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**Department of Defense
Fiscal Year (FY) 2018 Budget Estimates**

May 2017



Army

*Justification Book of
Procurement of Ammunition, Army*

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The following Justification Books were prepared at a cost of \$250,916: Aircraft (ACFT), Missile (MSLS), Weapons & Tracked Combat Vehicles (WTCV), Ammunition (AMMO), Other Procurement Army (OPA) 1 - Tactical & Support Vehicles, Other Procurement Army (OPA) 2 - Communications & Electronics, Other Procurement Army (OPA) 3 & 4 - Other Support Equipment & Spares, Research, Development, Test and Evaluation (RDTE) for: Budget Activity 1, Budget Activity 2, Budget Activity 3, Budget Activity 4, Budget Activity 5A, Budget Activity 5B, Budget Activity 6, and Budget Activity 7.

PROCUREMENT OF AMMUNITION ARMY

Appropriation Language

For construction, procurement, production, modification, and modernization of ammunition, and accessories therefore; specialized equipment and training devices; expansion of public and private plants, including ammunition facilities, authorized by Sec 2854 of Title 10, United States Code, and land necessary therefore, for the foregoing purposes, and such lands and interest therein, may be acquired, and construction prosecuted thereon 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; and other expenses necessary for the foregoing purposes, Base \$1,879,283 and OCO \$193,436 to remain available for obligation until September 30, 2020.

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Department of the Army
 FY 2018 President's Budget Request
 Exhibit P-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

03 May 2017

<u>Appropriation</u>	<u>FY 2016 Base + OCO</u>	<u>FY 2017 PB Request with CR Adj Base</u>	<u>FY 2017 Total PB Requests* with CR Adj Base</u>
Procurement of Ammunition, Army	1,465,416	1,243,058	1,729,743
Total Department of the Army	1,465,416	1,243,058	1,729,743

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03 May 2017

<u>Appropriation</u>	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Procurement of Ammunition, Army	222,040	222,040		222,040
Total Department of the Army	222,040	222,040		222,040

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03 May 2017

<u>Appropriation</u>	<u>FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA</u>	<u>FY 2017 Total PB Requests* with CR Adj Base + OCO</u>	<u>FY 2017 Less Enacted Div B P.L.114-254** OCO</u>	<u>FY 2017 Remaining Req with CR Adj Base + OCO</u>
Procurement of Ammunition, Army	1,465,098	1,951,783		1,951,783
Total Department of the Army	1,465,098	1,951,783		1,951,783

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Department of the Army
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 (Dollars in Thousands)

03 May 2017

<u>Appropriation</u>	<u>FY 2018 Base</u>	<u>FY 2018 OCO</u>	<u>FY 2018 Total</u>
Procurement of Ammunition, Army	1,879,283	193,436	2,072,719
Total Department of the Army	1,879,283	193,436	2,072,719

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Department of the Army
 FY 2018 President's Budget Request
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 (Dollars in Thousands)

03 May 2017

Appropriation: Procurement of Ammunition, Army

Budget Activity	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base
01. Ammunition	1,092,090	1,129,859	1,434,154
02. Ammunition Production Base Support	373,326	383,298	565,688
20. Undistributed		-270,099	-270,099
Total Procurement of Ammunition, Army	1,465,416	1,243,058	1,729,743

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Department of the Army
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 (Dollars in Thousands)

03 May 2017

Appropriation: Procurement of Ammunition, Army

Budget Activity -----	FY 2017 PB Request with CR Adj OCO -----	FY 2017 Total PB Requests* with CR Adj OCO -----	FY 2017 Less Enacted Div B P.L.114-254** OCO -----	FY 2017 Remaining Req with CR Adj OCO -----
01. Ammunition	301,523	301,523		301,523
02. Ammunition Production Base Support				
20. Undistributed	-79,483	-79,483		-79,483
Total Procurement of Ammunition, Army	222,040	222,040		222,040

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03 May 2017

Appropriation: Procurement of Ammunition, Army

Budget Activity	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO
01. Ammunition	1,431,382	1,735,677		1,735,677
02. Ammunition Production Base Support	383,298	565,688		565,688
20. Undistributed	-349,582	-349,582		-349,582
Total Procurement of Ammunition, Army	1,465,098	1,951,783		1,951,783

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 (Dollars in Thousands)

03 May 2017

Appropriation: Procurement of Ammunition, Army

Budget Activity	FY 2018 Base	FY 2018 OCO	FY 2018 Total
01. Ammunition	1,348,383	193,436	1,541,819
02. Ammunition Production Base Support	530,900		530,900
20. Undistributed			
Total Procurement of Ammunition, Army	1,879,283	193,436	2,072,719

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 (Dollars in Thousands)

03 May 2017

Appropriation: 2034A Procurement of Ammunition, Army

Line No.	Item Nomenclature	Ident Code	FY 2016		FY 2017		FY 2017		S e c
			Base + OCO	Quantity	Cost	Quantity	Cost	Total PB Requests* with CR Adj	
Budget Activity 01: Ammunition									
Small/Medium Cal Ammunition									
1	Ctg, 5.56mm, All Types	A	43,489		40,296		44,296		U
2	CTG, 7.62mm, All Types	A	40,715		39,237		46,237		U
3	CTG, Handgun, All Types	A	6,801		5,193		9,193		U
4	CTG, .50 Cal, All Types	A	33,674		46,693		53,693		U
5	CTG, 20mm, All Types	A			7,000		35,000		U
6	CTG, 25mm, All Types	A	8,305		7,753		7,753		U
7	CTG, 30mm, All Types	A	33,130		47,000		55,200		U
8	CTG, 40mm, All Types	A	56,322		118,178		118,178		U
Mortar Ammunition									
9	60MM Mortar, All Types		52,443		69,784		69,784		U
10	81MM Mortar, All Types		46,130		36,125		36,125		U
11	120MM Mortar, All Types	A	74,897		69,133		96,433		U
Tank Ammunition									
12	Cartridges, Tank, 105MM and 120MM, All Types	A	115,190		120,668		135,668		U
Artillery Ammunition									
13	Artillery Cartridges, 75MM & 105MM, All Types	A	62,756		64,800		69,290		U
14	Artillery Projectile, 155MM, All Types		87,995		109,515		111,753		U

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Appropriation: 2034A Procurement of Ammunition, Army

Line No	Item Nomenclature	Ident Code	FY 2017 PB Request with CR Adj		FY 2017 Total PB Requests* with CR Adj		FY 2017 Less Enacted Div B P.L.114-254**		FY 2017 Remaining Req with CR Adj		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 01: Ammunition											
Small/Medium Cal Ammunition											
1	Ctg, 5.56mm, All Types	A									U
2	CTG, 7.62mm, All Types	A		9,642		9,642				9,642	U
3	CTG, Handgun, All Types	A									U
4	CTG, .50 Cal, All Types	A		6,607		6,607				6,607	U
5	CTG, 20mm, All Types	A		1,077		1,077				1,077	U
6	CTG, 25mm, All Types	A		28,534		28,534				28,534	U
7	CTG, 30mm, All Types	A		20,000		20,000				20,000	U
8	CTG, 40mm, All Types	A		7,423		7,423				7,423	U
Mortar Ammunition											
9	60MM Mortar, All Types			10,000		10,000				10,000	U
10	81MM Mortar, All Types			2,677		2,677				2,677	U
11	120MM Mortar, All Types	A									U
Tank Ammunition											
12	Cartridges, Tank, 105MM and 120MM, All Types	A		8,999		8,999				8,999	U
Artillery Ammunition											
13	Artillery Cartridges, 75MM & 105MM, All Types	A									U
14	Artillery Projectile, 155MM, All Types			30,348		30,348				30,348	U

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Appropriation: 2034A Procurement of Ammunition, Army

Line No	Item Nomenclature	Ident Code	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA		FY 2017 Total PB Requests* with CR Adj Base + OCO		FY 2017 Less Enacted Div B P.L.114-254** OCO		FY 2017 Remaining Req with CR Adj Base + OCO		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 01: Ammunition											
Small/Medium Cal Ammunition											
1	Ctg, 5.56mm, All Types	A		40,296		44,296				44,296	U
2	CTG, 7.62mm, All Types	A		48,879		55,879				55,879	U
3	CTG, Handgun, All Types	A		5,193		9,193				9,193	U
4	CTG, .50 Cal, All Types	A		53,300		60,300				60,300	U
5	CTG, 20mm, All Types	A		8,077		36,077				36,077	U
6	CTG, 25mm, All Types	A		36,287		36,287				36,287	U
7	CTG, 30mm, All Types	A		67,000		75,200				75,200	U
8	CTG, 40mm, All Types	A		125,601		125,601				125,601	U
Mortar Ammunition											
9	60MM Mortar, All Types			79,784		79,784				79,784	U
10	81MM Mortar, All Types			38,802		38,802				38,802	U
11	120MM Mortar, All Types	A		69,133		96,433				96,433	U
Tank Ammunition											
12	Cartridges, Tank, 105MM and 120MM, All Types	A		129,667		144,667				144,667	U
Artillery Ammunition											
13	Artillery Cartridges, 75MM & 105MM, All Types	A		64,800		69,290				69,290	U
14	Artillery Projectile, 155MM, All Types			139,863		142,101				142,101	U

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Appropriation: 2034A Procurement of Ammunition, Army

Line No	Item Nomenclature	Ident Code	FY 2018 Base		FY 2018 OCO		FY 2018 Total		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
<u>Budget Activity 01: Ammunition</u>									
Small/Medium Cal Ammunition									
1	Ctg, 5.56mm, All Types	A		39,767				39,767	U
2	CTG, 7.62mm, All Types	A		46,804				46,804	U
3	CTG, Handgun, All Types	A		10,413		5		10,418	U
4	CTG, .50 Cal, All Types	A		62,837		121		62,958	U
5	CTG, 20mm, All Types	A		8,208		1,605		9,813	U
6	CTG, 25mm, All Types	A		8,640				8,640	U
7	CTG, 30mm, All Types	A		76,850		35,000		111,850	U
8	CTG, 40mm, All Types	A		108,189				108,189	U
Mortar Ammunition									
9	60MM Mortar, All Types			57,359				57,359	U
10	81MM Mortar, All Types			49,471				49,471	U
11	120MM Mortar, All Types	A		91,528				91,528	U
Tank Ammunition									
12	Cartridges, Tank, 105MM and 120MM, All Types	A		133,500				133,500	U
Artillery Ammunition									
13	Artillery Cartridges, 75MM & 105MM, All Types	A		44,200				44,200	U
14	Artillery Projectile, 155MM, All Types			187,149				187,149	U

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Appropriation: 2034A Procurement of Ammunition, Army

Line No	Item Nomenclature	Ident Code	FY 2016		FY 2017		FY 2017		S e c	
			Base + OCO	Quantity	Cost	PB Request with CR Adj	Total PB Requests* with CR Adj	Quantity		Cost
15	Proj 155mm Extended Range M982	A			65,518		39,200	1839	174,600	U
16	Artillery Propellants, Fuzes and Primers, All	A			80,024		70,881		122,548	U
Mines										
17	Mines & Clearing Charges, All Types									U
Networked Munitions										
18	Spider Network Munitions, All Types									U
Rockets										
19	Shoulder Launched Munitions, All Types	A			7,500		38,000		38,000	U
20	Rocket, Hydra 70, All Types	A			171,193		87,213		97,213	U
Other Ammunition										
21	CAD/PAD, All Types	A			5,639		4,914		4,914	U
22	Demolition Munitions, All Types	A			13,751		6,380		6,380	U
23	Grenades, All Types	A			19,993		22,760		22,760	U
24	Signals, All Types	A			17,761		10,666		10,666	U
25	Simulators, All Types	A			9,749		7,412		7,412	U
Miscellaneous										
26	Ammo Components, All Types	A			3,521		12,726		12,726	U
27	Non-Lethal Ammunition, All Types	A			1,700		6,100		6,100	U
28	Items Less Than \$5 Million (AMMO)	A			4,945		10,006		10,006	U
29	Ammunition Peculiar Equipment	A			14,249		17,275		17,275	U

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Appropriation: 2034A Procurement of Ammunition, Army

Line No	Item Nomenclature	Ident Code	FY 2017 PB Request with CR Adj OCO		FY 2017 Total PB Requests* with CR Adj OCO		FY 2017 Less Enacted Div B P.L.114-254** OCO		FY 2017 Remaining Req with CR Adj OCO		S e c -
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
15	Proj 155mm Extended Range M982	A		140		140				140	U
16	Artillery Propellants, Fuzes and Primers, All Mines	A		29,655		29,655				29,655	U
17	Mines & Clearing Charges, All Types			16,866		16,866				16,866	U
18	Spider Network Munitions, All Types			10,353		10,353				10,353	U
19	Shoulder Launched Munitions, All Types	A		63,210		63,210				63,210	U
20	Rocket, Hydra 70, All Types	A		42,851		42,851				42,851	U
21	CAD/PAD, All Types	A									U
22	Demolition Munitions, All Types	A		6,373		6,373				6,373	U
23	Grenades, All Types	A		4,143		4,143				4,143	U
24	Signals, All Types	A		1,852		1,852				1,852	U
25	Simulators, All Types	A									U
26	Ammo Components, All Types	A									U
27	Non-Lethal Ammunition, All Types	A		773		773				773	U
28	Items Less Than \$5 Million (AMMO)	A									U
29	Ammunition Peculiar Equipment	A									U

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Appropriation: 2034A Procurement of Ammunition, Army

Line No	Item Nomenclature	Ident Code	FY 2017 Total		FY 2017 Total		FY 2017 Less Enacted		FY 2017 Remaining Req		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
15	Proj 155mm Extended Range M982	A		39,340	1839	174,740			1839	174,740	U
16	Artillery Propellants, Fuzes and Primers, All	A		100,536		152,203				152,203	U
Mines											
17	Mines & Clearing Charges, All Types			16,866		16,866				16,866	U
Networked Munitions											
18	Spider Network Munitions, All Types			10,353		10,353				10,353	U
Rockets											
19	Shoulder Launched Munitions, All Types	A		101,210		101,210				101,210	U
20	Rocket, Hydra 70, All Types	A		130,064		140,064				140,064	U
Other Ammunition											
21	CAD/PAD, All Types	A		4,914		4,914				4,914	U
22	Demolition Munitions, All Types	A		12,753		12,753				12,753	U
23	Grenades, All Types	A		26,903		26,903				26,903	U
24	Signals, All Types	A		12,518		12,518				12,518	U
25	Simulators, All Types	A		7,412		7,412				7,412	U
Miscellaneous											
26	Ammo Components, All Types	A		12,726		12,726				12,726	U
27	Non-Lethal Ammunition, All Types	A		6,873		6,873				6,873	U
28	Items Less Than \$5 Million (AMMO)	A		10,006		10,006				10,006	U
29	Ammunition Peculiar Equipment	A		17,275		17,275				17,275	U

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03 May 2017

Appropriation: 2034A Procurement of Ammunition, Army

Line No	Item Nomenclature	Ident Code	FY 2018 Base		FY 2018 OCO		FY 2018 Total		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
15	Proj 155mm Extended Range M982	A	480	49,000	266	23,234	746	72,234	U
16	Artillery Propellants, Fuzes and Primers, All Mines	A		83,046		20,023		103,069	U
17	Mines & Clearing Charges, All Types			3,942		11,615		15,557	U
18	Spider Network Munitions, All Types								U
19	Shoulder Launched Munitions, All Types	A		5,000		25,000		30,000	U
20	Rocket, Hydra 70, All Types	A		161,155		75,820		236,975	U
21	CAD/PAD, All Types	A		7,441				7,441	U
22	Demolition Munitions, All Types	A		19,345				19,345	U
23	Grenades, All Types	A		22,759				22,759	U
24	Signals, All Types	A		2,583		1,013		3,596	U
25	Simulators, All Types	A		13,084				13,084	U
26	Ammo Components, All Types	A		12,237				12,237	U
27	Non-Lethal Ammunition, All Types	A		1,500				1,500	U
28	Items Less Than \$5 Million (AMMO)	A		10,730				10,730	U
29	Ammunition Peculiar Equipment	A		16,425				16,425	U

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03 May 2017

Appropriation: 2034A Procurement of Ammunition, Army

Line No	Item Nomenclature	Ident Code	FY 2016		FY 2017 PB Request with CR Adj		FY 2017 Total PB Requests* with CR Adj		S e c	
			Base + OCO Quantity	Cost	Base Quantity	Cost	Base Quantity	Cost		
30	First Destination Transportation (AMMO)	A		14,695		14,951		14,951	U	
31	Closed Account Adjustments			5					U	
Total Ammunition				1,092,090		1,129,859		1,434,154		
Budget Activity 02: Ammunition Production Base Support										
Production Base Support										
32	Industrial Facilities			221,703		222,269		404,659	U	
33	Conventional Munitions Demilitarization			148,048		157,383		157,383	U	
34	Arms Initiative			3,575		3,646		3,646	U	
Total Ammunition Production Base Support				373,326		383,298		565,688		
Budget Activity 20: Undistributed										
Undistributed										
35	Adj to Match Continuing Resolution	A				-270,099		-270,099	U	
Total Undistributed						-270,099		-270,099		
Total Procurement of Ammunition, Army				1,465,416		1,243,058		1,729,743		

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Appropriation: 2034A Procurement of Ammunition, Army

Line No	Item Nomenclature	Ident Code	FY 2017 PB Request with CR Adj OCO		FY 2017 Total PB Requests* with CR Adj OCO		FY 2017 Less Enacted Div B P.L.114-254** OCO		FY 2017 Remaining Req with CR Adj OCO		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
30	First Destination Transportation (AMMO)	A									U
31	Closed Account Adjustments										U
Total Ammunition				301,523		301,523				301,523	
Budget Activity 02: Ammunition Production Base Support											
Production Base Support											
32	Industrial Facilities										U
33	Conventional Munitions Demilitarization										U
34	Arms Initiative										U
Total Ammunition Production Base Support											
Budget Activity 20: Undistributed											
Undistributed											
35	Adj to Match Continuing Resolution	A		-79,483		-79,483				-79,483	U
Total Undistributed				-79,483		-79,483				-79,483	
Total Procurement of Ammunition, Army				222,040		222,040				222,040	

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03 May 2017

Appropriation: 2034A Procurement of Ammunition, Army

Line No	Item Nomenclature	Ident Code	FY 2017 Total		FY 2017 Total		FY 2017 Less Enacted		FY 2017 Remaining Req		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
30	First Destination Transportation (AMMO)	A		14,951		14,951				14,951	U
31	Closed Account Adjustments										U
Total Ammunition				1,431,382		1,735,677				1,735,677	
Budget Activity 02: Ammunition Production Base Support											
Production Base Support											
32	Industrial Facilities			222,269		404,659				404,659	U
33	Conventional Munitions Demilitarization			157,383		157,383				157,383	U
34	Arms Initiative			3,646		3,646				3,646	U
Total Ammunition Production Base Support				383,298		565,688				565,688	
Budget Activity 20: Undistributed											
Undistributed											
35	Adj to Match Continuing Resolution	A		-349,582		-349,582				-349,582	U
Total Undistributed				-349,582		-349,582				-349,582	
Total Procurement of Ammunition, Army				1,465,098		1,951,783				1,951,783	

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Department of the Army
 FY 2018 President's Budget Request
 Exhibit P-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

03 May 2017

Appropriation: 2034A Procurement of Ammunition, Army

Line No	Item Nomenclature	Ident Code	FY 2018 Base		FY 2018 OCO		FY 2018 Total		S e c	
			Quantity	Cost	Quantity	Cost	Quantity	Cost		
30	First Destination Transportation (AMMO)	A		15,221				15,221	U	
31	Closed Account Adjustments								U	
Total Ammunition				1,348,383		193,436		1,541,819		
Budget Activity 02: Ammunition Production Base Support										
Production Base Support										
32	Industrial Facilities			329,356				329,356	U	
33	Conventional Munitions Demilitarization			197,825				197,825	U	
34	Arms Initiative			3,719				3,719	U	
Total Ammunition Production Base Support				530,900				530,900		
Budget Activity 20: Undistributed										
Undistributed										
35	Adj to Match Continuing Resolution	A							U	
Total Undistributed										
Total Procurement of Ammunition, Army				1,879,283		193,436		2,072,719		

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Appropriation 2034A: Procurement of Ammunition, Army

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2	01	30	E02000	CTG, 7.62MM, All Types.....	26
3	01	30	EA3000	CTG, Handgun, All Types.....	44
4	01	30	E08000	CTG, .50 Cal, All Types.....	47
5	01	30	E08900	CTG, 20mm, All Types.....	66
6	01	30	E08200	CTG, 25MM, All Types.....	68
7	01	30	ER8120	CTG, 30MM, ALL TYPES.....	70
8	01	30	ER8001	CTG, 40MM, All Types.....	107
9	01	33	E89600	60MM Mortar, All Types.....	129
10	01	33	E76000	81MM Mortar, All Types.....	150
11	01	33	E25500	120MM Mortar, All Types.....	172
12	01	35	E22203	Cartridges, Tank, 105MM And 120MM, All Types.....	186
13	01	37	E15101	Artillery Cartridges, 75MM & 105MM, All Types.....	209
14	01	37	E89500	ARTILLERY PROJECTILE, 155MM, ALL TYPES.....	214
15	01	37	E80100	Proj 155mm Extended Range M982.....	247
16	01	37	E27501	Artillery Propellants, Fuzes and Primers, All.....	256

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Appropriation 2034A: Procurement of Ammunition, Army

Line #	BA	BSA	Line Item Number	Line Item Title	Page
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18	01	44	E95900	Spider Network Munitions, All Types.....	277
19	01	45	EA4000	Shoulder Launched Munitions, All Types.....	279
20	01	45	E37300	Rocket, Hydra 70, All Types.....	297
21	01	47	E61000	CAD/PAD, All Types.....	310
22	01	47	E55400	Demolition Munitions, All Types.....	311
23	01	47	E34000	Grenades, All Types.....	316
24	01	47	E46900	Signals, All Types.....	329
25	01	47	E51200	Simulators, All Types.....	333
26	01	50	EB0016	Ammo Components, All Types.....	335
27	01	50	E91901	Non-Lethal Ammunition, All Types.....	336
28	01	50	EA0055	Items Less Than \$5 Million (AMMO).....	338
29	01	50	EA0575	Ammunition Peculiar Equipment.....	341
30	01	50	EA0550	First Destination Transportation (AMMO).....	343

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Appropriation 2034A: Procurement of Ammunition, Army

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33	02	10	EP1700	Conventional Munitions Demilitarization.....	460
34	02	10	EP2500	ARMS Initiative.....	467

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60MM Mortar, All Types	E89600	9	01	33.....	129
81MM Mortar, All Types	E76000	10	01	33.....	150
ARMS Initiative	EP2500	34	02	10.....	467
ARTILLERY PROJECTILE, 155MM, ALL TYPES	E89500	14	01	37.....	214
Ammo Components, All Types	EB0016	26	01	50.....	335
Ammunition Peculiar Equipment	EA0575	29	01	50.....	341
Artillery Cartridges, 75MM & 105MM, All Types	E15101	13	01	37.....	209
Artillery Propellants, Fuzes and Primers, All	E27501	16	01	37.....	256
CAD/PAD, All Types	E61000	21	01	47.....	310
CTG, .50 Cal, All Types	E08000	4	01	30.....	47
CTG, 20mm, All Types	E08900	5	01	30.....	66
CTG, 25MM, All Types	E08200	6	01	30.....	68
CTG, 30MM, ALL TYPES	ER8120	7	01	30.....	70
CTG, 40MM, All Types	ER8001	8	01	30.....	107
CTG, 5.56MM, All Types	E00700	1	01	30.....	1
CTG, 7.62MM, All Types	E02000	2	01	30.....	26

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Line Item Title	Line Item Number	Line #	BA	BSA	Page
CTG, Handgun, All Types	EA3000	3	01	30.....	44
Cartridges, Tank, 105MM And 120MM, All Types	E22203	12	01	35.....	186
Conventional Munitions Demilitarization	EP1700	33	02	10.....	460
Demolition Munitions, All Types	E55400	22	01	47.....	311
First Destination Transportation (AMMO)	EA0550	30	01	50.....	343
Grenades, All Types	E34000	23	01	47.....	316
Items Less Than \$5 Million (AMMO)	EA0055	28	01	50.....	338
Mines & Clearing Charges, All Types	EA0800	17	01	43.....	276
Non-Lethal Ammunition, All Types	E91901	27	01	50.....	336
Proj 155mm Extended Range M982	E80100	15	01	37.....	247
Provision of Industrial Facilities	EP1000	32	02	10.....	344
Rocket, Hydra 70, All Types	E37300	20	01	45.....	297
Shoulder Launched Munitions, All Types	EA4000	19	01	45.....	279
Signals, All Types	E46900	24	01	47.....	329
Simulators, All Types	E51200	25	01	47.....	333
Spider Network Munitions, All Types	E95900	18	01	44.....	277

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: E034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 30: Small/ Medium Cal Ammunition	P-1 Line Item Number / Title: E00700 / CTG, 5.56MM, All Types
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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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,726.304	43.489	44.296	39.767	-	39.767	40.702	82.166	81.592	62.910	-	2,121.226
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,726.304	43.489	44.296	39.767	-	39.767	40.702	82.166	81.592	62.910	-	2,121.226
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,726.304	43.489	44.296	39.767	-	39.767	40.702	82.166	81.592	62.910	-	2,121.226

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

Description:

This budget line includes 5.56MM ALL TYPES.

(E00901) The M199A1, 5.56mm Dummy Drill & Inert ammunition (DDI) is an inert (no energetic) dummy cartridge used as an ammunition training aid and for weapon familiarization. The M199A1 DDI ammunition is both nickel plated and fluted for easy recognition and to distinguish the dummy ammunition visually from tactical ammunition. This item is Code A, approved for service use.

(E01000) 5.56mm High Pressure Test (HPT) cartridge is used for proofing 5.56mm weapons. The cartridge case is stannic stained (silver). This cartridge is required for testing the 5.56mm family of weapons during manufacturing, test or repair, as well as testing replacement parts. This item is Code A, approved for service use.

(E01100) 5.56mm, M200 Blank Cartridge consists of a brass cartridge case with primer and propellant sealed with a rosette crimp. This cartridge is used for training and ceremonial purposes without blank firing attachment (BFA) and in M16A2/A4 Series Rifles and M4 Carbine fitted with BFA. This item is Code A, approved for service use.

(E01101) 5.56mm Blank M200 Linked cartridge consists of a brass cartridge case with primer and propellant sealed with a rosette crimp. This cartridge is used in the M249 Squad Automatic Weapon (SAW) Machine Gun and it is designed to simulate firing during training exercises. The M27 metallic link is merely a scaled-down version of the highly successful 7.62mm M13 one-piece link. This item is Code A, approved for service use.

(E04607) 5.56mm M855A1 Ball Cartridges and M856A1 Tracer Cartridges are linked in a 4-Ball/1-Tracer configuration with the M27 link for use in the M249 Machine Gun. The M855A1 Ball Cartridge has a steel penetrator and non-lead slug surrounded by a copper jacket. The M856A1 Tracer Cartridge is lead free and provides a visible red light signature through its trajectory. The M856A1 Tracer Cartridge provides visible signature of fire out to 900 meters. This item is Code A, approved for service use.

(E04608) 5.56mm M856A1 Tracer Bullet is lead free and provides a visible red light signature through its trajectory. The bullet is used in M16 and M4 Rifles/Carbines. This item is Code A, approved for service use.

(E95400) 5.56mm, M855A1 Ball Cartridge has a bullet with a conical steel insert and a non-lead slug in a copper alloy jacket. The cartridge is used in M16A2/A4 Rifles and M4/M4A1 Carbines. This cartridge is packed in bandoleer's in standard military can pack. This item is Code A, approved for service use.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 30: Small/ Medium Cal Ammunition		P-1 Line Item Number / Title: E00700 / CTG, 5.56MM, All Types
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		

(E95700) 5.56mm, M855A1 Ball Cartridge has a bullet with a conical steel insert and a non-lead slug in a copper alloy jacket. The cartridge is used in M16A2/A4 Rifles and M4/M4A1 Carbines. This cartridge is packed without bandoleer in standard military can pack. This item is Code A, approved for service use.

(E96120) 5.56mm, Marking Blue, M1071 is used for force-on-force training engagements. The cartridge can be fired with the existing M249 Squad Automatic Weapon with the use of the conversion kit. The projectile leaves a mark upon impact (similar to paintball), thus enabling after action evaluation of training scenarios. However, it differs from paintball in that it is a full complete cartridge with projectile and cartridge case containing a propulsion system for a low velocity launch. This item is Code A, approved for service use.

(E96121) 5.56mm, Marking Red, M1071 is used for force-on-force training engagements. The cartridge can be fired with the existing M249 Squad Automatic Weapon with the use of the conversion kit. The projectile leaves a mark upon impact (similar to paintball), thus enabling after action evaluation of training scenarios. However, it differs from paintball in that it is a full complete cartridge with projectile and cartridge case containing a propulsion system for a low velocity launch. This item is Code A, approved for service use.

(E96125) 5.56mm Short Range Training M1037 clipped cartridge will be used in live fire training scenarios. The M1037 clipped cartridge permits training in adjacent training areas due to its reduced Surface Danger Zone (SDZ) and can be fired with existing M4 weapons. This cartridge is used for Military Operations/Urban Terrain (MOUT) operational training. This item is Code A, approved for service use.

(E96126) 5.56mm Short Range Training Ammunition (SRTA) M1037 linked cartridge will be used in live fire training scenarios. The M1037 Linked cartridge permits training in adjacent training areas due to its reduced Surface Danger Zone (SDZ) and can be fired with the existing M249 family of weapons. This item is Code A, approved for service use.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date: May 2017**

Appropriation / Budget Activity / Budget Sub Activity:
2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 30: Small/
Medium Cal Ammunition **P-1 Line Item Number / Title:**
E00700 / CTG, 5.56MM, All Types

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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 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	E00901 / CTG, 5.56MM SINGLE ROUND, (DDI), M199A1 [AB46]		A		- / 0.295	- / -	- / -	201,730 / 0.229	- / -	201,730 / 0.229
P-5	E01000 / CTG 5.56MM TEST HIGH PRESSURE, M197 SERIES [A070]		A		1,649,904 / 1.732	- / -	524,034 / 0.390	- / -	- / -	- / -
P-5	E01100 / CTG 5.56MM BLANK M200 [A080]		A		2,749,717K / 523.319	32,910,951 / 4.632	27,080,447 / 4.500	19,564,800 / 3.300	- / -	19,564,800 / 3.300
P-5	E01101 / CTG 5.56MM BLANK M200 LINKED F/SAW [A075]		A		888,426K / 204.338	11,905,012 / 2.467	10,105,323 / 2.387	10,336,868 / 2.435	- / -	10,336,868 / 2.435
P-5	E04607 / CTG, 5.56MM 4 BALL M855A1 EPR /1 TR M856A1 LINKED [AB73]	P-5a	A		138,735K / 43.675	17,554,606 / 6.508	15,802,591 / 6.300	15,936,213 / 6.400	- / -	15,936,213 / 6.400
P-5	E04608 / CTG, 5.56MM TRACER M856A1 SINGLE ROUND [AB74]		A		22,191,379 / 8.922	2,243,934 / 0.860	- / -	- / -	- / -	- / -
P-5	E95400 / CTG 5.56MM, BALL M855A1 EPR, CLIPPED MIL PACK [AB57]	P-5a	A		1,742,916K / 797.166	14,355,217 / 10.258	16,813,320 / 6.400	18,181,170 / 6.500	- / -	18,181,170 / 6.500
P-5	E95700 / CTG, 5.56MM, BALL M855A1, CLIPPED BULK PACK [AB77]	P-5a, P-21	A		73,007,435 / 107.189	55,220,582 / 15.801	73,017,050 / 22.119	59,310,613 / 18.508	- / -	59,310,613 / 18.508
P-5	E96120 / CTG, 5.56MM MARKING LINKED, M1071 (BLUE) F/SAW [AB16]		A		2,541,168 / 3.494	13,704 / 0.042	440,477 / 0.350	347,718 / 0.263	- / -	347,718 / 0.263
P-5	E96121 / CTG, 5.56MM MARKING LINKED, M1071 (RED) F/SAW [AB17]		A		3,854,747 / 3.208	245,902 / 0.300	188,776 / 0.150	200,301 / 0.150	- / -	200,301 / 0.150
P-5	E96125 / Ctg, 5.56mm, Short Range Training, M1037, sngl rd [AB67]		A		90,310 / 0.148	1,143,696 / 1.466	502,902 / 0.700	991,433 / 1.400	- / -	991,433 / 1.400
P-5	E96126 / Ctg, 5.56mm, Short Range Training, M1037 Linked [AB66]		A		1,018,438 / 4.695	852,525 / 1.155	771,428 / 1.000	437,995 / 0.582	- / -	437,995 / 0.582
P-40	Total Gross/Weapon System Cost				- / 1,726.304	- / 43.489	- / 44.296	- / 39.767	- / -	- / 39.767

*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 2018 Base Budget supports critical Army Title 10 war reserve/operational, training, and test requirements IAW DoD Instruction 3000.04 (Munitions Requirements Process) and AR 5-13 (Total Army Munitions Requirements Process and Prioritization System). War reserve requirements support OSD-approved Combatant Commander Operational Plans, Homeland Defense, and other OSD-directed missions. Training requirements support individual and collective training of Active and Reserve Component forces at Army schools, home station, and the combined training centers. Test requirements support the development, fielding, safety, and quality assurance of Army munitions and equipment throughout their life-cycle.

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.

