). The Stinger missile is deployable from a variety of platforms that includes vehicles, helicopters, UAS and Man Portable Air Defense System (MANPADS). The missile is delivered as a certified round and requires no field testing or maintenance.

The Service Life Extension Program (SLEP) is ongoing at McAlester Army Ammunition Plant to replace aging key components in existing Block I missiles to extend the current shelf life providing a more viable asset to the Army's inventory. The addition of a Proximity Fuze (PROX) capability in FY 2019 provided improved effectiveness against UAS threats by eliminating the need for hit to kill.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	39.641	37.281	-	-	-	-	-	-
ANG	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	55.115	51.834	-	-	-	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	94.756	89.115	-	-	-	-	-	-

Justification:

The Stinger FY 2021 budget request is \$0.000 million.

In accordance with Section 1815 of the FY08 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications		P-1 Line Item Number / Title: 2684C20000 / Stinger Mods
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0203801A
Line Item MDAP/MAIS Code: N/A		

UNCLASSIFIED

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications	P-1 Line Item Number / Title: 2690CE8710 / AVENGER 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: 0203801A
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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>)	161.230	31.093	14.107	13.942	-	13.942	11.381	-	-	-	-	231.753
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	161.230	31.093	14.107	13.942	-	13.942	11.381	-	-	-	-	231.753
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	161.230	31.093	14.107	13.942	-	13.942	11.381	-	-	-	-	231.753

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	144.861	43.426	-	-	-	-	-	-	-	-	-	126.710

Description:

Avenger is a lightweight, ground-to-air missile and gun weapon system mounted on a High Mobility Multi-purpose Wheeled Vehicle. The system protects against unmanned aircraft systems, cruise missiles, and fixed and rotary wing threats. Avenger provides day/night adverse weather operations, shoot on the move capability, rapid target engagement, and remote firing capability. It can be air dropped, lifted by helicopter and is air transportable. The system employs up to eight Stinger missiles to counter aerial threats and a M3P gun for close-in ground and air threats. An Identification Friend or Foe (IFF) system aids in the identification of friendly aircraft in order to minimize the potential for fratricide. The Avenger fleet of 453 systems includes 169 systems that are equipped with a digital Slew-to-Cue (STC) capability to speed target detection and engagement.

The Avenger Modification - Service Life Extension Program (MOD-SLEP) consists of Project 038: Avenger Production Improvement Program (PIP) and Program Element CE8710: Avenger MODS. The ongoing MOD-SLEP addresses obsolescence of Avenger components to ensure Avenger maintains operational capability through FY 2031. Five key MOD-SLEP components are: the Targeting Console (TC), the .50 Caliber Machine Gun (M3P), the Avenger Fire Control Computer (AFCC), the Mode 5 Identification Friend or Foe (IFF) and the Vehicle Internal Communications (VIC-5). Additional Obsolescence Mitigation Items include Avenger Organizational Maintenance Tool Kits, AN/PSM-95 Electronic Systems Test Set and the Avenger Remote Handheld Terminal Unit (RHTU) mounting kits.

The Avenger MOD-SLEP is fielded in two phases. Phase I fields the TC to 169 STC Avengers. Phase II fields the AFCC (169 STC Avengers), VIC-5 and the Mode 5 IFF. The M3P will be fielded through attrition. The TC and AFCC are fielded to the 169 STC Avenger variants only.

The Product Office will use FY 2021 funding to buy the Maintenance Tool Kits, AN/PSM-95 Electronic Systems Test Sets and RHTU mounting kits.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	-	-	-	-	-	-	-	-	-
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	12.437	14.107	13.942	-	13.942	11.381	-	-	-
ANG	-	-	-	-	-	-	-	-	-
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	18.656	-	-	-	-	-	-	-	-
Total:	-	-	-	-	-	-	-	-	-
Quantity	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications	P-1 Line Item Number / Title: 2690CE8710 / AVENGER 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: 0203801A
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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	31.093	14.107	13.942	-	13.942	11.381	-	-	-

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UNCLASSIFIED

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications **P-1 Line Item Number / Title:** 2690CE8710 / AVENGER MODS

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0203801A

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	CE8710 / AVENGER MODS (Operational)		A		- / 161.230	- / 31.093	- / 14.107	- / 13.942	- / -	- / 13.942
P-40	Total Gross/Weapon System Cost				- / 161.230	- / 31.093	- / 14.107	- / 13.942	- / -	- / 13.942

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	CE8710 / AVENGER MODS (Operational)		A		- / 11.381	- / -	- / -	- / -	- / -	- / 231.753
P-40	Total Gross/Weapon System Cost				- / 11.381	- / -	- / -	- / -	- / -	- / 231.753

*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 procurement dollars in the amount of \$13.942 million procures additional Obsolescence Mitigation Items, including 20 Avenger Organizational Maintenance Tool Kits, 70 AN/PSM-95 Electronic Systems Test Sets and 169 Avenger RHTU mounting kits with associated procurement support. Funding also provides for the fielding of the 453 Phase II MOD-SLEP kits, consisting of the AFCC, VIC-5 and IFF, with associated production and procurement support.

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

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Exhibit P-3a, Individual Modification: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10	P-1 Line Item Number / Title: 2690CE8710 / AVENGER MODS	Modification Number / Title: CE8710 / AVENGER MODS

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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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)	161.230	31.093	14.107	13.942	-	13.942	11.381	-	-	-	-	231.753
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	161.230	31.093	14.107	13.942	-	13.942	11.381	-	-	-	-	231.753
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	161.230	31.093	14.107	13.942	-	13.942	11.381	-	-	-	-	231.753

(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)	144.861	43.426	-	-	-	-	-	-	-	-	-	126.710

Description:

Avenger is a lightweight, ground-to-air missile and gun weapon system mounted on a High Mobility Multi-purpose Wheeled Vehicle. The system protects against unmanned aircraft systems, cruise missiles, and fixed and rotary wing threats. Avenger provides day/night adverse weather operations, shoot on the move capability, rapid target engagement, and remote firing capability. It can be air dropped, lifted by helicopter and is air transportable. The system employs up to eight Stinger missiles to counter aerial threats and a M3P gun for close-in ground and air threats. An Identification Friend or Foe (IFF) system aids in the identification of friendly aircraft in order to minimize the potential for fratricide. The Avenger fleet of 453 systems includes 169 systems that are equipped with a digital Slew-to-Cue (STC) capability to speed target detection and engagement.

The Avenger Modification - Service Life Extension Program (MOD-SLEP) addresses obsolescence of five key Avenger components to ensure Avenger maintains operational capability through FY 2031.

The Vehicle Internal Communications System is a required subsystem that allows communication between the gunner and driver. It also interfaces with the IFF and missile electronics resulting in improved IFF capabilities. The digital VIC-5 replaces the analog VIC-1 that is currently fielded with the Avenger.

The Avenger Fire Control Computer (AFCC) is a required subsystem of the Avenger Slew-to-Cue system that processes and displays air tracks data to the gunner. The current AFCC is not supportable through FY 2031. The AFCC will undergo software and hardware upgrades that will enable the system to handle increased targeting capability realized with the latest version of the FAAD early warning system, ensure the system meets the latest Information Assurance (IA) requirements, and allow for future growth in areas such as improved fire control/longer range engagements.

The Mode 5 IFF is required to replace the Mode 4 IFF, in order to comply with Department of Defense standards. Incorporation of Mode 5 IFF into Avenger is critical to retaining the cooperative target identification capability, allowing Avenger to remain relevant and effective in Air Defense and Homeland Defense missions. Mode 5 IFF quantities above 453 also support the Stinger Man Portable Air Defense System Initiative.

Additional Obsolescence Mitigation Items, in various quantities, support 453 Avenger systems and include Avenger Organizational Maintenance Tool Kits, AN/PSM-95 Electronic Systems Test Sets and Avenger Remote Handheld Terminal Unit (RHTU) mounting kits.

The Avenger MOD-SLEP is fielded in two phases. Phase I fields the TC to 169 STC Avengers. Phase II fields the AFCC (169 STC Avengers), VIC-5 and the Mode 5 IFF. The M3P will be fielded through attrition. The TC and AFCC are fielded to the 169 STC Avenger variants only.

In prior years, the Avenger MODS program also addressed the Slew-to-Cue upgrade, Targeting Consoles (TC) and M3P .50 CAL machine guns.

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10	P-1 Line Item Number / Title: 2690CE8710 / AVENGER MODS	Modification Number / Title: CE8710 / AVENGER MODS
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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
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	12.437	14.107	13.942	-	13.942	11.381	-	-	-
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	18.656	-	-	-	-	-	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	31.093	14.107	13.942	-	13.942	11.381	-	-	-

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Exhibit P-3a, Individual Modification: PB 2021 Army										Date: February 2020			
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10					P-1 Line Item Number / Title: 2690CE8710 / AVENGER MODS					Modification Number / Title: CE8710 / AVENGER MODS			
ID Code (A=Service Ready, B=Not Service Ready) : A							MDAP/MAIS Code:						
Models of Systems Affected: Avenger Basic and Slew-to-Cue Systems				Modification Type: Operational				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)	
Procurement													
Modification Item 1 of 5: Prior Modifications													
A Kits													
Recurring													
Prior Year Modifications	466 / 66.337	- / 0.722	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	466 / 67.059	
Subtotal: Recurring	466 / 66.337	- / 0.722	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	466 / 67.059	
Subtotal: Prior Modifications	466 / 66.337	- / 0.722	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	466 / 67.059	
Modification Item 2 of 5: Vehicle Internal Communication (VIC-5)													
A Kits													
Recurring													
Hardware	454 / 4.327	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	454 / 4.327	
Spares	- / 0.457	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.457	
Engineering Services	- / 0.172	- / 0.017	- / -	- / 0.162	- / -	- / 0.162	- / 0.110	- / -	- / -	- / -	- / -	- / 0.461	
Systems Engineering / Program Management	- / 2.711	- / 0.104	- / -	- / 0.241	- / -	- / 0.241	- / 0.237	- / -	- / -	- / -	- / -	- / 3.293	
Fielding	- / -	- / -	- / -	- / 0.208	- / -	- / 0.208	- / 0.212	- / -	- / -	- / -	- / -	- / 0.420	
Subtotal: Recurring	454 / 7.667	- / 0.121	- / -	- / 0.611	- / -	- / 0.611	- / 0.559	- / -	- / -	- / -	- / -	454 / 8.958	
B Kits													
Recurring													
Avenger to VIC 5 Cables	264 / 7.040	190 / 4.835	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	454 / 11.875	
Spares	- / 0.704	- / 0.483	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.187	
Engineering Services	- / 0.535	- / 0.282	- / -	- / 0.446	- / -	- / 0.446	- / 0.302	- / -	- / -	- / -	- / -	- / 1.565	
Systems Engineering / Program Management	- / 1.159	- / 0.293	- / -	- / 0.661	- / -	- / 0.661	- / 0.652	- / -	- / -	- / -	- / -	- / 2.765	
Fielding	- / 0.050	- / -	- / -	- / 0.571	- / -	- / 0.571	- / 0.583	- / -	- / -	- / -	- / -	- / 1.204	
Subtotal: Recurring	264 / 9.488	190 / 5.893	- / -	- / 1.678	- / -	- / 1.678	- / 1.537	- / -	- / -	- / -	- / -	454 / 18.596	
Subtotal: Vehicle Internal Communication (VIC-5)	718 / 17.155	190 / 6.014	- / -	- / 2.289	- / -	- / 2.289	- / 2.096	- / -	- / -	- / -	- / -	908 / 27.554	
Modification Item 3 of 5: Mode 5/Identification Friend or Foe													
A Kits													
Recurring													
Equipment	301 / 25.560	223 / 18.984	61 / 5.670	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	585 / 50.214	
Spares	- / 2.555	- / 1.898	- / 0.567	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.020	

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Exhibit P-3a, Individual Modification: PB 2021 Army										Date: February 2020		
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10				P-1 Line Item Number / Title: 2690CE8710 / AVENGER MODS						Modification Number / Title: CE8710 / AVENGER MODS		
ID Code (A=Service Ready, B=Not Service Ready) : A							MDAP/MAIS Code:					
Models of Systems Affected: Avenger Basic and Slew-to-Cue Systems				Modification Type: Operational				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)
Engineering Services	- / 1.571	- / 1.191	- / 0.542	- / 1.884	- / -	- / 1.884	- / 1.278	- / -	- / -	- / -	- / -	- / 6.466
System Engineering / Program Management	- / 8.945	- / 1.241	- / 1.479	- / 12.795	- / -	- / 12.795	- / 12.756	- / -	- / -	- / -	- / -	- / 17.216
Fielding	- / 0.010	- / -	- / 0.015	- / 12.415	- / -	- / 12.415	- / 12.463	- / -	- / -	- / -	- / -	- / 14.903
Subtotal: Recurring	301 / 38.641	223 / 23.314	61 / 8.273	- / 7.094	- / -	- / 7.094	- / 16.497	- / -	- / -	- / -	- / -	585 / 83.819
Non-Recurring												
Non-Recurring Production	- / 10.197	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.197
Subtotal: Non-Recurring	- / 10.197	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.197
Subtotal: Mode 5/Identification Friend or Foe	301 / 48.838	223 / 23.314	61 / 8.273	- / 7.094	- / -	- / 7.094	- / 16.497	- / -	- / -	- / -	- / -	585 / 94.016
Modification Item 4 of 5: Avenger Fire Control Computer												
A Kits												
Recurring												
Hardware	170 / 21.545	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	170 / 21.545
Spares	- / 2.155	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.155
Engineering Services	- / 1.639	- / 0.511	- / -	- / 0.808	- / -	- / 0.808	- / 0.549	- / -	- / -	- / -	- / -	- / 3.507
Systems Engineering / Program Management	- / 3.546	- / 0.532	- / -	- / 1.199	- / -	- / 1.199	- / 1.182	- / -	- / -	- / -	- / -	- / 6.459
Fielding	- / 0.015	- / -	- / -	- / 1.036	- / -	- / 1.036	- / 1.057	- / -	- / -	- / -	- / -	- / 12.108
Subtotal: Recurring	170 / 28.900	- / 1.043	- / -	- / 3.043	- / -	- / 3.043	- / 2.788	- / -	- / -	- / -	- / -	170 / 35.774
Subtotal: Avenger Fire Control Computer	170 / 28.900	- / 1.043	- / -	- / 3.043	- / -	- / 3.043	- / 2.788	- / -	- / -	- / -	- / -	170 / 35.774
Modification Item 5 of 5: Obsolescence Mitigation Items												
A Kits												
Recurring												
Hardware	- / -	- / -	37 / 5.834	259 / 0.606	- / -	259 / 0.606	- / -	- / -	- / -	- / -	- / -	296 / 6.440
Engineering Services	- / -	- / -	- / -	- / 0.242	- / -	- / 0.242	- / -	- / -	- / -	- / -	- / -	- / 0.242
Systems Engineering / Program Management	- / -	- / -	- / -	- / 0.358	- / -	- / 0.358	- / -	- / -	- / -	- / -	- / -	- / 0.358
Fielding	- / -	- / -	- / -	- / 0.310	- / -	- / 0.310	- / -	- / -	- / -	- / -	- / -	- / 0.310
Subtotal: Recurring	- / -	- / -	37 / 5.834	259 / 1.516	- / -	259 / 1.516	- / -	- / -	- / -	- / -	- / -	296 / 7.350
Subtotal: Obsolescence Mitigation Items	- / -	- / -	37 / 5.834	259 / 1.516	- / -	259 / 1.516	- / -	- / -	- / -	- / -	- / -	296 / 7.350
Subtotal: Procurement, All Modification Items	1,655 / 161.230	413 / 31.093	98 / 14.107	259 / 13.942	- / -	259 / 13.942	- / 11.381	- / -	- / -	- / -	- / -	2,425 / 231.753
Installation												

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10	P-1 Line Item Number / Title: 2690CE8710 / AVENGER MODS	Modification Number / Title: CE8710 / AVENGER MODS
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ID Code (A=Service Ready, B=Not Service Ready) : A **MDAP/MAIS Code:**

Models of Systems Affected: Avenger Basic and Slew-to-Cue Systems **Modification Type:** Operational **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)
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total												
Total Cost (Procurement + Support + Installation)	161.230	31.093	14.107	13.942	-	13.942	11.381	-	-	-	-	231.753

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Exhibit P-3a, Individual Modification: PB 2021 Army						Date: February 2020	
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 2690CE8710 / AVENGER MODS			Modification Number / Title: CE8710 / AVENGER MODS	
ID Code (A=Service Ready, B=Not Service Ready) : A					MDAP/MAIS Code:		
Modification Item 1 of 5: Prior Modifications							
Manufacturer Information							
Manufacturer Name: Not Applicable				Manufacturer Location: Not Applicable			
Administrative Leadtime (in Months):				Production Leadtime (in Months):			
Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							
Installation Information							
Method of Implementation (Organic): Completed at Depot					Installation Quantity: 466		

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Exhibit P-3a, Individual Modification: PB 2021 Army					Date: February 2020		
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 2690CE8710 / AVENGER MODS			Modification Number / Title: CE8710 / AVENGER MODS	
ID Code (A=Service Ready, B=Not Service Ready) : A					MDAP/MAIS Code:		
Modification Item 2 of 5: Vehicle Internal Communication (VIC-5)							
Manufacturer Information							
Manufacturer Name: Northrop Grumman				Manufacturer Location: Tobyhanna, PA			
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							
Delivery Dates							
Installation Information							
Method of Implementation (Organic): Fielded by Depot with Phase II kit					Installation Quantity: 453		

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Exhibit P-3a, Individual Modification: PB 2021 Army						Date: February 2020	
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 2690CE8710 / AVENGER MODS			Modification Number / Title: CE8710 / AVENGER MODS	
ID Code (A=Service Ready, B=Not Service Ready) : A					MDAP/MAIS Code:		
Modification Item 3 of 5: Mode 5/Identification Friend or Foe							
Manufacturer Information							
Manufacturer Name: Raytheon				Manufacturer Location: Largo, FL			
Administrative Leadtime (in Months): 4				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					
Delivery Dates	Jan 2022	Jan 2023					
Installation Information							
Method of Implementation (Organic): Fielded by Depot with Phase II kit					Installation Quantity: 453		