The FY 2018 Base procurement dollars in the amount of \$39.767 million supports procurement of 125.508 million cartridges

(E00901) 5.56mm, Single Cartridge (DDI), M199A1 is a training unique item not used in combat. FY 2018 procurement supports annual training and builds a depot level in accordance with Army's procurement goals. FY 2018 Base Procurement dollars in the amount of \$0.229 million supports the procurement of 0.202 million M199A1 cartridges. E00901 is a new start in FY 2018.
Type Classification date: 2008

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 30: Small/ Medium Cal Ammunition		P-1 Line Item Number / Title: E00700 / CTG, 5.56MM, All Types
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>(E01000) 5.56MM M197A1 High Pressure Test (HPT) cartridge is a testing cartridge used exclusively for acceptance testing of 5.56mm weapons. The procurement supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. Type classification date: 1975</p> <p>(E01100) 5.56mm, M200 Blank Cartridge is a training unique item not used in combat. The FY 2018 request supports annual training and builds a depot level in accordance with the Army's procurement goals. FY 2018 Base Procurement dollars in the amount of \$3.300 million supports the procurement of 19.564 million of the M200 Blank Cartridges. Type classification date: prior to 1977</p> <p>(E01101) 5.56mm, M200 Blank Linked F/SAW is a training unique item not used in combat. The FY 2018 request supports annual training and builds a depot level in accordance with the Army's procurement goals. FY 2018 Base Procurement dollars in the amount of \$2.435 million supports the procurement of 10.337 million of the M200 Blank Linked Cartridges. Type classification date: prior to 1977</p> <p>(E04607) 5.56mm M855A1 Ball and M856A1 Tracer Cartridges are training standard items used in both training and combat. The FY 2018 request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. FY 2018 Base Procurement dollars in the amount of \$6.400 million supports the procurement of 15.936 million of the CTG 5.56MM M855A1 Ball and M856A1 Tracer Cartridges. Type classification date: 1982</p> <p>(E04608) 5.56mm M856A1 Tracer Bullet is lead free and is a training standard item used in training and combat. The procurement supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. Type classification date: 1982</p> <p>(E95400) 5.56mm, M855A1 Ball Cartridge is a training standard item used in training and combat. The FY 2018 request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. FY 2018 Base Procurement dollars in the amount of \$6.500 million supports the procurement of 18.181 million of the CTG 5.56MM M855A1 Ball Cartridges. Type classification date: 1982</p> <p>(E95700) 5.56mm, M855A1 Ball Cartridge is a training standard item used in training and combat. The FY 2018 request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. FY 2018 Base Procurement dollars in the amount of \$18.508 million supports the procurement of 59.311 million of the M855A1 Ball Cartridges. Type classification date: 1982</p> <p>(E96120) 5.56mm, Marking Blue, M1071 are training unique items not used in combat. The FY 2018 request supports annual training and builds a depot level in accordance with the Army's procurement goals. FY 2018 Base Procurement dollars in the amount of \$0.263 million supports the procurement of .348 million of the Marking Blue M1071 Cartridges. Type classification date: May 2009</p> <p>(E96121) 5.56mm, Marking Red, M1071 are training unique items not used in combat. The FY 2018 request supports annual training and builds a depot level in accordance with the Army's procurement goals. FY 2018 Base Procurement dollars in the amount of \$0.150 million supports the procurement of .200 million of the Marking Red M1071 Cartridges. Type classification date: May 2009</p> <p>(E96125) 5.56mm Short Range Training Ammunition (SRTA) M1037 clipped cartridges are training unique items not used in combat. The FY 2018 request supports annual training and builds a depot level in accordance with the Army's procurement goals. FY 2018 Base Procurement dollars in the amount of \$1.400 million supports the procurement of .991 million of the SRTA M1037 Cartridges. Type classification date: July 2012</p>		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 30: Small/ Medium Cal Ammunition		P-1 Line Item Number / Title: E00700 / CTG, 5.56MM, All Types
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>(E96126) 5.56mm Short Range Training Ammunition (SRTA) M1037 linked cartridges are training unique items not used in combat. The FY 2018 request supports annual training and builds a depot level in accordance with the Army's procurement goals. FY 2018 Base Procurement dollars in the amount of \$0.582 million supports the procurement of .438 million of the SRTA M1037 Cartridges. Type classification date: July 2012</p>		

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: E00700 / CTG, 5.56MM, All Types	Item Number / Title [DODIC]: E00901 / CTG, 5.56MM SINGLE ROUND, (DDI), M199A1 [AB46]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	-	-	201,730	-	201,730
Gross/Weapon System Cost (\$ in Millions)	0.295	-	-	0.229	-	0.229
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.295	-	-	0.229	-	0.229
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.295	-	-	0.229	-	0.229

(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 Dollars)	-	-	-	1.14	-	1.14

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
Load, Assemble, Pack (Lap)	0.39	756,410	0.295	-	-	-	-	-	-	1.05	201,730	0.212	-	-	-	1.05	201,730	0.212
BOX METAL M2A2	-	-	-	-	-	-	-	-	-	13.67	246	0.003	-	-	-	13.67	246	0.003
<i>Subtotal: Recurring Cost</i>	-	-	0.295	-	-	-	-	-	-	-	-	0.215	-	-	-	-	-	0.215
<i>Subtotal: Hardware Cost</i>	-	-	0.295	-	-	-	-	-	-	-	-	0.215	-	-	-	-	-	0.215
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	-	-	-	-	-	-	0.014	-	-	-	-	-	0.014
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.014	-	-	-	-	-	0.014
Gross/Weapon System Cost	-	-	0.295	-	-	-	-	-	-	1.14	201,730	0.229	-	-	-	1.14	201,730	0.229

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: E00700 / CTG, 5.56MM, All Types	Item Number / Title [DODIC]: E01000 / CTG 5.56MM TEST HIGH PRESSURE, M197 SERIES [A070]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (<i>Units in Each</i>)	1,649,904	-	524,034	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1.732	-	0.390	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1.732	-	0.390	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1.732	-	0.390	-	-	-
<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 Dollars</i>)	1.05	-	0.74	-	-	-

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP)	0.64	1,649,904	1.056	-	-	-	0.69	524,034	0.362	-	-	-	-	-	-	-	-	-
BOX METAL M2A2	-	-	-	-	-	-	13.07	645	0.008	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	<i>1.056</i>	-	-	-	-	-	<i>0.370</i>	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware Cost</i>	-	-	<i>1.056</i>	-	-	-	-	-	<i>0.370</i>	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	0.676	-	-	-	-	-	0.020	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	<i>0.676</i>	-	-	-	-	-	<i>0.020</i>	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	1.05	1,649,904	1.732	-	-	-	0.74	524,034	0.390	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: E00700 / CTG, 5.56MM, All Types	Item Number / Title [DODIC]: E01100 / CTG 5.56MM BLANK M200 [A080]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (<i>Units in Each</i>)	2,749,717K	32,910,951	27,080,447	19,564,800	-	19,564,800
Gross/Weapon System Cost (<i>\$ in Millions</i>)	523.319	4.632	4.500	3.300	-	3.300
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	523.319	4.632	4.500	3.300	-	3.300
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	523.319	4.632	4.500	3.300	-	3.300

(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 Dollars</i>)	0.19	0.14	0.17	0.17	-	0.17

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP)	0.19	2,749,717K	522.446	0.11	32,910,951	3.620	0.13	27,080,447	3.520	0.13	19,564,800	2.543	-	-	-	0.13	19,564,800	2.543
BOX METAL M2A2	10.87	72,218	0.785	10.93	29,291	0.320	13.06	24,101	0.315	13.67	17,217	0.235	-	-	-	13.67	17,217	0.235
<i>Subtotal: Recurring Cost</i>	-	-	523.231	-	-	3.940	-	-	3.835	-	-	2.779	-	-	-	-	-	2.779
<i>Subtotal: Hardware Cost</i>	-	-	523.231	-	-	3.940	-	-	3.835	-	-	2.779	-	-	-	-	-	2.779
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	0.080	-	-	-	-	-	0.020	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	0.080	-	-	-	-	-	0.020	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	0.692	-	-	0.639	-	-	0.516	-	-	-	-	-	0.516
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	0.692	-	-	0.639	-	-	0.516	-	-	-	-	-	0.516
Support - Quality Assurance Cost																		
Quality Assurance	-	-	0.008	-	-	-	-	-	0.006	-	-	0.005	-	-	-	-	-	0.005
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	0.008	-	-	-	-	-	0.006	-	-	0.005	-	-	-	-	-	0.005
Gross/Weapon System Cost	0.19	2,749,717K	523.319	0.14	32,910,951	4.632	0.17	27,080,447	4.500	0.17	19,564,800	3.300	-	-	-	0.17	19,564,800	3.300

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: E00700 / CTG, 5.56MM, All Types	Item Number / Title [DODIC]: E01101 / CTG 5.56MM BLANK M200 LINKED F/SAW [A075]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	888,426K	11,905,012	10,105,323	10,336,868	-	10,336,868
Gross/Weapon System Cost (\$ in Millions)	204.338	2.467	2.387	2.435	-	2.435
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	204.338	2.467	2.387	2.435	-	2.435
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	204.338	2.467	2.387	2.435	-	2.435

(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 Dollars)	0.23	0.21	0.24	0.24	-	0.24

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND	0.23	888,426K	204.338	0.18	11,905,012	2.143	0.21	10,105,323	2.122	0.21	10,336,868	2.171	-	-	-	0.21	10,336,868	2.171
Subtotal: Recurring Cost	-	-	204.338	-	-	2.143	-	-	2.122	-	-	2.171	-	-	-	-	-	2.171
Subtotal: Hardware Cost	-	-	204.338	-	-	2.143	-	-	2.122	-	-	2.171	-	-	-	-	-	2.171
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	0.038	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Support - Acceptance Testing Cost	-	-	-	-	-	0.038	-	-	-	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	0.285	-	-	0.224	-	-	0.261	-	-	-	-	-	0.261
Subtotal: Support - Production Engineering Cost	-	-	-	-	-	0.285	-	-	0.224	-	-	0.261	-	-	-	-	-	0.261
Support - Quality Assurance Cost																		
Quality Assurance	-	-	-	-	-	0.002	-	-	0.003	-	-	0.003	-	-	-	-	-	0.003
Subtotal: Support - Quality Assurance Cost	-	-	-	-	-	0.002	-	-	0.003	-	-	0.003	-	-	-	-	-	0.003
Gross/Weapon System Cost	0.23	888,426K	204.338	0.21	11,905,012	2.467	0.24	10,105,323	2.387	0.24	10,336,868	2.435	-	-	-	0.24	10,336,868	2.435

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: E00700 / CTG, 5.56MM, All Types	Item Number / Title [DODIC]: E04607 / CTG, 5.56MM 4 BALL M855A1 EPR /1 TR M856A1 LINKED [AB73]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	138,735K	17,554,606	15,802,591	15,936,213	-	15,936,213
Gross/Weapon System Cost (\$ in Millions)	43.675	6.508	6.300	6.400	-	6.400
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	43.675	6.508	6.300	6.400	-	6.400
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	43.675	6.508	6.300	6.400	-	6.400

(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 Dollars)	0.31	0.37	0.40	0.40	-	0.40

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND ^(†)	0.31	138,735K	43.665	0.32	17,554,606	5.617	0.37	15,802,591	5.847	0.36	15,936,213	5.737	-	-	-	0.36	15,936,213	5.737
Subtotal: Recurring Cost	-	-	43.008	-	-	5.617	-	-	5.847	-	-	5.737	-	-	-	-	-	5.737
Subtotal: Hardware Cost	-	-	43.008	-	-	5.617	-	-	5.847	-	-	5.737	-	-	-	-	-	5.737
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	0.019	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Support - Acceptance Testing Cost	-	-	-	-	-	0.019	-	-	-	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	0.657	-	-	0.863	-	-	0.444	-	-	0.657	-	-	-	-	-	0.657
Subtotal: Support - Production Engineering Cost	-	-	0.657	-	-	0.863	-	-	0.444	-	-	0.657	-	-	-	-	-	0.657
Support - Quality Assurance Cost																		
Quality Assurance	-	-	0.010	-	-	0.009	-	-	0.009	-	-	0.006	-	-	-	-	-	0.006
Subtotal: Support - Quality Assurance Cost	-	-	0.010	-	-	0.009	-	-	0.009	-	-	0.006	-	-	-	-	-	0.006
Gross/Weapon System Cost	0.31	138,735K	43.675	0.37	17,554,606	6.508	0.40	15,802,591	6.300	0.40	15,936,213	6.400	-	-	-	0.40	15,936,213	6.400

(†) indicates the presence of a P-5a

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30			P-1 Line Item Number / Title: E00700 / CTG, 5.56MM, All Types				Item Number / Title [DODIC]: E04607 / CTG, 5.56MM 4 BALL M855A1 EPR /1 TR M856A1 LINKED [AB73]					

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>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
COMPLETE ROUND		2016	ALLIANT TECHSYSTEMS (LCAAP) / INDEPENDENCE, MO	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2016	Jul 2017	17,554,606	0.32	Y		
COMPLETE ROUND		2017	ALLIANT TECHSYSTEMS (LCAAP) / INDEPENDENCE, MO	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2017	Oct 2017	15,802,591	0.37	Y		
COMPLETE ROUND		2018	ALLIANT TECHSYSTEMS (LCAAP) / INDEPENDENCE, MO	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2018	Oct 2018	15,936,213	0.36	Y		

Remarks:
FY 2016, FY 2017 AND FY 2018 COMPLETE ROUND IS A DELIVERY ORDER TO THE EXISTING CONTRACT.

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: E00700 / CTG, 5.56MM, All Types	Item Number / Title [DODIC]: E04608 / CTG, 5.56MM TRACER M856A1 SINGLE ROUND [AB74]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (<i>Units in Each</i>)	22,191,379	2,243,934	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	8.922	0.860	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	8.922	0.860	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	8.922	0.860	-	-	-	-

(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 Dollars</i>)	0.40	0.38	-	-	-	-

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
Load, Assemble, Pack (Lap)	0.39	22,191,379	8.655	0.34	2,243,934	0.763	-	-	-	-	-	-	-	-	-	-	-	-
BOX METAL M2A2	-	-	-	10.93	2,760	0.030	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	<i>8.655</i>	-	-	<i>0.793</i>	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware Cost</i>	-	-	<i>8.655</i>	-	-	<i>0.793</i>	-	-	-	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	0.267	-	-	0.067	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	<i>0.267</i>	-	-	<i>0.067</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	0.40	22,191,379	8.922	0.38	2,243,934	0.860	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30		P-1 Line Item Number / Title: E00700 / CTG, 5.56MM, All Types
		Item Number / Title [DODIC]: E95400 / CTG 5.56MM, BALL M855A1 EPR, CLIPPED MIL PACK [AB57]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	1,742,916K	14,355,217	16,813,320	18,181,170	-	18,181,170
Gross/Weapon System Cost (\$ in Millions)	797.166	10.258	6.400	6.500	-	6.500
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	797.166	10.258	6.400	6.500	-	6.500
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	797.166	10.258	6.400	6.500	-	6.500

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

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	0.46	0.71	0.38	0.36	-	0.36

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP) ^(†)	0.45	1,742,916K	784.312	0.47	14,355,217	6.747	0.30	16,813,320	5.044	0.30	18,181,170	5.454	-	-	-	0.30	18,181,170	5.454
BOX METAL M2A2 ^(†)	10.87	53,402	0.580	-	-	-	13.07	20,770	0.271	13.67	21,635	0.296	-	-	-	13.67	21,635	0.296
<i>Subtotal: Recurring Cost</i>	-	-	784.893	-	-	6.747	-	-	5.315	-	-	5.750	-	-	-	-	-	5.750
<i>Subtotal: Hardware Cost</i>	-	-	784.893	-	-	6.747	-	-	5.315	-	-	5.750	-	-	-	-	-	5.750
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	-	-	-	-	-	-	0.118	-	-	-	-	-	0.118
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.118	-	-	-	-	-	0.118
Support - Product Improvement Cost																		
Environmental Initiatives	-	-	-	-	-	2.420	-	-	0.505	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Product Improvement Cost</i>	-	-	-	-	-	2.420	-	-	0.505	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	12.260	-	-	1.088	-	-	0.576	-	-	0.629	-	-	-	-	-	0.629
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	12.260	-	-	1.088	-	-	0.576	-	-	0.629	-	-	-	-	-	0.629
Support - Quality Assurance Cost																		
Quality Assurance	-	-	0.013	-	-	0.003	-	-	0.003	-	-	0.003	-	-	-	-	-	0.003

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: E00700 / CTG, 5.56MM, All Types	Item Number / Title [DODIC]: E95400 / CTG 5.56MM, BALL M855A1 EPR, CLIPPED MIL PACK [AB57]
ID Code (A=Service Ready, B=Not Service Ready) : A		MDAP/MAIS Code:

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	0.013	-	-	0.003	-	-	0.003	-	-	0.003	-	-	-	-	-	0.003
Gross/Weapon System Cost	0.46	1,742,916K	797.166	0.71	14,355,217	10.258	0.38	16,813,320	6.400	0.36	18,181,170	6.500	-	-	-	0.36	18,181,170	6.500

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

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30			P-1 Line Item Number / Title: E00700 / CTG, 5.56MM, All Types				Item Number / Title [DODIC]: E95400 / CTG 5.56MM, BALL M855A1 EPR, CLIPPED MIL PACK [AB57]					

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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
LOAD, ASSEMBLE, PACK (LAP)		2016	OLIN CORP WINCHESTER DIVISION / EAST ALTON, IL	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2016	Feb 2017	14,355,217	0.47	Y		
LOAD, ASSEMBLE, PACK (LAP)		2017	OLIN CORP WINCHESTER DIVISION / EAST ALTON, IL	C / FFP	ROCK ISLAND ARSENAL< IL	Mar 2017	Oct 2017	15,131,988	0.30	Y		
LOAD, ASSEMBLE, PACK (LAP)		2017	ALLIANT TECHSYSTEMS (LCAAP) / INDEPENDENCE, MO	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2017	Oct 2017	1,681,332	0.30	Y		
LOAD, ASSEMBLE, PACK (LAP)		2018	OLIN CORP WINCHESTER DIVISION / EAST ALTON, IL	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2018	Oct 2018	1,818,117	0.30	Y		
LOAD, ASSEMBLE, PACK (LAP)		2018	ALLIANT TECHSYSTEMS (LCAAP) / INDEPENDENCE, MO	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2018	Oct 2018	16,363,053	0.30	Y		
BOX METAL M2A2		2017	BWAY CORPORATION / ATLANTA, GA	C / FFP	ROCK ISLAND ARSENAL, IL	May 2017	Jul 2017	20,770	13.07	Y		
BOX METAL M2A2		2018	BWAY CORPORATION / ATLANTA, GA	C / FFP	ROCK ISLAND ARSENAL, IL	May 2018	Jul 2018	21,635	13.67	Y		

Remarks:
FY 2016, FY 2017 AND FY 2018 LAP IS A DELIVERY ORDER TO AN EXISTING CONTRACT. FY 2017 AND FY 2018 LAP IS AN AVERAGE UNIT COST BETWEEN TWO CONTRACTORS.

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30		P-1 Line Item Number / Title: E00700 / CTG, 5.56MM, All Types
		Item Number / Title [DODIC]: E95700 / CTG, 5.56MM, BALL M855A1, CLIPPED BULK PACK [AB77]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	73,007,435	55,220,582	73,017,050	59,310,613	-	59,310,613
Gross/Weapon System Cost (\$ in Millions)	107.189	15.801	22.119	18.508	-	18.508
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	107.189	15.801	22.119	18.508	-	18.508
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	107.189	15.801	22.119	18.508	-	18.508

(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 Dollars)	1.47	0.29	0.30	0.31	-	0.31

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP) ^(†)	0.28	73,007,435	20.442	0.23	55,220,582	12.701	0.27	73,017,050	19.715	0.27	59,310,613	16.014	-	-	-	0.27	59,310,613	16.014
BOX METAL M2A2 ^(†)	10.87	6,676	0.073	10.93	61,847	0.676	13.07	81,779	1.069	13.67	65,845	0.900	-	-	-	13.67	65,845	0.900
<i>Subtotal: Recurring Cost</i>	-	-	20.515	-	-	13.377	-	-	20.783	-	-	16.914	-	-	-	-	-	16.914
<i>Subtotal: Hardware Cost</i>	-	-	20.515	-	-	13.377	-	-	20.783	-	-	16.914	-	-	-	-	-	16.914
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	0.068	-	-	-	-	-	0.089	-	-	-	-	-	0.089
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	-	-	-	0.068	-	-	-	-	-	0.089	-	-	-	-	-	0.089
Support - Production Engineering Cost																		
Production Engineering	-	-	86.674	-	-	2.350	-	-	1.332	-	-	1.502	-	-	-	-	-	1.502
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	86.674	-	-	2.350	-	-	1.332	-	-	1.502	-	-	-	-	-	1.502
Support - Quality Assurance Cost																		
Quality Assurance	-	-	-	-	-	0.006	-	-	0.003	-	-	0.003	-	-	-	-	-	0.003
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	-	-	-	0.006	-	-	0.003	-	-	0.003	-	-	-	-	-	0.003
Gross/Weapon System Cost	1.47	73,007,435	107.189	0.29	55,220,582	15.801	0.30	73,017,050	22.119	0.31	59,310,613	18.508	-	-	-	0.31	59,310,613	18.508

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: E00700 / CTG, 5.56MM, All Types	Item Number / Title [DODIC]: E95700 / CTG, 5.56MM, BALL M855A1, CLIPPED BULK PACK [AB77]
ID Code (A=Service Ready, B=Not Service Ready) : A		MDAP/MAIS Code:
^(†) indicates the presence of a P-5a		

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30			P-1 Line Item Number / Title: E00700 / CTG, 5.56MM, All Types				Item Number / Title [DODIC]: E95700 / CTG, 5.56MM, BALL M855A1, CLIPPED BULK PACK [AB77]					

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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
LOAD, ASSEMBLE, PACK (LAP) ^(†)		2016	ALLIANT TECHSYSTEMS (LCAAP) / INDEPENDENCE, MO	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2016	Oct 2016	55,220,582	0.23	Y		
LOAD, ASSEMBLE, PACK (LAP) ^(†)		2017	ALLIANT TECHSYSTEMS (LCAAP) / INDEPENDENCE, MO	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2017	Oct 2017	73,017,050	0.27	Y		
LOAD, ASSEMBLE, PACK (LAP) ^(†)		2018	ALLIANT TECHSYSTEMS (LCAAP) / INDEPENDENCE, MO	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2018	Oct 2018	59,310,613	0.27	Y		
BOX METAL M2A2		2016	BWAY CORPORATION / ATLANTA, GA	C / FFP	ROCK ISLAND ARSENAL, IL	Jul 2016	Sep 2016	61,847	10.93	Y		
BOX METAL M2A2		2017	BWAY CORPORATION / ATLANTA, GA	C / FFP	ROCK ISLAND ARSENAL, IL	May 2017	Jul 2017	81,779	13.07	Y		
BOX METAL M2A2		2018	BWAY CORPORATION / ATLANTA, GA	C / FFP	ROCK ISLAND ARSENAL, IL	May 2018	Jul 2018	65,845	13.67	Y		

^(†) indicates the presence of a P-21

Remarks:
FY 2016, FY 2017 AND FY 2018 LAP IS A DELIVERY ORDER TO THE EXISTING CONTRACTS.

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Exhibit P-21, Production Schedule: FY 2018 Army												Date: May 2017											
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30						P-1 Line Item Number / Title: E00700 / CTG, 5.56MM, All Types						Item Number / Title [DODIC]: E95700 / CTG, 5.56MM, BALL M855A1, CLIPPED BULK PACK [AB77]											

Cost Elements <i>(Units in Millions, * = < 500)</i>		Fiscal Year 2016												Fiscal Year 2017												B A L A N C E					
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016												Calendar Year 2017												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R		M A Y	J U N	J U L	A U G	S E P
LOAD, ASSEMBLE, PACK (LAP)																															
Prior Years Deliveries: 73007435																															
	1	2016	ARMY	55.221	.000	55.221																								.000	
	1	2017	ARMY	73.017	.000	73.017																								73.017	
	1	2018	ARMY	59.311	.000	59.311																								59.311	
							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	

UNCLASSIFIED

Exhibit P-21, Production Schedule: FY 2018 Army															Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30										P-1 Line Item Number / Title: E00700 / CTG, 5.56MM, All Types										Item Number / Title [DODIC]: E95700 / CTG, 5.56MM, BALL M855A1, CLIPPED BULK PACK [AB77]									

Cost Elements <i>(Units in Millions, * = < 500)</i>						Fiscal Year 2018														Fiscal Year 2019														BALANCE					
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018														Calendar Year 2019																		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P									
LOAD, ASSEMBLE, PACK (LAP)																																							
Prior Years Deliveries: 73007435																																							
	1	2016	ARMY	55.221	55.221	.000																																.000	
	1	2017	ARMY	73.017	.000	73.017	6.085	6.085	6.085	6.085	6.085	6.085	6.085	6.085	6.085	6.085	6.085																						.000
	1	2018	ARMY	59.311	.000	59.311																																	.000
							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: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30		P-1 Line Item Number / Title: E00700 / CTG, 5.56MM, All Types
Item Number / Title [DODIC]: E95700 / CTG, 5.56MM, BALL M855A1, CLIPPED BULK PACK [AB77]		

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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	ALLIANT TECHSYSTEMS (LCAAP) - INDEPENDENCE, MO	900	19,400,000	67,500,000	6	6	12	18	6	6	7	13

"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: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: E00700 / CTG, 5.56MM, All Types	Item Number / Title [DODIC]: E96120 / CTG, 5.56MM MARKING LINKED, M1071 (BLUE) F/SAW [AB16]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity <i>(Units in Each)</i>	2,541,168	13,704	440,477	347,718	-	347,718
Gross/Weapon System Cost <i>(\$ in Millions)</i>	3.494	0.042	0.350	0.263	-	0.263
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	3.494	0.042	0.350	0.263	-	0.263
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	3.494	0.042	0.350	0.263	-	0.263

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

Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-
Gross/Weapon System Unit Cost <i>(\$ in Dollars)</i>	1.37	3.06	0.79	0.76	-	0.76

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
Complete Round	0.81	2,514,400	2.037	0.68	13,704	0.009	0.75	440,477	0.330	0.70	347,718	0.243	-	-	-	0.70	347,718	0.243
<i>Subtotal: Recurring Cost</i>	-	-	2.037	-	-	0.009	-	-	0.330	-	-	0.243	-	-	-	-	-	0.243
<i>Subtotal: Hardware Cost</i>	-	-	2.037	-	-	0.009	-	-	0.330	-	-	0.243	-	-	-	-	-	0.243
Support - Acceptance Testing Cost																		
First Article Test	-	-	-	-	-	0.010	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	-	-	-	0.010	-	-	-	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	1.457	-	-	0.022	-	-	0.020	-	-	0.017	-	-	-	-	-	0.017
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	1.457	-	-	0.022	-	-	0.020	-	-	0.017	-	-	-	-	-	0.017
Gross/Weapon System Cost	1.37	2,541,168	3.494	3.06	13,704	0.042	0.79	440,477	0.350	0.76	347,718	0.263	-	-	-	0.76	347,718	0.263

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: E00700 / CTG, 5.56MM, All Types	Item Number / Title [DODIC]: E96121 / CTG, 5.56MM MARKING LINKED, M1071 (RED) F/SAW [AB17]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity <i>(Units in Each)</i>	3,854,747	245,902	188,776	200,301	-	200,301
Gross/Weapon System Cost <i>(\$ in Millions)</i>	3.208	0.300	0.150	0.150	-	0.150
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	3.208	0.300	0.150	0.150	-	0.150
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	3.208	0.300	0.150	0.150	-	0.150

(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 Dollars)</i>	0.83	1.22	0.79	0.75	-	0.75

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
Complete Round	0.80	3,635,406	2,908	0.68	245,902	0.167	0.75	188,776	0.142	0.70	200,301	0.140	-	-	-	0.70	200,301	0.140
<i>Subtotal: Recurring Cost</i>	-	-	2,908	-	-	0.167	-	-	0.142	-	-	0.140	-	-	-	-	-	0.140
<i>Subtotal: Hardware Cost</i>	-	-	2,908	-	-	0.167	-	-	0.142	-	-	0.140	-	-	-	-	-	0.140
Support - Product Improvement Cost																		
Reliability	-	-	-	-	-	0.115	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Product Improvement Cost</i>	-	-	-	-	-	0.115	-	-	-	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	0.300	-	-	0.017	-	-	0.008	-	-	0.010	-	-	-	-	-	0.010
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	0.300	-	-	0.017	-	-	0.008	-	-	0.010	-	-	-	-	-	0.010
Gross/Weapon System Cost	0.83	3,854,747	3.208	1.22	245,902	0.300	0.79	188,776	0.150	0.75	200,301	0.150	-	-	-	0.75	200,301	0.150

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: E00700 / CTG, 5.56MM, All Types	Item Number / Title [DODIC]: E96125 / Ctg, 5.56mm, Short Range Training, M1037, snl rd [AB67]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (<i>Units in Each</i>)	90,310	1,143,696	502,902	991,433	-	991,433
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.148	1.466	0.700	1.400	-	1.400
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.148	1.466	0.700	1.400	-	1.400
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.148	1.466	0.700	1.400	-	1.400

(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 Dollars</i>)	1.64	1.28	1.39	1.41	-	1.41

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND	1.16	90,310	0.105	1.19	1,143,696	1.361	1.24	502,902	0.624	1.33	991,433	1.319	-	-	-	1.33	991,433	1.319
<i>Subtotal: Recurring Cost</i>	-	-	<i>0.105</i>	-	-	<i>1.361</i>	-	-	<i>0.624</i>	-	-	<i>1.319</i>	-	-	-	-	-	<i>1.319</i>
<i>Subtotal: Hardware Cost</i>	-	-	0.105	-	-	1.361	-	-	0.624	-	-	1.319	-	-	-	-	-	1.319
Support - Production Engineering Cost																		
Production Engineering	-	-	0.043	-	-	0.105	-	-	0.076	-	-	0.081	-	-	-	-	-	0.081
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	<i>0.043</i>	-	-	<i>0.105</i>	-	-	<i>0.076</i>	-	-	<i>0.081</i>	-	-	-	-	-	<i>0.081</i>
Gross/Weapon System Cost	1.64	90,310	0.148	1.28	1,143,696	1.466	1.39	502,902	0.700	1.41	991,433	1.400	-	-	-	1.41	991,433	1.400

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: E00700 / CTG, 5.56MM, All Types	Item Number / Title [DODIC]: E96126 / Ctg, 5.56mm, Short Range Training, M1037 Linked [AB66]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (<i>Units in Each</i>)	1,018,438	852,525	771,428	437,995	-	437,995
Gross/Weapon System Cost (<i>\$ in Millions</i>)	4.695	1.155	1.000	0.582	-	0.582
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	4.695	1.155	1.000	0.582	-	0.582
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	4.695	1.155	1.000	0.582	-	0.582

(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 Dollars</i>)	4.61	1.35	1.30	1.33	-	1.33

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
Complete Round	1.17	1,018,438	1.192	1.15	852,525	0.980	1.15	771,428	0.887	1.25	437,995	0.547	-	-	-	1.25	437,995	0.547
<i>Subtotal: Recurring Cost</i>	-	-	<i>1.192</i>	-	-	<i>0.980</i>	-	-	<i>0.887</i>	-	-	<i>0.547</i>	-	-	-	-	-	<i>0.547</i>
<i>Subtotal: Hardware Cost</i>	-	-	<i>1.192</i>	-	-	<i>0.980</i>	-	-	<i>0.887</i>	-	-	<i>0.547</i>	-	-	-	-	-	<i>0.547</i>
Support - Production Engineering Cost																		
Production Engineering	-	-	3.503	-	-	0.175	-	-	0.113	-	-	0.034	-	-	-	-	-	0.034
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	<i>3.503</i>	-	-	<i>0.175</i>	-	-	<i>0.113</i>	-	-	<i>0.034</i>	-	-	-	-	-	<i>0.034</i>
Gross/Weapon System Cost	4.61	1,018,438	4.695	1.35	852,525	1.155	1.30	771,428	1.000	1.33	437,995	0.582	-	-	-	1.33	437,995	0.582

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 30: Small/ Medium Cal Ammunition	P-1 Line Item Number / Title: E02000 / CTG, 7.62MM, All Types
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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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	938.592	40.715	55.879	46.804	-	46.804	50.600	54.623	85.355	101.606	-	1,374.174
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	938.592	40.715	55.879	46.804	-	46.804	50.600	54.623	85.355	101.606	-	1,374.174
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	938.592	40.715	55.879	46.804	-	46.804	50.600	54.623	85.355	101.606	-	1,374.174

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

Description:

This budget line includes 7.62mm ALL TYPES.

(E02007) 7.62mm 4 BALL/1 TRACER F/OHF consists of a M80 OHF ball and a M62 OHF tracer cartridges linked four to one and is used for overhead fire in the M240 Machine Gun family of weapons. Manufactured with unique bullet jackets and no base closure seals to reduce fragmentation or shrapnel risks to soldiers training underneath the flight path of these bullets. This item is Code A, approved for service use.

(E02011) 7.62mm M80A1 Enhanced Performance Round (EPR) Ball is linked in a 100 cartridge belt with the M13 link for use in the M240 Machine Gun family of weapons. The M80A1 Ball Cartridge has a steel penetrator and non-lead slug surrounded by a copper jacket. They are intended for use against personnel and light-armored targets. This Item is Code A, approved for service use.

(E02012) 7.62mm M80A1 Enhanced Performance Round (EPR) Ball Cartridges and M62A1 Tracer Cartridges are linked in a 100 cartridge belt in a 4 Ball/1 Tracer configuration with the M13 link for use in the M240 Machine Gun family of weapons. The M80A1 Ball Cartridge has a steel penetrator and a non-lead slug surrounded by a copper jacket. The M62A1 Tracer Cartridge also contains a lead free projectile and provides a visible red light signature through its trajectory and is a ballistic match with the M80A1 trajectory. They are intended for use against personnel and light-armored targets. This Item is Code A, approved for service use.

(E02015) 7.62mm M82A1 Blank Bottleneck Cartridge has a bottleneck design with a paper wad closure and a red tip. The M82A1 is used in sniper training and salute ceremonies in M14 rifles without being equipped with a firing adapter. This Item is Code A, approved for service use.

(E02500) 7.62mm Dummy M172 W/M13 linked cartridge is properly weighted in terms of mass and center of gravity and is physically contoured to represent a tactical M80 7.62mm ball cartridge. The round is coated with black oxide to visually distinguish from tactical ammunition. The cartridge is used for weapon manufacturing testing to conduct belt-pull tests for automatic weapons and for environmental conditioning tests of weapons, mounts and ammunition. The M172 linked cartridge is also used for developing new and/or improved mount systems for the vehicles that contain the M240 Series machine gun. This Item is Code B, not approved for service use.

(E02501) 7.62mm, M63A1 Dummy, Drilled and Inert ammunition (DDI) is an inert dummy cartridge used as an ammunition training aid and for weapon familiarization. The 7.62mm, M63A1 DDI ammunition is both nickel plated and fluted for easy recognition and to distinguish the dummy ammunition visually from tactical ammunition. This Item is Code A, approved for service use.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 30: Small/ Medium Cal Ammunition		P-1 Line Item Number / Title: E02000 / CTG, 7.62MM, All Types
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>(E89100) 7.62mm M118 Long Range cartridge is a match grade design intended for long range accuracy and is packed in a 20 cartridge cardboard carton and intended for Sniper use in the M40, M110, and MK21 Rifles. It is intended for use against personnel and non-armored targets. This Item is Code A, approved for service use.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army	Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 30: Small/ Medium Cal Ammunition	P-1 Line Item Number / Title: E02000 / CTG, 7.62MM, All Types

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

Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 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	E02007 / CTG 7.62MM 4 BALL/1 TRACER F/OHF [A151]		A		1,356,136K / 745.875	- / -	- / -	4,525,617 / 2.800	- / -	4,525,617 / 2.800
P-5	E02011 / CTG, 7.62MM M80A1 BALL LINKED, LEAD FREE [AB79]	P-5a	A		24,835,065 / 19.696	6,662,227 / 5.900	5,245,278 / 4.900	9,421,274 / 9.300	- / -	9,421,274 / 9.300
P-5	E02012 / CTG, 7.62MM 4 BALL/1TR LINKED, LEAD FREE [AB86]	P-5a, P-21	A		- / 125.209	34,943,649 / 34.362	42,606,521 / 49.642	30,839,984 / 33.627	- / -	30,839,984 / 33.627
P-5	E02015 / CTG, 7.62MM, BOTTLENOSE BLANK, M82A1 [AB72]		A		1,492,880 / 1.107	309,407 / 0.234	425,706 / 0.332	419,262 / 0.338	- / -	419,262 / 0.338
P-5	E02500 / CTG 7.62MM DUMMY M172 W/M13 LINK [A159]		B		673,076 / 0.734	- / -	151,649 / 0.170	- / -	- / -	- / -
P-5	E02501 / CTG, 7.62MM SINGLE ROUND (NPF DDI), M63A1 [AB47]		A		841,129 / 0.734	- / -	303,311 / 0.256	- / -	- / -	- / -
P-5	E89100 / CARTRIDGE 7.62MM M118 LONG RANGE [AA11]		A		31,240,203 / 37.678	383,108 / 0.219	818,718 / 0.579	1,021,510 / 0.739	- / -	1,021,510 / 0.739
P-40	Total Gross/Weapon System Cost				- / 938.592	- / 40.715	- / 55.879	- / 46.804	- / -	- / 46.804

*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 2018 Base Budget supports critical Army Title 10 war reserve/operational, training, and test requirements IAW DoD Instruction 3000.04 (Munitions Requirements Process) and AR 5-13 (Total Army Munitions Requirements Process and Prioritization System). War reserve requirements support OSD-approved Combatant Commander Operational Plans, Homeland Defense, and other OSD-directed missions. Training requirements support individual and collective training of Active and Reserve Component forces at Army schools, home station, and the combined training centers. Test requirements support the development, fielding, safety, and quality assurance of Army munitions and equipment throughout their life-cycle.

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.

The FY 2018 Base procurement dollars in the amount of \$46.804 million supports procurement of 46.228 million cartridges

(E02007) 7.62mm 4 BALL/1 TRACER F/OHF is a training unique item and is not used in combat. FY 2018 request supports annual training and builds a depot level in accordance with the Army's procurement goals. FY 2018 Base Procurement dollars in the amount of \$2.800 million supports the procurement of 4.526 million of the 7.62mm 4 BALL/1 TRACER F/OHF cartridges. E02007 is a new start in FY 2018. TYPE CLASSIFICATION DATE: 1975

(E02011) 7.62mm M80A1 Enhanced Performance Round (EPR) Lead Free Slug (LFS) Ball Cartridge is a training standard item used in training and combat. The FY 2018 request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. FY 2018 Base Procurement dollars in the amount of \$9.300 million supports the procurement of 9.421 million of the 7.62mm M80A1 1 Ball (EPR) (LFS) Cartridges. Type classification date: 1962

(E02012) 7.62mm M80A1 Enhanced Performance Round (EPR) 4 Ball /1 Trace, Lead Free Slug (LFS) Cartridge /M62A1 LFS Tracer Cartridge is a training standard item used in training and combat. The FY 2018 request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. FY 2018 Base Procurement dollars in the amount of \$33.627 million supports the procurement of 30.840 million of the 7.62mm M80A1 4 Ball/1Trace (EPR) (LFS) Cartridges. Type classification date: 1962

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 30: Small/ Medium Cal Ammunition		P-1 Line Item Number / Title: E02000 / CTG, 7.62MM, All Types
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>(E02015) 7.62mm M82A1 Blank Bottlenose Cartridge is a training unique item not used in combat. The FY 2018 request supports annual training and builds a depot level in accordance with the Army's procurement goals. FY 2018 Base Procurement dollars in the amount of \$.338 million supports the procurement of .419 million of the M82A1 Blank Bottlenose Cartridges. Type classification date: 2012</p> <p>(E02500) 7.62mm Dummy M172 W/M13 linked cartridge is a training unique item not used in combat. The procurement supports annual training and builds a depot level in accordance with the Army's procurement goals. Type classification date: 1963</p> <p>(E02501) 7.62mm Single Round (NPF DDI) M63A1 Round is a training unique item not used in combat. The procurement supports annual training and builds a depot level in accordance with the Army's procurement goals. Type classification date: 2008</p> <p>(E89100) 7.62mm M118 Long Range Round is a training standard item used in training and combat. The FY 2018 request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. FY 2018 Base Procurement dollars in the amount of \$.739 million supports the procurement of 1.022 million of the 7.62mm Long Range Rounds. Type classification date: Prior to 1997</p>		

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: E02000 / CTG, 7.62MM, All Types	Item Number / Title [DODIC]: E02007 / CTG 7.62MM 4 BALL/1 TRACER F/OHF [A151]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (<i>Units in Each</i>)	1,356,136K	-	-	4,525,617	-	4,525,617
Gross/Weapon System Cost (<i>\$ in Millions</i>)	745.875	-	-	2.800	-	2.800
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	745.875	-	-	2.800	-	2.800
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	745.875	-	-	2.800	-	2.800

(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 Dollars</i>)	0.55	-	-	0.62	-	0.62

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND	0.55	1,356,136K	745.875	-	-	-	-	-	-	0.55	4,525,617	2.489	-	-	-	0.55	4,525,617	2.489
<i>Subtotal: Recurring Cost</i>	-	-	745.875	-	-	-	-	-	-	-	-	2.489	-	-	-	-	-	2.489
<i>Subtotal: Hardware Cost</i>	-	-	745.875	-	-	-	-	-	-	-	-	2.489	-	-	-	-	-	2.489
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	-	-	-	-	-	-	0.310	-	-	-	-	-	0.310
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.310	-	-	-	-	-	0.310
Gross/Weapon System Cost	0.55	1,356,136K	745.875	-	-	-	-	-	-	0.62	4,525,617	2.800	-	-	-	0.62	4,525,617	2.800

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: E02000 / CTG, 7.62MM, All Types	Item Number / Title [DODIC]: E02011 / CTG, 7.62MM M80A1 BALL LINKED, LEAD FREE [AB79]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	24,835,065	6,662,227	5,245,278	9,421,274	-	9,421,274
Gross/Weapon System Cost (\$ in Millions)	19.696	5.900	4.900	9.300	-	9.300
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	19.696	5.900	4.900	9.300	-	9.300
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	19.696	5.900	4.900	9.300	-	9.300

(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 Dollars)	0.79	0.89	0.93	0.99	-	0.99

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND ^(†)	0.77	24,835,065	19.123	0.78	6,662,227	5.197	0.83	5,245,278	4.354	0.88	9,421,274	8.291	-	-	-	0.88	9,421,274	8.291
<i>Subtotal: Recurring Cost</i>	-	-	19.123	-	-	5.197	-	-	4.354	-	-	8.291	-	-	-	-	-	8.291
<i>Subtotal: Hardware Cost</i>	-	-	19.123	-	-	5.197	-	-	4.354	-	-	8.291	-	-	-	-	-	8.291
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	-	-	-	-	-	-	0.105	-	-	-	-	-	0.105
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.105	-	-	-	-	-	0.105
Support - Production Engineering Cost																		
Production Engineering	-	-	0.569	-	-	0.697	-	-	0.540	-	-	0.898	-	-	-	-	-	0.898
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	0.569	-	-	0.697	-	-	0.540	-	-	0.898	-	-	-	-	-	0.898
Support - Quality Assurance Cost																		
Quality Assurance	-	-	0.004	-	-	0.006	-	-	0.006	-	-	0.007	-	-	-	-	-	0.007
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	0.004	-	-	0.006	-	-	0.006	-	-	0.007	-	-	-	-	-	0.007
Gross/Weapon System Cost	0.79	24,835,065	19.696	0.89	6,662,227	5.900	0.93	5,245,278	4.900	0.99	9,421,274	9.300	-	-	-	0.99	9,421,274	9.300

^(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30			P-1 Line Item Number / Title: E02000 / CTG, 7.62MM, All Types				Item Number / Title [DODIC]: E02011 / CTG, 7.62MM M80A1 BALL LINKED, LEAD FREE [AB79]					

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>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
COMPLETE ROUND		2016	OLIN CORP WINCHESTER DIVISION / EAST ALTON, IL	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2016	Mar 2017	6,662,227	0.78	Y		
COMPLETE ROUND		2017	OLIN CORP WINCHESTER DIVISION / EAST ALTON, IL	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2017	Oct 2017	5,245,278	0.83	Y		
COMPLETE ROUND		2018	OLIN CORP WINCHESTER DIVISION / EAST ALTON, IL	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2018	Oct 2018	9,421,274	0.88	Y		

Remarks:
FY 2016, FY 2017 AND FY 2018 COMPLETE ROUND IS A DELIVERY ORDER TO THE EXISTING CONTRACT.