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2021 Army					Date: February 2020		
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 2690CE8710 / AVENGER MODS			Modification Number / Title: CE8710 / AVENGER MODS	
ID Code (A=Service Ready, B=Not Service Ready) : A					MDAP/MAIS Code:		
Modification Item 4 of 5: Avenger Fire Control Computer							
Manufacturer Information							
Manufacturer Name: Boeing				Manufacturer Location: Huntsville, AL			
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	Oct 2018						
Delivery Dates	May 2020						
Installation Information							
Method of Implementation (Organic): Fielded by Depot with Phase II kit					Installation Quantity: 169		

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UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2021 Army						Date: February 2020	
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 2690CE8710 / AVENGER MODS			Modification Number / Title: CE8710 / AVENGER MODS	
ID Code (A=Service Ready, B=Not Service Ready) : A					MDAP/MAIS Code:		
Modification Item 5 of 5: Obsolescence Mitigation Items							
Manufacturer Information							
Manufacturer Name: Varies				Manufacturer Location: Varies			
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		Jul 2020	Jul 2021				
Delivery Dates		Jul 2021	Jul 2022				
Installation Information							
Method of Implementation (Organic): Fielded by Depot					Installation Quantity: 169		

UNCLASSIFIED

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications	P-1 Line Item Number / Title: 3972C61700 / ITAS/TOW Mods
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 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>)	1,792.822	3.173	3.469	5.666	-	5.666	-	-	-	-	-	1,805.130
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,792.822	3.173	3.469	5.666	-	5.666	-	-	-	-	-	1,805.130
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,792.822	3.173	3.469	5.666	-	5.666	-	-	-	-	-	1,805.130

(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>)	68,954.692	132.208	138.760	153.135	-	153.135	-	-	-	-	-	16,117.232

Description:

The Improved Target Acquisition System (ITAS) with Far Target Location (FTL) is a combat proven system that provides long-range, lethal anti-armor and precision assault fires capability for Active Component and Army National Guard Infantry Brigade Combat Teams (IBCT) and Stryker Brigade Combat Teams (SBCT) equipped with Modified ITAS (MITAS) across the spectrum of contemporary operational environments. ITAS with the TOW Missile provides the capability to defeat armored vehicles, bunkers, and buildings at extended ranges in all battlefield conditions. ITAS's superior surveillance capability also enables the Soldier to shape the battlefield by detecting targets at long range and either engaging with TOW missiles or other weapon systems to destroy those targets with its ability to generate a 10 digit grid coordinate of a target location. The ITAS completed fielding to the total Army in December 2012. ITAS continues to be the weapon of choice in precision combat engagements. The TOW Weapon System includes the ITAS launcher and TOW Missiles.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	3.173	3.469	3.166	-	3.166	-	-	-
ANG	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	2.500	-	2.500	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	3.173	3.469	5.666	-	5.666	-	-	-

UNCLASSIFIED

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications **P-1 Line Item Number / Title:** 3972C61700 / ITAS/TOW Mods

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

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 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	C61700 / ITAS/TOW Mods (NA)				- / 1,792.822	- / 3.173	- / 3.469	- / 5.666	- / -	- / 5.666
P-40	Total Gross/Weapon System Cost				- / 1,792.822	- / 3.173	- / 3.469	- / 5.666	- / -	- / 5.666

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	C61700 / ITAS/TOW Mods (NA)				- / -	- / -	- / -	- / -	- / -	- / 1,805.130
P-40	Total Gross/Weapon System Cost				- / -	- / -	- / -	- / -	- / -	- / 1,805.130

*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:
 FY2021 funding totals include \$5.666 Million in Base to procure 37 Common Processor Kits for the Modified ITAS (MITAS) in the Stryker Anti-Tank Guided Missile (Stryker ATGM) vehicle. This procurement will field a single configuration across the US Army ITAS and MITAS fleets. The funding also includes the installation and program management cost. Once installation completes, the entire ITAS / MITAS fleet within the Army's Infantry Brigade Combat Team (IBCT) and Stryker Brigade Combat Teams (SBCT) will have a single configuration.

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

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10	P-1 Line Item Number / Title: 3972C61700 / ITAS/TOW Mods	Modification Number / Title: C61700 / ITAS/TOW Mods

ID Code (A=Service Ready, B=Not Service Ready) : _____ **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>)	1,792.822	3.173	3.469	5.666	-	5.666	-	-	-	-	-	1,805.130
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,792.822	3.173	3.469	5.666	-	5.666	-	-	-	-	-	1,805.130
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,792.822	3.173	3.469	5.666	-	5.666	-	-	-	-	-	1,805.130

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	68,954.692	132.208	138.760	153.135	-	153.135	-	-	-	-	-	16,117.232

Description:

The Improved Target Acquisition System (ITAS) with Far Target Location (FTL) is a combat proven system that provides long-range, lethal anti-armor and precision assault fires capability for Active Component and Army National Guard Infantry Brigade Combat Teams (IBCT) and Stryker Brigade Combat Teams (SBCT) equipped with Modified ITAS (MITAS) across the spectrum of contemporary operational environments. ITAS with the TOW Missile provides the capability to defeat armored vehicles, bunkers, and buildings at extended ranges in all battlefield conditions. ITAS's superior surveillance capability also enables the Soldier to shape the battlefield by detecting targets at long range and either engaging with TOW missiles or other weapon systems to destroy those targets with its ability to generate a 10 digit grid coordinate of a target location. The ITAS completed fielding to the total Army in December 2012. ITAS continues to be the weapon of choice in precision combat engagements.

FY2021 funding totals include \$5.666 Million in Base to procure 37 Common Processor Kits for the Modified ITAS (MITAS) in the Stryker Anti-Tank Guided Missile (Stryker ATGM) vehicle. This procurement will field a single configuration across the US Army ITAS and MITAS fleets. The funding also includes the installation and program management cost. Once installation completes, the entire ITAS / MITAS fleet within the Army's Infantry Brigade Combat Team (IBCT) and Stryker Brigade Combat Teams (SBCT) will have a single configuration.

In accordance with Section 1815 of the FY2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	3.173	3.469	3.166	-	3.166	-	-	-	-
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	2.500	-	2.500	-	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	3.173	3.469	5.666	-	5.666	-	-	-	-

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Exhibit P-3a, Individual Modification: PB 2021 Army										Date: February 2020			
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10					P-1 Line Item Number / Title: 3972C61700 / ITAS/TOW Mods					Modification Number / Title: C61700 / ITAS/TOW Mods			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: NA				Modification Type: NA				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)	
Procurement													
<i>Modification Item 1 of 1: ITAS (IMPROVED TARGET ACQUISITION SYSTEM)</i>													
B Kits													
Recurring													
Kit Production	- / 1,412.925	24 / 2.831	25 / 3.109	37 / 5.231	- / -	37 / 5.231	- / -	- / -	- / -	- / -	- / -	86 / 1,424.096	
Fielding	- / 82.591	- / -	- / 0.063	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 82.654	
Subcomponents	- / 0.302	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.302	
Data	- / 3.097	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.097	
<i>Subtotal: Recurring</i>	<i>- / 1,498.915</i>	<i>24 / 2.831</i>	<i>25 / 3.172</i>	<i>37 / 5.231</i>	<i>- / -</i>	<i>37 / 5.231</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>86 / 1,510.149</i>	
Non-Recurring													
Project Management	- / 125.067	- / 0.312	- / 0.297	- / 0.388	- / -	- / 0.388	- / -	- / -	- / -	- / -	- / -	- / 126.064	
Training Equipment	- / 86.715	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 86.715	
Prior Equipment - Kits	- / 82.125	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 82.125	
<i>Subtotal: Non-Recurring</i>	<i>- / 293.907</i>	<i>- / 0.312</i>	<i>- / 0.297</i>	<i>- / 0.388</i>	<i>- / -</i>	<i>- / 0.388</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / 294.904</i>	
<i>Subtotal: ITAS (IMPROVED TARGET ACQUISITION SYSTEM)</i>	<i>- / 1,792.822</i>	<i>24 / 3.143</i>	<i>25 / 3.469</i>	<i>37 / 5.619</i>	<i>- / -</i>	<i>37 / 5.619</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>86 / 1,805.053</i>	
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / 1,792.822</i>	<i>24 / 3.143</i>	<i>25 / 3.469</i>	<i>37 / 5.619</i>	<i>- / -</i>	<i>37 / 5.619</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>86 / 1,805.053</i>	
Installation													
<i>Modification Item 1 of 1: ITAS (IMPROVED TARGET ACQUISITION SYSTEM)</i>	<i>- / -</i>	<i>24 / 0.030</i>	<i>- / -</i>	<i>37 / 0.047</i>	<i>- / -</i>	<i>37 / 0.047</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>61 / 0.077</i>	
<i>Subtotal: Installation</i>	<i>- / -</i>	<i>24 / 0.030</i>	<i>- / -</i>	<i>37 / 0.047</i>	<i>- / -</i>	<i>37 / 0.047</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>61 / 0.077</i>	
Total													
Total Cost (Procurement + Support + Installation)	1,792.822	3.173	3.469	5.666	-	5.666	-	-	-	-	-	1,805.130	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10	P-1 Line Item Number / Title: 3972C61700 / ITAS/TOW Mods	Modification Number / Title: C61700 / ITAS/TOW Mods

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 1: ITAS (IMPROVED TARGET ACQUISITION SYSTEM)

Manufacturer Information

Manufacturer Name: Raytheon Network Centric Systems Company	Manufacturer Location: McKinney, TX
Administrative Leadtime (in Months): 4	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				
Delivery Dates	Mar 2020	Mar 2021	Mar 2022				

Installation Information

Method of Implementation: Contract

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 / 0.015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.015
FY 2021	- / -	12 / 0.015	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.015
FY 2022	- / -	- / -	- / -	18 / 0.023	- / -	18 / 0.023	- / -	- / -	- / -	- / -	- / -	18 / 0.023
FY 2023	- / -	- / -	- / -	19 / 0.024	- / -	19 / 0.024	- / -	- / -	- / -	- / -	- / -	19 / 0.024
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	24 / 0.030	- / -	37 / 0.047	- / -	37 / 0.047	- / -	- / -	- / -	- / -	- / -	61 / 0.077

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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	9	9	10	-	-	-	-	-	-	-	-	-	-	-	-	-	37
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	9	9	10	-	-	-	-	-	-	-	-	-	-	-	-	-	37

UNCLASSIFIED

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications	P-1 Line Item Number / Title: 6552C67500 / MLRS Mods
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0603778A
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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>)	606.945	478.998	372.550	310.419	20.000	330.419	277.623	207.159	165.712	165.062	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	606.945	478.998	372.550	310.419	20.000	330.419	277.623	207.159	165.712	165.062	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	606.945	478.998	372.550	310.419	20.000	330.419	277.623	207.159	165.712	165.062	Continuing	Continuing

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	12,644.688	6,942.000	4,005.914	7,760.475	10,000.000	7,867.119	25,238.455	9,416.318	8,285.600	8,253.100	Continuing	Continuing

Description:

The M270A1 Multiple Launch Rocket System (MLRS) launcher is a full-spectrum, combat-proven, all-weather, 24/7 lethal and responsive, precision strike weapon system. MLRS provides critical missile precision strike, operational shaping fires, counterfire, and close support destructive and suppressive fires. MLRS is a tracked, indirect fire, rocket/missile launcher capable of firing two pods of precision rockets/missiles from the current and emerging Multiple Launch Rocket System (MLRS) Family of Munitions (MFOM), to include the Extended Range Guided Multiple Launch Rocket System (ER GMLRS), the Army Tactical Missile System (ATACMS), and the Precision Strike Missile (PrSM).

In FY2017, the Army directed the program office to modernize 160 obsolete, unserviceable MLRS M270A0s to M270A2s in an effort called MLRS Fleet Expansion. In addition to MLRS Fleet Expansion, the Army decided to extend the operational life of the existing M270A1 fleet to FY2050 or beyond, which drives the requirement to upgrade the current fleet of 225 M270A1 launchers to the M270A2 configuration. The end state is 385 MLRS launchers with Improved Armored Cabs (IAC), Bradley commonality improvements, and Common Fire Control System (CFCS). Upon integration of the IAC Modification Kit on a M270A1, the launcher permanently becomes an M270A2.

Mod 1 (MLRS Fleet Expansion). The Fleet Expansion effort will modernize 160 MLRS M270A0s to M270A2s through a Public Private Partnership. The prime contractor and Red River Army Depot (RRAD) will rebuild and provide selective upgrades to include, IAC, Bradley commonality improvements, and CFCS.

Mod 2 (MLRS Fleet Upgrade). The MLRS Fleet upgrade effort will follow the same rebuild process and selective upgrades as the Fleet Expansion effort, by upgrading the current fleet of M270A1 launchers to M270A2 with IAC, Bradley Commonality and CFCS. Upon integration of the IAC Modification Kit on a M270A1, the launcher permanently becomes a M270A2. This upgrade effort will extend the operational life of these launchers to FY2050 and beyond.

Mod 3 (Improved Armored Cab). The Improved Armored Cab (IAC) Modification Kit provides crew survivability against Improvised Explosive Devices (IEDs) and small arms fire greater than or equal to the High Mobility Artillery Rocket System (HIMARS) Increased Crew Protection Cab (ICP). Additionally, IAC standardizes crew drill requirements between HIMARS and MLRS operators. Upon integration of the IAC Modification Kit on a M270A1, the launcher permanently becomes a M270A2. Integration of the IAC is performed by RRAD under a Public Private Partnership as part of the MLRS Fleet Expansion effort.

The current Army Acquisition Objective is 225 MLRS launchers. The end state Army Acquisition Objective after Fleet Expansion will be 385 M270A2 MLRS launchers.

UNCLASSIFIED

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications	P-1 Line Item Number / Title: 6552C67500 / MLRS Mods
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0603778A
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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
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	478.998	372.550	301.055	20.000	321.055	266.537	207.159	165.712	165.062
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	9.364	-	9.364	11.086	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	478.998	372.550	310.419	20.000	330.419	277.623	207.159	165.712	165.062

UNCLASSIFIED

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications **P-1 Line Item Number / Title:** 6552C67500 / MLRS Mods

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0603778A

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	C67500 / MLRS Mods (.)				- / 606.945	- / 478.998	- / 372.550	- / 310.419	- / 20.000	- / 330.419
P-40	Total Gross/Weapon System Cost				- / 606.945	- / 478.998	- / 372.550	- / 310.419	- / 20.000	- / 330.419

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	C67500 / MLRS Mods (.)				- / 277.623	- / 207.159	- / 165.712	- / 165.062	Continuing	Continuing
P-40	Total Gross/Weapon System Cost				- / 277.623	- / 207.159	- / 165.712	- / 165.062	Continuing	Continuing

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

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

Justification:
 FY 2021 procurement dollars in the amount of \$310.419 million supports MLRS Fleet Expansion (Mod 1) of 37 MLRS launchers from M270A0 configuration to M270A2 configuration; completes the nonrecurring engineering obsolescence effort of the launcher chassis design. Procures 26 Improved Armored Cabs (Mod 3).
 FY 2021 OCO procurement dollars in the amount of \$20.000 million supports MLRS Fleet Expansion (Mod 1) of 3 MLRS launchers from M270A0 configuration to M270A2 configuration.
 The Army intends to convert any price advantage created through contract negotiations, other service procurement, and/or foreign military sales to start the MLRS Fleet Upgrade (Mod 2) of MLRS launchers from M270A1 configuration to M270A2 configuration, and/or address obsolescence, modernization, cost reduction, and production initiatives. The Army will continue to incorporate modifications with the MLRS launcher to keep pace with the current and evolving threat.
 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 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10	P-1 Line Item Number / Title: 6552C67500 / MLRS Mods	Modification Number / Title: C67500 / MLRS Mods

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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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>)	606.945	478.998	372.550	310.419	20.000	330.419	277.623	207.159	165.712	165.062	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	606.945	478.998	372.550	310.419	20.000	330.419	277.623	207.159	165.712	165.062	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	606.945	478.998	372.550	310.419	20.000	330.419	277.623	207.159	165.712	165.062	Continuing	Continuing

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	12,644.688	6,942.000	4,005.914	7,760.475	10,000.000	7,867.119	25,238.455	9,416.318	8,285.600	8,253.100	Continuing	Continuing

Description:

The M270A1 Multiple Launch Rocket System (MLRS) launcher is a full-spectrum, combat-proven, all-weather, 24/7 lethal and responsive, precision strike weapon system. MLRS provides critical missile precision strike, operational shaping fires, counterfire, and close support destructive and suppressive fires. MLRS is a tracked, indirect fire, rocket/missile launcher capable of firing two pods of precision rockets/missiles from the current and emerging Multiple Launch Rocket System (MLRS) Family of Munitions (MFOM), to include the Extended Range Guided Multiple Launch Rocket System (ER GMLRS), the Army Tactical Missile System (ATACMS), and the Precision Strike Missile (PrSM).

In FY2017, the Army directed the program office to modernize 160 obsolete, unserviceable MLRS M270A0s to M270A2s in an effort called MLRS Fleet Expansion. In addition to MLRS Fleet Expansion, the Army decided to extend the operational life of the existing M270A1 fleet to FY2050 or beyond, which drives the requirement to upgrade the current fleet of 225 M270A1 launchers to the M270A2 configuration. The end state is 385 MLRS launchers with Improved Armored Cabs (IAC), Bradley commonality improvements, and Common Fire Control System (CFCS). Upon integration of the IAC Modification Kit on a M270A1, the launcher permanently becomes an M270A2.

Mod 1 (MLRS Fleet Expansion). The Fleet Expansion effort will modernize 160 MLRS M270A0s to M270A2s through a Public Private Partnership. The prime contractor and Red River Army Depot (RRAD) will rebuild and provide selective upgrades to include, IAC, Bradley commonality improvements, and CFCS.

Mod 2 (MLRS Fleet Upgrade). The MLRS Fleet upgrade effort will follow the same rebuild process and selective upgrades as the Fleet Expansion effort, by upgrading the current fleet of M270A1 launchers to M270A2 with IAC, Bradley Commonality and CFCS. Upon integration of the IAC Modification Kit on a M270A1, the launcher permanently becomes a M270A2. This upgrade effort will extend the operational life of these launchers to FY2050 and beyond.