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: E02000 / CTG, 7.62MM, All Types	Item Number / Title [DODIC]: E02012 / CTG, 7.62MM 4 BALL/1TR LINKED, LEAD FREE [AB86]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	34,943,649	42,606,521	30,839,984	-	30,839,984
Gross/Weapon System Cost (\$ in Millions)	125.209	34.362	49.642	33.627	-	33.627
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	125.209	34.362	49.642	33.627	-	33.627
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	125.209	34.362	49.642	33.627	-	33.627

(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 Dollars)	-	0.98	1.17	1.09	-	1.09

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND ^(†)	1.25	96,294,000	120.368	0.85	34,943,649	29.702	1.08	42,606,521	46.015	0.99	30,839,984	30.532	-	-	-	0.99	30,839,984	30.532
Subtotal: Recurring Cost	-	-	120.368	-	-	29.702	-	-	46.015	-	-	30.532	-	-	-	-	-	30.532
Subtotal: Hardware Cost	-	-	120.368	-	-	29.702	-	-	46.015	-	-	30.532	-	-	-	-	-	30.532
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	0.127	-	-	0.163	-	-	0.164	-	-	-	-	-	0.164
Subtotal: Support - Acceptance Testing Cost	-	-	-	-	-	0.127	-	-	0.163	-	-	0.164	-	-	-	-	-	0.164
Support - Product Improvement Cost																		
Environmental Initiatives	-	-	-	-	-	1.482	-	-	0.567	-	-	-	-	-	-	-	-	-
Subtotal: Support - Product Improvement Cost	-	-	-	-	-	1.482	-	-	0.567	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	4.842	-	-	3.044	-	-	2.890	-	-	2.932	-	-	-	-	-	2.932
Subtotal: Support - Production Engineering Cost	-	-	4.842	-	-	3.044	-	-	2.890	-	-	2.932	-	-	-	-	-	2.932
Support - Quality Assurance Cost																		
Quality Assurance	-	-	-	-	-	0.006	-	-	0.006	-	-	-	-	-	-	-	-	-
Subtotal: Support - Quality Assurance Cost	-	-	-	-	-	0.006	-	-	0.006	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: E02000 / CTG, 7.62MM, All Types	Item Number / Title [DODIC]: E02012 / CTG, 7.62MM 4 BALL/1TR LINKED, LEAD FREE [AB86]
ID Code (A=Service Ready, B=Not Service Ready) : A		MDAP/MAIS Code:

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Gross/Weapon System Cost	-	-	125.209	0.98	34,943,649	34.362	1.17	42,606,521	49.642	1.09	30,839,984	33.627	-	-	-	1.09	30,839,984	33.627

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

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30			P-1 Line Item Number / Title: E02000 / CTG, 7.62MM, All Types				Item Number / Title [DODIC]: E02012 / CTG, 7.62MM 4 BALL/1TR LINKED, LEAD FREE [AB86]					

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>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
COMPLETE ROUND ^(†)		2016	ALLIANT TECHSYSTEMS (LCAAP) / INDEPENDENCE, MO	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2016	Apr 2017	19,219,007	0.85	Y		
COMPLETE ROUND ^(†)		2016	OLIN CORP WINCHESTER DIVISION / EAST ALTON, IL	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2016	Mar 2017	15,724,642	0.85	Y		
COMPLETE ROUND ^(†)		2017	ALLIANT TECHSYSTEMS (LCAAP) / INDEPENDENCE, MO	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2017	Apr 2018	21,303,260	1.08	Y		
COMPLETE ROUND ^(†)		2017	OLIN CORP WINCHESTER DIVISION / EAST ALTON, IL	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2017	Apr 2018	21,303,261	1.08	Y		
COMPLETE ROUND ^(†)		2018	ALLIANT TECHSYSTEMS (LCAAP) / INDEPENDENCE, MO	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2018	Apr 2019	15,419,992	0.99	Y		
COMPLETE ROUND ^(†)		2018	OLIN CORP WINCHESTER DIVISION / EAST ALTON, IL	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2018	Oct 2018	15,419,992	0.99	Y		

^(†) indicates the presence of a P-21

Remarks:
FY 2016, FY 2017 AND FY 2018 IS A DELIVERY ORDER TO THE EXISTING CONTRACTS. FY 2016, FY 2017 AND FY 2018 IS AN AVERAGE UNIT COST BETWEEN TWO CONTRACTORS.

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Exhibit P-21, Production Schedule: FY 2018 Army												Date: May 2017											
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30						P-1 Line Item Number / Title: E02000 / CTG, 7.62MM, All Types						Item Number / Title [DODIC]: E02012 / CTG, 7.62MM 4 BALL/1TR LINKED, LEAD FREE [AB86]											

Cost Elements <i>(Units in Millions, * = < 500)</i>						Fiscal Year 2016												Fiscal Year 2017												B A L A N C E		
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEP T P R I O R T O 1 O C T 2 0 1 5	BAL D U E A S O F 1 O C T	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	
COMPLETE ROUND																																
Prior Years Deliveries: 96294000																																
	1	2016	ARMY	19.219	.000	19.219																										
	2	2016	ARMY	15.725	.000	15.725																										
	1	2017	ARMY	21.303	.000	21.303																										
	2	2017	ARMY	21.303	.000	21.303																										
	1	2018	ARMY	15.420	.000	15.420																										
	2	2018	ARMY	15.420	.000	15.420																										
							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: FY 2018 Army															Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30										P-1 Line Item Number / Title: E02000 / CTG, 7.62MM, All Types										Item Number / Title [DODIC]: E02012 / CTG, 7.62MM 4 BALL/1TR LINKED, LEAD FREE [AB86]									

Cost Elements <i>(Units in Millions, * = < 500)</i>					Fiscal Year 2018												Fiscal Year 2019												B A L L A N C E					
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEP T O 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018												Calendar Year 2019															
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L		A U G	S E P			
COMPLETE ROUND																																		
Prior Years Deliveries: 96294000																																		
	1	2016	ARMY	19.219	9.492	9.727	1.621	1.621	1.621	1.621	1.621	1.621																	.000					
	2	2016	ARMY	15.725	8.577	7.148	1.430	1.430	1.430	1.430	1.430																		.000					
	1	2017	ARMY	21.303	.000	21.303	-	-	-	-	-	-	1.775	1.775	1.775	1.775	1.775	1.775	1.775	1.775	1.775	1.775	1.775	1.775	1.775	1.775	1.775		.000					
	2	2017	ARMY	21.303	.000	21.303	-	-	-	-	-	-	1.775	1.775	1.775	1.775	1.775	1.775	1.775	1.775	1.775	1.775	1.775	1.775	1.775	1.775		.000						
	1	2018	ARMY	15.420	.000	15.420							A -	-	-	-	-	-	-	-	-	-	-	-	-	-	1.285	1.285	1.285	1.285	1.285	1.285	1.285	7.710
	2	2018	ARMY	15.420	.000	15.420							A -	-	-	-	-	-	-	-	-	-	-	-	-	1.285	1.285	1.285	1.285	1.285	1.285	1.285	.000	
							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: FY 2018 Army															Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30										P-1 Line Item Number / Title: E02000 / CTG, 7.62MM, All Types										Item Number / Title [DODIC]: E02012 / CTG, 7.62MM 4 BALL/1TR LINKED, LEAD FREE [AB86]									

Cost Elements <i>(Units in Millions, * = < 500)</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	ACCEP T P R I O R T O 1 O C T 2 0 1 9	BAL D U E A S O F 1 O C T	Calendar Year 2020												Calendar Year 2021												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L		A U G	S E P
COMPLETE ROUND																															
Prior Years Deliveries: 96294000																															
	1	2016	ARMY	19.219	19.219	.000																							.000		
	2	2016	ARMY	15.725	15.725	.000																							.000		
	1	2017	ARMY	21.303	21.303	.000																							.000		
	2	2017	ARMY	21.303	21.303	.000																							.000		
	1	2018	ARMY	15.420	7.710	7.710	1.285	1.285	1.285	1.285	1.285	1.285																	.000		
	2	2018	ARMY	15.420	15.420	.000																							.000		
							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: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30		P-1 Line Item Number / Title: E02000 / CTG, 7.62MM, All Types
Item Number / Title [DODIC]: E02012 / CTG, 7.62MM 4 BALL/1TR LINKED, LEAD FREE [AB86]		

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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	ALLIANT TECHSYSTEMS (LCAAP) - INDEPENDENCE, MO	800	5,000,000	10,000,000	6	6	13	19	6	6	13	19
2	OLIN CORP WINCHESTER DIVISION - EAST ALTON, IL	500,000	1,500,000	3,000,000	6	6	12	18	6	6	7	13

"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: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30		P-1 Line Item Number / Title: E02000 / CTG, 7.62MM, All Types
		Item Number / Title [DODIC]: E02015 / CTG, 7.62MM, BOTTLENOSE BLANK, M82A1 [AB72]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (<i>Units in Each</i>)	1,492,880	309,407	425,706	419,262	-	419,262
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1.107	0.234	0.332	0.338	-	0.338
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1.107	0.234	0.332	0.338	-	0.338
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1.107	0.234	0.332	0.338	-	0.338

(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 Dollars</i>)	0.74	0.76	0.78	0.81	-	0.81

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND	0.72	1,492,880	1.075	0.72	309,407	0.223	0.71	425,706	0.302	0.72	419,262	0.302	-	-	-	0.72	419,262	0.302
<i>Subtotal: Recurring Cost</i>	-	-	1.075	-	-	0.223	-	-	0.302	-	-	0.302	-	-	-	-	-	0.302
<i>Subtotal: Hardware Cost</i>	-	-	1.075	-	-	0.223	-	-	0.302	-	-	0.302	-	-	-	-	-	0.302
Support - Production Engineering Cost																		
Production Engineering	-	-	0.032	-	-	0.008	-	-	0.027	-	-	0.033	-	-	-	-	-	0.033
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	0.032	-	-	0.008	-	-	0.027	-	-	0.033	-	-	-	-	-	0.033
Support - Quality Assurance Cost																		
Quality Assurance	-	-	-	-	-	0.003	-	-	0.003	-	-	0.003	-	-	-	-	-	0.003
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	-	-	-	0.003	-	-	0.003	-	-	0.003	-	-	-	-	-	0.003
Gross/Weapon System Cost	0.74	1,492,880	1.107	0.76	309,407	0.234	0.78	425,706	0.332	0.81	419,262	0.338	-	-	-	0.81	419,262	0.338

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: E02000 / CTG, 7.62MM, All Types	Item Number / Title [DODIC]: E02500 / CTG 7.62MM DUMMY M172 W/M13 LINK [A159]

ID Code (A=Service Ready, B=Not Service Ready) : B	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (<i>Units in Each</i>)	673,076	-	151,649	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.734	-	0.170	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.734	-	0.170	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.734	-	0.170	-	-	-
<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 Dollars</i>)	1.09	-	1.12	-	-	-

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND	1.04	673,076	0.700	-	-	-	1.04	151,649	0.158	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	<i>0.700</i>	-	-	-	-	-	<i>0.158</i>	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware Cost</i>	-	-	<i>0.700</i>	-	-	-	-	-	<i>0.158</i>	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	0.034	-	-	-	-	-	0.012	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	<i>0.034</i>	-	-	-	-	-	<i>0.012</i>	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	1.09	673,076	0.734	-	-	-	1.12	151,649	0.170	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30		P-1 Line Item Number / Title: E02000 / CTG, 7.62MM, All Types
		Item Number / Title [DODIC]: E02501 / CTG, 7.62MM SINGLE ROUND (NPF DDI), M63A1 [AB47]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity <i>(Units in Each)</i>	841,129	-	303,311	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	0.734	-	0.256	-	-	-
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	0.734	-	0.256	-	-	-
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	0.734	-	0.256	-	-	-

(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 Dollars)</i>	0.87	-	0.84	-	-	-

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP)	0.81	841,129	0.685	-	-	-	0.75	303,311	0.227	-	-	-	-	-	-	-	-	-
BOX METAL M2A2	13.01	1,809	0.024	-	-	-	13.06	667	0.009	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	<i>0.705</i>	-	-	-	-	-	<i>0.236</i>	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware Cost</i>	-	-	<i>0.705</i>	-	-	-	-	-	<i>0.236</i>	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	0.029	-	-	-	-	-	0.020	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	<i>0.029</i>	-	-	-	-	-	<i>0.020</i>	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	0.87	841,129	0.734	-	-	-	0.84	303,311	0.256	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30		P-1 Line Item Number / Title: E02000 / CTG, 7.62MM, All Types
		Item Number / Title [DODIC]: E89100 / CARTRIDGE 7.62MM M118 LONG RANGE [AA11]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	31,240,203	383,108	818,718	1,021,510	-	1,021,510
Gross/Weapon System Cost (\$ in Millions)	37.678	0.219	0.579	0.739	-	0.739
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	37.678	0.219	0.579	0.739	-	0.739
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	37.678	0.219	0.579	0.739	-	0.739

(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 Dollars)	1.21	0.57	0.71	0.72	-	0.72

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
Load, Assemble, Pack (Lap)	1.09	31,240,203	34.052	0.52	383,108	0.199	0.61	818,718	0.499	0.61	1,021,510	0.623	-	-	-	0.61	1,021,510	0.623
BOX METAL M2A2	-	-	-	10.93	843	0.009	13.07	1,801	0.024	13.67	2,227	0.030	-	-	-	13.67	2,227	0.030
<i>Subtotal: Recurring Cost</i>	-	-	<i>34.052</i>	-	-	<i>0.208</i>	-	-	<i>0.523</i>	-	-	<i>0.654</i>	-	-	-	-	-	<i>0.654</i>
<i>Subtotal: Hardware Cost</i>	-	-	<i>34.052</i>	-	-	<i>0.208</i>	-	-	<i>0.523</i>	-	-	<i>0.654</i>	-	-	-	-	-	<i>0.654</i>
Support - Production Engineering Cost																		
Production Engineering	-	-	3.620	-	-	0.011	-	-	0.056	-	-	0.083	-	-	-	-	-	0.083
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	<i>3.620</i>	-	-	<i>0.011</i>	-	-	<i>0.056</i>	-	-	<i>0.083</i>	-	-	-	-	-	<i>0.083</i>
Support - Quality Assurance Cost																		
Quality Assurance	-	-	0.006	-	-	-	-	-	-	-	-	0.002	-	-	-	-	-	0.002
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	<i>0.006</i>	-	-	-	-	-	-	-	-	<i>0.002</i>	-	-	-	-	-	<i>0.002</i>
Gross/Weapon System Cost	1.21	31,240,203	37.678	0.57	383,108	0.219	0.71	818,718	0.579	0.72	1,021,510	0.739	-	-	-	0.72	1,021,510	0.739

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 30: Small/ Medium Cal Ammunition	P-1 Line Item Number / Title: EA3000 / CTG, Handgun, All Types
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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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	129.015	6.801	9.193	10.413	0.005	10.418	12.011	12.692	13.365	7.785	-	201.280
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	129.015	6.801	9.193	10.413	0.005	10.418	12.011	12.692	13.365	7.785	-	201.280
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	129.015	6.801	9.193	10.413	0.005	10.418	12.011	12.692	13.365	7.785	-	201.280

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

Description:

This budget line includes CTG, Handgun, ALL TYPES.

(E96105) CTG, 9MM MARKING, M1041 (BLUE) is used for force on force training engagements. The cartridge can be fired with existing M9/M11 pistols and M4 rifles with use of a conversion kit. The M9 kit consists of a replacement barrel only. The M11 kit consists of a replacement barrel and recoil spring guide. The M4 kit consist of a replacement upper receiver for 9mm. A blue enameled portion of the M9, M11, and M4 barrels is visible through the ejection port of the weapons. The projectile leaves a mark upon impact (similar to paintball), enabling after action evaluation of training scenarios. It differs from paintball in that it is a full complete cartridge with projectile and cartridge case containing a propulsion system for a low velocity launch. The M1041 is required to hit targets accurately out to 12 meters. The cartridge has been safety certified to be fired in close proximity at properly protected human subjects. This item is Code A, approved for service use.

(E96107) CTG, 9MM MARKING, M1041 (RED) is used for force on force training engagements. The cartridge can be fired with existing M9/M11 pistols and M4 rifles with use of a conversion kit. The M9 kit consists of a replacement barrel only. The M11 kit consists of a replacement barrel and recoil spring guide. The M4 kit consist of a replacement upper receiver for 9mm. A blue enameled portion of the M9, M11 and M4 barrels is visible through the ejection port of the weapons. The projectile leaves a mark upon impact (similar to paintball), enabling after action evaluation of training scenarios. It differs from paintball in that it is a full complete cartridge with projectile and cartridge case containing a propulsion system for a low velocity launch. The M1041 is required to hit targets accurately out to 12 meters. The cartridge has been safety certified to be fired in close proximity at properly protected human subjects. This item is Code A, approved for service use.

(E05218) CTG, MODULAR HANDGUN SYSTEM AMMUNITION consists of four new cartridges – Ball XM1152, Special Purpose XM1153, Drilled Dummy Inert (DDI) XM1156 and Blank XM1157. The Ball cartridge is intended for use against enemy personnel, for training, and for force protection. The Special Purpose cartridge is required for use in situations where limited over-penetration of targets is necessary to reduce collateral damage. DDI cartridges are completely inert. They are plated and drilled for easy identification and used for training and weapon familiarization. Blank cartridges are used for K-9 training. These items are not yet type classified or approved for service use. The Modular Handgun System will also utilize three M1041 cartridges - Blue, Red and Yellow through the use of a weapon adapter kit. This item is Code B, not approved for service use.

(E05217) CTG, 9MM SINGLE CARTRIDGE, Dummy Drill and Inert (DDI), M917A1 ammunition cartridge is an inert (no energetic) dummy cartridge used as an ammunition training aid and for weapon familiarization. This item is Code A, approved for service use.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 30: Small/ Medium Cal Ammunition		P-1 Line Item Number / Title: EA3000 / CTG, Handgun, All Types
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>(E05210) CTG, 9MM BALL M882 (Combat Pack) cartridge contains a bullet comprised of a copper alloy jacket and a lead alloy core. The cartridge is identified by the plain bullet tip. The ammunition complies with NATO STANAG 4090 and is packed in military type packaging. It is used in M9 and M11 pistols. This item is Code A, approved for service use.</p> <p>(E99900) CTG, 9MM BALL M882 (Commercial Pack) cartridge contains a bullet comprised of a copper alloy jacket and a lead alloy core. The cartridge is identified by the plain bullet tip. It is packed in commercial type packaging and is not intended for OCONUS shipment. It is used in the M9 and M11 pistols. This item is Code A, approved for service use.</p>		
<p>Justification: FY 2018 Base Budget supports critical Army Title 10 war reserve/operational, training, and test requirements IAW DoD Instruction 3000.04 (Munitions Requirements Process) and AR 5-13 (Total Army Munitions Requirements Process and Prioritization System). War reserve requirements support OSD-approved Combatant Commander Operational Plans, Homeland Defense, and other OSD-directed missions. Training requirements support individual and collective training of Active and Reserve Component forces at Army schools, home station, and the combined training centers. Test requirements support the development, fielding, safety, and quality assurance of Army munitions and equipment throughout their life-cycle.</p> <p>The FY 2018 OCO includes \$0.005 million to support the COCOM requirement for unit equipment sets to deter potential adversaries and support the European Reassurance Initiative. The procurement includes 0.029 million M882 Ball cartridges.</p> <p>In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.</p> <p>The FY 2018 Base procurement dollars in the amount of \$10.413 million supports procurement of 42.500 million cartridges.</p> <p>The FY 2018 OCO procurement dollars in the amount of \$0.005 million supports the procurement of 0.029 million cartridges.</p> <p>(E96105) CTG 9MM MARKING, M1041 (BLUE) is a training unique item not used in combat. The FY 2018 request supports annual training and builds a depot level in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$0.168 million supports the procurement of 0.270 million M1041 (Blue) cartridges. Type Classification Date: 2009</p> <p>(E96107) CTG, 9MM MARKING, M1041 (RED) is a training unique item not used in combat. The FY 2018 request supports annual training and builds a depot level in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$0.037 million supports the procurement of 0.059 million M1041 (Red) cartridges. Type Classification Date: 2009</p> <p>(E05218) CTG MODULAR HANDGUN SYSTEM AMMUNITION is a training standard item used in both training and combat. The FY 2018 request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$4.258 million supports the procurement of 12.688 million Modular Handgun cartridges. E05218 is a new start in FY 2018. Type Classification Date: Pending</p> <p>(E05217) CTG, 9MM SINGLE CARTRIDGE, (DDI), M917A1 is a training unique item not used in combat. The request supports annual training and builds a depot level in accordance with the Army's procurement goals. Type Classification Date: 1975</p> <p>(E05210) CTG 9MM BALL, M882 (Combat Pack) is a training standard item used in both training and combat. The FY 2018 request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$2.000 million supports the procurement of 9.410 million M882 Ball cartridges. FY 2018 OCO procurement dollars in the amount of \$0.005 million supports the procurement of 0.029 million M882 Ball cartridges.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 30: Small/ Medium Cal Ammunition		P-1 Line Item Number / Title: EA3000 / CTG, Handgun, All Types
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		
Type Classification Date: 1985		
<p>(E99900) CTG 9MM BALL M882 (Commercial Pack) is a training standard item packed commercially for training. The FY 2018 request supports annual training and builds a depot level in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$3.950 million supports the procurement of 20.073 million M882 Ball cartridges.</p> <p>Type Classification Date: 1985</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 30: Small/ Medium Cal Ammunition	P-1 Line Item Number / Title: E08000 / CTG, .50 Cal, All Types
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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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,973.352	33.674	60.300	62.837	0.121	62.958	41.334	79.947	56.118	83.194	-	2,390.877
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,973.352	33.674	60.300	62.837	0.121	62.958	41.334	79.947	56.118	83.194	-	2,390.877
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,973.352	33.674	60.300	62.837	0.121	62.958	41.334	79.947	56.118	83.194	-	2,390.877

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

Description:

This budget line includes .50 CAL ALL TYPES.

(E06903) CTG .50 Caliber M8/M20 Tracer, Armor Piercing Incendiary (API) linked 4 to 1 in a 100 cartridge belt with the M9 link for use in the M2, M2A1 and M3 Machine Gun. M8 is identified with a gray bullet tip. M20 is identified with a red bullet tip with gray annulus. This item is Code A, approved for service use

(E07100) CTG .50 Caliber Cartridge Ball M33 is linked in 100 cartridge belts with the M9 link, for use in the M2, M2A1 and M3 Machine Gun. M33 is identified with a plain bullet tip. This item is Code A, approved for service use.

(E07200) CTG .50 Caliber Cartridge, Ball M33 and Cartridge, Tracer M17 linked 4 to 1 in a 100 cartridge belt with the M9 link for use in M2, M2A1 and M3 Machine Gun against unarmored targets. The tracer cartridge permits observation of the bullet's trajectory to the point of impact. M17 is identified with a brown bullet tip. M33 is identified with a plain bullet tip. This item is Code A, approved for service use.

(E07302) CTG .50 Caliber Blank Cartridge, M1A1 linked in a 100 cartridge belt with the M9 link for use in the M2 and M2A1 Machine Gun. This cartridge is a blank cartridge with a rosette crimp at the mouth used to simulate firing in training exercises in conjunction with the M19 Blank Firing Attachment (BFA). This item is Code A, approved for service use.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date: May 2017**

Appropriation / Budget Activity / Budget Sub Activity:
2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 30: Small/
Medium Cal Ammunition

P-1 Line Item Number / Title:
E08000 / CTG, .50 Cal, All Types

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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 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	E06903 / CTG CAL .50 LINKED 4 API M8/1 TRACER M17 w/M9 LINK [A576]	P-5a	A		144,113K / 397.279	- / -	2,839,091 / 5.998	- / -	- / -	- / -
P-5	E07100 / CTG CAL .50 BALL M33 LINK [A555]	P-5a	A		130,875K / 260.658	4,739,791 / 10.706	4,712,152 / 10.450	1,087,893 / 2.380	- / -	1,087,893 / 2.380
P-5	E07200 / CTG CAL .50 4 BALL/1 TRACER W/M9 LINK [A557]	P-5a, P-21	A		- / 1,205.062	8,714,400 / 20.769	17,648,391 / 41.599	25,452,892 / 58.132	57,985 / 0.121	25,510,877 / 58.253
P-5	E07302 / CTG CAL .50 BLANK M1A1 LKD W/M9 LINK F/M [A598]		A		- / 110.353	1,803,846 / 2.199	1,519,510 / 2.253	1,568,977 / 2.325	- / -	1,568,977 / 2.325
P-40	Total Gross/Weapon System Cost				- / 1,973.352	- / 33.674	- / 60.300	- / 62.837	- / 0.121	- / 62.958

*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 2018 Base Budget supports critical Army Title 10 war reserve/operational, training, and test requirements IAW DoD Instruction 3000.04 (Munitions Requirements Process) and AR 5-13 (Total Army Munitions Requirements Process and Prioritization System). War reserve requirements support OSD-approved Combatant Commander Operational Plans, Homeland Defense, and other OSD-directed missions. Training requirements support individual and collective training of Active and Reserve Component forces at Army schools, home station, and the combined training centers. Test requirements support the development, fielding, safety, and quality assurance of Army munitions and equipment throughout their life-cycle.

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.

The FY 2018 Base procurement dollars in the amount of \$62.837 million supports procurement of 28.110 million cartridges.
The FY 2018 OCO dollars in the amount of \$0.121 million supports procurement of .058 million .50 caliber Cartridge, Ball M33 and Cartridge, Tracer M17 linked Cartridges.

(E06903) CTG .50 Caliber M8/M20 Tracer, Armor Piercing Incendiary (API) linked 4 to 1 in a 100 round belt with the M9 link, This is a training standard item used in training and combat. The procurement supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals.
Type classification date: M8 1944, M17 1950, M20 1953

(E07100) CTG .50 Caliber Cartridge Ball M33 is linked in 100 round belts with the M9 link. This is a training standard item used in training and combat. The FY 2018 request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$2.380 million supports the procurement of 1.088 million of the Ball M33 Link Cartridges.
Type classification date: 1951

(E07200) CTG .50 Caliber Cartridge, Ball M33 and Cartridge, Tracer M17 linked 4 to 1 in a 100 round belt with the M9 link. This is a training standard item used in training and combat. The FY 2018 request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$58.132 million supports the procurement of 25.453 million .50 Caliber Cartridge, Ball M33 and Cartridge, Tracer M17 linked Cartridges. The FY 2018 OCO includes \$0.121 million to support the COCOM requirement for unit equipment sets to deter potential adversaries and support the European Reassurance Initiative. The FY 2018 ERI OCO supports the procurement of .058 million .50 caliber Cartridge, Ball M33 and Cartridge, Tracer M17 linked Cartridges.
Type classification date: 1968

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 30: Small/ Medium Cal Ammunition		P-1 Line Item Number / Title: E08000 / CTG, .50 Cal, All Types
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>(E07302) CTG .50 Caliber Blank Cartridge, M1A1 linked with the M9 link. This is a training unique item not used in combat. The FY 2018 request supports annual training and builds a depot level in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$2.325 million supports the procurement of 1.569 million .50 Caliber Blank Cartridge, M1A1 Cartridges. Type classification date: 1980</p>		

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: E08000 / CTG, .50 Cal, All Types	Item Number / Title [DODIC]: E06903 / CTG CAL .50 LINKED 4 API M8/1 TRACER M17 w/M9 LINK [A576]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity <i>(Units in Each)</i>	144,113K	-	2,839,091	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	397.279	-	5.998	-	-	-
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	397.279	-	5.998	-	-	-
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	397.279	-	5.998	-	-	-

(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 Dollars)</i>	2.76	-	2.11	-	-	-

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP) ^(†)	2.74	144,113K	394.868	-	-	-	1.98	2,839,091	5.621	-	-	-	-	-	-	-	-	-
BOX METAL M2A2 ^(†)	-	-	-	-	-	-	13.06	28,836	0.377	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	394.868	-	-	-	-	-	5.998	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware Cost</i>	-	-	394.868	-	-	-	-	-	5.998	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	2.411	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	2.411	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	2.76	144,113K	397.279	-	-	-	2.11	2,839,091	5.998	-	-	-	-	-	-	-	-	-

^(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30			P-1 Line Item Number / Title: E08000 / CTG, .50 Cal, All Types					Item Number / Title [DODIC]: E06903 / CTG CAL .50 LINKED 4 API M8/1 TRACER M17 w/M9 LINK [A576]				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
LOAD, ASSEMBLE, PACK (LAP)		2017	ALLIANT TECHSYSTEMS (LCAAP) / INDEPENDENCE, MO	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2017	Mar 2018	2,839,091	1.98	Y		
BOX METAL M2A2		2017	BWAY CORPORATION / ATLANTA, GA	C / FFP	ROCK ISLAND ARSENAL, IL	May 2017	Jul 2017	28,836	13.06	Y		

Remarks:
FY 2017 LAP IS A DELIVERY ORDER TO THE EXISTING CONTRACT.

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30		P-1 Line Item Number / Title: E08000 / CTG, .50 Cal, All Types
		Item Number / Title [DODIC]: E07100 / CTG CAL .50 BALL M33 LINK [A555]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	130,875K	4,739,791	4,712,152	1,087,893	-	1,087,893
Gross/Weapon System Cost (\$ in Millions)	260.658	10.706	10.450	2.380	-	2.380
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	260.658	10.706	10.450	2.380	-	2.380
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	260.658	10.706	10.450	2.380	-	2.380

(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 Dollars)	1.99	2.26	2.22	2.19	-	2.19

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP) ^(†)	1.99	128,088K	254.895	2.10	4,739,791	9.954	1.90	4,712,152	8.953	1.86	1,087,893	2.023	-	-	-	1.86	1,087,893	2.023
BOX METAL M2A2 ^(†)	10.87	48,271	0.525	10.93	48,346	0.528	13.06	48,064	0.628	13.67	10,933	0.149	-	-	-	13.67	10,933	0.149
<i>Subtotal: Recurring Cost</i>	-	-	255.420	-	-	10.482	-	-	9.581	-	-	2.173	-	-	-	-	-	2.173
<i>Subtotal: Hardware Cost</i>	-	-	255.420	-	-	10.482	-	-	9.581	-	-	2.173	-	-	-	-	-	2.173
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	0.004	-	-	0.010	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	-	-	-	0.004	-	-	0.010	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	5.234	-	-	0.218	-	-	0.856	-	-	0.205	-	-	-	-	-	0.205
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	5.234	-	-	0.218	-	-	0.856	-	-	0.205	-	-	-	-	-	0.205
Support - Quality Assurance Cost																		
Quality Assurance	-	-	0.003	-	-	0.002	-	-	0.003	-	-	0.002	-	-	-	-	-	0.002
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	0.003	-	-	0.002	-	-	0.003	-	-	0.002	-	-	-	-	-	0.002
Gross/Weapon System Cost	1.99	130,875K	260.658	2.26	4,739,791	10.706	2.22	4,712,152	10.450	2.19	1,087,893	2.380	-	-	-	2.19	1,087,893	2.380

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: E08000 / CTG, .50 Cal, All Types	Item Number / Title [DODIC]: E07100 / CTG CAL .50 BALL M33 LINK [A555]
ID Code (A=Service Ready, B=Not Service Ready) : A		MDAP/MAIS Code:

(†) indicates the presence of a P-5a

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: FY 2018 Army								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30			P-1 Line Item Number / Title: E08000 / CTG, .50 Cal, All Types					Item Number / Title [DODIC]: E07100 / CTG CAL .50 BALL M33 LINK [A555]				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
LOAD, ASSEMBLE, PACK (LAP)		2016	OLIN CORP WINCHESTER DIVISION / EAST ALTON, IL	C / FFP	ROCK ISLAND ARSENAL, IL	Feb 2016	Oct 2017	3,460,047	2.10	Y		
LOAD, ASSEMBLE, PACK (LAP)		2016	ALLIANT TECHSYSTEMS (LCAAP) / INDEPENDENCE, MO	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2016	Apr 2017	1,279,744	2.10	Y		
LOAD, ASSEMBLE, PACK (LAP)		2017	OLIN CORP WINCHESTER DIVISION / EAST ALTON, IL	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2017	Mar 2018	471,215	1.90	Y		
LOAD, ASSEMBLE, PACK (LAP)		2017	ALLIANT TECHSYSTEMS (LCAAP) / INDEPENDENCE, MO	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2017	Mar 2018	4,240,937	1.90	Y		
LOAD, ASSEMBLE, PACK (LAP)		2018	OLIN CORP WINCHESTER DIVISION / EAST ALTON, IL	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2018	Mar 2019	108,789	1.86	Y		
LOAD, ASSEMBLE, PACK (LAP)		2018	ALLIANT TECHSYSTEMS (LCAAP) / INDEPENDENCE, MO	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2018	Mar 2019	979,104	1.86	Y		
BOX METAL M2A2		2016	BWAY CORPORATION / ATLANTA, GA	C / FFP	ROCK ISLAND ARSENAL, IL	Jul 2016	Sep 2016	48,346	10.93	Y		
BOX METAL M2A2		2017	BWAY CORPORATION / ATLANTA, GA	C / FFP	ROCK ISLAND ARSENAL, IL	May 2017	Jul 2017	48,064	13.06	Y		
BOX METAL M2A2		2018	BWAY CORPORATION / ATLANTA, GA	C / FFP	ROCK ISLAND ARSENAL, IL	May 2018	Jul 2018	10,933	13.67	Y		

Remarks:
 FY 2016, FY 2017 AND FY 2018 LAP IS A DELIVERY ORDER TO THE EXISTING CONTRACTS. FY 2016, FY 2017 AND FY 2018 LAP IS AN AVERAGE UNIT COST BETWEEN TWO CONTRACTORS.

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: E08000 / CTG, .50 Cal, All Types	Item Number / Title [DODIC]: E07200 / CTG CAL .50 4 BALL/1 TRACER W/M9 LINK [A557]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	8,714,400	17,648,391	25,452,892	57,985	25,510,877
Gross/Weapon System Cost (\$ in Millions)	1,205.062	20.769	41.599	58.132	0.121	58.253
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	1,205.062	20.769	41.599	58.132	0.121	58.253
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	1,205.062	20.769	41.599	58.132	0.121	58.253

(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 Dollars)	-	2.38	2.36	2.28	2.09	2.28

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP) ^(†)	2.15	546,466K	1,174.902	1.93	8,714,400	16.819	1.99	17,648,391	35.120	1.95	25,452,892	49.633	1.95	57,985	0.113	1.95	25,510,877	49.746
BOX METAL M2A2 ^(†)	10.87	212,806	2.313	10.93	87,144	0.952	13.06	149,562	1.953	13.67	255,801	3.497	13.67	580	0.008	13.67	256,381	3.505
<i>Subtotal: Recurring Cost</i>	-	-	1,177.215	-	-	17.771	-	-	37.074	-	-	53.130	-	-	0.121	-	-	53.251
<i>Subtotal: Hardware Cost</i>	-	-	1,177.215	-	-	17.771	-	-	37.074	-	-	53.130	-	-	0.121	-	-	53.251
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	0.263	-	-	0.212	-	-	0.196	-	-	0.178	-	-	-	-	-	0.178
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	0.263	-	-	0.212	-	-	0.196	-	-	0.178	-	-	-	-	-	0.178
Support - Product Improvement Cost																		
Safety	-	-	-	-	-	0.804	-	-	-	-	-	-	-	-	-	-	-	-
Environmental Initiatives	-	-	0.105	-	-	-	-	-	0.567	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Product Improvement Cost</i>	-	-	0.105	-	-	0.804	-	-	0.567	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	27.432	-	-	1.975	-	-	3.753	-	-	4.814	-	-	-	-	-	4.814
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	27.432	-	-	1.975	-	-	3.753	-	-	4.814	-	-	-	-	-	4.814
Support - Quality Assurance Cost																		
Quality Assurance	-	-	0.047	-	-	0.007	-	-	0.010	-	-	0.010	-	-	-	-	-	0.010

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: E08000 / CTG, .50 Cal, All Types	Item Number / Title [DODIC]: E07200 / CTG CAL .50 4 BALL/1 TRACER W/M9 LINK [A557]
ID Code (A=Service Ready, B=Not Service Ready) : A		MDAP/MAIS Code:

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	0.047	-	-	0.007	-	-	0.010	-	-	0.010	-	-	-	-	-	0.010
Gross/Weapon System Cost	-	-	1,205.062	2.38	8,714,400	20.769	2.36	17,648,391	41.599	2.28	25,452,892	58.132	2.09	57,985	0.121	2.28	25,510,877	58.253

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

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30			P-1 Line Item Number / Title: E08000 / CTG, .50 Cal, All Types				Item Number / Title [DODIC]: E07200 / CTG CAL .50 4 BALL/1 TRACER W/M9 LINK [A557]					

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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
LOAD, ASSEMBLE, PACK (LAP) ^(†)		2016	OLIN CORP WINCHESTER DIVISION / EAST ALTON, IL	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2016	Mar 2017	871,440	2.77	Y		
LOAD, ASSEMBLE, PACK (LAP) ^(†)		2016	ALLIANT TECHSYSTEMS (LCAAP) / INDEPENDENCE, MO	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2016	Mar 2017	7,842,960	1.93	Y		
LOAD, ASSEMBLE, PACK (LAP) ^(†)		2017	OLIN CORP WINCHESTER DIVISION / EAST ALTON, IL	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2017	Mar 2018	1,764,839	1.99	Y		
LOAD, ASSEMBLE, PACK (LAP) ^(†)		2017	ALLIANT TECHSYSTEMS (LCAAP) / INDEPENDENCE, MO	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2017	Mar 2018	15,883,552	1.99	Y		
LOAD, ASSEMBLE, PACK (LAP) ^(†)		2018	OLIN CORP WINCHESTER DIVISION / EAST ALTON, IL	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2018	Mar 2019	2,551,088	1.95	Y		
LOAD, ASSEMBLE, PACK (LAP) ^(†)		2018	ALLIANT TECHSYSTEMS (LCAAP) / INDEPENDENCE, MO	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2018	Mar 2019	22,959,789	1.95	Y		
BOX METAL M2A2		2016	BWAY CORPORATION / ATLANTA, GA	C / FFP	ROCK ISLAND ARSENAL, IL	Jul 2016	Sep 2016	87,144	10.93	Y		
BOX METAL M2A2		2017	BWAY CORPORATION / ATLANTA, GA	C / FFP	ROCK ISLAND ARSENAL, IL	May 2017	Jul 2017	149,562	13.06	Y		
BOX METAL M2A2		2018	BWAY CORPORATION / ATLANTA, GA	C / FFP	ROCK ISLAND ARSENAL, IL	May 2018	Jul 2018	256,381	13.67	Y		

(†) indicates the presence of a P-21

Remarks:
FY 2016, FY 2017 AND FY 2018 LAP IS A DELIVERY ORDER TO THE EXISTING CONTRACT. FY 2016, FY 2017 AND FY 2018 LAP IS AN AVERAGE UNIT COST BETWEEN TWO CONTRACTORS.