Mod 3 (Improved Armored Cab). The Improved Armored Cab (IAC) Modification Kit provides crew survivability against Improvised Explosive Devices (IEDs) and small arms fire greater than or equal to the High Mobility Artillery Rocket System (HIMARS) Increased Crew Protection Cab (ICP). Additionally, IAC standardizes crew drill requirements between HIMARS and MLRS operators. Upon integration of the IAC Modification Kit on a M270A1, the launcher permanently becomes a M270A2. Integration of the IAC is performed by RRAD under a Public Private Partnership as part of the MLRS Fleet Expansion effort.

The current Army Acquisition Objective is 225 MLRS launchers. The end state Army Acquisition Objective after Fleet Expansion will be 385 M270A2 MLRS launchers.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	478.998	372.550	301.055	20.000	321.055	266.537	207.159	165.712	165.062

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10	P-1 Line Item Number / Title: 6552C67500 / MLRS Mods	Modification Number / Title: C67500 / MLRS Mods
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ID Code (A=Service Ready, B=Not Service Ready) : **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
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	9.364	-	9.364	11.086	-	-	-
Total:	Quantity	-	-	-	-	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	478.998	372.550	310.419	20.000	330.419	277.623	207.159	165.712	165.062

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Exhibit P-3a, Individual Modification: PB 2021 Army										Date: February 2020			
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10					P-1 Line Item Number / Title: 6552C67500 / MLRS Mods					Modification Number / Title: C67500 / MLRS Mods			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: M270A1				Modification Type: .				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)	
Procurement													
Modification Item 1 of 3: MLRS Fleet Expansion													
A Kits													
Recurring													
Obsolescence Mitigation (inactive)	- / 468.710	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 468.710	
System Engineering Program Management	- / 14.418	- / 16.847	- / 16.244	- / 16.525	- / -	- / 16.525	- / 10.481	- / -	- / -	- / -	- / -	- / 74.515	
Transmissions and Engines	- / 17.125	- / 1.288	- / 25.526	- / 16.383	- / -	- / 16.383	- / 10.653	- / -	- / -	- / -	- / -	- / 70.975	
M270A2 Launcher Fleet Expansion	- / -	55 / 368.802	39 / 271.493	37 / 229.978	3 / 20.000	40 / 249.978	26 / 167.200	- / -	- / -	- / -	- / -	160 / 1,057.473	
Subtotal: Recurring	- / 500.253	55 / 386.937	39 / 313.263	37 / 262.886	3 / 20.000	40 / 282.886	26 / 188.334	- / -	- / -	- / -	- / -	160 / 1,671.673	
Non-Recurring													
Obsolescence Mitigation Bradley Chassis	- / 18.494	- / 20.328	- / -	- / 17.871	- / -	- / 17.871	- / -	- / -	- / -	- / -	- / -	- / 46.693	
Obsolescence Mitigation Fire Control Sys	- / 14.195	- / 12.896	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 27.091	
Launcher Risk Reduction	- / 12.850	- / 4.567	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 17.417	
Government Testing	- / -	- / 0.923	- / 0.460	- / 2.627	- / -	- / 2.627	- / -	- / -	- / -	- / -	- / -	- / 4.010	
Initial Spares	- / -	- / 13.171	- / 14.470	- / 8.172	- / -	- / 8.172	- / 2.778	- / -	- / -	- / -	- / -	- / 38.591	
Training	- / -	- / 1.909	- / -	- / 6.693	- / -	- / 6.693	- / 2.692	- / -	- / -	- / -	- / -	- / 11.294	
Subtotal: Non-Recurring	- / 45.539	- / 53.794	- / 14.930	- / 25.363	- / -	- / 25.363	- / 5.470	- / -	- / -	- / -	- / -	- / 145.096	
Subtotal: MLRS Fleet Expansion	- / 545.792	55 / 440.731	39 / 328.193	37 / 288.249	3 / 20.000	40 / 308.249	26 / 193.804	- / -	- / -	- / -	- / -	160 / 1,816.769	
Modification Item 2 of 3: MLRS Fleet Upgrade													
A Kits													
Recurring													
System Engineering Program Management	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.448	- / 16.050	- / 16.719	- / 17.389	Continuing	Continuing	
Transmissions and Engines	- / -	- / -	- / -	- / -	- / -	- / -	- / 15.979	- / 12.496	- / 11.267	- / 7.119	Continuing	Continuing	
M270A2 Launcher Upgrade	- / -	- / -	- / -	- / -	- / -	- / -	6 / 37.987	22 / 152.521	20 / 136.369	20 / 138.765	Continuing	Continuing	
Subtotal: Recurring	- / -	- / -	- / -	- / -	- / -	- / -	6 / 59.414	22 / 181.067	20 / 164.355	20 / 163.273	Continuing	Continuing	
Non-Recurring													
Training	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.580	- / 1.795	- / 1.357	- / 1.789	Continuing	Continuing	
Subtotal: Non-Recurring	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.580	- / 1.795	- / 1.357	- / 1.789	Continuing	Continuing	
Subtotal: MLRS Fleet Upgrade	- / -	- / -	- / -	- / -	- / -	- / -	6 / 61.994	22 / 182.862	20 / 165.712	20 / 165.062	Continuing	Continuing	
Modification Item 3 of 3: Improved Armored Cab (IAC)													
A Kits													
Recurring													

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Exhibit P-3a, Individual Modification: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10	P-1 Line Item Number / Title: 6552C67500 / MLRS Mods	Modification Number / Title: C67500 / MLRS Mods

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Models of Systems Affected: M270A1	Modification Type: .	Related RDT&E PEs:
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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)
Production	51 / 61.153	51 / 38.267	51 / 44.357	26 / 22.170	- / -	26 / 22.170	25 / 21.825	26 / 24.297	- / -	- / -	Continuing	Continuing
<i>Subtotal: Recurring</i>	51 / 61.153	51 / 38.267	51 / 44.357	26 / 22.170	- / -	26 / 22.170	25 / 21.825	26 / 24.297	- / -	- / -	Continuing	Continuing
<i>Subtotal: Improved Armored Cab (IAC)</i>	51 / 61.153	51 / 38.267	51 / 44.357	26 / 22.170	- / -	26 / 22.170	25 / 21.825	26 / 24.297	- / -	- / -	Continuing	Continuing
<i>Subtotal: Procurement, All Modification Items</i>	51 / 606.945	106 / 478.998	90 / 372.550	63 / 310.419	3 / 20.000	66 / 330.419	57 / 277.623	48 / 207.159	20 / 165.712	20 / 165.062	Continuing	Continuing
Installation												
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total												
Total Cost (Procurement + Support + Installation)	606.945	478.998	372.550	310.419	20.000	330.419	277.623	207.159	165.712	165.062	Continuing	Continuing

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Exhibit P-3a, Individual Modification: PB 2021 Army						Date: February 2020	
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 6552C67500 / MLRS Mods			Modification Number / Title: C67500 / MLRS Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 1 of 3: MLRS Fleet Expansion							
Manufacturer Information							
Manufacturer Name: Lockheed Martin Missiles & Fire Control				Manufacturer Location: Camden, AR			
Administrative Leadtime (<i>in Months</i>): 3				Production Leadtime (<i>in Months</i>): 28			
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			
Delivery Dates	Dec 2021	Oct 2022	Sep 2023	Aug 2024			
Installation Information							
Method of Implementation (Organic): Field Artillery Launchers Product Office					Installation Quantity: 0		

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Exhibit P-3a, Individual Modification: PB 2021 Army					Date: February 2020		
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 6552C67500 / MLRS Mods			Modification Number / Title: C67500 / MLRS Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 2 of 3: MLRS Fleet Upgrade							
Manufacturer Information							
Manufacturer Name: Lockheed Martin Missiles & Fire Control				Manufacturer Location: Camden, AR			
Administrative Leadtime (in Months): 3				Production Leadtime (in Months): 28			
Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates				Apr 2022	Apr 2023	Apr 2024	Apr 2025
Delivery Dates				Dec 2024	Dec 2025	Dec 2026	Dec 2027
Installation Information							
Method of Implementation (Organic): Field Artillery Launchers Product Office					Installation Quantity: 0		

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Exhibit P-3a, Individual Modification: PB 2021 Army						Date: February 2020	
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 6552C67500 / MLRS Mods			Modification Number / Title: C67500 / MLRS Mods	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 3 of 3: Improved Armored Cab (IAC)							
Manufacturer Information							
Manufacturer Name: Loc Performance Products, LLC				Manufacturer Location: Plymouth, MI			
Administrative Leadtime (<i>in Months</i>): 3				Production Leadtime (<i>in Months</i>): 21			
Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Aug 2019	May 2020	May 2021	May 2022	May 2023		
Delivery Dates	May 2021	May 2022	May 2023	May 2024	May 2025		
Installation Information							
Method of Implementation (Organic): Depot					Installation Quantity: 0		

UNCLASSIFIED

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

Appropriation / Budget Activity / Budget Sub Activity:
2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications

P-1 Line Item Number / Title:
6580C67501 / HIMARS Modifications

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0210600A, 0603778A, 0210608A

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>)	59	35	40	22	-	22	22	30	60	100	Continuing	Continuing
Gross/Weapon System Cost (<i>\$ in Millions</i>)	235.062	10.196	12.483	6.081	-	6.081	7.292	9.700	17.402	29.968	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	235.062	10.196	12.483	6.081	-	6.081	7.292	9.700	17.402	29.968	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	235.062	10.196	12.483	6.081	-	6.081	7.292	9.700	17.402	29.968	Continuing	Continuing

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	3,984.102	291.314	312.075	276.409	-	276.409	331.455	323.333	290.033	299.680	Continuing	Continuing

Description:

The M142 High Mobility Artillery Rocket System (HIMARS) launcher is a full spectrum, combat proven, all weather, 24/7 lethal and responsive, precision strike weapon system. HIMARS provides critical missile precision strike, operational shaping fires, counter-fire, and close support destructive and suppressive fires. HIMARS is a C-130 or C-17 transportable, wheeled, indirect fire, rocket/missile launcher capable of firing one pod of precision rockets/missiles from the current and future Multiple Launch Rocket System (MLRS) Family of Munitions (MFOM), to include the Guided Multiple Launch Rocket System-Unitary (GMLRS-U), GMLRS Alternative Warhead, the Army Tactical Missile System (ATACMS) and future MFOM to include the Extended Range (ER) GMLRS, and the Precision Strike Missile (PrSM).