UNCLASSIFIED

Exhibit P-21, Production Schedule: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30		P-1 Line Item Number / Title: E08000 / CTG, .50 Cal, All Types
		Item Number / Title [DODIC]: E07200 / CTG CAL .50 4 BALL/1 TRACER W/M9 LINK [A557]

Cost Elements <small>(Units in Millions, * = < 500)</small>							Fiscal Year 2016														Fiscal Year 2017														BALANCE			
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016														Calendar Year 2017																	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P								
LOAD, ASSEMBLE, PACK (LAP)																																						
Prior Years Deliveries: 546465973																																						
1	2016	ARMY		.871	.000	.871							A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.073	.073	.073	.073	.073	.073	.073	.073	.363	
2	2016	ARMY		7.843	.000	7.843							A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.654	.654	.654	.654	.654	.654	.654	.654	3.268
2	2016	NSOF (+)		.779	.000	.779							A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.065	.065	.065	.065	.065	.065	.065	.065	.325	
2	2016	AF (+)		1.455	.000	1.455							A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.121	.121	.121	.121	.121	.121	.121	.121	.606	
2	2016	CG (+)		.200	.000	.200							A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.017	.183		
2	2016	NAVSEA (+)		4.936	.000	4.936							A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.411	.411	.411	.411	.411	.411	.411	.411	2.057	
2	2016	Total		15.214	.000	15.214							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.251	1.251	1.251	1.251	1.251	1.251	1.251	1.268	6.439	
1	2017	ARMY		1.765	.000	1.765																						A	-	-	-	-	-	-	-	1.765		
1	2017	CG (+)		.025	.000	.025																						A	-	-	-	-	-	-	-	.025		
1	2017	NAVSEA (+)		.361	.000	.361																						A	-	-	-	-	-	-	-	.361		
1	2017	Total		2.151	.000	2.151																						-	-	-	-	-	-	-	-	2.151		
2	2017	ARMY		15.884	.000	15.884																						A	-	-	-	-	-	-	-	15.884		
2	2017	CG (+)		.225	.000	.225																						A	-	-	-	-	-	-	-	.225		
2	2017	NAVSEA (+)		3.285	.000	3.285																						A	-	-	-	-	-	-	-	3.285		
2	2017	Total		19.394	.000	19.394																						-	-	-	-	-	-	-	-	19.394		
1	2018	ARMY		2.551	.000	2.551																														2.551		
1	2018	NSOF (+)		.050	.000	.050																														.050		
1	2018	AF (+)		.092	.000	.092																														.092		
1	2018	CG (+)		.030	.000	.030																														.030		
1	2018	NAVSEA (+)		.522	.000	.522																														.522		
1	2018	Total		3.245	.000	3.245																														3.245		
2	2018	ARMY		22.960	.000	22.960																														22.960		
2	2018	NSOF (+)		.450	.000	.450																														.450		
2	2018	AF (+)		.831	.000	.831																														.831		

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Exhibit P-21, Production Schedule: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30		P-1 Line Item Number / Title: E08000 / CTG, .50 Cal, All Types
		Item Number / Title [DODIC]: E07200 / CTG CAL .50 4 BALL/1 TRACER W/M9 LINK [A557]

Cost Elements <i>(Units in Millions, * = < 500)</i>						Fiscal Year 2016												Fiscal Year 2017												BALANCE				
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016												Calendar Year 2017															
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P			
	2	2018	CG (#)	.270	.000	.270																												.270
	2	2018	NAVSEA (#)	4.696	.000	4.696																												4.696
	2	2018	Total	29.207	.000	29.207																												29.207

UNCLASSIFIED

Exhibit P-21, Production Schedule: FY 2018 Army															Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30										P-1 Line Item Number / Title: E08000 / CTG, .50 Cal, All Types										Item Number / Title [DODIC]: E07200 / CTG CAL .50 4 BALL/1 TRACER W/M9 LINK [A557]									

Cost Elements <i>(Units in Millions, * = < 500)</i>				Fiscal Year 2018													Fiscal Year 2019													BALANCE					
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018													Calendar Year 2019															
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P				
LOAD, ASSEMBLE, PACK (LAP)																																			
Prior Years Deliveries: 546465973																																			
1	2016	ARMY		.871	.508	.363	.073	.073	.073	.073	.073																								.000
2	2016	ARMY		7.843	4.575	3.268	.654	.654	.654	.654	.654	-	-	-	-	-	-																		.000
2	2016	NSOF (+)		.779	.455	.325	.065	.065	.065	.065	.065	-	-	-	-	-	-																	.000	
2	2016	AF (+)		1.455	.849	.606	.121	.121	.121	.121	.121	-	-	-	-	-	-																	.000	
2	2016	CG (+)		.200	.017	.183	.017	.017	.017	.017	.017	.017	.017	.017	.017	.017	.017																	.000	
2	2016	NAVSEA (+)		4.936	2.879	2.057	.411	.411	.411	.411	.411	-	-	-	-	-	-																	.000	
2	2016	Total		15.214	8.775	6.439	1.268	1.268	1.268	1.268	1.268	.017	.017	.017	.017	.017	.017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.000	
1	2017	ARMY		1.765	.000	1.765	-	-	-	-	-	.147	.147	.147	.147	.147	.147	.147	.147	.147	.147	.147	.147											.000	
1	2017	CG (+)		.025	.000	.025	-	-	-	-	-	.025	-	-	-	-	-	-	-	-	-	-	-											.000	
1	2017	NAVSEA (+)		.361	.000	.361	-	-	-	-	-	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030											.000	
1	2017	Total		2.151	.000	2.151	-	-	-	-	-	.202	.177	.177	.177	.177	.177	.177	.177	.177	.177	.177	.177	-	-	-	-	-	-	-	-	-	.000		
2	2017	ARMY		15.884	.000	15.884	-	-	-	-	-	1.324	1.324	1.324	1.324	1.324	1.324	1.324	1.324	1.324	1.324	1.324	1.324											.000	
2	2017	CG (+)		.225	.000	.225	.019	.019	.019	.019	.019	.019	.019	.019	.019	.019	.019	.019	-	-	-	-	-											.000	
2	2017	NAVSEA (+)		3.285	.000	3.285	.274	.274	.274	.274	.274	.274	.274	.274	.274	.274	.274	.274	-	-	-	-	-											.000	
2	2017	Total		19.394	.000	19.394	.292	.292	.292	.292	.292	1.616	1.616	1.616	1.616	1.616	1.616	1.616	1.324	1.324	1.324	1.324	1.324	-	-	-	-	-	-	-	-	-	.000		
1	2018	ARMY		2.551	.000	2.551						A -	-	-	-	-	-	-	-	-	-	-	-	.213	.213	.213	.213	.213	.213	.213	.213		1.063		
1	2018	NSOF (+)		.050	.000	.050						A -	-	-	-	-	-	-	-	-	-	-	-	.004	.004	.004	.004	.004	.004	.004	.004		.021		
1	2018	AF (+)		.092	.000	.092						A -	-	-	-	-	-	-	-	-	-	-	-	.008	.008	.008	.008	.008	.008	.008	.008		.038		
1	2018	CG (+)		.030	.000	.030						A -	-	-	-	-	-	-	-	-	-	-	-	.002	.002	.002	.002	.002	.002	.002	.002		.012		
1	2018	NAVSEA (+)		.522	.000	.522						A -	-	-	-	-	-	-	-	-	-	-	.043	.043	.043	.043	.043	.043	.043	.043		.217			
1	2018	Total		3.245	.000	3.245						-	-	-	-	-	-	-	-	-	-	-	.270	.270	.270	.270	.270	.270	.270	.270		1.352			
2	2018	ARMY		22.960	.000	22.960						A -	-	-	-	-	-	-	-	-	-	-	-	1.913	1.913	1.913	1.913	1.913	1.913	1.913	1.913		9.567		
2	2018	NSOF (+)		.450	.000	.450						A -	-	-	-	-	-	-	-	-	-	-	-	.038	.038	.038	.038	.038	.038	.038	.038		.188		
2	2018	AF (+)		.831	.000	.831						A -	-	-	-	-	-	-	-	-	-	-	-	.069	.069	.069	.069	.069	.069	.069	.069		.346		
												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: FY 2018 Army					Date: May 2017							
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30			P-1 Line Item Number / Title: E08000 / CTG, .50 Cal, All Types					Item Number / Title [DODIC]: E07200 / CTG CAL .50 4 BALL/1 TRACER W/M9 LINK [A557]				

Cost Elements <i>(Units in Millions, * = < 500)</i>							Fiscal Year 2018											Fiscal Year 2019											BALANCE							
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018											Calendar Year 2019																		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L		A U G	S E P					
	2	2018	CG (#)	.270	.000	.270																														.112
	2	2018	NAVSEA (#)	4.696	.000	4.696																														1.957
	2	2018	Total	29.207	.000	29.207																														12.170

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Exhibit P-21, Production Schedule: FY 2018 Army													Date: May 2017																		
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30						P-1 Line Item Number / Title: E08000 / CTG, .50 Cal, All Types													Item Number / Title [DODIC]: E07200 / CTG CAL .50 4 BALL/1 TRACER W/M9 LINK [A557]												

Cost Elements <i>(Units in Millions, * = < 500)</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	ACCEP T P R I O R T O 1 O C T 2 0 1 9	BAL D U E A S O F 1 O C T	Calendar Year 2020													Calendar Year 2021													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
LOAD, ASSEMBLE, PACK (LAP)																																	
Prior Years Deliveries: 546465973																																	
	1	2016	ARMY	.871	.871	.000																								.000			
	2	2016	ARMY	7.843	7.843	.000																								.000			
	2	2016	NSOF (+)	.779	.779	.000																								.000			
	2	2016	AF (+)	1.455	1.455	.000																								.000			
	2	2016	CG (+)	.200	.200	.000																								.000			
	2	2016	NAVSEA (+)	4.936	4.936	.000																								.000			
	2	2016	Total	15.214	15.214	.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.000			
	1	2017	ARMY	1.765	1.765	.000																								.000			
	1	2017	CG (+)	.025	.025	.000																								.000			
	1	2017	NAVSEA (+)	.361	.361	.000																								.000			
	1	2017	Total	2.151	2.151	.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.000			
	2	2017	ARMY	15.884	15.884	.000																								.000			
	2	2017	CG (+)	.225	.225	.000																								.000			
	2	2017	NAVSEA (+)	3.285	3.285	.000																								.000			
	2	2017	Total	19.394	19.394	.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.000			
	1	2018	ARMY	2.551	1.488	1.063	.213	.213	.213	.213	.213																				.000		
	1	2018	NSOF (+)	.050	.029	.021	.004	.004	.004	.004	.004																				.000		
	1	2018	AF (+)	.092	.054	.038	.008	.008	.008	.008	.008																				.000		
	1	2018	CG (+)	.030	.018	.012	.002	.002	.002	.002	.002																				.000		
	1	2018	NAVSEA (+)	.522	.304	.217	.043	.043	.043	.043	.043																				.000		
	1	2018	Total	3.245	1.893	1.352	.270	.270	.270	.270	.270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.000			
	2	2018	ARMY	22.960	13.393	9.567	1.913	1.913	1.913	1.913	1.913																				.000		
	2	2018	NSOF (+)	.450	.262	.188	.038	.038	.038	.038	.038																				.000		
	2	2018	AF (+)	.831	.485	.346	.069	.069	.069	.069	.069																				.000		
							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: FY 2018 Army																		Date: May 2017													
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30												P-1 Line Item Number / Title: E08000 / CTG, .50 Cal, All Types										Item Number / Title [DODIC]: E07200 / CTG CAL .50 4 BALL/1 TRACER W/M9 LINK [A557]									

Cost Elements (Units in Millions, * = < 500)					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				
2	2018		CG (#)	.270	.158	.112	.022	.022	.022	.022	.022																							
2	2018		NAVSEA (#)	4.696	2.739	1.957	.391	.391	.391	.391	.391																						.000	
2	2018		Total	29.207	17.038	12.170	2.434	2.434	2.434	2.434	2.434	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.000		

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Exhibit P-21, Production Schedule: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30		P-1 Line Item Number / Title: E08000 / CTG, .50 Cal, All Types
		Item Number / Title [DODIC]: E07200 / CTG CAL .50 4 BALL/1 TRACER W/M9 LINK [A557]

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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	OLIN CORP WINCHESTER DIVISION - EAST ALTON, IL	200	400,000	1,200,000	6	6	12	18	6	6	12	18
2	ALLIANT TECHSYSTEMS (LCAAP) - INDEPENDENCE, MO	200	1,670,000	5,000,000	6	6	12	18	6	6	12	18

(†) 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: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30		P-1 Line Item Number / Title: E08000 / CTG, .50 Cal, All Types
		Item Number / Title [DODIC]: E07302 / CTG CAL .50 BLANK M1A1 LKD W/M9 LINK F/M [A598]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (<i>Units in Each</i>)	-	1,803,846	1,519,510	1,568,977	-	1,568,977
Gross/Weapon System Cost (<i>\$ in Millions</i>)	110.353	2.199	2.253	2.325	-	2.325
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	110.353	2.199	2.253	2.325	-	2.325
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	110.353	2.199	2.253	2.325	-	2.325

(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 Dollars</i>)	-	1.22	1.48	1.48	-	1.48

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP)	1.02	107,610K	109.762	0.99	1,803,846	1.786	1.20	1,519,510	1.823	1.19	1,568,977	1.867	-	-	-	1.19	1,568,977	1.867
BOX METAL M2A2	-	-	-	10.93	18,399	0.201	13.06	15,499	0.202	13.67	15,768	0.216	-	-	-	13.67	15,768	0.216
<i>Subtotal: Recurring Cost</i>	-	-	<i>109.762</i>	-	-	<i>1.987</i>	-	-	<i>2.026</i>	-	-	<i>2.083</i>	-	-	-	-	-	<i>2.083</i>
<i>Subtotal: Hardware Cost</i>	-	-	<i>109.762</i>	-	-	<i>1.987</i>	-	-	<i>2.026</i>	-	-	<i>2.083</i>	-	-	-	-	-	<i>2.083</i>
Support - Production Engineering Cost																		
Production Engineering	-	-	0.591	-	-	0.212	-	-	0.225	-	-	0.240	-	-	-	-	-	0.240
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	<i>0.591</i>	-	-	<i>0.212</i>	-	-	<i>0.225</i>	-	-	<i>0.240</i>	-	-	-	-	-	<i>0.240</i>
Support - Quality Assurance Cost																		
Quality Assurance	-	-	-	-	-	-	-	-	0.002	-	-	0.002	-	-	-	-	-	0.002
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	-	-	-	-	-	-	<i>0.002</i>	-	-	<i>0.002</i>	-	-	-	-	-	<i>0.002</i>
Gross/Weapon System Cost	-	-	110.353	1.22	1,803,846	2.199	1.48	1,519,510	2.253	1.48	1,568,977	2.325	-	-	-	1.48	1,568,977	2.325

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 30: Small/ Medium Cal Ammunition	P-1 Line Item Number / Title: E08900 / CTG, 20mm, All Types
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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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	103.061	-	36.077	8.208	1.605	9.813	8.426	8.640	8.856	9.072	-	183.945
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	103.061	-	36.077	8.208	1.605	9.813	8.426	8.640	8.856	9.072	-	183.945
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	103.061	-	36.077	8.208	1.605	9.813	8.426	8.640	8.856	9.072	-	183.945

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

Description:

This budget line includes 20MM ALL TYPES:

(E08909) The 20MM Multi-Purpose Tracer - Self-Destruct (MPT-SD), M940 w/MK7 cartridge is an improved, fuzeless, pyrotechnically initiated 20mm High Explosive cartridge. The projectile consists of a heavy walled steel body charged with an explosive mix and an incendiary mix. The M940 is currently being employed as a force protection munition in the M61 cannon of the Land Based Phalanx Weapon System (LPWS) for Counter-Rocket, Artillery and Mortar (C-RAM). It is effective against light armor at 1,000 meters and against airborne and light surface targets at 2,000 meters. The projectile self-destructs at 2,300 meters, minimizing collateral surface damage when engaging airborne targets. The M940 replaced the M246 High Explosive Incendiary-Tracer, Self-Destroying (HEI-T-SD) as the primary air defense cartridge. This item is Code A, approved for service use.

Justification:

FY 2018 Base Budget supports critical Army Title 10, United States Code, war reserve/operational, training, and test requirements IAW DoD Instruction 3000.04 (Munitions Requirements Process) and AR 5-13 (Total Army Munitions Requirements Process and Prioritization System). War reserve requirements support OSD-approved Combatant Commander Operational Plans, Homeland Defense, and other OSD-directed missions. Training requirements support individual and collective training of Active and Reserve Component forces at Army schools, home station, and the combined training centers. Test requirements support the development, fielding, safety, and quality assurance of Army munitions and equipment throughout their life-cycle.

FY 2018 OCO funds are required to replenish munitions expended in combat operations in OFS-Afghanistan theater and supports procurement of critical Army munitions consumed in support of Operation Inherent Resolve for ISIL.

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.

The FY 2018 Base procurement dollars in the amount of \$8.208 million supports the procurement of .202 million M940 cartridges.

The FY 2018 OCO procurement dollars in the amount of \$1.605 million supports the procurement of .045 million M940 cartridges.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 30: Small/ Medium Cal Ammunition		P-1 Line Item Number / Title: E08900 / CTG, 20mm, All Types
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>(E08909) The 20MM Multi-Purpose Tracer - Self-Destruct (MPT-SD) cartridge is a training standard item used in both training and combat. The FY 2018 request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. The FY 2018 Base procurement dollars in the amount of \$8.208 million supports the procurement of .202 million M940 cartridges. The FY 2018 OCO procurement dollars in the amount of \$1.605 million supports the procurement of .045 million M940 cartridges.</p>		
TYPE CLASSIFICATION DATE: 1989		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 30: Small/
Medium Cal Ammunition **P-1 Line Item Number / Title:**
E08200 / CTG, 25MM, All Types

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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	703.907	8.305	36.287	8.640	-	8.640	8.813	8.989	9.200	9.352	-	793.493
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	703.907	8.305	36.287	8.640	-	8.640	8.813	8.989	9.200	9.352	-	793.493
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	703.907	8.305	36.287	8.640	-	8.640	8.813	8.989	9.200	9.352	-	793.493

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

Description:

This budget line includes 25MM ALL TYPES:

(E08203) 25MM M793 Target Practice - Tracer Cartridge is a ballistically matched training round that simulates the M792 25mm High Explosive Incendiary - Tracer Cartridge and the MK210 High Explosive Incendiary - Tracer Cartridge. The M793 supports gunnery training for the Army's Bradley Fighting Vehicles, the United States Marine Corps Light Armored Vehicles, and the Navy's MK38 Deck Gun. The M793 is a percussion primed round. It is packed for the Army and USMC in linked belts of 30 cartridges and packed into the PA125 Container. It is packed for the Navy in linked belts of 55 cartridges in the CNU405 Container. The M28 metal link is used to belt M793 cartridges. This item is Code A, approved for service use.

(E92500) 25MM XM1083 High Explosive Air Burst (HEAB)The 25MM High Explosive Air Burst (HEAB), XM1083 is a programmable ammunition that is fired from the Individual Counter Defilade Weapon System. The XM1083 HEAB features a mid body fuze with front and aft warheads that can be programmed to airburst at a designated range to defeat defilade targets. The Individual Counter Defilade Weapon System dramatically increases lethality, range, and capability through the use of a family of low-velocity 25mm ammunition. This item is code B, not approved for service use.

(E08201) 25mm HEI-T M792 is a High Explosive Incendiary Tracer (HEI-T) cartridge, fired from the M242 Bushmaster automatic cannon mounted on the Army's Bradley Fighting Vehicles (BFV) and the United States Marine Corps Light Armored Vehicles. The M792 provides lethality against structures and vehicles. The defeat mechanism of the M792 is an explosively loaded, naturally fragmenting warhead with incendiary charge. This item is Code A, approved for service use.

Justification:

FY 2018 Base Budget supports critical Army Title 10, United States Code, war reserve/operational, training, and test requirements IAW DoD Instruction 3000.04 (Munitions Requirements Process) and AR 5-13 (Total Army Munitions Requirements Process and Prioritization System). War reserve requirements support OSD-approved Combatant Commander Operational Plans, Homeland Defense, and other OSD-directed missions. Training requirements support individual and collective training of Active and Reserve Component forces at Army schools, home station, and the combined training centers. Test requirements support the development, fielding, safety, and quality assurance of Army munitions and equipment throughout their life-cycle.

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

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 30: Small/ Medium Cal Ammunition		P-1 Line Item Number / Title: E08200 / CTG, 25MM, All Types
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>FY 2018 Base procurement dollars in the amount of \$8,640 million supports the procurement of .241 million 25mm cartridges.</p> <p>(E08203) CTG 25MM TP-T M793 - This is a training unique item not used in combat. The FY 2018 procurement supports annual training and builds a depot level in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$8.640 million supports the procurement of .241 million M793 cartridges.</p> <p>Type Classification Date: 1979</p> <p>(E08201) 25mm HEI-T M792 This is a war reserve item used in combat. The request builds a war reserve inventory in accordance with the Army's procurement goals.</p> <p>Type Classification Date: 1979</p> <p>(E92500) The 25mm XM1083 High Explosive Air Burst (HEAB) This is a war reserve item used in combat. The request builds a war reserve inventory in accordance with the Army's procurement goals.</p> <p>Type Classification Date: Pending</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 30: Small/ Medium Cal Ammunition	P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES
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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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,295.696	33.130	75.200	76.850	35.000	111.850	82.400	77.028	78.920	81.197	-	1,835.421
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,295.696	33.130	75.200	76.850	35.000	111.850	82.400	77.028	78.920	81.197	-	1,835.421
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,295.696	33.130	75.200	76.850	35.000	111.850	82.400	77.028	78.920	81.197	-	1,835.421

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

Description:

This budget line includes 30MM ALL TYPES:

(E06000) 30mm M848 is an inert training device. It physically mimics the M788 and M789 cartridges. It is used for training of proper handling and loading of ammunition and for non-firing system training and checkout of the 30mm M230 weapon prior to exposing soldiers to live ammunition. This item is Code A, approved for service use.

(E09900) 30mm M789 High Explosive Dual Purpose Cartridge is the only qualified combat cartridge for use in the Apache Helicopter's M230 Chain Gun. It is also used by SOCOM, fired from the MH-60 Blackhawk helicopter. The M789 cartridge consists of a projectile containing explosive, a shaped charge liner, a M759 point-detonating fuze, aluminum cartridge case, propellant and a PA520 electric primer. The shaped charge allows the M789 to defeat light armor, and the steel projectile body provides an anti-personnel capability. M789 cartridges are packed in Bulk Ammunition Strips (BAS), 110 cartridges per M592 container. This item is Code A, approved for service use

(E10100) 30mm M788 30mm Target Practice cartridge is the only qualified training cartridge for use in the Apache and Blackhawk Helicopter's M230 Chain Gun. The M788 consists of an inert projectile, propellant utilizes a PA520 electric primer and a lightweight aluminum cartridge case. M788 cartridges are packed in Bulk Ammunition Strips (BAS), 110 cartridges per M592 container. This item is Code A, approved for service use.

(E09191) 30x173mm MK317 is a Target Practice Discarding Sabot with Tracer (TPDS-T). The MK317 cartridge consists of an inert projectile, molded plastic sabot, a pusher base, a tracer, propellant, an M36A2 percussion primer, and an aluminum cartridge case. The MK317 cartridges are packed 30 cartridges per M592 ammunition container. This item is Code B, not approved for Army use.

(E07306) 30x173mm MK239 Target Practice with Tracer (TP-T) cartridge is a Navy qualified training cartridge that is ballistically matched to the MK238 and MK266 High Explosive Incendiary with Tracer (HEI-T) cartridges. The MK239 cartridge consists of an inert projectile, a glass-reinforced nylon rotating band, a tracer, propellant, an M36A2 percussion primer, and an aluminum cartridge case. The MK239 cartridges are packed 30 cartridges per M592 ammunition container. This item is Code B, not approved for Army use.

(E09292) 30x173mm MK258 Armor Piercing Fin Stabilized Discarding Sabot with Tracer (APFSDS-T) cartridge is a Navy qualified tactical cartridge consisting of a high-density inert tungsten alloy long-rod penetrator sub-projectile held in a three-petal aluminum sabot, a plastic nose cap and obturator, a tracer, propellant, a DNAG 8235 percussion primer, and a steel cartridge case. The MK258 cartridges are packed 30 cartridges per M592 ammunition container. This item is code B, not approved for Army use.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 30: Small/ Medium Cal Ammunition		P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>(E07406) CTG MK238 High Explosive Incendiary with Tracer (HEI-T) cartridge is a Navy qualified tactical cartridge consisting of a steel projectile body assembly crimped into an aluminum cartridge case, PBXN-5 explosive, a zirconium pellet, ATK151-LD fuze, a tracer, AFP-001 propellant, and an M36A2 percussion primer. The MK238 cartridges are packed 30 cartridges per M592 container. This item is code B, not approved for Army use.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 30: Small/
Medium Cal Ammunition **P-1 Line Item Number / Title:**
ER8120 / CTG, 30MM, ALL TYPES

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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 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	E06000 / CTG 30MM DUMMY M848 [B133]		A		41,700 / 2.666	16,858 / 0.737	- / -	- / -	- / -	- / -
P-5	E07306 / CTG, 30MM, TP-T, Mk239, single	P-5a, P-21	B		- / -	- / -	55,191 / 4.000	188,780 / 11.550	56,274 / 3.000	245,054 / 14.550
P-5	E07406 / CTG, 30mm Hi Expl Incendry-T(HEI-T), Mk238	P-5a, P-21	B		- / -	- / -	124,365 / 14.200	60,281 / 8.300	55,601 / 6.000	115,882 / 14.300
P-5	E09191 / CTG, 30MM, TPFSDS-T, Mk317 (sabot trnr), single	P-5a, P-21	B		- / -	- / -	13,914 / 2.000	78,582 / 11.000	32,703 / 4.000	111,285 / 15.000
P-5	E09292 / CTG, 30MM, APFSDS-T, Mk258, single	P-5a, P-21	B		- / -	- / -	19,560 / 13.000	19,144 / 13.500	19,994 / 12.000	39,138 / 25.500
P-5	E09900 / CTG 30MM HEDP M789 [B129]	P-5a, P-21	A		1,922,419K / 950.519	100,938 / 10.033	170,138 / 20.000	68,124 / 10.000	81,741 / 10.000	149,865 / 20.000
P-5	E10100 / CTG 30MM TP M788 [B118]	P-5a, P-21	A		949,229K / 342.511	1,011,387 / 22.360	916,650 / 22.000	868,420 / 22.500	- / -	868,420 / 22.500
P-40	Total Gross/Weapon System Cost				- / 1,295.696	- / 33.130	- / 75.200	- / 76.850	- / 35.000	- / 111.850

*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 2018 Base Budget supports critical Army Title 10 war reserve/operational, training, and test requirements IAW DoD Instruction 3000.04 (Munitions Requirements Process) and AR 5-13 (Total Army Munitions Requirements Process and Prioritization System). War reserve requirements support OSD-approved Combatant Commander Operational Plans, Homeland Defense, and other OSD-directed missions. Training requirements support individual and collective training of Active and Reserve Component forces at Army schools, home station, and the combined training centers. Test requirements support the development, fielding, safety, and quality assurance of Army munitions and equipment throughout their life-cycle.

The FY 2018 OCO includes \$10.000 million to replenish munitions expended in combat operations in OFS-Afghanistan Theater. The procurement includes .082 million M789 cartridges.

The FY 2018 OCO includes \$25.000 million to support the COCOM requirement to deter potential adversaries and support the European Reassurance Initiative. The procurement includes .056 million Mk239 Cartridges, .056 million Mk238 cartridges, .033 million Mk317 cartridges, and .020 million Mk258 cartridges.

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

The FY 2018 Base procurement dollars in the amount of \$76.850 million supports the procurement of 1.283 million cartridges.
The FY 2018 OCO dollars in the amount of \$35.000 million supports the procurement of .247 million cartridges.

(E06000) CTG, 30MM DUMMY M848 - This is a training unique item not used in combat. The procurement supports annual training and builds a depot level in accordance with the Army's procurement goals.

TYPE CLASSIFICATION DATE: 1991

(E09900) CTG 30mm HEDP M789 - This is a war reserve item used in combat. The FY 2018 procurement request builds a war reserve inventory in accordance with the Army's procurement goals. The FY 2018 Base procurement dollars in the amount of \$10.000 million supports the procurement of .068 million M789 cartridges. The FY 2018 OCO dollars in the amount of \$10.000 million supports the procurement of .082 million M789 cartridges.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 30: Small/ Medium Cal Ammunition		P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES
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		
TYPE CLASSIFICATION DATE: 1962		
(E10100) CTG 30mm TP M788 - This is a training unique item not used in combat. The FY 2018 procurement request supports annual training and builds a depot level in accordance with the Army's procurement goals. FY 2018 procurement dollars in the amount of \$22.500 million supports the procurement of .868 million M788 cartridges.		
TYPE CLASSIFICATION DATE: 1982		
(E09191) CTG 30x173mm MK317 - This is a training unique item not used in combat. The FY 2018 request supports annual training and builds a depot level in accordance with the Army's procurement goals. The FY 2018 Base procurement dollars in the amount of \$11.000 million supports the procurement of .079 million Mk317 Cartridges. The FY 2018 OCO dollars in the amount of \$4.000 million supports the procurement of .033 million Mk317 cartridges.		
TYPE CLASSIFICATION DATE: PENDING		
(E07306) CTG 30x173mm MK239 - This is a training unique item not used in combat. The FY 2018 request supports annual training and builds a depot level in accordance with the Army's procurement goals. The FY 2018 Base procurement dollars in the amount of \$11.550 million supports the procurement of .189 million Mk239 cartridges. The FY 2018 OCO dollars in the amount of \$3.000 million supports the procurement of .056 million Mk239 cartridges.		
TYPE CLASSIFICATION DATE: PENDING		
(E09292) CTG 30x173mm MK258 - This is a war reserve item used in combat. The FY 2018 request builds a war reserve inventory in accordance with the Army's procurement goals. The FY 2018 Base procurement dollars in the amount of \$13.500 million supports the procurement of .019 million Mk258 cartridges. The FY 2018 OCO dollars in the amount of \$12.000 million supports the procurement of .020 million Mk258 cartridges.		
TYPE CLASSIFICATION DATE: PENDING		
(E07406) CTG 30x173mm MK238 High Explosive Incendiary with Tracer (HEI-T) - This is a war reserve item used in combat. The FY 2018 request builds a war reserve inventory in accordance with the Army's procurement goals. The FY 2018 Base procurement dollars in the amount of \$8.300 million supports the procurement of .060 million Mk238 cartridges. The FY 2018 OCO dollars in the amount of \$6.000 million supports the procurement of .056 million Mk238 cartridges.		
TYPE CLASSIFICATION DATE: PENDING		

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES	Item Number / Title [DODIC]: E06000 / CTG 30MM DUMMY M848 [B133]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	41,700	16,858	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	2.666	0.737	-	-	-	-
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	2.666	0.737	-	-	-	-
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	2.666	0.737	-	-	-	-

(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 Dollars)	63.93	43.72	-	-	-	-

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
Complete Round	57.12	41,700	2,382	33.47	16,858	0.564	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	2,382	-	-	0.564	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware Cost	-	-	2,382	-	-	0.564	-	-	-	-	-	-	-	-	-	-	-	-
Support - Acceptance Testing Cost																		
First Article Test	-	-	0.000	-	-	0.014	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	0.000	-	-	0.014	-	-	-	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	0.280	-	-	0.155	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	0.280	-	-	0.155	-	-	-	-	-	-	-	-	-	-	-	-
Support - Quality Assurance Cost																		
Quality Assurance	-	-	0.004	-	-	0.004	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	0.004	-	-	0.004	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	63.93	41,700	2.666	43.72	16,858	0.737	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES	Item Number / Title [DODIC]: E07306 / CTG, 30MM, TP-T, Mk239, single

ID Code (A=Service Ready, B=Not Service Ready) : B	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	-	55,191	188,780	56,274	245,054
Gross/Weapon System Cost (\$ in Millions)	-	-	4.000	11.550	3.000	14.550
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	-	4.000	11.550	3.000	14.550
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	-	-	4.000	11.550	3.000	14.550

(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 Dollars)	-	-	72.48	61.18	53.31	59.37

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
Complete Round ^(†)	-	-	-	-	-	-	60.00	55,191	3.311	53.31	188,780	10.064	53.31	56,274	3.000	53.31	245,054	13.064
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	3.311	-	-	10.064	-	-	3.000	-	-	13.064
Subtotal: Hardware Cost	-	-	-	-	-	-	-	-	3.311	-	-	10.064	-	-	3.000	-	-	13.064
Support - Acceptance Testing Cost																		
First Article Test	-	-	-	-	-	-	-	-	-	-	-	0.445	-	-	-	-	-	0.445
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.445	-	-	-	-	-	0.445
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	-	-	-	0.679	-	-	1.022	-	-	0.000	-	-	1.022
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	-	-	-	0.679	-	-	1.022	-	-	0.000	-	-	1.022
Support - Quality Assurance Cost																		
Quality Assurance	-	-	-	-	-	-	-	-	0.010	-	-	0.020	-	-	-	-	-	0.020
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	-	-	-	-	-	-	0.010	-	-	0.020	-	-	-	-	-	0.020
Gross/Weapon System Cost	-	-	-	-	-	-	72.48	55,191	4.000	61.18	188,780	11.550	53.31	56,274	3.000	59.37	245,054	14.550

^(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30			P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES				Item Number / Title [DODIC]: E07306 / CTG, 30MM, TP-T, Mk239, single				

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>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
Complete Round ^(†)		2017	TO BE SELECTED / TBS01	C / FFP	ROCK ISLAND ARSENAL, IL	May 2017	May 2018	55,191	60.00	Y		
Complete Round ^(†)		2018	TO BE SELECTED / TBS01	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2018	Mar 2019	245,054	53.31	Y		

^(†) indicates the presence of a P-21

Remarks:

This item is part of a combined 20mm, 25mm, 30mm contract FY 2013- FY 2018. Quantity split is determined in year of execution between two contractors: General Dynamics Ordnance and Tactical Systems, Marion, IL and Alliant Techsystems Operations, Plymouth, MN.

FY 2017 and FY 2018 Complete Round is an average unit cost of two contractors.

UNCLASSIFIED

Exhibit P-21, Production Schedule: FY 2018 Army													Date: May 2017												
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30						P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES													Item Number / Title [DODIC]: E07306 / CTG, 30MM, TP-T, Mk239, single						

Cost Elements <i>(Units in Thousands)</i>						Fiscal Year 2017												Fiscal Year 2018												B A L A N C E									
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017												Calendar Year 2018																				
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P								
Complete Round																																							
	1	2017	ARMY	55.191	.000	55.191										A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.599	4.599	4.599	4.599	4.599	32.196		
	1	2018	ARMY	245.054	.000	245.054																																	245.054
							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									

UNCLASSIFIED

Exhibit P-21, Production Schedule: FY 2018 Army															Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30										P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES										Item Number / Title [DODIC]: E07306 / CTG, 30MM, TP-T, Mk239, single									

Cost Elements <i>(Units in Thousands)</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
Complete Round																															
	1	2017	ARMY	55.191	22.995	32.196	4.599	4.599	4.600	4.600	4.600	4.599	4.599																	.000	
	1	2018	ARMY	245.054	.000	245.054	-	-	-	-	-	20.421	20.421	20.421	20.421	20.421	20.421	20.421	20.421	20.421	20.421	20.421	20.421	20.421	20.421	20.421	20.423		.000		
							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: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30		P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES
Item Number / Title [DODIC]: E07306 / CTG, 30MM, TP-T, Mk239, single		

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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	TO BE SELECTED - TBS01	4,000	85,000	150,000	6	6	12	18	6	6	12	18

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

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

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES	Item Number / Title [DODIC]: E07406 / CTG, 30mm Hi Expl Incendry-T(HEI-T), Mk238

ID Code (A=Service Ready, B=Not Service Ready) : B	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (<i>Units in Each</i>)	-	-	124,365	60,281	55,601	115,882
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	-	14.200	8.300	6.000	14.300
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	-	14.200	8.300	6.000	14.300
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	-	14.200	8.300	6.000	14.300

(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 Dollars</i>)	-	-	114.18	137.69	107.91	123.40

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND ^(†)	-	-	-	-	-	-	108.00	124,365	13.431	107.91	60,281	6.505	107.91	55,601	6.000	107.91	115,882	12.505
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	<i>13.431</i>	-	-	<i>6.505</i>	-	-	<i>6.000</i>	-	-	<i>12.505</i>
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	-	-	-	13.431	-	-	6.505	-	-	6.000	-	-	12.505
Support - Acceptance Testing Cost																		
First Article Test	-	-	-	-	-	-	-	-	-	-	-	0.711	-	-	-	-	-	0.711
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.711	-	-	-	-	-	0.711
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	-	-	-	0.759	-	-	1.074	-	-	0.000	-	-	1.074
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	-	-	-	0.759	-	-	1.074	-	-	0.000	-	-	1.074
Support - Quality Assurance Cost																		
Quality Assurance	-	-	-	-	-	-	-	-	0.010	-	-	0.010	-	-	-	-	-	0.010
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	-	-	-	-	-	-	0.010	-	-	0.010	-	-	-	-	-	0.010
Gross/Weapon System Cost	-	-	-	-	-	-	114.18	124,365	14.200	137.69	60,281	8.300	107.91	55,601	6.000	123.40	115,882	14.300

(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30			P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES				Item Number / Title [DODIC]: E07406 / CTG, 30mm Hi Expl Incendry-T(HEI-T), Mk238				

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>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
COMPLETE ROUND ^(†)		2017	TO BE SLECTED / TBS01	C / FFP	ROCK ISLAND ARSENAL, IL	May 2017	May 2018	124,365	108.00	Y		
COMPLETE ROUND ^(†)		2018	TO BE SLECTED / TBS01	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2018	Mar 2019	115,882	107.91	Y		

^(†) indicates the presence of a P-21

Remarks:

This item is part of a combined 20mm, 25mm, 30mm contract FY 2013 - FY 2018. Quantity split is determined in year of execution between two contractors: General Dynamics Ordnance and Tactical Systems, Marion, IL and Alliant Techsystems Operations, Plymouth, MN.

FY 2017 and FY 2018 Complete Round is an average unit cost of two contractors.

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Exhibit P-21, Production Schedule: FY 2018 Army														Date: May 2017															
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30										P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES										Item Number / Title [DODIC]: E07406 / CTG, 30mm Hi Expl Incendry-T(HEI-T), Mk238									

Cost Elements <i>(Units in Thousands)</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					
COMPLETE ROUND																																			
	1	2017	ARMY	124.365	51.818	72.547	10.364	10.364	10.364	10.364	10.364	10.364	10.364																					.000	
	1	2018	ARMY	115.882	.000	115.882	-	-	-	-	-	9.656	9.656	9.657	9.657	9.657	9.657	9.657	9.657	9.657	9.657	9.657	9.657	9.657	9.657	9.657	9.657						.000		
							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: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30		P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES
		Item Number / Title [DODIC]: E07406 / CTG, 30mm Hi Expl Incendry-T(HEI-T), Mk238

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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	TO BE SLECTED - TBS01	68,000	85,000	150,000	6	6	12	18	6	6	12	18

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

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

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES	Item Number / Title [DODIC]: E09191 / CTG, 30MM, TPFSDS-T, Mk317 (sabot trnr), single

ID Code (A=Service Ready, B=Not Service Ready) : B	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	-	13,914	78,582	32,703	111,285
Gross/Weapon System Cost (\$ in Millions)	-	-	2.000	11.000	4.000	15.000
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	-	2.000	11.000	4.000	15.000
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	-	-	2.000	11.000	4.000	15.000

(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 Dollars)	-	-	143.74	139.98	122.31	134.79

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
Complete Round ^(†)	-	-	-	-	-	-	89.00	13,914	1.238	122.31	78,582	9.611	122.31	32,703	4.000	122.31	111,285	13.611
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	1.238	-	-	9.611	-	-	4.000	-	-	13.611
Subtotal: Hardware Cost	-	-	-	-	-	-	-	-	1.238	-	-	9.611	-	-	4.000	-	-	13.611
Support - Acceptance Testing Cost																		
First Article Test	-	-	-	-	-	-	-	-	-	-	-	0.304	-	-	-	-	-	0.304
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.304	-	-	-	-	-	0.304
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	-	-	-	0.752	-	-	1.075	-	-	-	-	-	1.075
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	-	-	-	0.752	-	-	1.075	-	-	-	-	-	1.075
Support - Quality Assurance Cost																		
Quality Assurance	-	-	-	-	-	-	-	-	0.010	-	-	0.010	-	-	-	-	-	0.010
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	-	-	-	-	-	-	0.010	-	-	0.010	-	-	-	-	-	0.010
Gross/Weapon System Cost	-	-	-	-	-	-	143.74	13,914	2.000	139.98	78,582	11.000	122.31	32,703	4.000	134.79	111,285	15.000

^(†) indicates the presence of a P-5a

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: FY 2018 Army								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30			P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES					Item Number / Title [DODIC]: E09191 / CTG, 30MM, TPFSDS-T, Mk317 (sabot trnr), single				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
Complete Round ^(†)		2017	TO BE SELECTED / TBD	C / FFP	ROCK ISLAND ARSENAL, IL	Jun 2017	Jun 2018	13,914	89.00	Y		
Complete Round ^(†)		2018	TO BE SELECTED / TBD	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2018	Mar 2019	111,285	122.31	Y		

^(†) indicates the presence of a P-21

Remarks:

This item is part of a combined 20mm, 25mm, 30mm contract FY 2013 - FY 2018. Quantity split is determined in year of execution between two contractors: General Dynamics Ordnance and Tactical Systems, Marion, IL and Alliant Techsystems Operations, Plymouth, MN.

FY 2017 and FY 2018 Complete Round is an average unit cost of two contractors.

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Exhibit P-21, Production Schedule: FY 2018 Army				Date: May 2017						
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30			P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES				Item Number / Title [DODIC]: E09191 / CTG, 30MM, TPFSDS-T, Mk317 (sabot trnr), single			

Cost Elements <i>(Units in Thousands)</i>				Fiscal Year 2017														Fiscal Year 2018											BALANCE							
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017														Calendar Year 2018															
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L		A U G	S E P					
Complete Round																																				
1		2017	ARMY	13.914	.000	13.914											A	-	-	-	-	-	-	-	-	-	-	-	-	-	1.160	1.160	1.160	1.160	9.274	
1		2018	ARMY	111.285	.000	111.285																						A	-	-	-	-	-	-	-	111.285
							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: FY 2018 Army															Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30										P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES										Item Number / Title [DODIC]: E09191 / CTG, 30MM, TPFSDS-T, Mk317 (sabot trnr), single									

Cost Elements <i>(Units in Thousands)</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			
Complete Round																																	
	1	2017	ARMY	13.914	4.640	9.274	1.160	1.160	1.160	1.160	1.154	1.160	1.160	1.160																	.000		
	1	2018	ARMY	111.285	.000	111.285	-	-	-	-	-	9.273	9.274	9.273	9.274	9.273	9.274	9.274	9.274	9.274	9.274	9.274	9.274	9.274	9.274	9.274	9.274	9.274	9.274	.000			
							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: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30		P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES
Item Number / Title [DODIC]: E09191 / CTG, 30MM, TPFSDS-T, Mk317 (sabot trnr), single		

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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	TO BE SELECTED - TBD	24,000	30,000	65,000	6	6	12	18	6	6	12	18

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

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

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES	Item Number / Title [DODIC]: E09292 / CTG, 30MM, APFSDS-T, Mk258, single

ID Code (A=Service Ready, B=Not Service Ready) : B	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (<i>Units in Each</i>)	-	-	19,560	19,144	19,994	39,138
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	-	13.000	13.500	12.000	25.500
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	-	13.000	13.500	12.000	25.500
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	-	13.000	13.500	12.000	25.500

(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 Dollars</i>)	-	-	664.62	705.18	600.18	651.54

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND ^(†)	-	-	-	-	-	-	611.00	19,560	11.951	600.16	19,144	11.489	600.16	19,994	12.000	600.16	39,138	23.489
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	<i>11.951</i>	-	-	<i>11.489</i>	-	-	<i>12.000</i>	-	-	<i>23.489</i>
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	-	-	-	<i>11.951</i>	-	-	<i>11.489</i>	-	-	<i>12.000</i>	-	-	<i>23.489</i>
Support - Acceptance Testing Cost																		
First Article Test	-	-	-	-	-	-	-	-	-	-	-	0.709	-	-	-	-	-	0.709
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	-	-	-	-	-	-	-	-	-	<i>0.709</i>	-	-	-	-	-	<i>0.709</i>
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	-	-	-	1.039	-	-	1.292	-	-	-	-	-	1.292
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	-	-	-	<i>1.039</i>	-	-	<i>1.292</i>	-	-	-	-	-	<i>1.292</i>
Support - Quality Assurance Cost																		
Quality Assurance	-	-	-	-	-	-	-	-	0.010	-	-	0.010	-	-	-	-	-	0.010
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	-	-	-	-	-	-	<i>0.010</i>	-	-	<i>0.010</i>	-	-	-	-	-	<i>0.010</i>
Gross/Weapon System Cost	-	-	-	-	-	-	664.62	19,560	13.000	705.18	19,144	13.500	600.18	19,994	12.000	651.54	39,138	25.500

(†) indicates the presence of a P-5a

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30			P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES				Item Number / Title [DODIC]: E09292 / CTG, 30MM, APFSDS-T, Mk258, single				

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>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
COMPLETE ROUND ^(†)		2017	TO BE SELECTED / TBS01	C / FFP	ROCK ISLAND ARSENAL, IL	Jul 2017	Jul 2018	19,560	611.00	Y		
COMPLETE ROUND ^(†)		2018	TO BE SELECTED / TBS01	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2018	Mar 2019	39,138	600.16	Y		

^(†) indicates the presence of a P-21

Remarks:

This item is part of a combined 20mm, 25mm, 30mm contract FY 2013 - FY 2018. Quantity split is determined in year of execution between two contractors: General Dynamics Ordnance and Tactical Systems, Marion, IL and Alliant Techsystems Operations, Plymouth, MN.

FY 2017 and FY 2018 Complete Round is an average unit cost of two contractors.

UNCLASSIFIED

Exhibit P-21, Production Schedule: FY 2018 Army																		Date: May 2017											
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30										P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES										Item Number / Title [DODIC]: E09292 / CTG, 30MM, APFSDS-T, Mk258, single									

Cost Elements <i>(Units in Thousands)</i>						Fiscal Year 2017												Fiscal Year 2018												BALANCE				
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017												Calendar Year 2018															
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P			
COMPLETE ROUND																																		
	1	2017	ARMY	19.560	.000	19.560											A	-	-	-	-	-	-	-	-	-	-	-	1.630	1.630	1.630	14.670		
	1	2018	ARMY	39.138	.000	39.138																					A	-	-	-	-	-	-	39.138

UNCLASSIFIED

Exhibit P-21, Production Schedule: FY 2018 Army															Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30										P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES										Item Number / Title [DODIC]: E09292 / CTG, 30MM, APFSDS-T, Mk258, single									

Cost Elements <i>(Units in Thousands)</i>					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			
COMPLETE ROUND																																	
	1	2017	ARMY	19.560	4.890	14.670	1.630	1.630	1.630	1.630	1.630	1.630	1.630	1.630																.000			
	1	2018	ARMY	39.138	.000	39.138	-	-	-	-	-	3.261	3.262	3.261	3.262	3.261	3.262	3.261	3.262	3.261	3.262	3.261	3.262							.000			
							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: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30		P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES
		Item Number / Title [DODIC]: E09292 / CTG, 30MM, APFSDS-T, Mk258, single

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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	TO BE SELECTED - TBS01	24,000	30,000	65,000	6	6	12	18	6	6	12	18

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

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

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES	Item Number / Title [DODIC]: E09900 / CTG 30MM HEDP M789 [B129]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	1,922,419K	100,938	170,138	68,124	81,741	149,865
Gross/Weapon System Cost (\$ in Millions)	950.519	10.033	20.000	10.000	10.000	20.000
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	950.519	10.033	20.000	10.000	10.000	20.000
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	950.519	10.033	20.000	10.000	10.000	20.000

(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 Dollars)	0.49	99.40	117.55	146.79	122.34	133.45

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND ^(†)	78.34	12,090,909	947.202	79.74	100,938	8.048	108.86	170,138	18.521	122.33	68,124	8.334	122.33	81,741	9.999	122.33	149,865	18.333
Subtotal: Recurring Cost	-	-	947.202	-	-	8.049	-	-	18.521	-	-	8.334	-	-	9.999	-	-	18.333
Subtotal: Hardware Cost	-	-	947.202	-	-	8.049	-	-	18.521	-	-	8.334	-	-	9.999	-	-	18.333
Support - Production Engineering Cost																		
Production Engineering	-	-	3.302	-	-	1.968	-	-	1.468	-	-	1.658	-	-	0.001	-	-	1.659
Subtotal: Support - Production Engineering Cost	-	-	3.302	-	-	1.968	-	-	1.468	-	-	1.658	-	-	0.001	-	-	1.659
Support - Quality Assurance Cost																		
Quality Assurance	-	-	0.016	-	-	0.016	-	-	0.011	-	-	0.008	-	-	-	-	-	0.008
Subtotal: Support - Quality Assurance Cost	-	-	0.016	-	-	0.016	-	-	0.011	-	-	0.008	-	-	-	-	-	0.008
Gross/Weapon System Cost	0.49	1,922,419K	950.519	99.40	100,938	10.033	117.55	170,138	20.000	146.79	68,124	10.000	122.34	81,741	10.000	133.45	149,865	20.000

^(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES	Item Number / Title [DODIC]: E09900 / CTG 30MM HEDP M789 [B129]
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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>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
COMPLETE ROUND ^(†)		2016	ALLIANT TECHSYSTEMS / PLYMOUTH, MN	C / FFP	ROCK ISLAND ARSENAL, IL	Feb 2016	Oct 2017	50,469	79.74	Y		
COMPLETE ROUND ^(†)		2016	GENERAL DYNAMICS ORD & TAC / MARION, IL	C / FFP	ROCK ISLAND ARSENAL, IL	Feb 2016	Apr 2018	50,469	79.74	Y		
COMPLETE ROUND ^(†)		2017	ALLIANT TECHSYSTEMS / PLYMOUTH, MN	C / FFP	ROCK ISLAND ARSENAL, IL	May 2017	May 2018	85,069	108.86	Y		
COMPLETE ROUND ^(†)		2017	GENERAL DYNAMICS ORD & TAC / MARION, IL	C / FFP	ROCK ISLAND ARSENAL, IL	May 2017	May 2018	85,069	108.86	Y		
COMPLETE ROUND ^(†)		2018	TO BE SELECTED / TBS02	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2018	Mar 2019	74,933	122.33	Y		
COMPLETE ROUND ^(†)		2018	TO BE SELECTED / TBS01	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2018	Mar 2019	74,932	122.33	Y		

^(†) indicates the presence of a P-21

Remarks:

This item is part of a combined 20mm, 25mm, 30mm contract FY 2013 - FY 2018. Quantity split is determined in year of execution between two contractors: General Dynamics Ordnance and Tactical Systems, Marion, IL and Alliant Techsystems Operations, Plymouth, MN.

FY 2017 and FY 2018 Complete Round is an average unit cost of two contractors.

Type Classification Date: 1962.

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Exhibit P-21, Production Schedule: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES	Item Number / Title [DODIC]: E09900 / CTG 30MM HEDP M789 [B129]
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Cost Elements <i>(Units in Thousands)</i>						Fiscal Year 2016												Fiscal Year 2017												B A L A N C E	
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016												Calendar Year 2017												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
COMPLETE ROUND																															
Prior Years Deliveries: 12090909																															
	1	2016	ARMY	50.469	.000	50.469																								50.469	
	2	2016	ARMY	50.469	.000	50.469																								50.469	
	1	2017	ARMY	85.069	.000	85.069																								85.069	
	2	2017	ARMY	85.069	.000	85.069																								85.069	
	3	2018	ARMY	74.933	.000	74.933																								74.933	
	4	2018	ARMY	74.932	.000	74.932																								74.932	

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Exhibit P-21, Production Schedule: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30 **P-1 Line Item Number / Title:** ER8120 / CTG, 30MM, ALL TYPES **Item Number / Title [DODIC]:** E09900 / CTG 30MM HEDP M789 [B129]

Cost Elements <i>(Units in Thousands)</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			
COMPLETE ROUND																																	
Prior Years Deliveries: 12090909																																	
	1	2016	ARMY	50.469	.000	50.469	14.448	36.021																						.000			
	2	2016	ARMY	50.469	.000	50.469	-	-	-	-	-	-	13.597	23.660	13.212															.000			
	1	2017	ARMY	85.069	.000	85.069	-	-	-	-	-	-	7.089	7.089	7.089	7.089	7.089	7.089	7.089	7.089	7.089	7.089	7.089	7.089	7.089	7.089	7.089	7.089		.000			
	2	2017	ARMY	85.069	.000	85.069	-	-	-	-	-	-	7.089	7.089	7.089	7.089	7.089	7.089	7.089	7.089	7.089	7.089	7.089	7.089	7.089	7.089	7.089	7.089		.000			
	3	2018	ARMY	74.933	.000	74.933							A -	-	-	-	-	-	-	-	-	-	-	-	6.260	6.243	6.243	6.243	6.243	6.243	31.215		
	4	2018	ARMY	74.932	.000	74.932							A -	-	-	-	-	-	-	-	-	-	-	6.260	6.243	6.243	6.243	6.243	6.243	6.243	31.214		
							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: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30 **P-1 Line Item Number / Title:** ER8120 / CTG, 30MM, ALL TYPES **Item Number / Title [DODIC]:** E09900 / CTG 30MM HEDP M789 [B129]

Cost Elements <i>(Units in Thousands)</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	ACCEP T P R I O R T O 1 O C T 2 0 1 9	BAL D U E A S O F 1 O C T	Calendar Year 2020												Calendar Year 2021												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L		A U G	S E P
COMPLETE ROUND																															
Prior Years Deliveries: 12090909																															
	1	2016	ARMY	50.469	50.469	.000																							.000		
	2	2016	ARMY	50.469	50.469	.000																							.000		
	1	2017	ARMY	85.069	85.069	.000																							.000		
	2	2017	ARMY	85.069	85.069	.000																							.000		
	3	2018	ARMY	74.933	43.718	31.215	6.243	6.243	6.243	6.243	6.243																		.000		
	4	2018	ARMY	74.932	43.718	31.214	6.243	6.243	6.243	6.243	6.242																		.000		
							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: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30		P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES
		Item Number / Title [DODIC]: E09900 / CTG 30MM HEDP M789 [B129]

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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	ALLIANT TECHSYSTEMS - PLYMOUTH, MN	1,000	85,000	150,000	6	6	12	18	6	6	12	18
2	GENERAL DYNAMICS ORD & TAC - MARION, IL	1,000	30,000	65,000	6	6	12	18	6	6	12	18
3	TO BE SELECTED - TBS02	1,000	30,000	50,000	6	6	12	18	6	6	12	18
4	TO BE SELECTED - TBS01	1,000	85,000	150,000	6	6	12	18	6	6	12	18

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

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

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES	Item Number / Title [DODIC]: E10100 / CTG 30MM TP M788 [B118]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (<i>Units in Each</i>)	949,229K	1,011,387	916,650	868,420	-	868,420
Gross/Weapon System Cost (<i>\$ in Millions</i>)	342.511	22.360	22.000	22.500	-	22.500
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	342.511	22.360	22.000	22.500	-	22.500
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	342.511	22.360	22.000	22.500	-	22.500

(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 Dollars</i>)	0.36	22.11	24.00	25.91	-	25.91

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND ^(†)	18.06	18,421,375	332.690	19.86	1,011,387	20.086	21.98	916,650	20.148	23.69	868,420	20.573	-	-	-	23.69	868,420	20.573
<i>Subtotal: Recurring Cost</i>	-	-	332.690	-	-	20.086	-	-	20.148	-	-	20.573	-	-	-	-	-	20.573
<i>Subtotal: Hardware Cost</i>	-	-	332.690	-	-	20.086	-	-	20.148	-	-	20.573	-	-	-	-	-	20.573
Support - Production Engineering Cost																		
Production Engineering	-	-	9.813	-	-	2.258	-	-	1.836	-	-	1.919	-	-	-	-	-	1.919
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	9.813	-	-	2.258	-	-	1.836	-	-	1.919	-	-	-	-	-	1.919
Support - Quality Assurance Cost																		
Quality Assurance	-	-	0.008	-	-	0.016	-	-	0.016	-	-	0.008	-	-	-	-	-	0.008
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	0.008	-	-	0.016	-	-	0.016	-	-	0.008	-	-	-	-	-	0.008
Gross/Weapon System Cost	0.36	949,229K	342.511	22.11	1,011,387	22.360	24.00	916,650	22.000	25.91	868,420	22.500	-	-	-	25.91	868,420	22.500

^(†) indicates the presence of a P-5a

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES	Item Number / Title [DODIC]: E10100 / CTG 30MM TP M788 [B118]
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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>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
COMPLETE ROUND ^(†)		2016	GENERAL DYNAMICS ORD & TAC / MARION, IL	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2016	Dec 2016	353,985	19.86	Y		
COMPLETE ROUND ^(†)		2016	ALLIANT TECHSYSTEMS / PLYMOUTH, MN	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2016	Feb 2017	657,402	19.86	Y		
COMPLETE ROUND ^(†)		2017	GENERAL DYNAMICS ORD & TAC / MARION, IL	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2017	Mar 2018	458,325	21.98	Y		
COMPLETE ROUND ^(†)		2017	ALLIANT TECHSYSTEMS / PLYMOUTH, MN	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2017	Mar 2018	458,325	21.98	Y		
COMPLETE ROUND ^(†)		2018	TO BE SELECTED / TBS01	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2018	Mar 2019	434,210	23.69	Y		
COMPLETE ROUND ^(†)		2018	TO BE SELECTED / TBS02	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2018	Mar 2019	434,210	23.69	Y		

^(†) indicates the presence of a P-21

Remarks:

This item is part of a combined 20mm, 25mm, 30MM contract FY 2013 - FY2018. Quantity split is determined in year of execution between two contractors. General Dynamics Ordnance and Tactical Systems, Marion, IL and Alliant Techsystems Operations Plymouth, MN.

FY 2017 and FY 2018 Complete Round is an average unit cost of two contractors.

UNCLASSIFIED

Exhibit P-21, Production Schedule: FY 2018 Army															Date: May 2017									
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30										P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES										Item Number / Title [DODIC]: E10100 / CTG 30MM TP M788 [B118]				

Cost Elements <i>(Units in Thousands)</i>						Fiscal Year 2016												Fiscal Year 2017												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEP T P R I O R T O 1 O C T 2 0 1 5	BAL D U E A S O F 1 O C T	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

COMPLETE ROUND																													
Prior Years Deliveries: 18421375																													
1	2016	ARMY	353.985	.000	353.985																								.000
2	2016	ARMY	657.402	.000	657.402																								.000
1	2017	ARMY	458.325	.000	458.325																								458.325
2	2017	ARMY	458.325	.000	458.325																								458.325
3	2018	ARMY	434.210	.000	434.210																								434.210
4	2018	ARMY	434.210	.000	434.210																								434.210

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Exhibit P-21, Production Schedule: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30 **P-1 Line Item Number / Title:** ER8120 / CTG, 30MM, ALL TYPES **Item Number / Title [DODIC]:** E10100 / CTG 30MM TP M788 [B118]

Cost Elements <i>(Units in Thousands)</i>					Fiscal Year 2018														Fiscal Year 2019												B A L A N C E				
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018														Calendar Year 2019														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
COMPLETE ROUND																																			
Prior Years Deliveries: 18421375																																			
	1	2016	ARMY	353.985	353.985	.000																							.000						
	2	2016	ARMY	657.402	657.402	.000																							.000						
	1	2017	ARMY	458.325	.000	458.325	-	-	-	-	-	38.202	38.193	38.193	38.193	38.193	38.193	38.193	38.193	38.193	38.193	38.193	38.193	38.193	38.193	38.193	38.193	.000							
	2	2017	ARMY	458.325	.000	458.325	-	-	-	-	-	38.202	38.193	38.193	38.193	38.193	38.193	38.193	38.193	38.193	38.193	38.193	38.193	38.193	38.193	38.193	.000								
	3	2018	ARMY	434.210	.000	434.210						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36.186	36.184	36.184	36.184	36.184	36.184	36.184	36.184	180.920
	4	2018	ARMY	434.210	.000	434.210						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	36.186	36.184	36.184	36.184	36.184	36.184	36.184	36.184	180.920	
							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: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES	Item Number / Title [DODIC]: E10100 / CTG 30MM TP M788 [B118]
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Cost Elements <i>(Units in Thousands)</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

COMPLETE ROUND																														
Prior Years Deliveries: 18421375																														
	1	2016	ARMY	353.985	353.985	.000																							.000	
	2	2016	ARMY	657.402	657.402	.000																							.000	
	1	2017	ARMY	458.325	458.325	.000																							.000	
	2	2017	ARMY	458.325	458.325	.000																							.000	
	3	2018	ARMY	434.210	253.290	180.920	36.184	36.184	36.184	36.184	36.184																		.000	
	4	2018	ARMY	434.210	253.290	180.920	36.184	36.184	36.184	36.184	36.184																		.000	
							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: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: ER8120 / CTG, 30MM, ALL TYPES	Item Number / Title [DODIC]: E10100 / CTG 30MM TP M788 [B118]
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	GENERAL DYNAMICS ORD & TAC - MARION, IL	1,000	120,000	200,000	6	6	12	18	6	6	12	18
2	ALLIANT TECHSYSTEMS - PLYMOUTH, MN	1,000	120,000	200,000	6	6	12	18	6	6	12	18
3	TO BE SELECTED - TBS01	1,000	120,000	200,000	6	6	12	18	6	6	12	18
4	TO BE SELECTED - TBS02	1,000	120,000	200,000	6	6	12	18	6	6	12	18

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

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

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 30: Small/ Medium Cal Ammunition	P-1 Line Item Number / Title: ER8001 / CTG, 40MM, All Types
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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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	2,092.187	56.322	125.601	108.189	-	108.189	71.906	100.429	111.719	125.344	-	2,791.697
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	2,092.187	56.322	125.601	108.189	-	108.189	71.906	100.429	111.719	125.344	-	2,791.697
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	2,092.187	56.322	125.601	108.189	-	108.189	71.906	100.429	111.719	125.344	-	2,791.697

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

Description:

This budget line includes 40MM ALL TYPES:

(E11800) CTG 40mm M430A1 is a High-Explosive Dual Purpose cartridge (HEDP), and is fired from a MK19 Grenade Machine Gun at a max range of 2,200 meters. It is capable of penetrating three inches of steel armor and inflicting personnel casualties in the target area. This item is Code A, approved for service use.

(E12601) CTG 40mm M433 is a High Explosive Dual Purpose impact type round designed to penetrate lightly armored targets and perform an anti-personnel mission, and is compatible with the M203, M320, and M79 Grenade Launchers. Upon impact, the detonator triggers the spitback shaped charge and produces a jet blast that detonates the high explosive bursting charge. Detonation of the bursting charge forms an armor-piercing jet of molten metal and fragmentation of the projectile body. This item is Code A, approved for service use.

(E74315) CTG 40mm Practice M918/M385A1 Mixed Belt cartridge configuration for the MK19 Grenade Machine Gun is a high velocity training projectile with realistic signature effects providing sufficient flash, smoke and sound upon impact to be seen/heard out to 1,200 meters. In addition to providing audible/visual signature for day or night firing, the mixed belt for MK19 Grenade Machine Gun will minimize hazards to troops in the training area. This item is Code A, approved for service use.

(E05611) CTG 40mm M918E1 High Velocity Day Night Thermal cartridge is a training cartridge for the MK19 Grenade Machine Gun. This ammunition consists of a projectile assembly and cartridge case assembly. The projectile ogive is filled with a signature material that provides a signature upon impact that can be seen, day or night with unaided eye, thermal and night vision weapon sights. The cartridge does not contain any fuzing or explosives, eliminating unexploded ordnance issues on the training ranges due to non-functioning training ammunition. This item is code B, not approved for service use.

(E05610) CTG 40mm M781E1 Low Velocity Day Night Thermal cartridge is a training cartridge for the M203 and M320 Grenade Launchers. This ammunition consists of a projectile assembly and cartridge case assembly. The projectile ogive is filled with a signature material that provides a signature upon impact that can be seen, day or night with unaided eye, thermal and night vision weapon sights. The cartridge does not contain any fuzing or explosives, eliminating unexploded ordnance issues on the training ranges due to non-functioning training ammunition. This item is code B, not approved for service use.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 30: Small/
Medium Cal Ammunition **P-1 Line Item Number / Title:**
ER8001 / CTG, 40MM, All Types

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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 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	E05610 / CTG, 40MM TP-DAY/NITE/THER,LO VEL M781E1, f/ M203GL	P-5a, P-21	B		- / -	- / -	858,206 / 24.000	1,049,196 / 23.000	- / -	1,049,196 / 23.000
P-5	E05611 / CTG, 40MM TP-DAY/NITE/THER,HI VEL,M918E1 f/ MK19GIMG	P-5a, P-21	B		- / -	- / -	2,665,407 / 94.178	2,717,867 / 82.276	- / -	2,717,867 / 82.276
P-5	E11800 / CTG 40MM HEDP M430A1 series F/MK19 MG [B542]	P-5a	A		5,681,602 / 721.087	- / -	153,202 / 7.423	41,881 / 2.913	- / -	41,881 / 2.913
P-5	E12601 / CTG 40MM HEDP M433 f/M203 Gren Launcher [B546]	P-5a	A		156,790K / 527.014	68,266 / 5.000	- / -	- / -	- / -	- / -
P-5	E74315 / CTG 40MM PRAC, M918/M385A1 [BA30]	P-5a	A		31,080,562 / 844.086	1,150,284 / 51.322	- / -	- / -	- / -	- / -
P-40	Total Gross/Weapon System Cost				- / 2,092.187	- / 56.322	- / 125.601	- / 108.189	- / -	- / 108.189

*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 2018 Base Budget supports critical Army Title 10 war reserve/operational, training, and test requirements IAW DoD Instruction 3000.04 (Munitions Requirements Process) and AR 5-13 (Total Army Munitions Requirements Process and Prioritization System). War reserve requirements support OSD-approved Combatant Commander Operational Plans, Homeland Defense, and other OSD-directed missions. Training requirements support individual and collective training of Active and Reserve Component forces at Army schools, home station, and the combined training centers. Test requirements support the development, fielding, safety, and quality assurance of Army munitions and equipment throughout their life-cycle.

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

The FY 2018 Base procurement dollars in the amount of \$108.189 million supports the procurement of 3.796 million cartridges.

(E05611) CTG, 40MM, M918E1 High Velocity Day Night Thermal - This is a training unique item not used in combat. The FY 2018 request supports annual training and builds a depot level in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$82.276 million supports the procurement of 2.718 million M918E1 cartridges.

Type Classification Date: Pending

(E05610) CTG, 40MM, M781E1 Low Velocity Day Night Thermal - This is a training unique item not used in combat. The FY 2018 request supports annual training and builds a depot level in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$23.000 million supports the procurement of 1.049 million M781E1 cartridges.

Type Classification Date: Pending

(E11800) CTG 40MM HEDP M430A1 F/MK19 MG - This is a war reserve item used in combat. FY 2018 request builds a war reserve inventory in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$2.913 million supports the procurement of .042 million M430A1 cartridges.

Type Classification Date: 1971

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 30: Small/ Medium Cal Ammunition		P-1 Line Item Number / Title: ER8001 / CTG, 40MM, All Types
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>(E12601) CTG 40MM HEDP M433 - This is a training standard item used in both training and combat. The request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals.</p> <p>Type Classification Date: 1971</p> <p>(E74315) CTG 40MM PRACTICE, M918/M385A1 - This is a training unique item not used in combat. The request supports annual training and builds a depot level in accordance with the Army's procurement goals.</p> <p>Type Classification Date: 1985</p>		

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: ER8001 / CTG, 40MM, All Types	Item Number / Title [DODIC]: E05610 / CTG, 40MM TP-DAY/NITE/ THER,LO VEL M781E1, f/M203GL

ID Code (A=Service Ready, B=Not Service Ready) : B	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	-	858,206	1,049,196	-	1,049,196
Gross/Weapon System Cost (\$ in Millions)	-	-	24.000	23.000	-	23.000
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	-	24.000	23.000	-	23.000
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	-	-	24.000	23.000	-	23.000

(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 Dollars)	-	-	27.97	21.92	-	21.92

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND ^(†)	-	-	-	-	-	-	23.11	858,206	19.833	20.00	1,049,196	20.984	-	-	-	20.00	1,049,196	20.984
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	19.833	-	-	20.984	-	-	-	-	-	20.984
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	-	-	-	19.833	-	-	20.984	-	-	-	-	-	20.984
Support - Acceptance Testing Cost																		
First Article Test	-	-	-	-	-	-	-	-	2.152	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	-	-	-	-	-	-	2.152	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	-	-	-	2.010	-	-	1.902	-	-	-	-	-	1.902
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	-	-	-	2.010	-	-	1.902	-	-	-	-	-	1.902
Support - Quality Assurance Cost																		
Quality Assurance	-	-	-	-	-	-	-	-	0.005	-	-	0.005	-	-	-	-	-	0.005
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	-	-	-	-	-	-	0.005	-	-	0.005	-	-	-	-	-	0.005
Support - System Test and Evaluation Cost																		
Operational Test and Evaluation	-	-	-	-	-	-	-	-	-	-	-	0.109	-	-	-	-	-	0.109
<i>Subtotal: Support - System Test and Evaluation Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.109	-	-	-	-	-	0.109

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: ER8001 / CTG, 40MM, All Types	Item Number / Title [DODIC]: E05610 / CTG, 40MM TP-DAY/NITE/ THER,LO VEL M781E1, f/M203GL
ID Code (A=Service Ready, B=Not Service Ready) : B		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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Gross/Weapon System Cost	-	-	-	-	-	-	27.97	858,206	24.000	21.92	1,049,196	23.000	-	-	-	21.92	1,049,196	23.000

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

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30			P-1 Line Item Number / Title: ER8001 / CTG, 40MM, All Types					Item Number / Title [DODIC]: E05610 / CTG, 40MM TP-DAY/NITE/ THER,LO VEL M781E1, f/M203GL				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
COMPLETE ROUND ^(†)		2017	TO BE SELECTED / TBS01	C / FFP	PICATINNY ARSENAL, NJ	Aug 2017	Aug 2018	858,206	23.11	Y		
COMPLETE ROUND ^(†)		2018	TO BE SELECTED / TBS01	C / FFP	PICATINNY ARSENAL, NJ	Mar 2018	Mar 2019	1,049,196	20.00	Y		

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: FY 2018 Army															Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30										P-1 Line Item Number / Title: ER8001 / CTG, 40MM, All Types										Item Number / Title [DODIC]: E05610 / CTG, 40MM TP-DAY/NITE/ THER,LO VEL M781E1, f/M203GL									

Cost Elements <i>(Units in Millions, * = < 500)</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					
COMPLETE ROUND																																				
	1	2017	ARMY	.858	.000	.858												A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.072	.072	.715	
	1	2018	ARMY	1.049	.000	1.049																														1.049
							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: FY 2018 Army															Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30										P-1 Line Item Number / Title: ER8001 / CTG, 40MM, All Types										Item Number / Title [DODIC]: E05610 / CTG, 40MM TP-DAY/NITE/ THER,LO VEL M781E1, f/M203GL									

Cost Elements <i>(Units in Millions, * = < 500)</i>					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
COMPLETE ROUND																															
	1	2017	ARMY	.858	.143	.715	.072	.072	.072	.072	.072	.072	.072	.072	.072	.072													.000		
	1	2018	ARMY	1.049	.000	1.049	-	-	-	-	-	.087	.087	.087	.087	.087	.087	.087	.087	.087	.087	.087	.087						.000		
							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: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30		P-1 Line Item Number / Title: ER8001 / CTG, 40MM, All Types
Item Number / Title [DODIC]: E05610 / CTG, 40MM TP-DAY/NITE/ THER,LO VEL M781E1, f/M203GL		

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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	TO BE SELECTED - TBS01	20,000	320,000	800,000	6	6	12	18	6	6	12	18

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

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

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: ER8001 / CTG, 40MM, All Types	Item Number / Title [DODIC]: E05611 / CTG, 40MM TP-DAY/NITE/ THER,HI VEL,M918E1 f/MK19GMG

ID Code (A=Service Ready, B=Not Service Ready) : B	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	-	2,665,407	2,717,867	-	2,717,867
Gross/Weapon System Cost (\$ in Millions)	-	-	94.178	82.276	-	82.276
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	-	94.178	82.276	-	82.276
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	-	-	94.178	82.276	-	82.276

(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 Dollars)	-	-	35.33	30.27	-	30.27

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND ^(†)	-	-	-	-	-	-	32.54	2,665,407	86.732	28.44	2,717,867	77.296	-	-	-	28.44	2,717,867	77.296
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	86.732	-	-	77.296	-	-	-	-	-	77.296
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	-	-	-	86.732	-	-	77.296	-	-	-	-	-	77.296
Support - Acceptance Testing Cost																		
First Article Test	-	-	-	-	-	-	-	-	1.922	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	-	-	-	-	-	-	1.922	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	-	-	-	5.519	-	-	4.865	-	-	-	-	-	4.865
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	-	-	-	5.519	-	-	4.865	-	-	-	-	-	4.865
Support - Quality Assurance Cost																		
Quality Assurance	-	-	-	-	-	-	-	-	0.005	-	-	0.006	-	-	-	-	-	0.006
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	-	-	-	-	-	-	0.005	-	-	0.006	-	-	-	-	-	0.006
Support - System Test and Evaluation Cost																		
Test and Evaluation Support	-	-	-	-	-	-	-	-	-	-	-	0.109	-	-	-	-	-	0.109
<i>Subtotal: Support - System Test and Evaluation Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.109	-	-	-	-	-	0.109

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: ER8001 / CTG, 40MM, All Types	Item Number / Title [DODIC]: E05611 / CTG, 40MM TP-DAY/NITE/ THER,HI VEL,M918E1 f/MK19GMG
ID Code (A=Service Ready, B=Not Service Ready) : B		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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Gross/Weapon System Cost	-	-	-	-	-	-	35.33	2,665,407	94.178	30.27	2,717,867	82.276	-	-	-	30.27	2,717,867	82.276

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

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30			P-1 Line Item Number / Title: ER8001 / CTG, 40MM, All Types				Item Number / Title [DODIC]: E05611 / CTG, 40MM TP-DAY/NITE/ THER,HI VEL,M918E1 f/MK19GMG				

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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
COMPLETE ROUND ^(†)		2017	TO BE SELECTED / TBS01	C / FFP	Picatinny Arsenal, NJ	Aug 2017	Aug 2018	2,665,407	32.54	Y		
COMPLETE ROUND ^(†)		2018	TO BE SELECTED / TBS01	C / FFP	Picatinny Arsenal, NJ	Mar 2018	Mar 2019	2,717,867	28.44	Y		

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: FY 2018 Army Date: May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: ER8001 / CTG, 40MM, All Types	Item Number / Title [DODIC]: E05611 / CTG, 40MM TP-DAY/NITE/ THER,HI VEL,M918E1 f/MK19GMG
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Cost Elements <i>(Units in Millions, * = < 500)</i>					Fiscal Year 2017													Fiscal Year 2018												BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017													Calendar Year 2018												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P	
COMPLETE ROUND																																
	1	2017	ARMY	2.665	.000	2.665											A	-	-	-	-	-	-	-	-	-	-	-	.222	.222	2.221	
	1	2018	ARMY	2.718	.000	2.718																									2.718	
							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: FY 2018 Army															Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30										P-1 Line Item Number / Title: ER8001 / CTG, 40MM, All Types										Item Number / Title [DODIC]: E05611 / CTG, 40MM TP-DAY/NITE/ THER,HI VEL,M918E1 f/MK19GMG									

Cost Elements <i>(Units in Millions, * = < 500)</i>					Fiscal Year 2019												Fiscal Year 2020												BALANCE		
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
COMPLETE ROUND																															
	1	2017	ARMY	2.665	.444	2.221	.222	.222	.222	.222	.222	.222	.222	.222	.222	.222														.000	
	1	2018	ARMY	2.718	.000	2.718	-	-	-	-	-	.226	.226	.226	.226	.226	.226	.226	.226	.226	.226	.226	.226							.000	
							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: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30		P-1 Line Item Number / Title: ER8001 / CTG, 40MM, All Types
Item Number / Title [DODIC]: E05611 / CTG, 40MM TP-DAY/NITE/ THER,HI VEL,M918E1 f/MK19GMG		

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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	TO BE SELECTED - TBS01	50,000	320,000	800,000	6	6	12	18	6	6	12	18

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

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

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: ER8001 / CTG, 40MM, All Types	Item Number / Title [DODIC]: E11800 / CTG 40MM HEDP M430A1 series F/MK19 MG [B542]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	5,681,602	-	153,202	41,881	-	41,881
Gross/Weapon System Cost (\$ in Millions)	721.087	-	7.423	2.913	-	2.913
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	721.087	-	7.423	2.913	-	2.913
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	721.087	-	7.423	2.913	-	2.913

(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 Dollars)	126.92	-	48.45	69.55	-	69.55

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND ^(†)	12.73	56,450,802	718.718	-	-	-	48.45	153,202	7.423	53.29	41,881	2.232	-	-	-	53.29	41,881	2.232
Subtotal: Recurring Cost	-	-	718.619	-	-	-	-	-	7.423	-	-	2.232	-	-	-	-	-	2.232
Subtotal: Hardware Cost	-	-	718.619	-	-	-	-	-	7.423	-	-	2.232	-	-	-	-	-	2.232
Support - Production Engineering Cost																		
Production Engineering	-	-	2.441	-	-	-	-	-	-	-	-	0.672	-	-	-	-	-	0.672
Subtotal: Support - Production Engineering Cost	-	-	2.441	-	-	-	-	-	-	-	-	0.672	-	-	-	-	-	0.672
Support - Quality Assurance Cost																		
Quality Assurance	-	-	0.028	-	-	-	-	-	-	-	-	0.009	-	-	-	-	-	0.009
Subtotal: Support - Quality Assurance Cost	-	-	0.028	-	-	-	-	-	-	-	-	0.009	-	-	-	-	-	0.009
Gross/Weapon System Cost	126.92	5,681,602	721.087	-	-	-	48.45	153,202	7.423	69.55	41,881	2.913	-	-	-	69.55	41,881	2.913

(†) indicates the presence of a P-5a

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: FY 2018 Army								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30			P-1 Line Item Number / Title: ER8001 / CTG, 40MM, All Types					Item Number / Title [DODIC]: E11800 / CTG 40MM HEDP M430A1 series F/MK19 MG [B542]				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
COMPLETE ROUND		2017	TO BE SELECTED / TBS01	C / FFP	ROCK ISLAND ARSENAL, IL	Sep 2017	Jul 2019	153,202	48.45	Y		
COMPLETE ROUND		2018	TO BE SELECTED / TBS01	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2018	Jul 2020	41,881	53.29	Y		

Remarks:
This item is a shared line with other 40mm rounds.