Mod 1 (M142 Mods). Modifications are needed to address safety, operational-related, chassis, and Command, Control, Communications, Computer, and Intelligence (C4I) obsolescence issues within the HIMARS fleet. Additionally, procures system-specific training devices required to support the HIMARS Vehicle and Maintainer training courses.

Army Acquisition Objective (AAO) is 363 HIMARS launchers. The end state Army Acquisition Objective after HIMARS Fleet Expansion will be 425 HIMARS launchers, but may be increased contingent on Army requirements.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	16	40	14	-	14	14	17	34	52
	Total Obligation Authority	4.444	12.483	3.867	-	3.867	4.545	5.525	9.911	15.338
ANG	Quantity	19	-	8	-	8	8	13	26	48
	Total Obligation Authority	5.752	-	2.214	-	2.214	2.747	4.175	7.491	14.630
Total: Secondary Distribution	Quantity	35	40	22	-	22	22	30	60	100
	Total Obligation Authority	10.196	12.483	6.081	-	6.081	7.292	9.700	17.402	29.968

UNCLASSIFIED

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

Appropriation / Budget Activity / Budget Sub Activity:
2032A: Missile Procurement, Army / BA 03: Modification of Missiles / BSA 10: Modifications

P-1 Line Item Number / Title:
6580C67501 / HIMARS Modifications

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0210600A, 0603778A, 0210608A

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	C67501 / HIMARS Modifications (Operational, Reliability, Safety, Crew Survivability)				59 / 235.062	35 / 10.196	40 / 12.483	22 / 6.081	- / -	22 / 6.081
P-40	Total Gross/Weapon System Cost				59 / 235.062	35 / 10.196	40 / 12.483	22 / 6.081	- / -	22 / 6.081

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	C67501 / HIMARS Modifications (Operational, Reliability, Safety, Crew Survivability)				22 / 7.292	30 / 9.700	60 / 17.402	100 / 29.968	Continuing	Continuing
P-40	Total Gross/Weapon System Cost				22 / 7.292	30 / 9.700	60 / 17.402	100 / 29.968	Continuing	Continuing

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

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

Justification:
FY2021 Base procurement dollars in the amount of \$6.081 million support obsolescence mitigation and other design modifications of the M142 High Mobility Artillery Rocket System (HIMARS) fleet. HIMARS Modifications funding will include, but are not limited to, the following: updating the FMTV carrier and the Launcher-Loader Module drawing packages and Technical Data Packages through the prime contractor and the government product office; updating the Interactive Electronic Technical Manuals for Soldiers to perform operator maintenance; upgrading the Diagnostic Trainers and HIMARS Mock-up Trainer due to obsolescence. Software updates and Information Assurance requirements will be conducted to support fielding of Software Version 8.x. System engineering efforts will be conducted to sustain the system and to assess and conduct modifications such as long range communications, wireless vehicular intercom system, carrier, Launcher-Loader Module, and Fire Control System obsolescence. Base procurement dollars will also incorporate modifications with the HIMARS launcher to keep pace with the current and evolving threat.

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

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10	P-1 Line Item Number / Title: 6580C67501 / HIMARS Modifications	Modification Number / Title: C67501 / HIMARS Modifications

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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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>)	59	35	40	22	-	22	22	30	60	100	Continuing	Continuing
Gross/Weapon System Cost (<i>\$ in Millions</i>)	235.062	10.196	12.483	6.081	-	6.081	7.292	9.700	17.402	29.968	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	235.062	10.196	12.483	6.081	-	6.081	7.292	9.700	17.402	29.968	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	235.062	10.196	12.483	6.081	-	6.081	7.292	9.700	17.402	29.968	Continuing	Continuing

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	3,984.102	291.314	312.075	276.409	-	276.409	331.455	323.333	290.033	299.680	Continuing	Continuing

Description:

The M142 High Mobility Artillery Rocket System (HIMARS) launcher is a full-spectrum, combat-proven, all-weather, 24/7 lethal and responsive, precision strike weapon system. HIMARS provides critical missile precision strike, operational shaping fires, counter-fire, and close support destructive and suppressive fires. HIMARS is a C-130 or C-17 transportable, wheeled, indirect fire, rocket/misile launcher capable of firing one pod of precision rockets/missiles from the current and emerging Multiple Launch Rocket System (MLRS) Family of Munitions (MFOM), to include the Guided Multiple Launch Rocket System-Unitary (GMLRS-U), GMLRS Alternative Warhead, the Army Tactical Missile System (ATACMS) and future MFOM to include the Extended Range (ER) GMLRS, and the Precision Strike Missile (PrSM).

Mod 1 (M142 Mods). Modifications are needed to address safety, operational-related, chassis, and Command, Control, Communications, Computer, and Intelligence (C4I) obsolescence issues within the HIMARS fleet. Additionally, procures system-specific training devices required to support the HIMARS Vehicle and Maintainer training courses.

Army Acquisition Objective (AAO) is 363 HIMARS launchers. The end state Army Acquisition Objective after HIMARS Fleet Expansion will be 425 HIMARS launchers, but may be increased contingent on Army requirements.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	16	40	14	-	14	14	17	34	52
	Total Obligation Authority	4.444	12.483	3.867	-	3.867	4.545	5.525	9.911	15.338
ANG	Quantity	19	-	8	-	8	8	13	26	48
	Total Obligation Authority	5.752	-	2.214	-	2.214	2.747	4.175	7.491	14.630
Total:	Quantity	35	40	22	-	22	22	30	60	100
Secondary Distribution	Total Obligation Authority	10.196	12.483	6.081	-	6.081	7.292	9.700	17.402	29.968

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Exhibit P-3a, Individual Modification: PB 2021 Army										Date: February 2020			
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10				P-1 Line Item Number / Title: 6580C67501 / HIMARS Modifications						Modification Number / Title: C67501 / HIMARS Modifications			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: M142 High Mobility Artillery Rocket System				Modification Type: Operational, Reliability, Safety, Crew Survivability				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)	
Procurement													
<i>Modification Item 1 of 1: M142 Mods</i>													
A Kits													
Recurring													
Program Management	- / 1.300	- / 1.326	- / 1.353	- / 1.262	- / -	- / 1.262	- / 1.401	- / 1.426	- / 1.446	- / 2.461	Continuing	Continuing	
Obsolescence Mitigation	- / 228.601	- / 3.604	- / 5.930	- / 2.552	- / -	- / 2.552	- / 0.477	- / 2.752	- / 10.326	- / 17.769	Continuing	Continuing	
Industrial Facilities	- / 0.700	- / 0.714	- / 0.729	- / 0.356	- / -	- / 0.356	- / 0.759	- / 0.774	- / 0.789	- / 1.804	Continuing	Continuing	
Peculiar Support Equipment	- / 0.175	- / 0.179	- / 0.183	- / 0.089	- / -	- / 0.089	- / 0.191	- / 0.195	- / 0.199	- / 1.203	Continuing	Continuing	
Training	- / 0.661	- / 0.675	- / 0.689	- / 0.336	- / -	- / 0.336	- / 0.718	- / 0.732	- / 0.746	- / 1.760	Continuing	Continuing	
Test & Evaluation (Acceptance Testing)	- / 1.200	- / 1.224	- / 1.249	- / 0.609	- / -	- / 0.609	- / 1.300	- / 1.326	- / 1.352	- / 1.378	Continuing	Continuing	
Systems Engineering	- / 2.425	- / 2.474	- / 2.350	- / 0.877	- / -	- / 0.877	- / 2.446	- / 2.495	- / 2.544	- / 3.593	Continuing	Continuing	
<i>Subtotal: Recurring</i>	- / 235.062	- / 10.196	- / 12.483	- / 6.081	- / -	- / 6.081	- / 7.292	- / 9.700	- / 17.402	- / 29.968	Continuing	Continuing	
<i>Subtotal: M142 Mods</i>	- / 235.062	- / 10.196	- / 12.483	- / 6.081	- / -	- / 6.081	- / 7.292	- / 9.700	- / 17.402	- / 29.968	Continuing	Continuing	
<i>Subtotal: Procurement, All Modification Items</i>	- / 235.062	- / 10.196	- / 12.483	- / 6.081	- / -	- / 6.081	- / 7.292	- / 9.700	- / 17.402	- / 29.968	Continuing	Continuing	
Installation													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
Total													
Total Cost (Procurement + Support + Installation)	235.062	10.196	12.483	6.081	-	6.081	7.292	9.700	17.402	29.968	Continuing	Continuing	