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30		P-1 Line Item Number / Title: ER8001 / CTG, 40MM, All Types
		Item Number / Title [DODIC]: E12601 / CTG 40MM HEDP M433 f/ M203 Gren Launcher [B546]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity <i>(Units in Each)</i>	156,790K	68,266	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	527.014	5.000	-	-	-	-
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	527.014	5.000	-	-	-	-
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	527.014	5.000	-	-	-	-

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

Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-
Gross/Weapon System Unit Cost <i>(\$ in Dollars)</i>	3.36	73.24	-	-	-	-

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND ^(†)	2.86	156,790K	448.419	67.92	68,266	4.637	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	448.419	-	-	4.637	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware Cost</i>	-	-	448.419	-	-	4.637	-	-	-	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	77.382	-	-	0.350	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	77.382	-	-	0.350	-	-	-	-	-	-	-	-	-	-	-	-
Support - Quality Assurance Cost																		
Quality Assurance	-	-	1.212	-	-	0.013	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	1.212	-	-	0.013	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	3.36	156,790K	527.014	73.24	68,266	5.000	-	-	-	-	-	-	-	-	-	-	-	-

(†) indicates the presence of a P-5a

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30			P-1 Line Item Number / Title: ER8001 / CTG, 40MM, All Types				Item Number / Title [DODIC]: E12601 / CTG 40MM HEDP M433 f/ M203 Gren Launcher [B546]					
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
COMPLETE ROUND		2016	TO BE SELECTED / TBS01	C / FFP	ROCK ISLAND ARSENAL, IL	Sep 2017	Apr 2019	68,266	67.92	Y		

Remarks:
This item is a shared line with other 40mm rounds.

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: ER8001 / CTG, 40MM, All Types	Item Number / Title [DODIC]: E74315 / CTG 40MM PRAC, M918/ M385A1 [BA30]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	31,080,562	1,150,284	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	844.086	51.322	-	-	-	-
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	844.086	51.322	-	-	-	-
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	844.086	51.322	-	-	-	-

(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 Dollars)	27.16	44.62	-	-	-	-

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP) ^(†)	26.32	31,080,562	818.195	12.58	1,150,284	14.471	-	-	-	-	-	-	-	-	-	-	-	-
PROJ ASSY 40MM M918 ^(†)	15.80	895,416	14.148	19.65	806,637	15.850	-	-	-	-	-	-	-	-	-	-	-	-
PROJ BODY 40MM M385A1 ^(†)	5.02	412,753	2.072	4.14	371,829	1.539	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	834.260	-	-	31.860	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware Cost	-	-	834.260	-	-	31.860	-	-	-	-	-	-	-	-	-	-	-	-
Support - Non-Recurring Support Cost																		
Industrial Stock	-	-	-	-	-	5.971	-	-	-	-	-	-	-	-	-	-	-	-
Value Engineering	-	-	-	-	-	6.789	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Non-Recurring Support Cost</i>	-	-	-	-	-	12.760	-	-	-	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	9.786	-	-	6.681	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	9.786	-	-	6.681	-	-	-	-	-	-	-	-	-	-	-	-
Support - Quality Assurance Cost																		
Quality Assurance	-	-	0.040	-	-	0.021	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30	P-1 Line Item Number / Title: ER8001 / CTG, 40MM, All Types	Item Number / Title [DODIC]: E74315 / CTG 40MM PRAC, M918/ M385A1 [BA30]
ID Code (A=Service Ready, B=Not Service Ready) : A		MDAP/MAIS Code:

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	0.040	-	-	0.021	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	27.16	31,080,562	844.086	44.62	1,150,284	51.322	-	-	-	-	-	-	-	-	-	-	-	-

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

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 30			P-1 Line Item Number / Title: ER8001 / CTG, 40MM, All Types				Item Number / Title [DODIC]: E74315 / CTG 40MM PRAC, M918/ M385A1 [BA30]				

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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
LOAD, ASSEMBLE, PACK (LAP)		2016	AMTEC CORPORATION / JANESVILLE, WI	SS / FFP	ROCK ISLAND ARSENAL, IL	Jun 2016	Mar 2017	1,150,284	12.58	Y		
PROJ ASSY 40MM M918		2016	GTI SYSTEMS, INC / AUBURNDALE, FL	C / FFP	ROCK ISLAND ARSENAL, IL	Jun 2016	Dec 2016	806,637	19.65	Y		
PROJ BODY 40MM M385A1		2016	GTI SYSTEMS, INC / AUBURNDALE, FL	C / FFP	ROCK ISLAND ARSENAL, IL	Jun 2016	Dec 2016	371,829	4.14	Y		

Remarks:
This item is a shared line with other 40mm rounds.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 33: Mortar Ammunition	P-1 Line Item Number / Title: E89600 / 60MM Mortar, All Types
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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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	468.615	52.443	79.784	57.359	-	57.359	57.570	59.289	35.000	45.000	-	855.060
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	468.615	52.443	79.784	57.359	-	57.359	57.570	59.289	35.000	45.000	-	855.060
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	468.615	52.443	79.784	57.359	-	57.359	57.570	59.289	35.000	45.000	-	855.060

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

Description:

(E89600)60MM Mortar, All Types

This line includes 60mm Mortar Ammunition, All Types.

The 60mm Mortar cartridges are designed for use with the M224A1 Lightweight Company Mortar System (LWCMS) in all light infantry battalions including Airborne, Air Assault and Ranger. The short minimum range of the M224 makes the 60mm mortar ammunition well suited for close protective fires against an assaulting enemy, for block-to-block fighting in cities, and combat over close terrain with restricted visibility.

(E72199) CTG, 60mm Mortar HE ENFRAG, M1061 Series w/MOFM

The M1061, 60mm High Explosive Enhanced Fragmentation (EF) cartridge with multi-option fuze (Range 70 meter minimum to 3,400 meter maximum) is used against personnel and a higher category of materiel target sets providing both fragmentation and blast effect. This round uses the insensitive main charge explosive PBNX-110. Lethality is maintained by an enhanced fragmentation warhead. The M1061 EF uses the highly reliable and countermeasure resistant M734A1 multi-option fuze. When the fuze is set in the proximity mode, it functions at a height over the target that is optimized for lethality.

The M1061 is Code A, approved for service use.

(E92900) CTG, 60mm Mortar HE, M768 Series w/PD Fuze

The 60mm High Explosive Cartridges are Insensitive Munitions (IM) enhanced, HE rounds. The M786 High Explosive cartridge (Range 70 meter minimum to 3,400 meter maximum) is used with the new M783 dual safety, point detonating/delay fuze, tail fin assembly, and high fragmentation steel (HF-1) shell body loaded with approximately 2lbs. of an IM explosive. This round is used primarily in training because it is significantly less expensive than the M720A1, the preferred war fighting round. However, the M768 is lethal and can be used in combat.

This item is Code A, approved for service use.

(E92200) CTG, 60mm Mortar FRTR, M769 Series w/Practice Fuze

The M769 is a low-cost, full range, practice round that will replace a percentage of the standard HE rounds used in 60mm mortar training. The M769 FRPC (Range 70 meter minimum to 3,500 meter maximum) has been designed to provide the user with realistic training at a fraction of the cost. It is identical in shape, size and weight to the M720/M720A1 HE cartridges. The flash, bang and smoke signature provided by the M775 fuze is channeled to exhaust holes in the rear of the cartridge through the use of a center vent tube.

This item is Code A, approved for service use.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 33: Mortar Ammunition		P-1 Line Item Number / Title: E89600 / 60MM Mortar, All Types
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>(E70400) CTG, 60mm Mortar VL ILLUM, M721 w/MTSQ Fuze The M721 cartridge is a fin stabilized, mortar cartridge that consists of a M776 Mechanical Time Superquick (MTSQ) fuze, a thin wall steel body tube and aluminum tail cone that contains the payload (parachute and canister), and a fin assembly that contains the ignition cartridge and propelling charges. The payload is base ejected and upon ignition produces visible light illumination. This visible light illumination allows for monitoring of enemy activities and adjustment of fire at greater observation distances during night operations. It also provides a means for day/night signaling. It is particularly useful in combined operations with allies who may not have night vision devices (NVDs). The M721/M767 Illumination Cartridges (Range 200 meter minimum to 3,200 meter maximum) are ballistically similar to the M720A1 HE Cartridge, allowing a gun to illuminate and fire on the same target without adjustments. These items are Code A, approved for service use.</p> <p>(E85700) CTG, 60mm Mortar IR ILLUM, M767 Series w/MTSQ Fuze The M767 cartridge is a fin stabilized, mortar cartridge that consists of a M776 Mechanical Time Superquick (MTSQ) fuze, a thin wall steel body tube and aluminum tail cone that contains the payload (parachute and canister), and a fin assembly that contains the ignition cartridge and propelling charges. The payload is base ejected and upon ignition produces infrared (IR) illumination. The advantage of the infrared over conventional illumination is that there is minimal visible light. This reduces the possibility of exposing forward friendly troop positions while also allowing covert adjustment of fire at greater observation distances through use of passive Night Vision Devices (NVD). The M721/M767 Illumination Cartridges (Range 300 meter minimum to 3,175 meter maximum) are ballistically similar to the M720A1 HE Cartridge, allowing a gun to illuminate and fire on the same target without adjustments. This item is Code A, approved for service use.</p>		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date: May 2017**

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 33: Mortar Ammunition	P-1 Line Item Number / Title: E89600 / 60MM Mortar, All Types
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 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	E70400 / CTG, MORTAR, 60MM ILLUM VL M721 W/MTSQ FUZE [B647]	P-5a	A		- / 80.722	- / -	- / -	12,901 / 8.600	- / -	12,901 / 8.600
P-5	E72199 / CTG, MORTAR, 60MM HE ENFRAG M1061 SERIES W/MOFM [BA42]	P-5a	A		- / 19.523	1,739 / 3.700	13,293 / 20.156	10,650 / 15.559	- / -	10,650 / 15.559
P-5	E85700 / CTG, MORTAR, 60MM ILLUM IR M767 SERIES W/MTSQ FUZE [BA04]	P-5a	A		- / 44.634	- / -	12,527 / 8.208	- / -	- / -	- / -
P-5	E92200 / CTG, Mortar, 60MM FRTR M769 SERIES W/PRACTICE FUZE [BA15]	P-5a	A		- / 131.784	118,272 / 19.333	130,435 / 23.420	75,395 / 14.400	- / -	75,395 / 14.400
P-5	E92900 / CTG MORTAR 60MM HE M768 SERIES W/PD FUZE [BA45]	P-5a	A		- / 191.952	65,942 / 29.410	50,728 / 28.000	37,363 / 18.800	- / -	37,363 / 18.800
P-40	Total Gross/Weapon System Cost				- / 468.615	- / 52.443	- / 79.784	- / 57.359	- / -	- / 57.359

*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 2018 Base Budget supports critical Army Title 10 war reserve/operational, training, and test requirements IAW DoD Instruction 3000.04 (Munitions Requirements Process) and AR 5-13 (Total Army Munitions Requirements Process and Prioritization System). War reserve requirements support OSD-approved Combatant Commander Operational Plans, Homeland Defense, and other OSD-directed missions. Training requirements support individual and collective training of Active and Reserve Component forces at Army schools, home station, and the combined training centers. Test requirements support the development, fielding, safety, and quality assurance of Army munitions and equipment throughout their life-cycle.

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.

FY 2018 Base procurement dollars in the amount of \$57.359 million supports production of 136,309 cartridges.

E72199 - CTG, 60mm Mortar HE ENFRAG, M1061 Series w/MOFM
 This is a war reserve item used in combat. FY 2018 Request builds a war reserve inventory in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$15.559 million supports production of 10,650 cartridges.
 TYPE CLASSIFICATION DATE: 2013

E92200 - CTG, 60mm Mortar FRTR, M769 Series w/Practice Fuze
 This is a training unique item not used in combat. FY2018 request supports annual training and builds a depot level in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$14.400 million supports production of 75,395 cartridges.
 TYPE CLASSIFICATION DATE: 2001

E92900 - CTG, 60mm Mortar HE, M768 Series w/PD Fuze
 This is a training standard item used in training and combat. FY 2018 request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$18.800 million supports production of 37,363 cartridges.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 33: Mortar Ammunition		P-1 Line Item Number / Title: E89600 / 60MM Mortar, All Types
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		
TYPE CLASSIFICATION DATE: 2001		
E70400 -CTG, 60mm Mortar VL ILLUM, M721 w/MTSQ Fuze This is a training standard item used in training and combat. FY 2018 request supports annual training and builds a war reserve inventory in accordance with the Army procurement goals. FY 2018 Base procurement dollars in the amount of \$8.600 million supports production of 12,901 cartridges. E70400 is a new start in FY 2018. TYPE CLASSIFICATION DATE: DECEMBER 1999		
E85700 - CTG, 60mm Mortar IR ILLUM, M767 Series w/MTSQ Fuze This is a training standard item used in training and combat. Request supports annual training and builds a war reserve inventory in accordance with the Army procurement goals. TYPE CLASSIFICATION DATE: DECEMBER 1999		

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33	P-1 Line Item Number / Title: E89600 / 60MM Mortar, All Types	Item Number / Title [DODIC]: E70400 / CTG, MORTAR, 60MM ILLUM VL M721 W/MTSQ FUZE [B647]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	-	-	12,901	-	12,901
Gross/Weapon System Cost (\$ in Millions)	80.722	-	-	8.600	-	8.600
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	80.722	-	-	8.600	-	8.600
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	80.722	-	-	8.600	-	8.600

(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 Dollars)	-	-	-	666.61	-	666.61

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP) ^(†)	-	-	-	-	-	-	-	-	-	121.83	12,901	1.572	-	-	-	121.83	12,901	1.572
FIN ASSEMBLY M27 ^(†)	-	-	-	-	-	-	-	-	-	7.99	13,288	0.106	-	-	-	7.99	13,288	0.106
M702 IGNITION CARTRIDGE ^(†)	-	-	-	-	-	-	-	-	-	17.39	13,288	0.231	-	-	-	17.39	13,288	0.231
PROPELLANT CHARGE, M235 ^(†)	-	-	-	-	-	-	-	-	-	12.92	53,152	0.687	-	-	-	12.92	53,152	0.687
FUZE MTSQ, M776 ^(†)	-	-	-	-	-	-	-	-	-	199.48	13,288	2.651	-	-	-	199.48	13,288	2.651
BODY TUBE, 60MM ILLUM ^(†)	-	-	-	-	-	-	-	-	-	27.37	13,288	0.364	-	-	-	27.37	13,288	0.364
VL ILLUM CANNISTER, 60MM ^(†)	-	-	-	-	-	-	-	-	-	99.03	13,288	1.316	-	-	-	99.03	13,288	1.316
PARACHUTE, 60MM ^(†)	-	-	-	-	-	-	-	-	-	19.58	13,288	0.260	-	-	-	19.58	13,288	0.260
FIBER CONTAINER PA 175, 60MM ^(†)	-	-	-	-	-	-	-	-	-	4.58	13,288	0.061	-	-	-	4.58	13,288	0.061
TAIL CONE, 60MM ILLUM ^(†)	-	-	-	-	-	-	-	-	-	20.56	13,288	0.273	-	-	-	20.56	13,288	0.273

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33		P-1 Line Item Number / Title: E89600 / 60MM Mortar, All Types
		Item Number / Title [DODIC]: E70400 / CTG, MORTAR, 60MM ILLUM VL M721 W/MTSQ FUZE [B647]
ID Code (A=Service Ready, B=Not Service Ready) : A		MDAP/MAIS Code:

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
METAL CONTAINER PA191, 60MM ^(t)	-	-	-	-	-	-	-	-	-	46.21	1,612	0.074	-	-	-	46.21	1,612	0.074
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	7.595	-	-	-	-	-	7.595
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	-	-	-	-	-	-	7.595	-	-	-	-	-	7.595
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	-	-	-	-	-	-	0.090	-	-	-	-	-	0.090
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.090	-	-	-	-	-	0.090
Support - Production Engineering Cost																		
Production Engineering	-	-	80.722	-	-	-	-	-	-	-	-	0.915	-	-	-	-	-	0.915
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	80.722	-	-	-	-	-	-	-	-	0.915	-	-	-	-	-	0.915
Gross/Weapon System Cost	-	-	80.722	-	-	-	-	-	-	666.61	12,901	8.600	-	-	-	666.61	12,901	8.600

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

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33			P-1 Line Item Number / Title: E89600 / 60MM Mortar, All Types					Item Number / Title [DODIC]: E70400 / CTG, MORTAR, 60MM ILLUM VL M721 W/MTSQ FUZE [B647]				

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>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
LOAD, ASSEMBLE, PACK (LAP)		2018	PINE BLUFF ARSENAL / PINE BLUFF, AR	PO	PICATINNY ARSENAL, NJ	Jan 2018	Jan 2020	12,901	121.83	Y		
FIN ASSEMBLY M27		2018	TO BE SELECTED / TBS01	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	13,288	7.99	Y		
M702 IGNITION CARTRIDGE		2018	TO BE SELECTED / TBS01	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	13,288	17.39	Y		
PROPELLANT CHARGE, M235		2018	TO BE SELECTED / TBS01	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	53,152	12.92	Y		
FUZE MTSQ, M776		2018	JUNGHANS MICROTEC GMBH / DUNNINGEN, GERMANY	Option / FFP	ROCK ISLAND ARSENAL, IL	Feb 2018	Oct 2019	13,288	199.48	Y		
BODY TUBE, 60MM ILLUM		2018	TO BE SELECTED / TBS01	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	13,288	27.37	Y		
VL ILLUM CANNISTER, 60MM		2018	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Jan 2018	Jul 2019	13,288	99.03	Y		
PARACHUTE, 60MM		2018	TO BE SELECTED / TBS01	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	13,288	19.58	Y		
FIBER CONTAINER PA 175, 60MM		2018	TO BE SELECTED / TBS01	C / IDDQ	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	13,288	4.58	Y		
TAIL CONE, 60MM ILLUM		2018	TO BE SELECTED / TBS01	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	13,288	20.56	Y		
METAL CONTAINER PA191, 60MM		2018	BWAY CORPORATION / ATLANTA, GA	Option / IDIQ	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	1,612	46.21	Y		

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33		P-1 Line Item Number / Title: E89600 / 60MM Mortar, All Types
		Item Number / Title [DODIC]: E72199 / CTG, MORTAR, 60MM HE ENFRAG M1061 SERIES W/MOFM [BA42]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	1,739	13,293	10,650	-	10,650
Gross/Weapon System Cost (\$ in Millions)	19.523	3.700	20.156	15.559	-	15.559
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	19.523	3.700	20.156	15.559	-	15.559
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	19.523	3.700	20.156	15.559	-	15.559

(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 Dollars)	-	-	-	-	-	-

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP) ^(†)	900.13	2,115	1.904	900.13	1,739	1.565	917.70	13,293	12.199	935.94	10,650	9.968	-	-	-	935.94	10,650	9.968
FUZE MOFM, M734A1 ^(†)	-	-	-	334.33	1,791	0.599	340.86	13,691	4.667	271.13	10,969	2.974	-	-	-	271.13	10,969	2.974
M702 IGNITION CARTRIDGE ^(†)	-	-	-	13.80	1,791	0.025	17.06	13,957	0.238	17.39	10,969	0.191	-	-	-	17.39	10,969	0.191
PROPELLANT CHARGE, M236 ^(†)	-	-	-	11.21	7,165	0.080	14.80	55,830	0.826	15.08	43,878	0.662	-	-	-	15.08	43,878	0.662
FIN ASSEMBLY M27 ^(†)	-	-	-	7.05	1,791	0.013	7.39	13,691	0.101	7.99	10,969	0.088	-	-	-	7.99	10,969	0.088
<i>Subtotal: Recurring Cost</i>	-	-	<i>1.904</i>	-	-	<i>2.282</i>	-	-	<i>18.031</i>	-	-	<i>13.882</i>	-	-	-	-	-	<i>13.882</i>
<i>Subtotal: Hardware Cost</i>	-	-	<i>1.904</i>	-	-	<i>2.282</i>	-	-	<i>18.031</i>	-	-	<i>13.882</i>	-	-	-	-	-	<i>13.882</i>
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	0.111	-	-	0.208	-	-	0.120	-	-	-	-	-	0.120
First Article Test	-	-	-	-	-	0.051	-	-	0.400	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	-	-	-	<i>0.162</i>	-	-	<i>0.608</i>	-	-	<i>0.120</i>	-	-	-	-	-	<i>0.120</i>
Support - Data Cost																		
Technical Publications	-	-	-	-	-	1.256	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33	P-1 Line Item Number / Title: E89600 / 60MM Mortar, All Types	Item Number / Title [DODIC]: E72199 / CTG, MORTAR, 60MM HE ENFRAG M1061 SERIES W/MOFM [BA42]

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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Support - Data Cost</i>	-	-	-	-	-	1.256	-	-	-	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	17.619	-	-	-	-	-	1.517	-	-	1.556	-	-	-	-	-	1.556
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	17.619	-	-	-	-	-	1.517	-	-	1.556	-	-	-	-	-	1.556
Gross/Weapon System Cost	-	-	19.523	-	1,739	3.700	-	13,293	20.156	-	10,650	15.559	-	-	-	-	10,650	15.559

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

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: FY 2018 Army								Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33			P-1 Line Item Number / Title: E89600 / 60MM Mortar, All Types					Item Number / Title [DODIC]: E72199 / CTG, MORTAR, 60MM HE ENFRAG M1061 SERIES W/MOFM [BA42]			

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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
LOAD, ASSEMBLE, PACK (LAP)		2016	TO BE SELECTED / TBS01	C / FFP	PICATINNY ARSENAL, NJ	Sep 2017	Sep 2019	1,739	900.13	Y		
LOAD, ASSEMBLE, PACK (LAP)		2017	TO BE SELECTED / TBS01	C / FFP	PICATINNY ARSENAL, NJ	Sep 2017	Sep 2019	13,293	917.70	Y		
LOAD, ASSEMBLE, PACK (LAP)		2018	TO BE SELECTED / TBS01	C / FFP	PICATINNY ARSENAL, NJ	May 2018	May 2020	10,650	935.94	Y		
FUZE MOFM, M734A1		2016	L-3 FUZING & ORDANCE SYSTEMS / CINCINNATI, OH	Option / FFP	PICATINNY ARSENAL, NJ	Feb 2017	Oct 2018	1,791	334.33	Y		
FUZE MOFM, M734A1		2017	L-3 FUZING & ORDANCE SYSTEMS / CINCINNATI, OH	Option / FFP	PICATINNY ARSENAL, NJ	Mar 2017	Nov 2018	13,691	340.86	Y		
FUZE MOFM, M734A1		2018	L-3 FUZING & ORDANCE SYSTEMS / CINCINNATI, OH	Option / FFP	PICATINNY ARSENAL, NJ	Feb 2018	Oct 2019	10,969	271.13	Y		
M702 IGNITION CARTRIDGE		2016	NAMMO POCAL INC. / SCRANTON, PA	C / IDIQ	ROCK ISLAND ARSENAL, IL	Mar 2016	Sep 2017	1,791	13.80	Y		
M702 IGNITION CARTRIDGE		2017	NAMMO POCAL INC. / SCRANTON, PA	C / IDIQ	ROCK ISLAND ARSENAL, IL	Mar 2017	Sep 2018	13,957	17.06	Y		
M702 IGNITION CARTRIDGE		2018	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	10,969	17.39	Y		
PROPELLANT CHARGE, M236		2016	GENERAL DYNAMICS ORD & TAC / MARION, IL	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2016	Dec 2017	7,165	11.21	Y		
PROPELLANT CHARGE, M236		2017	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2017	Dec 2018	55,830	14.80	Y		
PROPELLANT CHARGE, M236		2018	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Mar 2018	Sep 2019	43,878	15.08	Y		
FIN ASSEMBLY M27		2016	FLEXIBLE CONCEPTS, INC. / ELKHART, IN	C / IDIQ	PICATINNY ARSENAL, NJ	Mar 2016	Sep 2017	1,791	7.05	Y		
FIN ASSEMBLY M27		2017	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2017	Dec 2018	13,691	7.39	Y		
FIN ASSEMBLY M27		2018	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Mar 2018	Sep 2019	10,969	7.99	Y		

Remarks:
 Ignition Cartridges: IDIQ awarded (Jun 12) to multiple contractors. Requirements will be competed among the following contractors: Pocal Industries, Scranton, PA; Day and Zimmerman, Camden AR and American Ordnance, Middletown, IA.
 M27 Fins: IDIQ awarded (Feb 11) to multiple contractors. Requirements will be competed among the following contractors: Gayston, Springboro, OH; Flexible Concepts, Elkhart, IN; Cerebrus, Morris Plains, NJ. M236 Propellant Charges: IDIQ awarded (Dec 12) to multiple contractors. Requirements will be competed among the following contractors: Day and Zimmerman, Camden, AR; American Ordnance, Middletown, IA; and General Dynamics, Marion, IL.

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33		P-1 Line Item Number / Title: E89600 / 60MM Mortar, All Types
		Item Number / Title [DODIC]: E85700 / CTG, MORTAR, 60MM ILLUM IR M767 SERIES W/MTSQ FUZE [BA04]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	-	12,527	-	-	-
Gross/Weapon System Cost (\$ in Millions)	44.634	-	8.208	-	-	-
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	44.634	-	8.208	-	-	-
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	44.634	-	8.208	-	-	-

(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 Dollars)	-	-	-	-	-	-

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP) ^(†)	-	-	44.634	-	-	-	101.77	12,527	1.275	-	-	-	-	-	-	-	-	-
FIN ASSEMBLY M27 ^(†)	-	-	-	-	-	-	7.39	12,902	0.095	-	-	-	-	-	-	-	-	-
M702 IGNITION CARTRIDGE ^(†)	-	-	-	-	-	-	17.06	12,902	0.220	-	-	-	-	-	-	-	-	-
PROPELLANT CHARGE, M235 ^(†)	-	-	-	-	-	-	12.67	51,611	0.654	-	-	-	-	-	-	-	-	-
FUZE MTSQ, M776 ^(†)	-	-	-	-	-	-	204.20	12,902	2.635	-	-	-	-	-	-	-	-	-
BODY TUBE, 60MM ILLUM ^(†)	-	-	-	-	-	-	26.84	12,902	0.346	-	-	-	-	-	-	-	-	-
TAIL CONE, 60MM ILLUM ^(†)	-	-	-	-	-	-	20.15	12,902	0.260	-	-	-	-	-	-	-	-	-
PARACHUTE, 60MM ^(†)	-	-	-	-	-	-	19.19	12,902	0.248	-	-	-	-	-	-	-	-	-
IR ILLUM CANNISTER, 60MM ^(†)	-	-	-	-	-	-	111.42	12,902	1.438	-	-	-	-	-	-	-	-	-
FIBER CONTAINER PA 175, 60MM ^(†)	-	-	-	-	-	-	4.49	12,902	0.058	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33	P-1 Line Item Number / Title: E89600 / 60MM Mortar, All Types	Item Number / Title [DODIC]: E85700 / CTG, MORTAR, 60MM ILLUM IR M767 SERIES W/MTSQ FUZE [BA04]

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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
METAL CONTAINER PA191, 60MM ^(t)	-	-	-	-	-	-	45.28	1,503	0.068	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	44.634	-	-	-	-	-	7.296	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware Cost</i>	-	-	44.634	-	-	-	-	-	7.296	-	-	-	-	-	-	-	-	-
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	-	-	-	0.090	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	-	-	-	-	-	-	0.090	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	-	-	-	0.821	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	-	-	-	0.821	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	-	-	44.634	-	-	-	-	12,527	8.208	-	-	-	-	-	-	-	-	-

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

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33			P-1 Line Item Number / Title: E89600 / 60MM Mortar, All Types				Item Number / Title [DODIC]: E85700 / CTG, MORTAR, 60MM ILLUM IR M767 SERIES W/MTSQ FUZE [BA04]					

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>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
LOAD, ASSEMBLE, PACK (LAP)		2017	PINE BLUFF ARSENAL / PINE BLUFF, AR	PO	PICATINNY ARSENAL, NJ	Jun 2017	Jun 2019	12,527	101.77	Y		
FIN ASSEMBLY M27		2017	TO BE SELECTED / TBS01	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2017	Dec 2018	12,902	7.39	Y		
M702 IGNITION CARTRIDGE		2017	TO BE SELECTED / TBS01	C / IDIQ	ROCK ISLAND ARSENAL, IL	Sep 2017	Mar 2018	12,902	17.06	Y		
PROPELLANT CHARGE, M235		2017	TO BE SELECTED / TBS01	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2017	Dec 2018	51,611	12.67	Y		
FUZE MTSQ, M776		2017	JUNGHANS MICROTEC GMBH / DUNNINGEN, GERMANY	SS / FFP	ROCK ISLAND ARSENAL, IL	Jul 2017	Mar 2018	12,902	204.20	Y		
BODY TUBE, 60MM ILLUM		2017	TO BE SELECTED / TBS01	C / IDIQ	PICATINNY ARSENAL, NJ	Aug 2017	Feb 2018	12,902	26.84	Y		
TAIL CONE, 60MM ILLUM		2017	TO BE SELECTED / TBS01	C / IDIQ	PICATINNY ARSENAL, NJ	Aug 2017	Feb 2018	12,902	20.15	Y		
PARACHUTE, 60MM		2017	TO BE SELECTED / TBS01	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2017	Dec 2018	12,902	19.19	Y		
IR ILLUM CANNISTER, 60MM		2017	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Jun 2017	Dec 2018	12,902	111.42	Y		
FIBER CONTAINER PA 175, 60MM		2017	TO BE SELECTED / TBS01	C / IDIQ	PICATINNY ARSENAL, NJ	Aug 2017	Feb 2018	12,902	4.49	Y		
METAL CONTAINER PA191, 60MM		2017	BWAY CORPORATION / ATLANTA, GA	Option / IDIQ	PICATINNY ARSENAL, NJ	Aug 2017	Feb 2018	1,503	45.28	Y		

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33		P-1 Line Item Number / Title: E89600 / 60MM Mortar, All Types
		Item Number / Title [DODIC]: E92200 / CTG, Mortar, 60MM FRTR M769 SERIES W/PRACTICE FUZE [BA15]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	118,272	130,435	75,395	-	75,395
Gross/Weapon System Cost (\$ in Millions)	131.784	19.333	23.420	14.400	-	14.400
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	131.784	19.333	23.420	14.400	-	14.400
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	131.784	19.333	23.420	14.400	-	14.400

(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 Dollars)	-	163.46	179.55	190.99	-	190.99

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
Load, Assemble, Pack (LAP) ^(†)	17.16	121,720	2.088	16.25	118,272	1.922	17.60	130,435	2.296	17.96	75,395	1.354	-	-	-	17.96	75,395	1.354
Fuze Practice, M775 ^(†)	17.89	125,372	2.243	19.61	121,820	2.389	19.74	134,348	2.652	21.56	77,656	1.674	-	-	-	21.56	77,656	1.674
Shell Body, 60MM FRPC ^(†)	34.39	125,372	4.312	35.69	121,820	4.348	39.68	134,348	5.331	44.00	77,656	3.417	-	-	-	44.00	77,656	3.417
M702 Ignition Cartridge ^(†)	13.25	125,372	1.661	13.80	121,820	1.681	17.06	134,348	2.292	17.39	77,656	1.350	-	-	-	17.39	77,656	1.350
Propellant Charge, M235 ^(†)	8.92	501,487	4.473	11.21	487,281	5.462	12.67	537,392	6.809	12.92	310,627	4.013	-	-	-	12.92	310,627	4.013
Fin Assembly M27 ^(†)	7.19	125,372	0.901	7.71	121,820	0.939	7.39	134,348	0.993	7.99	77,656	0.620	-	-	-	7.99	77,656	0.620
<i>Subtotal: Recurring Cost</i>	-	-	15.679	-	-	16.741	-	-	20.372	-	-	12.429	-	-	-	-	-	12.429
<i>Subtotal: Hardware Cost</i>	-	-	15.679	-	-	16.741	-	-	20.372	-	-	12.429	-	-	-	-	-	12.429
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	0.513	-	-	0.901	-	-	0.528	-	-	-	-	-	0.528
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	-	-	-	0.513	-	-	0.901	-	-	0.528	-	-	-	-	-	0.528
Support - Production Engineering Cost																		
Production Engineering	-	-	116.106	-	-	2.079	-	-	2.146	-	-	1.444	-	-	-	-	-	1.444

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33	P-1 Line Item Number / Title: E89600 / 60MM Mortar, All Types	Item Number / Title [DODIC]: E92200 / CTG, Mortar, 60MM FRTR M769 SERIES W/PRACTICE FUZE [BA15]

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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	116.106	-	-	2.079	-	-	2.146	-	-	1.444	-	-	-	-	-	1.444
Gross/Weapon System Cost	-	-	131.784	163.46	118,272	19.333	179.55	130,435	23.420	190.99	75,395	14.400	-	-	-	190.99	75,395	14.400

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

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33				P-1 Line Item Number / Title: E89600 / 60MM Mortar, All Types				Item Number / Title [DODIC]: E92200 / CTG, Mortar, 60MM FRTR M769 SERIES W/PRACTICE FUZE [BA15]				

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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
Load, Assemble, Pack (LAP)		2016	NAMMO POCAL INC. / SCRANTON, PA	C / IDIQ	ROCK ISLAND ARSENAL, IL	Dec 2015	Apr 2018	118,272	16.25	Y		
Load, Assemble, Pack (LAP)		2017	TO BE SELECTED / TBS01	C / IDIQ	ROCK ISLAND ARSENAL, IL	May 2017	May 2019	130,435	17.60	Y		
Load, Assemble, Pack (LAP)		2018	TO BE SELECTED / TBS01	C / IDIQ	ROCK ISLAND ARSENAL, IL	May 2018	May 2020	75,395	17.96	Y		
Fuze Practice, M775		2016	NAMMO POCAL INC. / SCRANTON, PA	C / IDIQ	PICATINNY ARSENAL, NJ	Jun 2016	Dec 2017	121,820	19.61	Y		
Fuze Practice, M775		2017	TO BE SELECTED / TBS02	C / IDIQ	PICATINNY ARSENAL, NJ	Aug 2017	Feb 2019	134,348	19.74	Y		
Fuze Practice, M775		2018	TO BE SELECTED / TBS02	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	77,656	21.56	Y		
Shell Body, 60MM FRPC		2016	MEDICO INDUSTRIES INC. / WILKES BARRE, PA	Option / IDIQ	PICATINNY ARSENAL, NJ	Mar 2016	Sep 2017	121,820	35.69	Y		
Shell Body, 60MM FRPC		2017	MEDICO INDUSTRIES INC. / WILKES BARRE, PA	Option / IDIQ	PICATINNY ARSENAL, NJ	Mar 2017	Sep 2018	134,348	39.68	Y		
Shell Body, 60MM FRPC		2018	TO BE SELECTED / TBS02	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	77,656	44.00	Y		
M702 Ignition Cartridge		2016	NAMMO POCAL INC. / SCRANTON, PA	Option / IDIQ	ROCK ISLAND ARSENAL, IL	Mar 2016	Sep 2017	121,820	13.80	Y		
M702 Ignition Cartridge		2017	NAMMO POCAL INC. / SCRANTON, PA	Option / IDIQ	ROCK ISLAND ARSENAL, IL	Mar 2017	Aug 2018	134,348	17.06	Y		
M702 Ignition Cartridge		2018	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	77,656	17.39	Y		
Propellant Charge, M235		2016	GENERAL DYNAMICS ORD & TAC / MARION, IL	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2016	May 2017	487,281	11.21	Y		
Propellant Charge, M235		2017	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	May 2017	Nov 2018	537,392	12.67	Y		
Propellant Charge, M235		2018	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	310,627	12.92	Y		
Fin Assembly M27		2016	FLEXIBLE CONCEPTS, INC. / ELKHART, IN	C / IDIQ	PICATINNY ARSENAL, NJ	Mar 2016	Sep 2017	36,361	7.71	Y		
Fin Assembly M27		2016	GAYSTON CORPORATION / MIAMISBURG, OH	C / IDIQ	PICATINNY ARSENAL, NJ	Mar 2016	Sep 2017	85,459	7.71	Y		
Fin Assembly M27		2017	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	May 2017	Nov 2018	134,348	7.39	Y		

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33			P-1 Line Item Number / Title: E89600 / 60MM Mortar, All Types				Item Number / Title [DODIC]: E92200 / CTG, Mortar, 60MM FRTR M769 SERIES W/PRACTICE FUZE [BA15]				

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>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
Fin Assembly M27		2018	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	77,656	7.99	Y		

Remarks:
 FRPC LAP: IDIQ awarded (Feb 11) to multiple contractors. Requirements will be competed among the following contractors: Day and Zimmerman, Parsons, KS; Chemring Ordnance, Perry FL. M27 FINS: IDIQ awarded (Feb 11) to multiple contractors. Requirements will be competed among the following contractors: Gayston, Springboro, OH; Flexible Concepts, Elkhart, IN; Cerebrus, Morris Plains, NJ. Ignition Cartridges: IDIQ awarded (Jun 12) to multiple contractors. Requirements will be competed among the following contractors: Pocal Industries, Scranton, PA and American Ordnance, Middletown, IA.

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33		P-1 Line Item Number / Title: E89600 / 60MM Mortar, All Types
		Item Number / Title [DODIC]: E92900 / CTG MORTAR 60MM HE M768 SERIES W/PD FUZE [BA45]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	65,942	50,728	37,363	-	37,363
Gross/Weapon System Cost (\$ in Millions)	191.952	29.410	28.000	18.800	-	18.800
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	191.952	29.410	28.000	18.800	-	18.800
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	191.952	29.410	28.000	18.800	-	18.800

(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 Dollars)	-	446.00	551.96	503.17	-	503.17

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP) ^(†)	53.39	60,039	3.205	47.47	65,942	3.130	57.19	50,728	2.901	58.35	37,363	2.180	-	-	-	58.35	37,363	2.180
SHELL BODY (HF1), 60MM HE ^(†)	37.39	61,840	2.312	39.19	67,920	2.662	41.11	52,249	2.148	48.00	38,483	1.847	-	-	-	48.00	38,483	1.847
FIN ASSEMBLY M27 ^(†)	7.95	61,840	0.492	7.07	67,920	0.480	7.39	52,249	0.386	7.99	38,483	0.307	-	-	-	7.99	38,483	0.307
M702 IGNITION CARTRIDGE ^(†)	13.25	61,840	0.819	13.80	67,920	0.937	17.06	52,249	0.891	17.39	38,483	0.669	-	-	-	17.39	38,483	0.669
PROPELLANT CHARGE, M235 ^(†)	8.92	247,361	2.206	10.00	271,681	2.717	12.67	208,999	2.648	12.92	153,935	1.989	-	-	-	12.92	153,935	1.989
FUZE POINT DETONATOR M783 ^(†)	158.29	61,840	9.789	164.24	67,920	11.155	229.39	52,249	11.985	167.50	38,483	6.446	-	-	-	167.50	38,483	6.446
PBXW-14 BULK EXPLOSIVE ^(†)	80.31	3,482	0.280	75.83	3,956	0.300	85.04	3,043	0.259	83.63	2,241	0.187	-	-	-	83.63	2,241	0.187
EXPLOSIVE FILL IMX-104 ^(†)	21.90	102,066	2.235	23.28	197,826	4.605	27.00	152,184	4.109	27.04	112,089	3.031	-	-	-	27.04	112,089	3.031
<i>Subtotal: Recurring Cost</i>	-	-	21.339	-	-	25.987	-	-	25.328	-	-	16.657	-	-	-	-	-	16.657
<i>Subtotal: Hardware Cost</i>	-	-	21.339	-	-	25.987	-	-	25.328	-	-	16.657	-	-	-	-	-	16.657
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	0.386	-	-	0.372	-	-	0.264	-	-	-	-	-	0.264

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33	P-1 Line Item Number / Title: E89600 / 60MM Mortar, All Types	Item Number / Title [DODIC]: E92900 / CTG MORTAR 60MM HE M768 SERIES W/PD FUZE [BA45]
ID Code (A=Service Ready, B=Not Service Ready) : A		MDAP/MAIS Code:

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
First Article Test	-	-	-	-	-	1.125	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	-	-	-	1.511	-	-	0.372	-	-	0.264	-	-	-	-	-	0.264
Support - Production Engineering Cost																		
Production Engineering	-	-	170.614	-	-	1.913	-	-	2.301	-	-	1.880	-	-	-	-	-	1.880
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	170.614	-	-	1.913	-	-	2.301	-	-	1.880	-	-	-	-	-	1.880
Gross/Weapon System Cost	-	-	191.952	446.00	65,942	29.410	551.96	50,728	28.000	503.17	37,363	18.800	-	-	-	503.17	37,363	18.800

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

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33			P-1 Line Item Number / Title: E89600 / 60MM Mortar, All Types					Item Number / Title [DODIC]: E92900 / CTG MORTAR 60MM HE M768 SERIES W/PD FUZE [BA45]				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
LOAD, ASSEMBLE, PACK (LAP)		2016	GEN DYNAMICS ORD & TAC SYS - / LE GARDEUR, CANADA	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2016	Jun 2019	65,942	47.47	Y		
LOAD, ASSEMBLE, PACK (LAP)		2017	TO BE SELECTED / TBS01	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2017	Jun 2020	50,728	57.19	Y		
LOAD, ASSEMBLE, PACK (LAP)		2018	TO BE SELECTED / TBS01	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2018	Jun 2021	37,363	58.35	Y		
SHELL BODY (HF1), 60MM HE		2016	MEDICO INDUSTRIES INC. / WILKES BARRE, PA	Option / IDIQ	PICATINNY ARSENAL, NJ	Mar 2016	Sep 2017	67,920	39.19	Y		
SHELL BODY (HF1), 60MM HE		2017	MEDICO INDUSTRIES INC. / WILKES BARRE, PA	Option / IDIQ	PICATINNY ARSENAL, NJ	Mar 2017	Sep 2018	52,249	41.11	Y		
SHELL BODY (HF1), 60MM HE		2018	TO BE SELECTED / TBS02	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	38,483	48.00	Y		
FIN ASSEMBLY M27		2016	FLEXIBLE CONCEPTS, INC. / ELKHART, IN	C / IDIQ	PICATINNY ARSENAL, NJ	May 2016	Nov 2017	67,920	7.07	Y		
FIN ASSEMBLY M27		2017	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2017	Dec 2018	52,249	7.39	Y		
FIN ASSEMBLY M27		2018	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	38,483	7.99	Y		
M702 IGNITION CARTRIDGE		2016	NAMMO POCAL INC. / SCRANTON, PA	C / IDIQ	ROCK ISLAND ARSENAL, IL	Apr 2016	Oct 2017	67,920	13.80	Y		
M702 IGNITION CARTRIDGE		2017	NAMMO POCAL INC. / SCRANTON, PA	C / IDIQ	ROCK ISLAND ARSENAL, IL	Mar 2017	Sep 2018	52,249	17.06	Y		
M702 IGNITION CARTRIDGE		2018	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	38,483	17.39	Y		
PROPELLANT CHARGE, M235		2016	GENERAL DYNAMICS ORD & TAC / MARION, IL	C / IDIQ	ROCK ISLAND ARSENAL, IL	Sep 2016	Mar 2017	271,681	10.00	Y		
PROPELLANT CHARGE, M235		2017	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2017	Dec 2018	208,999	12.67	Y		
PROPELLANT CHARGE, M235		2018	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	153,935	12.92	Y		
FUZE POINT DETONATOR M783		2016	L-3 FUZING & ORDANCE SYSTEMS / CINCINNATI, OH	Option / FFP	PICATINNY ARSENAL, NJ	Feb 2017	Jul 2017	67,920	164.24	Y		
FUZE POINT DETONATOR M783		2017	L-3 FUZING & ORDANCE SYSTEMS / CINCINNATI, OH	Option / FFP	PICATINNY ARSENAL, NJ	Mar 2017	Nov 2018	52,249	229.39	Y		
FUZE POINT DETONATOR M783		2018	L-3 FUZING & ORDANCE SYSTEMS / CINCINNATI, OH	Option / FFP	PICATINNY ARSENAL, NJ	Mar 2018	Nov 2019	38,483	167.50	Y		
PBXW-14 BULK EXPLOSIVE		2016	BAE SYSTEMS ORDNANCE SYSTEMS / KINGSPORT, TN	Option / FFP	ROCK ISLAND ARSENAL, IL	Jun 2016	Feb 2017	3,956	75.83	Y		

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33			P-1 Line Item Number / Title: E89600 / 60MM Mortar, All Types					Item Number / Title [DODIC]: E92900 / CTG MORTAR 60MM HE M768 SERIES W/PD FUZE [BA45]				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
PBXW-14 BULK EXPLOSIVE		2017	BAE SYSTEMS ORDNANCE SYSTEMS / KINGSPORT, TN	Option / FFP	ROCK ISLAND ARSENAL, IL	Jun 2017	Feb 2018	3,043	85.04	Y		
PBXW-14 BULK EXPLOSIVE		2018	BAE SYSTEMS ORDNANCE SYSTEMS / KINGSPORT, TN	Option / FFP	ROCK ISLAND ARSENAL, IL	Feb 2018	Oct 2019	2,241	83.63	Y		
EXPLOSIVE FILL IMX-104		2016	BAE SYSTEMS ORDNANCE SYSTEMS / KINGSPORT, TN	Option / FFP	ROCK ISLAND ARSENAL, IL	Nov 2017	May 2019	197,826	23.28	Y		
EXPLOSIVE FILL IMX-104		2017	BAE SYSTEMS ORDNANCE SYSTEMS / KINGSPORT, TN	Option / FFP	ROCK ISLAND ARSENAL, IL	Jun 2017	Dec 2019	152,184	27.00	Y		
EXPLOSIVE FILL IMX-104		2018	BAE SYSTEMS ORDNANCE SYSTEMS / KINGSPORT, TN	Option / FFP	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2020	112,089	27.04	Y		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 33: Mortar Ammunition	P-1 Line Item Number / Title: E76000 / 81MM Mortar, All Types
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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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	673.059	46.130	38.802	49.471	-	49.471	40.195	57.794	54.388	57.132	-	1,016.971
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	673.059	46.130	38.802	49.471	-	49.471	40.195	57.794	54.388	57.132	-	1,016.971
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	673.059	46.130	38.802	49.471	-	49.471	40.195	57.794	54.388	57.132	-	1,016.971

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

Description:

This budget line includes 81mm Mortar Ammunition, All Types.
The 81mm Mortar cartridges are designed for use with the M252 Mortar Weapon System used by the Stryker Brigade Combat Teams as well as light infantry battalions including Airborne, Air Assault and Ranger.

(E18403)CTG, MORTAR, 81MM HE M821 W/MOFM

The 81mm High Explosive (HE) Cartridges are Insensitive Munitions (IM) enhanced, HE rounds. The 81mm HE Cartridges consist of a fuze, a threaded plastic fuze adapter, a High Fragmentation (HF)-1 steel projectile body loaded with approximately 3lbs. of IMX-104 explosive, a plastic obturating ring, a M24 Fin, the M220 Propelling Charges, and a M299 Ignition Cartridge. The M821A2 HE (Range 70 meter minimum to 5,859 meter maximum) also incorporates the highly reliable and countermeasure resistant M734A1 multi-option fuze. When the fuze is set in the proximity mode, it functions at a height over the target that is optimized for lethality.

IM features of this cartridge reduce the vulnerability to unplanned stimuli, e.g. fire/heat, shock and impact. In order to maintain the required effectiveness while implementing IM features, the M821A3E1 cartridge will incorporate warhead modifications in order to meet all requirements. Specifically, the warhead will consist of a Fragmentation Sleeve with an HF-1 Steel body. All other components are the same and will utilize existing production lines and production contracts.

These items are Code A, approved for service use.

(E18404)CTG, MORTAR, 81MM HE M889 SERIES W/PD FUZE

The 81mm High Explosive Cartridges are Insensitive Munitions (IM) enhanced, HE rounds. The 81mm HE Cartridges consist of a fuze, a threaded plastic fuze adapter, a HF-1 steel projectile body loaded with approximately 3lbs. of IMX-104 explosive, a plastic obturating ring, a M24 Fin, the M220 Propelling Charges, and a M299 Ignition Cartridge. The M889A2 HE (Range 70 meter minimum to 5,859 meter maximum) is used with the new M783 dual safety, point detonating/delay fuze. This round is used primarily in training because it is significantly less expensive than the M821A2, the preferred war fighting round. However, the M889A2 is lethal and can be used in combat.

IM features of this cartridge reduce the vulnerability to unplanned stimuli, e.g. fire/heat, shock and impact, while maintaining or exceeding the same level of effectiveness in combat.

These items are Code A, approved for service use.

(E69600)CTG, MORTAR, 81MM FRPC M879 SERIES W/PRACTICE FUZE

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 33: Mortar Ammunition		P-1 Line Item Number / Title: E76000 / 81MM Mortar, All Types
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>The M879 is a low-cost, full range, practice round that will replace a percentage of the standard HE rounds used in 81mm mortar training. The M879 FRPC (Range 70 meter minimum to 5,800 meter maximum) has been designed to provide the user with realistic training at a fraction of the cost. It is identical in shape, size and weight to the M889A2/M821A2 HE cartridges. The flash, bang and smoke signature provided by the M751 fuze is channeled to exhaust holes in the rear of the cartridge through the use of a center vent tube. This item is Code A, approved for service use.</p> <p>(E76100)CTG, MORTAR, 81MM VL ILLUM M853 SERIES W/MTSQ FUZE The M853A1 cartridge is a fin stabilized, mortar cartridge that consists of a M772 Mechanical Time Super Quick (MTSQ) fuze, a thin wall aluminum body tube and aluminum tail cone that contains the payload (parachute and canister), and a fin assembly that contains the ignition cartridge and propelling charges. The payload is base ejected and upon ignition produces visible light illumination. This visible light illumination allows for monitoring of enemy activities and adjustment of fire at greater observation distances during night operations. It also provides a means for day/night signaling. It is particularly useful in combined operations with allies who may not have night vision devices (NVDs). This round illuminates to the full range of the HE round, which allows adjustment of fire at any distance out to the maximum range. The M853A1 (Range 300 meter minimum and 5,050 maximum) is range-matched to the 81mm High Explosive (HE) and smoke cartridges. This item is Code A, approved for service use.</p> <p>(E76200)CTG, MORTAR, 81MM RP SMOKE M819 SERIES W/MTSQ FUZE The M819 Cartridge is a fin stabilized thin wall steel body tube containing 28 pelletized red phosphorous (RP) wedges; it uses the highly reliable M772 Mechanical Time Super Quick (MTSQ) fuze. After a set time delay, the RP wedges are ejected and dispersed on the target to quickly produce an obscuring smoke screen. A full screen can be developed with 3 rounds as opposed to 15 rounds with the M375 series WP cartridge that is used to create smoke screens to cover movement of troops and/or disrupt visibility of enemy forces. This cartridge was modified to include Gas Absorbent Modules (GAMS) that absorb the phosphine gas emitted by the RP to keep the round stable. The M819 (Range 300 meter minimum and 4,900 maximum) is range-matched to the 81mm High Explosive (HE) and Illum cartridges. This item is code A, approved for service use.</p>		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 33: Mortar Ammunition

P-1 Line Item Number / Title:
E76000 / 81MM Mortar, All Types

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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 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	E18403 / CTG, MORTAR, 81MM HE M821 SERIES W/MOFM [CA66]	P-5a	A		- / 275.553	- / -	- / -	15,051 / 15.934	- / -	15,051 / 15.934
P-5	E18404 / CTG, MORTAR 81MM HE M889 SERIES W/PD FUZE [CA63]	P-5a	A		- / 98.348	28,521 / 14.969	23,144 / 15.277	21,041 / 13.100	- / -	21,041 / 13.100
P-5	E69600 / CTG, MORTAR, 81MM FRTR M879 SERIES W/PRACT FUZE [C875]	P-5a	A		- / 133.445	87,066 / 16.956	76,116 / 17.300	56,069 / 14.000	- / -	56,069 / 14.000
P-5	E76100 / CTG, MORTAR, 81MM VL ILLUM M853 SERIES W/MTSQ FUZE [C871]	P-5a	A		- / 87.608	11,261 / 8.444	- / -	- / -	- / -	- / -
P-5	E76200 / CTG, MORTAR, 81MM RP SMOKE M819 SERIES W/MTSQ FUZE [C870]	P-5a	A		- / 78.105	8,127 / 5.761	8,131 / 6.225	7,931 / 6.437	- / -	7,931 / 6.437
P-40	Total Gross/Weapon System Cost				- / 673.059	- / 46.130	- / 38.802	- / 49.471	- / -	- / 49.471

*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 2018 Base Budget supports critical Army Title 10 war reserve/operational, training, and test requirements IAW DoD Instruction 3000.04 (Munitions Requirements Process) and AR 5-13 (Total Army Munitions Requirements Process and Prioritization System). War reserve requirements support OSD-approved Combatant Commander Operational Plans, Homeland Defense, and other OSD-directed missions. Training requirements support individual and collective training of Active and Reserve Component forces at Army schools, home station, and the combined training centers. Test requirements support the development, fielding, safety, and quality assurance of Army munitions and equipment throughout their life-cycle.

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.

FY 2018 Base procurement dollars in the amount of \$49.471 million supports production of 100,092 cartridges.

E18403 - CTG, MORTAR, 81MM HE M821 SERIES W/MOFM

This is a training standard item used in training and combat. FY 2018 request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$15.934 million supports production of 15,051 cartridges. TYPE CLASSIFICATION DATE: June 1996

E18404 - CTG, MORTAR 81MM HE M889 SERIES W/PD FUZE

This is a training standard item used in training and combat. FY 2018 request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$13.100 million supports production of 21,041 cartridges. TYPE CLASSIFICATION DATE: July 2009

E69600 - CTG, MORTAR, 81MM FRPC M879 SERIES W/PRACTICE FUZE

This is a training standard item used in training and combat. FY 2018 request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$14.000 million supports production of 56,069 cartridges. TYPE CLASSIFICATION DATE: August 1986

E76100 - CTG, MORTAR, 81MM VL ILLUM M853 SERIES W/MTSQ FUZE

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 33: Mortar Ammunition		P-1 Line Item Number / Title: E76000 / 81MM Mortar, All Types
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		
This is a training standard item used in training and combat. Request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. TYPE CLASSIFICATION DATE: December 1986		
E76200 - CTG, MORTAR, 81MM RP SMOKE M819 SERIES W/MTSQ FUZE This is a training standard item used in training and combat. FY 2018 request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. FY 2018 Base procurement in the amount of \$6.437 million supports production of 7,931 cartridges. TYPE CLASSIFICATION DATE: December 1986		

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33	P-1 Line Item Number / Title: E76000 / 81MM Mortar, All Types	Item Number / Title [DODIC]: E18403 / CTG, MORTAR, 81MM HE M821 SERIES W/MOFM [CA66]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	-	-	15,051	-	15,051
Gross/Weapon System Cost (\$ in Millions)	275.553	-	-	15.934	-	15.934
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	275.553	-	-	15.934	-	15.934
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	275.553	-	-	15.934	-	15.934

(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 Dollars)	-	-	-	1,058.67	-	1,058.67

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP) ^(†)	-	-	275.553	-	-	-	-	-	-	253.10	15,051	3.809	-	-	-	253.10	15,051	3.809
SHELL BODY, 81MM HE M821A3E1 ^(†)	-	-	-	-	-	-	-	-	-	80.00	15,502	1.240	-	-	-	80.00	15,502	1.240
FIN MORTAR CTG M24 F/81MM ^(†)	-	-	-	-	-	-	-	-	-	16.59	15,502	0.257	-	-	-	16.59	15,502	0.257
IGN CTG M299 ^(†)	-	-	-	-	-	-	-	-	-	18.05	15,502	0.280	-	-	-	18.05	15,502	0.280
CHG PROP 81MM M220 ^(†)	-	-	-	-	-	-	-	-	-	16.08	62,010	0.997	-	-	-	16.08	62,010	0.997
FUZE MOFM, M734A1 ^(†)	-	-	-	-	-	-	-	-	-	271.13	15,502	4.203	-	-	-	271.13	15,502	4.203
PBXW-14 BULK EXPLOSIVE ^(†)	-	-	-	-	-	-	-	-	-	83.63	1,806	0.151	-	-	-	83.63	1,806	0.151
EXPLOSIVE FILL IMX-104 ^(†)	-	-	-	-	-	-	-	-	-	27.04	63,214	1.709	-	-	-	27.04	63,214	1.709
<i>Subtotal: Recurring Cost</i>	-	-	275.553	-	-	-	-	-	-	-	-	12.647	-	-	-	-	-	12.647
<i>Subtotal: Hardware Cost</i>	-	-	275.553	-	-	-	-	-	-	-	-	12.647	-	-	-	-	-	12.647
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	-	-	-	-	-	-	0.085	-	-	-	-	-	0.085
First Article Test	-	-	-	-	-	-	-	-	-	-	-	0.500	-	-	-	-	-	0.500

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Exhibit P-5, Cost Analysis: FY 2018 Army												Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33						P-1 Line Item Number / Title: E76000 / 81MM Mortar, All Types						Item Number / Title [DODIC]: E18403 / CTG, MORTAR, 81MM HE M821 SERIES W/MOFM [CA66]					
ID Code (A=Service Ready, B=Not Service Ready) : A												MDAP/MAIS Code:					

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.585	-	-	-	-	-	0.585
Support - Engineering Change Proposals Cost																		
Engineering Change Proposals	-	-	-	-	-	-	-	-	-	-	-	1.000	-	-	-	-	-	1.000
<i>Subtotal: Support - Engineering Change Proposals Cost</i>	-	-	-	-	-	-	-	-	-	-	-	1.000	-	-	-	-	-	1.000
Support - Product Improvement Cost																		
Insensitive Munitions	-	-	-	-	-	-	-	-	-	-	-	1.700	-	-	-	-	-	1.700
<i>Subtotal: Support - Product Improvement Cost</i>	-	-	-	-	-	-	-	-	-	-	-	1.700	-	-	-	-	-	1.700
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	-	-	-	-	-	-	0.003	-	-	-	-	-	0.003
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.003	-	-	-	-	-	0.003
Gross/Weapon System Cost	-	-	275.553	-	-	-	-	-	-	1,058.67	15,051	15.934	-	-	-	1,058.67	15,051	15.934

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

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33			P-1 Line Item Number / Title: E76000 / 81MM Mortar, All Types				Item Number / Title [DODIC]: E18403 / CTG, MORTAR, 81MM HE M821 SERIES W/MOFM [CA66]					

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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
LOAD, ASSEMBLE, PACK (LAP)		2018	TO BE SELECTED / TBS01	C / IDIQ	PICATINNY ARSENAL, NJ	May 2018	May 2021	15,051	253.10	Y		
SHELL BODY, 81MM HE M821A3E1		2018	TO BE SELECTED / TBS03	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	15,502	80.00	Y		
FIN MORTAR CTG M24 F/81MM		2018	TO BE SELECTED / TBS03	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	15,502	16.59	Y		
IGN CTG M299		2018	TO BE SELECTED / TBS03	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	15,502	18.05	Y		
CHG PROP 81MM M220		2018	TO BE SELECTED / TBS03	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	62,010	16.08	Y		
FUZE MOFM, M734A1		2018	L-3 FUZING & ORDANCE SYSTEMS / CINCINNATI, OH	Option / FFP	PICATINNY ARSENAL, NJ	Feb 2018	Oct 2019	15,502	271.13	Y		
PBXW-14 BULK EXPLOSIVE		2018	BAE SYSTEMS ORDNANCE SYSTEMS / KINGSPORT, TN	Option / FFP	ROCK ISLAND ARSENAL, IL	Feb 2018	Oct 2019	1,806	83.63	Y		
EXPLOSIVE FILL IMX-104		2018	BAE SYSTEMS ORDNANCE SYSTEMS / KINGSPORT, TN	Option / FFP	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2020	63,214	27.04	Y		

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33		P-1 Line Item Number / Title: E76000 / 81MM Mortar, All Types
		Item Number / Title [DODIC]: E18404 / CTG, MORTAR 81MM HE M889 SERIES W/PD FUZE [CA63]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	28,521	23,144	21,041	-	21,041
Gross/Weapon System Cost (\$ in Millions)	98.348	14.969	15.277	13.100	-	13.100
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	98.348	14.969	15.277	13.100	-	13.100
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	98.348	14.969	15.277	13.100	-	13.100

(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 Dollars)	-	524.84	660.08	622.59	-	622.59

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP) ^(†)	70.97	16,543	1.174	76.79	28,521	2.190	84.13	23,144	1.947	86.78	21,041	1.826	-	-	-	86.78	21,041	1.826
FUZE POINT DETONATOR M783 ^(†)	158.29	17,039	2.697	164.24	29,377	4.825	229.39	23,838	5.468	167.50	21,672	3.630	-	-	-	167.50	21,672	3.630
SHELL BODY, 81MM HE ^(†)	48.63	17,039	0.829	50.29	29,376	1.477	52.50	23,838	1.251	64.00	21,672	1.387	-	-	-	64.00	21,672	1.387
IGN CTG M299 ^(†)	14.35	17,039	0.245	14.35	29,376	0.422	17.70	23,838	0.422	18.06	21,672	0.391	-	-	-	18.06	21,672	0.391
CHG PROP 81MM M220 ^(†)	10.50	68,157	0.716	13.46	117,506	1.582	15.47	95,353	1.475	16.08	86,688	1.394	-	-	-	16.08	86,688	1.394
FIN MORTAR CTG M24 F/81MM ^(†)	14.95	17,039	0.255	15.75	29,376	0.463	16.43	23,838	0.392	16.59	21,672	0.360	-	-	-	16.59	21,672	0.360
PBXW-14 BULK EXPLOSIVE ^(†)	80.31	1,919	0.154	75.83	3,423	0.260	85.04	2,777	0.236	83.63	2,524	0.211	-	-	-	83.63	2,524	0.211
EXPLOSIVE FILL IMX-104 ^(†)	21.90	53,765	1.177	22.38	119,789	2.681	27.00	97,204	2.625	27.04	88,372	2.390	-	-	-	27.04	88,372	2.390
<i>Subtotal: Recurring Cost</i>	-	-	7.246	-	-	13.899	-	-	13.816	-	-	11.589	-	-	-	-	-	11.589
<i>Subtotal: Hardware Cost</i>	-	-	7.246	-	-	13.899	-	-	13.816	-	-	11.589	-	-	-	-	-	11.589
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	0.128	-	-	0.220	-	-	0.203	-	-	0.200	-	-	-	-	-	0.200
First Article Test	-	-	0.050	-	-	0.148	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33	P-1 Line Item Number / Title: E76000 / 81MM Mortar, All Types	Item Number / Title [DODIC]: E18404 / CTG, MORTAR 81MM HE M889 SERIES W/PD FUZE [CA63]
ID Code (A=Service Ready, B=Not Service Ready) : A		MDAP/MAIS Code:

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	0.178	-	-	0.368	-	-	0.203	-	-	0.200	-	-	-	-	-	0.200
Support - Production Engineering Cost																		
Production Engineering	-	-	90.923	-	-	0.701	-	-	1.258	-	-	1.311	-	-	-	-	-	1.311
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	90.923	-	-	0.701	-	-	1.258	-	-	1.311	-	-	-	-	-	1.311
Gross/Weapon System Cost	-	-	98.348	524.84	28,521	14,969	660.08	23,144	15,277	622.59	21,041	13,100	-	-	-	622.59	21,041	13,100

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

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: FY 2018 Army										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33				P-1 Line Item Number / Title: E76000 / 81MM Mortar, All Types				Item Number / Title [DODIC]: E18404 / CTG, MORTAR 81MM HE M889 SERIES W/PD FUZE [CA63]				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
LOAD, ASSEMBLE, PACK (LAP)		2016	GEN DYNAMICS ORD & TAC SYS - / LE GARDEUR, CANADA	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2016	Jun 2019	28,521	76.79	Y		
LOAD, ASSEMBLE, PACK (LAP)		2017	TO BE SELECTED / TBS01	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2017	Jun 2020	23,144	84.13	Y		
LOAD, ASSEMBLE, PACK (LAP)		2018	TO BE SELECTED / TBS01	C / IDIQ	ROCK ISLAND ARSENAL, IL	May 2018	May 2021	21,041	86.78	Y		
FUZE POINT DETONATOR M783		2016	L-3 FUZING & ORDANCE SYSTEMS / CINCINNATI, OH	Option / FFP	PICATINNY ARSENAL, NJ	Feb 2017	Oct 2018	29,377	164.24	Y		
FUZE POINT DETONATOR M783		2017	L-3 FUZING & ORDANCE SYSTEMS / CINCINNATI, OH	Option / FFP	PICATINNY ARSENAL, NJ	Mar 2017	Nov 2018	23,838	229.39	Y		
FUZE POINT DETONATOR M783		2018	L-3 FUZING & ORDANCE SYSTEMS / CINCINNATI, OH	Option / FFP	PICATINNY ARSENAL, NJ	Mar 2018	Nov 2019	21,672	167.50	Y		
SHELL BODY, 81MM HE		2016	MEDICO INDUSTRIES INC. / WILKES BARRE, PA	C / IDIQ	PICATINNY ARSENAL, NJ	Mar 2016	Sep 2017	29,376	50.29	Y		
SHELL BODY, 81MM HE		2017	MEDICO INDUSTRIES INC. / WILKES BARRE, PA	C / IDIQ	PICATINNY ARSENAL, NJ	Mar 2017	Sep 2018	23,838	52.50	Y		
SHELL BODY, 81MM HE		2018	TO BE SELECTED / TBS02	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	21,672	64.00	Y		
IGN CTG M299		2016	NAMMO POCAL INC. / SCRANTON, PA	C / IDIQ	ROCK ISLAND ARSENAL, IL	Mar 2016	Sep 2017	29,376	14.35	Y		
IGN CTG M299		2017	NAMMO POCAL INC. / SCRANTON, PA	C / IDIQ	ROCK ISLAND ARSENAL, IL	Mar 2017	Sep 2018	23,838	17.70	Y		
IGN CTG M299		2018	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	21,672	18.06	Y		
CHG PROP 81MM M220		2016	GENERAL DYNAMICS ORD & TAC / MARION, IL	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2016	Dec 2017	117,506	13.46	Y		
CHG PROP 81MM M220		2017	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2017	Dec 2018	95,353	15.47	Y		
CHG PROP 81MM M220		2018	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	86,688	16.08	Y		
FIN MORTAR CTG M24 F/81MM		2016	FLEXIBLE CONCEPTS, INC. / ELKHART, IN	C / IDIQ	PICATINNY ARSENAL, NJ	Mar 2016	Sep 2017	29,376	15.75	Y		
FIN MORTAR CTG M24 F/81MM		2017	TO BE SELECTED / TBS02	C / IDIQ	PICATINNY ARSENAL, NJ	Jun 2017	Dec 2018	23,838	16.43	Y		
FIN MORTAR CTG M24 F/81MM		2018	TO BE SELECTED / TBS02	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	21,672	16.59	Y		
PBXW-14 BULK EXPLOSIVE		2016	BAE SYSTEMS ORDNANCE SYSTEMS / KINGSPORT, TN	Option / FFP	ROCK ISLAND ARSENAL, IL	Jun 2016	Feb 2018	3,423	75.83	Y		

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33			P-1 Line Item Number / Title: E76000 / 81MM Mortar, All Types				Item Number / Title [DODIC]: E18404 / CTG, MORTAR 81MM HE M889 SERIES W/PD FUZE [CA63]					

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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
PBXW-14 BULK EXPLOSIVE		2017	BAE SYSTEMS ORDNANCE SYSTEMS / KINGSPORT, TN	Option / FFP	ROCK ISLAND ARSENAL, IL	Jun 2017	Feb 2019	2,777	85.04	Y		
PBXW-14 BULK EXPLOSIVE		2018	BAE SYSTEMS ORDNANCE SYSTEMS / KINGSPORT, TN	Option / FFP	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	2,524	83.63	Y		
EXPLOSIVE FILL IMX-104		2016	BAE SYSTEMS ORDNANCE SYSTEMS / KINGSPORT, TN	Option / FFP	ROCK ISLAND ARSENAL, IL	Jan 2017	Jul 2018	119,789	22.38	Y		
EXPLOSIVE FILL IMX-104		2017	BAE SYSTEMS ORDNANCE SYSTEMS / KINGSPORT, TN	Option / FFP	ROCK ISLAND ARSENAL, IL	Jun 2017	Dec 2018	97,204	27.00	Y		
EXPLOSIVE FILL IMX-104		2018	BAE SYSTEMS ORDNANCE SYSTEMS / KINGSPORT, TN	Option / FFP	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2020	88,372	27.04	Y		

Remarks:
 Ignition Cartridges: IDIQ awarded (Jun 12) to multiple contractors. Requirements will be competed among the following contractors: Pocal Industries, Scranton, PA; American Ordnance, Middletown, IA; and DZI Lonestar LLC., Texarkana, TX. HE LAP: IDIQ awarded (Aug 11) to multiple contractors. Requirements will be competed among the following contractors: Day and Zimmerman, Camden, AR; Day and Zimmerman, Parsons, KS; General Dynamics, LeGardeur, Canada; American Ordnance, Middletown, IA. HE Shell Bodes: IDIQ awarded (Aug 11) to multiple contractors. Requirements will be competed among the following contractors: Medico Industries, Wilkes Barre, PA; Modern Industries, Erie, PA; T&A Screw Products, Terryville, CT. M220 Propellant Charges: IDIQ awarded (Dec 12) to multiple contractors. Requirements will be competed among the following contractors: Day and Zimmerman, Camden, AR; American Ordnance, Middletown, IA; and General Dynamics, Marion IL. Fins: IDIQ awarded (Jul 12) to multiple contractors. Requirements will be competed among the following contractors: Gayston Corp., Springboro, OH and T&A Screw Products, Terryville, CT.