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Exhibit P-3a, Individual Modification: PB 2021 Army					Date: February 2020		
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 03 / 10			P-1 Line Item Number / Title: 6580C67501 / HIMARS Modifications			Modification Number / Title: C67501 / HIMARS Modifications	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 1 of 1: M142 Mods							
Manufacturer Information							
Manufacturer Name: Strategic and Operational Rocket & Missiles Project Office				Manufacturer Location: Redstone Arsenal, AL			
Administrative Leadtime (<i>in Months</i>):				Production Leadtime (<i>in Months</i>):			
Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							
Installation Information							
Method of Implementation (Organic): Field Artillery Launchers Product Office					Installation Quantity: 0		

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 04: Spares and Repair Parts / BSA 10: Spares And Repair Parts	P-1 Line Item Number / Title: 1242CA0250 / Spares And Repair Parts
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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 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>)	329.783	27.737	26.444	5.090	-	5.090	16.167	6.380	6.553	6.671	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	329.783	27.737	26.444	5.090	-	5.090	16.167	6.380	6.553	6.671	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	329.783	27.737	26.444	5.090	-	5.090	16.167	6.380	6.553	6.671	Continuing	Continuing

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

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

Description:

FY 2021 funds provide for the procurement of spares to support initial fielding of new or modified end items.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	27.737	26.444	5.090	-	5.090	16.167	6.380	6.553	6.671
Total:									
Secondary Distribution									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	27.737	26.444	5.090	-	5.090	16.167	6.380	6.553	6.671

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 04: Spares and Repair Parts / BSA 10: Spares And Repair Parts **P-1 Line Item Number / Title:** 1242CA0250 / Spares And Repair Parts

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

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 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	CA0267 / PATRIOT MODIFICATION INITIAL SPARES				- / 329.783	- / 27.737	- / 26.444	- / 5.090	- / -	- / 5.090
P-40	Total Gross/Weapon System Cost				- / 329.783	- / 27.737	- / 26.444	- / 5.090	- / -	- / 5.090

*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:
 FY2021 procurement dollars in the amount of \$5.090 million support continuing acquisition of Patriot Modification Initial Spares. The funds in this account procure depot level repairable (DLR) secondary items from Supply Management, Army activities of the Army Working Capital Fund and commercial life cycle support vendors. To provide initial issue spares support, funds are required in the same year that end items are fielded.

In accordance with Section 1815 of the FY2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2021 Army															Date: February 2020				
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 04 / 10						P-1 Line Item Number / Title: 1242CA0250 / Spares And Repair Parts						Aggregated Items Title: CA0267 / PATRIOT MODIFICATION INITIAL SPARES							

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
			Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
PATRIOT MODIFICATION INITIAL SPARES																				
CA0267 / PATRIOT MODIFICATION INITIAL SPARES			-	-	329.783	-	-	27.737	-	-	26.444	-	-	5.090	-	-	-	-	-	5.090
<i>Secondary Distribution</i>																				
Army				-	-		-	27.737		-	26.444		-	5.090		-	-		-	5.090
Subtotal: PATRIOT MODIFICATION INITIAL SPARES			-	-	329.783	-	-	27.737	-	-	26.444	-	-	5.090	-	-	-	-	-	5.090
Total			-	-	329.783	-	-	27.737	-	-	26.444	-	-	5.090	-	-	-	-	-	5.090

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

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 05: Support Equipment and Facilities / BSA 10: Support Equipment & Facilities	P-1 Line Item Number / Title: 1242C93000 / Air Defense Targets
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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 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>)	-	-	394	538	-	538	539	527	530	524	-	3,052
Gross/Weapon System Cost (<i>\$ in Millions</i>)	441.086	6.417	10.593	8.978	-	8.978	8.987	9.190	9.377	9.593	-	504.221
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	441.086	6.417	10.593	8.978	-	8.978	8.987	9.190	9.377	9.593	-	504.221
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	441.086	6.417	10.593	8.978	-	8.978	8.987	9.190	9.377	9.593	-	504.221

(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>)	-	-	26.886	16.688	-	16.688	16.673	17.438	17.692	18.307	-	165.210

Description:

Air Defense Artillery (ADA) Targets program procures target hardware and associated training services to include scoring, payload, and ground support equipment to enable Air Defense Artillery Soldiers and units to conduct required training. This training consists of Department of the Army Pamphlet (DA PAM) 350-38 (Standards in Training Commission) required gunnery tables and aerial target tracking, training, and scoring. Target systems are also available to support collective training exercises and Force Development Testing and Experimentation (FDT&E) investigations of engagement techniques for small unmanned aircraft systems.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	-	394	538	-	538	539	527	530	524
Total Obligation Authority	6.417	10.593	8.978	-	8.978	8.987	9.190	9.377	9.593
Total:									
Secondary Distribution									
Quantity	-	394	538	-	538	539	527	530	524
Total Obligation Authority	6.417	10.593	8.978	-	8.978	8.987	9.190	9.377	9.593

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

Appropriation / Budget Activity / Budget Sub Activity: 2032A: Missile Procurement, Army / BA 05: Support Equipment and Facilities / BSA 10: Support Equipment & Facilities **P-1 Line Item Number / Title:** 1242C93000 / Air Defense Targets

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

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 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-5	C93000 / Air Defense Targets	P-5a			- / 441.086	- / 6.417	394 / 10.593	538 / 8.978	- / -	538 / 8.978
P-40	Total Gross/Weapon System Cost				- / 441.086	- / 6.417	394 / 10.593	538 / 8.978	- / -	538 / 8.978

*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 Base procurement dollars in the amount of \$8.978 million supports Air Defense Artillery Targets and scoring, payload, and ground support equipment for training required in DA PAM 350-38, Standards in Training Commission (STRAC). These items support gunnery tables, aerial target tracking (Captive Flight Trainer (CFT) and Tracking Head Trainer (THT) 5.56) training, Missile Live Fire training when missiles are allocated in accordance with (IAW) the Missile Distribution Plan, and U.S. Army Avenger systems worldwide. Training requirements are generated by Department of the Army Major Field Commands, Training Centers, Division Level Commands, and real world mission rehearsals. These field requirements have been reviewed and validated against ongoing force restructuring and are consistent with the approved training doctrine. These targets are necessary to meet Army Regulation 220-1 (Unit Status Reporting) training requirements, training strategies and gunnery standards, and soldier qualification in support of unit readiness.

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

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Exhibit P-5, Cost Analysis: PB 2021 Army		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 2032A / 05 / 10	P-1 Line Item Number / Title: 1242C93000 / Air Defense Targets	Item Number / Title [DODIC]: C93000 / Air Defense Targets

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	394	538	-	538
Gross/Weapon System Cost (\$ in Millions)	441.086	6.417	10.593	8.978	-	8.978
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	441.086	6.417	10.593	8.978	-	8.978
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	441.086	6.417	10.593	8.978	-	8.978

(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)	-	-	26.886	16.688	-	16.688

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
Remotely Piloted Vehicle Target (RPVT) ^(†)	551.380	789	435.039	6.756	394	2.662	6.962	394	2.743	7.171	539	3.865	-	-	-	7.171	539	3.865
Infrared Kit Payload ^(†)	0.277	788	0.218	0.322	394	0.127	0.332	394	0.131	0.341	539	0.184	-	-	-	0.341	539	0.184
Launcher ^(†)	27.286	7	0.191	30.000	4	0.120	31.000	5	0.155	32.000	1	0.032	-	-	-	32.000	1	0.032
Manual Navigation GCS ^(†)	10.429	14	0.146	11.857	14	0.166	12.214	14	0.171	12.600	5	0.063	-	-	-	12.600	5	0.063
BVR Navigation GCS ^(†)	27.000	4	0.108	30.750	4	0.123	31.750	4	0.127	32.700	10	0.327	-	-	-	32.700	10	0.327
BVR Payload ^(†)	12.063	48	0.579	13.700	20	0.274	14.100	20	0.282	14.519	27	0.392	-	-	-	14.519	27	0.392
Acoustic Scoring Payload ^(†)	13.580	50	0.679	13.393	28	0.375	13.786	28	0.386	14.200	50	0.710	-	-	-	14.200	50	0.710
Acoustic Scoring GCS ^(†)	43.000	8	0.344	47.778	9	0.430	49.222	9	0.443	51.000	2	0.102	-	-	-	51.000	2	0.102
Radar Scoring Payload ^(†)	16.900	20	0.338	18.750	20	0.375	19.300	20	0.386	20.000	40	0.800	-	-	-	20.000	40	0.800
Radar Scoring GCS ^(†)	-	-	-	17.000	1	0.017	18.000	1	0.018	18.500	2	0.037	-	-	-	18.500	2	0.037
RPVT Lighting Kit Payload ^(†)	0.286	56	0.016	0.323	31	0.010	0.323	31	0.010	0.333	45	0.015	-	-	-	0.333	45	0.015
Program Management Support	1,588.000	2	3.176	1,646.000	1	1.646	1,815.000	1	1.815	2,132.000	1	2.132	-	-	-	2,132.000	1	2.132

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Exhibit P-5, Cost Analysis: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 05 / 10	P-1 Line Item Number / Title: 1242C93000 / Air Defense Targets	Item Number / Title [DODIC]: C93000 / Air Defense Targets
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Smoke Generator Payload ^(†)	0.412	34	0.014	0.474	19	0.009	-	-	-	0.500	30	0.015	-	-	-	0.500	30	0.015
Over the Horizon BVR Payload ^(†)	23.900	10	0.239	20.750	4	0.083	-	-	-	20.000	15	0.300	-	-	-	20.000	15	0.300
<i>Subtotal: Recurring Cost</i>	-	-	441.087	-	-	6.417	-	-	6.667	-	-	8.974	-	-	-	-	-	8.974
<i>Subtotal: Flyaway Cost</i>	-	-	441.087	-	-	6.417	-	-	6.667	-	-	8.974	-	-	-	-	-	8.974
Software Cost																		
Recurring Cost																		
Technical Refresh - Windows OS Update	-	-	-	-	-	-	3,926.000	1	3.926	4.000	1	0.004	-	-	-	4.000	1	0.004
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	3.926	-	-	0.004	-	-	-	-	-	0.004
<i>Subtotal: Software Cost</i>	-	-	-	-	-	-	-	-	3.926	-	-	0.004	-	-	-	-	-	0.004
Gross/Weapon System Cost	-	-	441.086	-	-	6.417	26.886	394	10.593	16.688	538	8.978	-	-	-	16.688	538	8.978

Remarks:

FY 2020 increase in unit cost for Windows Operating System upgrade, which is necessary to maintain the system's authority to operate.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	394	538	-	538
	Total Obligation Authority	6.417	10.593	8.978	-	8.978
Total: Secondary Distribution	Quantity	-	394	538	-	538
	Total Obligation Authority	6.417	10.593	8.978	-	8.978

(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 05 / 10	P-1 Line Item Number / Title: 1242C93000 / Air Defense Targets	Item Number / Title [DODIC]: C93000 / Air Defense Targets
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
Remotely Piloted Vehicle Target (RPVT)		2018	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2018	Jun 2018	394	5.992	Y		
Remotely Piloted Vehicle Target (RPVT)		2019	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2019	Jun 2019	394	6.756	Y		
Remotely Piloted Vehicle Target (RPVT)		2020	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2020	Jun 2020	394	6.962	Y		
Remotely Piloted Vehicle Target (RPVT)		2021	Griffon Aerospace Inc. / Madison, AL	C / FFP	PEO-STRI	Dec 2020	Apr 2021	539	7.171	Y		
Infrared Kit Payload		2018	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2018	Jun 2018	394	0.284	Y		
Infrared Kit Payload		2019	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2019	Jun 2019	394	0.322	Y		
Infrared Kit Payload		2020	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2020	Jun 2020	394	0.332	Y		
Infrared Kit Payload		2021	Griffon Aerospace Inc. / Madison, AL	C / FFP	PEO-STRI	Dec 2020	Apr 2021	539	0.341	Y		
Launcher		2018	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2018	Jun 2018	4	27.250	Y		
Launcher		2019	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2019	Jun 2019	4	30.000	Y		
Launcher		2020	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2020	Jun 2020	5	31.000	Y		
Launcher		2021	Griffon Aerospace Inc. / Madison, AL	C / FFP	PEO-STRI	Dec 2020	Jun 2021	1	32.000	Y		
Manual Navigation GCS		2018	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2018	Jun 2018	14	10.429	Y		
Manual Navigation GCS		2019	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2019	Jun 2019	14	11.857	Y		
Manual Navigation GCS		2020	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2020	Jun 2020	14	12.214	Y		
Manual Navigation GCS		2021	Griffon Aerospace Inc. / Madison, AL	C / FFP	PEO STRI	Dec 2020	Jun 2021	5	12.600	Y		
BVR Navigation GCS		2018	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2018	Jun 2018	4	27.000	Y		
BVR Navigation GCS		2019	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2019	Jun 2019	4	30.750	Y		
BVR Navigation GCS		2020	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2020	Jun 2020	4	31.750	Y		
BVR Navigation GCS		2021	Griffon Aerospace Inc. / Madison, AL	C / FFP	PEO STRI	Dec 2020	Jul 2021	10	32.700	Y		
BVR Payload		2018	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2018	Jun 2018	16	12.063	Y		
BVR Payload		2019	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2019	Jun 2019	20	13.700	Y		
BVR Payload		2020	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2020	Jun 2020	20	14.100	Y		
BVR Payload		2021	Griffon Aerospace Inc. / Madison, AL	C / FFP	PEO STRI	Dec 2020	Jul 2021	27	14.519	Y		
Acoustic Scoring Payload		2018	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2018	Jun 2018	24	13.792	Y		
Acoustic Scoring Payload		2019	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2019	Jun 2019	28	13.393	Y		
Acoustic Scoring Payload		2020	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2020	Jun 2020	28	13.786	Y		
Acoustic Scoring Payload		2021	Griffon Aerospace Inc. / Madison, AL	C / FFP	PE STRI	Dec 2020	Jul 2021	50	14.200	Y		
Acoustic Scoring GCS		2018	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2018	Jun 2018	8	43.000	Y		
Acoustic Scoring GCS		2019	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2019	Jun 2019	9	47.778	Y		
Acoustic Scoring GCS		2020	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2020	Jun 2020	9	49.222	Y		

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Exhibit P-5a, Procurement History and Planning: PB 2021 Army **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 2032A / 05 / 10	P-1 Line Item Number / Title: 1242C93000 / Air Defense Targets	Item Number / Title [DODIC]: C93000 / Air Defense Targets
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
Acoustic Scoring GCS		2021	Griffon Aerospace Inc. / Madison, AL	C / FFP	PEO STRI	Dec 2020	Jul 2021	2	51.000	Y		
Radar Scoring Payload		2018	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2018	Jun 2018	20	16.900	Y		
Radar Scoring Payload		2019	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2019	Jun 2019	20	18.750	Y		
Radar Scoring Payload		2020	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2020	Dec 2021	20	19.300	Y		
Radar Scoring Payload		2021	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2021	Dec 2021	40	20.000	Y		
Radar Scoring GCS		2018	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2018	Jun 2018	0	0.000	Y		
Radar Scoring GCS		2019	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2019	Jun 2019	1	17.000	Y		
Radar Scoring GCS		2020	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2020	Jun 2020	1	18.000	Y		
Radar Scoring GCS		2021	Griffon Aerospace Inc. / Madison, AL	C / FFP	PEO STRI	Dec 2020	Dec 2021	2	18.500	Y		
RPVT Lighting Kit Payload		2018	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2018	Jun 2018	22	0.273	Y		
RPVT Lighting Kit Payload		2019	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2019	Jun 2019	31	0.323	Y		
RPVT Lighting Kit Payload		2020	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2020	Jun 2020	31	0.323	Y		
RPVT Lighting Kit Payload		2021	Griffon Aerospace Inc. / Madison, AL	C / FFP	PEO STRI	Dec 2020	May 2021	45	0.333	Y		
Smoke Generator Payload		2018	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2018	Jun 2018	19	0.421	Y		
Smoke Generator Payload		2019	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2019	Jun 2019	19	0.474	Y		
Smoke Generator Payload		2020	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2020	Jun 2020	0	0.000	Y		
Smoke Generator Payload		2021	Griffon Aerospace Inc. / Madison, AL	C / FFP	PEO STRI	Dec 2020	May 2021	30	0.500	Y		
Over the Horizon BVR Payload		2018	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2018	Jun 2018	4	19.000	Y		
Over the Horizon BVR Payload		2019	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2019	Jun 2019	4	20.750	Y		
Over the Horizon BVR Payload		2020	Griffon Aerospace Inc. / Madison, AL	C / FFP	AMCOM	Mar 2020	Jun 2020	0	0.000	Y		
Over the Horizon BVR Payload		2021	Griffon Aerospace Inc. / Madison, AL	C / FFP	PEO STRI	Dec 2020	Jul 2021	15	20.000	Y		

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

Appropriation / Budget Activity / Budget Sub Activity:
2032A: Missile Procurement, Army / BA 05: Support Equipment and Facilities / BSA 10: Support Equipment & Facilities

P-1 Line Item Number / Title:
4662CA0100 / Production Base Support

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 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>)	371.216	1.202	-	-	-	-	-	-	-	-	-	372.418
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	371.216	1.202	-	-	-	-	-	-	-	-	-	372.418
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	371.216	1.202	-	-	-	-	-	-	-	-	-	372.418

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

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

Description:

This program provided funding to the Army Test and Evaluation Command (ATEC), which modernized test facilities used in production testing of missiles and missile components. It sustained Army production test capabilities through upgrade and replacement of instrumentation and equipment that were technologically and/or economically obsolete. Modernization of test instrumentation and equipment provided increased automation and efficiencies, improved data quality and quantity, and cost avoidance to Army Program Managers. Programmed funding was used to upgrade or replace production test instrumentation and equipment at the White Sands Test Center (WSTC), White Sands Missile Range, New Mexico and Redstone Test Center (RTC), Huntsville, Alabama.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	1.202	-	-	-	-	-	-	-	-
Total:									
Secondary Distribution									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	1.202	-	-	-	-	-	-	-	-

Justification:

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.