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33	P-1 Line Item Number / Title: E76000 / 81MM Mortar, All Types	Item Number / Title [DODIC]: E69600 / CTG, MORTAR, 81MM FRTR M879 SERIES W/PRACT FUZE [C875]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	87,066	76,116	56,069	-	56,069
Gross/Weapon System Cost (\$ in Millions)	133.445	16.956	17.300	14.000	-	14.000
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	133.445	16.956	17.300	14.000	-	14.000
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	133.445	16.956	17.300	14.000	-	14.000

(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 Dollars)	-	194.75	227.28	249.69	-	249.69

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP) ^(†)	37.83	23,609	0.893	39.00	87,066	3.396	37.83	76,116	2.879	42.00	56,069	2.355	-	-	-	42.00	56,069	2.355
FUZE PRACTICE, M751 ^(†)	18.60	24,317	0.452	19.57	89,678	1.755	19.74	78,399	1.548	21.56	57,751	1.245	-	-	-	21.56	57,751	1.245
SHELL BODY, 81MM FRPC ^(†)	38.79	24,317	0.943	43.19	89,678	3.873	43.42	78,399	3.404	50.00	57,751	2.888	-	-	-	50.00	57,751	2.888
IGN CTG M299 ^(†)	14.35	24,317	0.349	14.35	89,678	1.287	17.70	78,399	1.388	18.06	57,751	1.043	-	-	-	18.06	57,751	1.043
CHG PROP 81MM M220 ^(†)	10.50	97,269	1.021	10.00	358,712	3.587	15.47	313,597	4.851	16.08	231,004	3.715	-	-	-	16.08	231,004	3.715
FIN MORTAR CTG M24 F/81MM ^(†)	14.95	24,317	0.364	15.95	89,678	1.430	16.43	78,399	1.288	16.59	57,751	0.958	-	-	-	16.59	57,751	0.958
<i>Subtotal: Recurring Cost</i>	-	-	4.022	-	-	15.328	-	-	15.358	-	-	12.203	-	-	-	-	-	12.203
<i>Subtotal: Hardware Cost</i>	-	-	4.022	-	-	15.328	-	-	15.358	-	-	12.203	-	-	-	-	-	12.203
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	0.133	-	-	0.401	-	-	0.442	-	-	0.395	-	-	-	-	-	0.395
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	0.133	-	-	0.401	-	-	0.442	-	-	0.395	-	-	-	-	-	0.395
Support - Production Engineering Cost																		
Production Engineering	-	-	129.290	-	-	1.227	-	-	1.500	-	-	1.401	-	-	-	-	-	1.401

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33	P-1 Line Item Number / Title: E76000 / 81MM Mortar, All Types	Item Number / Title [DODIC]: E69600 / CTG, MORTAR, 81MM FRTR M879 SERIES W/PRACT FUZE [C875]
ID Code (A=Service Ready, B=Not Service Ready) : A		MDAP/MAIS Code:

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	129.290	-	-	1.227	-	-	1.500	-	-	1.401	-	-	-	-	-	1.401
Gross/Weapon System Cost	-	-	133.445	194.75	87,066	16.956	227.28	76,116	17.300	249.69	56,069	14.000	-	-	-	249.69	56,069	14.000

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

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33			P-1 Line Item Number / Title: E76000 / 81MM Mortar, All Types					Item Number / Title [DODIC]: E69600 / CTG, MORTAR, 81MM FRTR M879 SERIES W/PRACT FUZE [C875]				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
LOAD, ASSEMBLE, PACK (LAP)		2016	DAY & ZIMMERMANN, INC. / PARSONS, KS	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2016	Feb 2018	87,066	39.00	Y		
LOAD, ASSEMBLE, PACK (LAP)		2017	TO BE SELECTED / TBS01	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2017	Jun 2019	76,116	37.83	Y		
LOAD, ASSEMBLE, PACK (LAP)		2018	TO BE SELECTED / TBS01	C / IDIQ	ROCK ISLAND ARSENAL, IL	May 2018	May 2020	56,069	42.00	Y		
FUZE PRACTICE, M751		2016	NAMMO POCAL INC. / SCRANTON, PA	Option / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2016	Nov 2017	89,678	19.57	Y		
FUZE PRACTICE, M751		2017	NAMMO POCAL INC. / SCRANTON, PA	Option / IDIQ	PICATINNY ARSENAL, NJ	Sep 2017	Mar 2018	78,399	19.74	Y		
FUZE PRACTICE, M751		2018	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	57,751	21.56	Y		
SHELL BODY, 81MM FRPC		2016	MEDICO INDUSTRIES INC. / WILKES BARRE, PA	Option / IDIQ	PICATINNY ARSENAL, NJ	Mar 2016	Sep 2017	89,678	43.19	Y		
SHELL BODY, 81MM FRPC		2017	MEDICO INDUSTRIES INC. / WILKES BARRE, PA	Option / IDIQ	PICATINNY ARSENAL, NJ	Mar 2017	Sep 2018	78,399	43.42	Y		
SHELL BODY, 81MM FRPC		2018	TO BE SELECTED / TBS02	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	57,751	50.00	Y		
IGN CTG M299		2016	NAMMO POCAL INC. / SCRANTON, PA	C / IDIQ	ROCK ISLAND ARSENAL, IL	Mar 2016	Sep 2017	89,678	14.35	Y		
IGN CTG M299		2017	NAMMO POCAL INC. / SCRANTON, PA	C / IDIQ	ROCK ISLAND ARSENAL, IL	Mar 2017	Sep 2018	78,399	17.70	Y		
IGN CTG M299		2018	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	57,751	18.06	Y		
CHG PROP 81MM M220		2016	GENERAL DYNAMICS ORD & TAC / MARION, IL	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2016	Dec 2017	358,712	10.00	Y		
CHG PROP 81MM M220		2017	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2017	Dec 2018	313,597	15.47	Y		
CHG PROP 81MM M220		2018	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	231,004	16.08	Y		
FIN MORTAR CTG M24 F/81MM		2016	GAYSTON CORPORATION / MIAMISBURG, OH	C / IDIQ	PICATINNY ARSENAL, NJ	Mar 2016	Sep 2017	89,678	15.95	Y		
FIN MORTAR CTG M24 F/81MM		2017	TO BE SELECTED / TBS02	C / IDIQ	PICATINNY ARSENAL, NJ	Jun 2017	Dec 2018	78,399	16.43	Y		
FIN MORTAR CTG M24 F/81MM		2018	TO BE SELECTED / TBS02	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	57,751	16.59	Y		
Remarks:												

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33	P-1 Line Item Number / Title: E76000 / 81MM Mortar, All Types	Item Number / Title [DODIC]: E69600 / CTG, MORTAR, 81MM FRTR M879 SERIES W/PRACT FUZE [C875]
<p>FRPC LAP: IDIQ awarded (Feb 11) to multiple contractors. Requirements will be competed among the following contractors: Day and Zimmerman, Camden, AR; Pocal Industries, Scranton, PA; Day and Zimmerman, Parsons, K S; Chemring Ordnance, Perry, FL. FRPC Shell Bodes: IDIQ awarded (Aug 11) to multiple contractors. Requirements will be competed among the following contractors: Medico Industries, Wilkes Barre, PA; Modern Industries, Erie, PA. Ignition Cartridges: IDIQ awarded (Jun 12) to multiple contractors. Requirements will be competed among the following contractors: Pocal Industries, Scranton, PA; DZI Lonestar LLC., Texarkana, TX and American Ordnance, Middletown, IA. M220 Propellant Charges: IDIQ awarded (Dec 12) to multiple contractors. Requirements will be competed among the following contractors: Day and Zimmerman, Camden, AR; American Ordnance, Middletown, IA; and General Dynamics, Marion, IL. Fins: IDIQ awarded (Jul 12) to multiple contractors. Requirements will be competed among the following contractors: Gayston Corp., Springboro, OH and T&A Screw Machine INC., Waterbury, CT.</p>		

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33	P-1 Line Item Number / Title: E76000 / 81MM Mortar, All Types	Item Number / Title [DODIC]: E76100 / CTG, MORTAR, 81MM VL ILLUM M853 SERIES W/MTSQ FUZE [C871]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	11,261	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	87.608	8.444	-	-	-	-
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	87.608	8.444	-	-	-	-
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	87.608	8.444	-	-	-	-

(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 Dollars)	-	749.84	-	-	-	-

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP) ^(†)	-	-	87.608	109.64	11,261	1.235	-	-	-	-	-	-	-	-	-	-	-	-
FUZE MTSQ, M772 ^(†)	-	-	-	191.80	11,599	2.225	-	-	-	-	-	-	-	-	-	-	-	-
BODY TUBE, 81MM ILLUM ^(†)	-	-	-	29.58	11,599	0.343	-	-	-	-	-	-	-	-	-	-	-	-
TAIL CONE, 81MM ILLUM ^(†)	-	-	-	14.75	11,599	0.171	-	-	-	-	-	-	-	-	-	-	-	-
IGN CTG M752 ^(†)	-	-	-	18.81	11,599	0.218	-	-	-	-	-	-	-	-	-	-	-	-
CHG PROP 81MM M219 ^(†)	-	-	-	15.13	46,395	0.702	-	-	-	-	-	-	-	-	-	-	-	-
FIN MORTAR CTG M28 F/81MM M819 RP ^(†)	-	-	-	16.10	11,599	0.187	-	-	-	-	-	-	-	-	-	-	-	-
ILLUM CANDLE VL F/81MM M853A1 ^(†)	-	-	-	144.93	11,599	1.681	-	-	-	-	-	-	-	-	-	-	-	-
PARACHUTE, 81MM ^(†)	-	-	-	25.85	11,599	0.300	-	-	-	-	-	-	-	-	-	-	-	-
FIBER CONTAINER PA 162, 81MM ^(†)	-	-	-	6.13	11,599	0.071	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33	P-1 Line Item Number / Title: E76000 / 81MM Mortar, All Types	Item Number / Title [DODIC]: E76100 / CTG, MORTAR, 81MM VL ILLUM M853 SERIES W/MTSQ FUZE [C871]

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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
METAL CONTAINER PA 157, 81MM ^(†)	-	-	-	49.00	3,941	0.193	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	87.608	-	-	7.325	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware Cost</i>	-	-	87.608	-	-	7.325	-	-	-	-	-	-	-	-	-	-	-	-
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	0.087	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	-	-	-	0.087	-	-	-	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	1.031	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	1.031	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	-	-	87.608	749.84	11,261	8.444	-	-	-	-	-	-	-	-	-	-	-	-

(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33			P-1 Line Item Number / Title: E76000 / 81MM Mortar, All Types				Item Number / Title [DODIC]: E76100 / CTG, MORTAR, 81MM VL ILLUM M853 SERIES W/MTSQ FUZE [C871]				

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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
LOAD, ASSEMBLE, PACK (LAP)		2016	PINE BLUFF ARSENAL / PINE BLUFF, AR	PO	PICATINNY ARSENAL, NJ	Dec 2016	Apr 2019	11,261	109.64	Y		
FUZE MTSQ, M772		2016	JUNGHANS MICROTEC GMBH / DUNNINGEN, GERMANY	SS / FFP	ROCK ISLAND ARSENAL, IL	May 2017	Jan 2019	11,599	191.80	Y		
BODY TUBE, 81MM ILLUM		2016	LEWIS ENGINEERING COMPANY / MARSHALL, TX	Option / FFP	PICATINNY ARSENAL, NJ	May 2016	Nov 2017	11,599	29.58	Y		
TAIL CONE, 81MM ILLUM		2016	LEWIS ENGINEERING COMPANY / MARSHALL, TX	Option / FFP	PICATINNY ARSENAL, NJ	May 2016	Nov 2017	11,599	14.75	Y		
IGN CTG M752		2016	NAMMO POCAL INC. / SCRANTON, PA	Option / IDIQ	ROCK ISLAND ARSENAL, IL	Apr 2016	Oct 2017	11,599	18.81	Y		
CHG PROP 81MM M219		2016	AMERICAN ORDNANCE LLC (IAAP) / MIDDLETOWN, IA	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jul 2016	Jan 2018	46,395	15.13	Y		
FIN MORTAR CTG M28 F/81MM M819 RP		2016	FLEXIBLE CONCEPTS, INC. / ELKHART, IN	C / IDIQ	PICATINNY ARSENAL, NJ	Apr 2016	Oct 2017	11,599	16.10	Y		
ILLUM CANDLE VL F/81MM M853A1		2016	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Jan 2016	Sep 2017	11,599	144.93	Y		
PARACHUTE, 81MM		2016	YOLAND CORPORATION / BROOKLYN, NY	C / IDIQ	ROCK ISLAND ARSENAL, IL	Apr 2016	Oct 2017	11,599	25.85	Y		
FIBER CONTAINER PA 162, 81MM		2016	UNITED AMMUNITION CONTAINER / WYNNEWOOD, PA	Option / IDIQ	PICATINNY ARSENAL, NJ	Feb 2016	Aug 2017	11,599	6.13	Y		
METAL CONTAINER PA 157, 81MM		2016	BWAY CORPORATION / ATLANTA, GA	Option / IDIQ	PICATINNY ARSENAL, NJ	Aug 2016	Feb 2018	3,941	49.00	Y		

Remarks:
81MM Illum Body Tubes and Tail Cones: IDIQ awarded (Aug 11) to multiple contractors. Requirements will be competed among the following contractors: Medico, Wilkes Barre, PA and Lewis Engineering, Marshall, TX. Ignition Cartridges: IDIQ awarded (Jun 12) to multiple contractors. Requirements will be competed among the following contractors: Pocal Industries, Scranton, PA ; DZI Lonestar, LLC., Texarka, TX and American Ordnance, Middletown, IA. M28 Fin: IDIQ awarded (Sept 11) to multiple contractors. Requirements will be competed among the following contractors: Gayston Corporation, Springboro, OH and Flexible Concepts, Elkhart, IN. M219 Propellany Charges: IDIQ awarded (Dec 12) to multiple contractors. Requirements will be competed among the following contractors: Day and Zimmerman, Camden, AR; American Ordnance, Middletown, IA and General Dynamics, Marion, IL. 81MM Parachutes: IDIQ awarded (Aug 10) to multiple contractors. Requirements will be competed among the following contractors: North American Aerodynamics INC., Roxboro, NC and Yoland Corp. Jamaica, NY.
81MM Illum Body Tubes and Tail Cones: IDIQ awarded (Aug 11) to multiple contractors. Requirements will be competed among the following contractors: Medico, Wilkes Barre, PA and Lewis Engineering, Marshall, TX Ignition Cartridges: IDIQ awarded (Jun 12) to multiple contractors. Requirements will be competed among the following contractors: Pocal Industries, Scranton, PA and American Ordnance, Middletown, IA.

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33	P-1 Line Item Number / Title: E76000 / 81MM Mortar, All Types	Item Number / Title [DODIC]: E76200 / CTG, MORTAR, 81MM RP SMOKE M819 SERIES W/MTSQ FUZE [C870]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	8,127	8,131	7,931	-	7,931
Gross/Weapon System Cost (\$ in Millions)	78.105	5.761	6.225	6.437	-	6.437
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	78.105	5.761	6.225	6.437	-	6.437
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	78.105	5.761	6.225	6.437	-	6.437

(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 Dollars)	-	708.87	765.59	811.63	-	811.63

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP) ^(†)	148.43	18,230	2.706	191.04	8,127	1.553	202.85	8,131	1.649	242.50	7,931	1.923	-	-	-	242.50	7,931	1.923
FIN MORTAR CTG M28 F/81MM M819 RP ^(†)	16.25	18,777	0.305	16.10	8,371	0.135	19.90	8,374	0.167	20.31	8,168	0.166	-	-	-	20.31	8,168	0.166
IGN CTG M752 ^(†)	17.95	18,777	0.337	18.81	8,371	0.157	20.47	8,374	0.171	20.14	8,168	0.165	-	-	-	20.14	8,168	0.165
PROPELLANT CHARGE, M218 ^(†)	10.50	75,108	0.789	15.13	33,483	0.507	14.93	33,499	0.500	17.26	32,675	0.564	-	-	-	17.26	32,675	0.564
FUZE MTSQ, M772 ^(†)	193.85	18,777	3.640	191.80	8,371	1.606	213.07	8,374	1.784	199.45	8,168	1.629	-	-	-	199.45	8,168	1.629
BODY TUBE, 81MM RP SMK ^(†)	24.45	18,777	0.459	24.67	8,371	0.207	30.58	8,374	0.256	49.42	8,168	0.404	-	-	-	49.42	8,168	0.404
TAIL CONE, 81MM SMOKE ^(†)	22.06	18,777	0.414	22.75	8,371	0.190	25.48	8,374	0.213	26.01	8,168	0.212	-	-	-	26.01	8,168	0.212
GAMS ^(†)	7.90	37,918	0.300	8.14	16,742	0.136	10.58	16,749	0.177	10.59	16,496	0.175	-	-	-	10.59	16,496	0.175
RED PHOSPHOROUS PELLETT ^(†)	12.34	54,690	0.675	13.00	24,381	0.317	13.19	28,458	0.375	13.45	23,793	0.320	-	-	-	13.45	23,793	0.320
FIBER CONTAINER PA 162, 81MM ^(†)	5.39	18,777	0.101	6.13	8,371	0.051	6.37	8,374	0.053	6.49	8,168	0.053	-	-	-	6.49	8,168	0.053

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33	P-1 Line Item Number / Title: E76000 / 81MM Mortar, All Types	Item Number / Title [DODIC]: E76200 / CTG, MORTAR, 81MM RP SMOKE M819 SERIES W/MTSQ FUZE [C870]

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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
METAL CONTAINER PA 157, 81MM ^(†)	48.45	6,381	0.309	49.00	2,844	0.139	57.52	2,845	0.164	50.97	991	0.051	-	-	-	50.97	991	0.051
<i>Subtotal: Recurring Cost</i>	-	-	10.035	-	-	4.998	-	-	5.511	-	-	5.661	-	-	-	-	-	5.661
<i>Subtotal: Hardware Cost</i>	-	-	10.035	-	-	4.998	-	-	5.511	-	-	5.661	-	-	-	-	-	5.661
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	66.975	-	-	0.156	-	-	0.090	-	-	0.090	-	-	-	-	-	0.090
First Article Test	-	-	-	-	-	0.023	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	66.975	-	-	0.179	-	-	0.090	-	-	0.090	-	-	-	-	-	0.090
Support - Production Engineering Cost																		
Production Engineering	-	-	1.095	-	-	0.584	-	-	0.625	-	-	0.685	-	-	-	-	-	0.685
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	1.095	-	-	0.584	-	-	0.625	-	-	0.685	-	-	-	-	-	0.685
Gross/Weapon System Cost	-	-	78.105	708.87	8,127	5.761	765.59	8,131	6.225	811.63	7,931	6.437	-	-	-	811.63	7,931	6.437

^(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33				P-1 Line Item Number / Title: E76000 / 81MM Mortar, All Types				Item Number / Title [DODIC]: E76200 / CTG, MORTAR, 81MM RP SMOKE M819 SERIES W/MTSQ FUZE [C870]				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
LOAD, ASSEMBLE, PACK (LAP)		2016	PINE BLUFF ARSENAL / PINE BLUFF, AR	PO	PICATINNY ARSENAL, NJ	Dec 2016	Apr 2019	8,127	191.04	Y		
LOAD, ASSEMBLE, PACK (LAP)		2017	PINE BLUFF ARSENAL / PINE BLUFF, AR	PO	PICATINNY ARSENAL, NJ	Jan 2017	May 2019	8,131	202.85	Y		
LOAD, ASSEMBLE, PACK (LAP)		2018	PINE BLUFF ARSENAL / PINE BLUFF, AR	PO	PICATINNY ARSENAL, NJ	Jan 2018	May 2020	7,931	242.50	Y		
FIN MORTAR CTG M28 F/81MM M819 RP		2016	FLEXIBLE CONCEPTS, INC. / ELKHART, IN	C / IDIQ	PICATINNY ARSENAL, NJ	Apr 2016	Oct 2017	8,371	16.10	Y		
FIN MORTAR CTG M28 F/81MM M819 RP		2017	TO BE SELECTED / TBS01	C / FFP	ROCK ISLAND ARSENAL, IL	Jun 2017	Dec 2018	8,374	19.90	Y		
FIN MORTAR CTG M28 F/81MM M819 RP		2018	TO BE SELECTED / TBS01	C / FFP	ROCK ISLAND ARSENAL, IL	May 2018	Nov 2019	8,168	20.31	Y		
IGN CTG M752		2016	NAMMO POCAL INC. / SCRANTON, PA	C / IDIQ	ROCK ISLAND ARSENAL, IL	Apr 2016	Oct 2017	8,371	18.81	Y		
IGN CTG M752		2017	NAMMO POCAL INC. / SCRANTON, PA	C / IDIQ	ROCK ISLAND ARSENAL, IL	Mar 2017	Sep 2018	8,374	20.47	Y		
IGN CTG M752		2018	TO BE SELECTED / TBS01	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	8,168	20.14	Y		
PROPELLANT CHARGE, M218		2016	AMERICAN ORDNANCE LLC (IAAP) / MIDDLETOWN, IA	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jul 2016	Jan 2018	33,483	15.13	Y		
PROPELLANT CHARGE, M218		2017	TO BE SELECTED / TBS01	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2017	Dec 2018	33,499	14.93	Y		
PROPELLANT CHARGE, M218		2018	TO BE SELECTED / TBS01	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	32,675	17.26	Y		
FUZE MTSQ, M772		2016	JUNGHANS MICROTEC GMBH / DUNNINGEN, GERMANY	SS / FFP	ROCK ISLAND ARSENAL, IL	May 2017	Jan 2019	8,371	191.80	Y		
FUZE MTSQ, M772		2017	JUNGHANS MICROTEC GMBH / DUNNINGEN, GERMANY	Option / FFP	ROCK ISLAND ARSENAL, IL	Jun 2017	Feb 2019	8,374	213.07	Y		
FUZE MTSQ, M772		2018	JUNGHANS MICROTEC GMBH / DUNNINGEN, GERMANY	Option / FFP	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	8,168	199.45	Y		
BODY TUBE, 81MM RP SMK		2016	LEWIS ENGINEERING COMPANY / MARSHALL, TX	C / IDIQ	PICATINNY ARSENAL, NJ	May 2016	Nov 2017	8,371	24.67	Y		
BODY TUBE, 81MM RP SMK		2017	TO BE SELECTED / TBS01	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2017	Aug 2018	8,374	30.58	Y		
BODY TUBE, 81MM RP SMK		2018	TO BE SELECTED / TBS01	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	8,168	49.42	Y		
TAIL CONE, 81MM SMOKE		2016	LEWIS ENGINEERING COMPANY / MARSHALL, TX	C / IDIQ	PICATINNY ARSENAL, NJ	May 2016	Nov 2017	8,371	22.75	Y		

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army								Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33			P-1 Line Item Number / Title: E76000 / 81MM Mortar, All Types					Item Number / Title [DODIC]: E76200 / CTG, MORTAR, 81MM RP SMOKE M819 SERIES W/MTSQ FUZE [C870]			

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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
TAIL CONE, 81MM SMOKE		2017	TO BE SELECTED / TBS01	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2017	Aug 2018	8,374	25.48	Y		
TAIL CONE, 81MM SMOKE		2018	TO BE SELECTED / TBS01	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	8,168	26.01	Y		
GAMS		2016	DESIGN WEST TECHNOLOGIES, / TUSTIN, CA	Option / FFP	ROCK ISLAND ARSENAL, IL	Mar 2016	Sep 2017	16,742	8.14	Y		
GAMS		2017	DESIGN WEST TECHNOLOGIES, / TUSTIN, CA	Option / FFP	PICATINNY ARSENAL, NJ	Mar 2017	Sep 2018	16,749	10.58	Y		
GAMS		2018	DESIGN WEST TECHNOLOGIES, / TUSTIN, CA	Option / FFP	ROCK ISLAND ARSENAL, IL	Mar 2018	Sep 2019	16,496	10.59	Y		
RED PHOSPHOROUS PELLET		2016	PINE BLUFF ARSENAL / PINE BLUFF, AR	PO	ROCK ISLAND ARSENAL, IL	Apr 2016	Oct 2017	24,381	13.00	Y		
RED PHOSPHOROUS PELLET		2017	PINE BLUFF ARSENAL / PINE BLUFF, AR	PO	ROCK ISLAND ARSENAL, IL	Jan 2017	Jul 2018	28,458	13.19	Y		
RED PHOSPHOROUS PELLET		2018	PINE BLUFF ARSENAL / PINE BLUFF, AR	PO	ROCK ISLAND ARSENAL, IL	Mar 2018	Sep 2019	23,793	13.45	Y		
FIBER CONTAINER PA 162, 81MM		2016	UNITED AMMUNITION CONTAINER / WYNNEWOOD, PA	Option / IDIQ	PICATINNY ARSENAL, NJ	Feb 2016	Aug 2017	8,371	6.13	Y		
FIBER CONTAINER PA 162, 81MM		2017	TO BE SELECTED / TBS01	C / IDIQ	PICATINNY ARSENAL, NJ	Sep 2017	Mar 2018	8,374	6.37	Y		
FIBER CONTAINER PA 162, 81MM		2018	TO BE SELECTED / TBS01	C / IDIQ	PICATINNY ARSENAL, NJ	May 2018	Nov 2019	8,168	6.49	Y		
METAL CONTAINER PA 157, 81MM		2016	BWAY CORPORATION / ATLANTA, GA	Option / IDIQ	PICATINNY ARSENAL, NJ	Aug 2016	Feb 2017	2,844	49.00	Y		
METAL CONTAINER PA 157, 81MM		2017	BWAY CORPORATION / ATLANTA, GA	Option / IDIQ	PICATINNY ARSENAL, NJ	Sep 2017	Mar 2018	2,845	57.52	Y		
METAL CONTAINER PA 157, 81MM		2018	BWAY CORPORATION / ATLANTA, GA	Option / IDIQ	PICATINNY ARSENAL, NJ	May 2018	Nov 2019	991	50.97	Y		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 33: Mortar Ammunition	P-1 Line Item Number / Title: E25500 / 120MM Mortar, All Types
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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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	955.695	74.897	96.433	91.528	-	91.528	69.323	102.652	98.510	110.804	-	1,599.842
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	955.695	74.897	96.433	91.528	-	91.528	69.323	102.652	98.510	110.804	-	1,599.842
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	955.695	74.897	96.433	91.528	-	91.528	69.323	102.652	98.510	110.804	-	1,599.842

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

Description:

This budget line item includes 120MM Mortars, All Types.
The 120mm Mortar Cartridges are designed for use with the M120, 120mm Towed Mortar System and the M121 Carrier Mortar System as well as use with the Brigade Combat Team Mortar System.

(E25502)CTG, MORTAR, 120MM HE M933 SERIES W/PD FUZE

The M933A1 120mm High Explosive (HE) cartridge with the M783 Point Detonating/ Delay (PD/DLY) Fuze is used against personnel, bunker and light materiel targets. It consists of a Steel Shell Body with Composition B fill, and aluminum M31 Fin Assembly. The propulsion system utilizes the M1020 Ignition Cartridge and four horseshoe-shaped, water-resistant M234 Propelling Charges. The M933A1 HE (Range 200 meter minimum to 7,200 meter maximum) is used with the new M783 dual safety, point detonating/delay fuze. This round is used primarily in training because it is significantly less expensive than the M934A1, the preferred war fighting round. However, the M933A1 is lethal and can be used in combat.

This item is Code A, approved for service use.

(E25507)CTG, MORTAR, 120MM FRPC M931 SERIES W/PRACT FUZE

The M931 is a low-cost, full range, practice round that will replace a percentage of the standard HE rounds used in 120mm mortar training. The M931 FRPC (Range 200 meter minimum to 7,200 meter maximum) has been designed to provide the user with realistic training for 120mm Mortar crews at a fraction of the cost. It is identical in shape, size and weight to the M933A1/M934A1 HE cartridges. The M931 is equipped with M781 PD Practice Fuze. The M781 PD Practice Fuze produces a flash, bang, and smoke signature that provides audio/visual feedback to the mortar crew and forward observer.

This item is Code A, approved for service use.

(E91300)CTG, MORTAR, 120MM WP SMOKE M929 SERIES W/MOFM

The M929 White Phosphorous (WP) Smoke Cartridge is used to provide smoke, with some incendiary effect for various screening missions. The cartridge is filled with 5 lbs of WP. The M929 uses the highly reliable and countermeasure resistant M734A1 multi-option fuze when functions, detonates the burster, which disperses the felt pads which are soaked with WP over the target. The smoke obscuration is generated by a spontaneous reaction between the WP and oxygen. The M929 (Range 200 meter minimum and 7,200 maximum) is range-matched to the 120mm High Explosive (HE) and Illum cartridges.

This item is Code A, approved for service use.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 33: Mortar Ammunition

P-1 Line Item Number / Title:
E25500 / 120MM Mortar, All Types

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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 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	E25502 / CTG, MORTAR, 120MM HE M933 SERIES W/PD FUZE [CA44]	P-5a	A		- / 360.286	9,468 / 9.601	52,063 / 42.100	26,485 / 23.400	- / -	26,485 / 23.400
P-5	E25507 / CTG, MORTAR, 120MM FRTR M931 SERIES W/PRACT FUZE [CA09]	P-5a	A		- / 416.912	122,525 / 46.862	105,035 / 54.333	101,783 / 51.328	- / -	101,783 / 51.328
P-5	E91300 / CTG, MORTAR, 120MM WP SMOKE M929 SERIES W/MOFM [CA03]	P-5a	A		- / 178.497	12,673 / 18.434	- / -	10,590 / 16.800	- / -	10,590 / 16.800
P-40	Total Gross/Weapon System Cost				- / 955.695	- / 74.897	- / 96.433	- / 91.528	- / -	- / 91.528

*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 2018 Base Budget supports critical Army Title 10 war reserve/operational, training, and test requirements IAW DoD Instruction 3000.04 (Munitions Requirements Process) and AR 5-13 (Total Army Munitions Requirements Process and Prioritization System). War reserve requirements support OSD-approved Combatant Commander Operational Plans, Homeland Defense, and other OSD-directed missions. Training requirements support individual and collective training of Active and Reserve Component forces at Army schools, home station, and the combined training centers. Test requirements support the development, fielding, safety, and quality assurance of Army munitions and equipment throughout their life-cycle.

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.

FY 2018 Base procurement dollars in the amount of \$91.528 million supports production of 138,858 cartridges.

(E25502)CTG, MORTAR, 120MM HE M933 SERIES W/PD FUZE
This is a training standard item used in training and combat. FY 2018 request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. FY 2018 Base procurement in the amount of \$23.400 million supports production of 26,485 cartridges.
TYPE CLASSIFICATION DATE: 2009

(E25507)CTG, MORTAR, 120MM FRPC M931 SERIES W/PRACT FUZE
This is a training unique item not used in combat. FY 2018 request supports annual training and builds a depot level in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$51.328 million supports production of 101,783 cartridges.
TYPE CLASSIFICATION DATE: 1996

(E91300)CTG, MORTAR, 120MM WP SMOKE M929 SERIES W/MOFM
This is a training standard item used in training and combat. FY 2018 request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$16.800 million supports production of 10,590 cartridges.
TYPE CLASSIFICATION DATE: 1996

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33	P-1 Line Item Number / Title: E25500 / 120MM Mortar, All Types	Item Number / Title [DODIC]: E25502 / CTG, MORTAR, 120MM HE M933 SERIES W/PD FUZE [CA44]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	9,468	52,063	26,485	-	26,485
Gross/Weapon System Cost (\$ in Millions)	360.286	9.601	42.100	23.400	-	23.400
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	360.286	9.601	42.100	23.400	-	23.400
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	360.286	9.601	42.100	23.400	-	23.400

(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 Dollars)	-	1,014.05	808.64	883.52	-	883.52

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP) ^(†)	144.68	42,357	6.128	127.38	9,468	1.206	127.44	52,063	6.635	145.57	26,485	3.855	-	-	-	145.57	26,485	3.855
FIN ASSEMBLY, M31 ^(†)	38.71	43,628	1.689	40.00	9,752	0.390	45.00	53,625	2.413	45.88	27,279	1.252	-	-	-	45.88	27,279	1.252
IGNITION CARTRIDGE, M1020 ^(†)	20.75	43,628	0.905	22.51	9,752	0.220	24.52	53,625	1.315	24.11	27,279	0.658	-	-	-	24.11	27,279	0.658
PROPELLANT CHARGE, M234A1 ^(†)	16.03	174,511	2.797	17.52	39,008	0.683	27.71	214,500	5.944	28.25	109,118	3.083	-	-	-	28.25	109,118	3.083
SHELL BODY, 120MM HE ^(†)	93.29	43,628	4.070	89.96	9,752	0.877	105.90	53,625	5.679	165.00	27,279	4.501	-	-	-	165.00	27,279	4.501
FUZE POINT DETONATOR M783 ^(†)	157.42	43,628	6.868	164.24	9,752	1.602	229.39	53,625	12.301	167.50	27,279	4.569	-	-	-	167.50	27,279	4.569
FUZE ADAPTER, 120MM ^(†)	9.74	43,628	0.425	13.89	9,752	0.135	-	-	-	-	-	-	-	-	-	-	-	-
COMP B TYPE I GRADE A ^(†)	11.62	296,499	3.445	11.63	85,212	0.991	13.25	468,567	6.209	12.00	238,365	2.860	-	-	-	12.00	238,365	2.860
<i>Subtotal: Recurring Cost</i>	<i>-</i>	<i>-</i>	<i>26.328</i>	<i>-</i>	<i>-</i>	<i>6.104</i>	<i>-</i>	<i>-</i>	<i>40.495</i>	<i>-</i>	<i>-</i>	<i>20.778</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>20.778</i>
<i>Subtotal: Hardware Cost</i>	<i>-</i>	<i>-</i>	<i>26.328</i>	<i>-</i>	<i>-</i>	<i>6.104</i>	<i>-</i>	<i>-</i>	<i>40.495</i>	<i>-</i>	<i>-</i>	<i>20.778</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>20.778</i>
Support - Acceptance Testing Cost																		

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33	P-1 Line Item Number / Title: E25500 / 120MM Mortar, All Types	Item Number / Title [DODIC]: E25502 / CTG, MORTAR, 120MM HE M933 SERIES W/PD FUZE [CA44]

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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Acceptance Test	-	-	-	-	-	0.110	-	-	0.125	-	-	0.280	-	-	-	-	-	0.280
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	-	-	-	0.110	-	-	0.125	-	-	0.280	-	-	-	-	-	0.280
Support - Engineering Change Proposals Cost																		
Engineering Change Proposals	-	-	-	-	-	0.075	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Engineering Change Proposals Cost</i>	-	-	-	-	-	0.075	-	-	-	-	-	-	-	-	-	-	-	-
Support - Product Improvement Cost																		
Insensitive Munitions	-	-	-	-	-	1.577	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Product Improvement Cost</i>	-	-	-	-	-	1.577	-	-	-	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	333.959	-	-	1.735	-	-	1.480	-	-	2.340	-	-	-	-	-	2.340
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	333.959	-	-	1.735	-	-	1.480	-	-	2.340	-	-	-	-	-	2.340
Gross/Weapon System Cost	-	-	360.286	1,014.05	9,468	9.601	808.64	52,063	42.100	883.52	26,485	23.400	-	-	-	883.52	26,485	23.400

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

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33			P-1 Line Item Number / Title: E25500 / 120MM Mortar, All Types					Item Number / Title [DODIC]: E25502 / CTG, MORTAR, 120MM HE M933 SERIES W/PD FUZE [CA44]				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
LOAD, ASSEMBLE, PACK (LAP)		2016	GEN DYNAMICS ORD & TAC SYS - / LE GARDEUR, CANADA	Option / IDIQ	PICATINNY ARSENAL, NJ	May 2016	Dec 2018	9,468	127.38	Y		
LOAD, ASSEMBLE, PACK (LAP)		2017	GEN DYNAMICS ORD & TAC SYS - / LE GARDEUR, CANADA	Option / IDIQ	PICATINNY ARSENAL, NJ	Jun 2017	Jun 2019	52,063	127.44	Y		
LOAD, ASSEMBLE, PACK (LAP)		2018	GEN DYNAMICS ORD & TAC SYS - / LE GARDEUR, CANADA	Option / IDIQ	PICATINNY ARSENAL, NJ	May 2018	May 2020	26,485	145.57	Y		
FIN ASSEMBLY, M31		2016	MACHINING TECHNOLOGIES INC / SALISBURY, MD	Option / FFP	PICATINNY ARSENAL, NJ	Feb 2016	Aug 2017	9,752	40.00	Y		
FIN ASSEMBLY, M31		2017	MACHINING TECHNOLOGIES INC / SALISBURY, MD	Option / FFP	PICATINNY ARSENAL, NJ	Aug 2017	Feb 2019	53,625	45.00	Y		
FIN ASSEMBLY, M31		2018	MACHINING TECHNOLOGIES INC / SALISBURY, MD	Option / FFP	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	27,279	45.88	Y		
IGNITION CARTRIDGE, M1020		2016	NAMMO POCAL INC. / SCRANTON, PA	Option / IDIQ	PICATINNY ARSENAL, NJ	Feb 2016	Aug 2017	9,752	22.51	Y		
IGNITION CARTRIDGE, M1020		2017	NAMMO POCAL INC. / SCRANTON, PA	Option / IDIQ	PICATINNY ARSENAL, NJ	Mar 2017	Sep 2018	53,625	24.52	Y		
IGNITION CARTRIDGE, M1020		2018	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	27,279	24.11	Y		
PROPELLANT CHARGE, M234A1		2016	GENERAL DYNAMICS ORD & TAC / MARION, IL	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2016	Dec 2017	39,008	17.52	Y		
PROPELLANT CHARGE, M234A1		2017	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2017	Dec 2018	214,500	27.71	Y		
PROPELLANT CHARGE, M234A1		2018	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	109,118	28.25	Y		
SHELL BODY, 120MM HE		2016	MEDICO INDUSTRIES INC. / WILKES BARRE, PA	Option / FFP	PICATINNY ARSENAL, NJ	Apr 2016	Oct 2017	9,752	89.96	Y		
SHELL BODY, 120MM HE		2017	MEDICO INDUSTRIES INC. / WILKES BARRE, PA	Option / FFP	PICATINNY ARSENAL, NJ	Jun 2017	Dec 2018	53,625	105.90	Y		
SHELL BODY, 120MM HE		2018	TO BE SELECTED / TBS02	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	27,279	165.00	Y		
FUZE POINT DETONATOR M783		2016	L-3 FUZING & ORDANCE SYSTEMS / CINCINNATI, OH	Option / FFP	PICATINNY ARSENAL, NJ	Feb 2017	Oct 2018	9,752	164.24	Y		
FUZE POINT DETONATOR M783		2017	L-3 FUZING & ORDANCE SYSTEMS / CINCINNATI, OH	Option / FFP	PICATINNY ARSENAL, NJ	Mar 2017	Nov 2018	53,625	229.39	Y		
FUZE POINT DETONATOR M783		2018	L-3 FUZING & ORDANCE SYSTEMS / CINCINNATI, OH	Option / FFP	PICATINNY ARSENAL, NJ	Mar 2018	Nov 2019	27,279	167.50	Y		
FUZE ADAPTER, 120MM		2016	MEDICO INDUSTRIES INC. / WILKES BARRE, PA	C / IDIQ	PICATINNY ARSENAL, NJ	Apr 2016	Oct 2017	9,752	13.89	Y		

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33			P-1 Line Item Number / Title: E25500 / 120MM Mortar, All Types					Item Number / Title [DODIC]: E25502 / CTG, MORTAR, 120MM HE M933 SERIES W/PD FUZE [CA44]				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
COMP B TYPE I GRADE A		2016	BAE SYSTEMS ORDNANCE SYSTEMS / KINGSPORT, TN	Option / FFP	ROCK ISLAND ARSENAL, IL	May 2016	Aug 2017	85,212	11.63	Y		
COMP B TYPE I GRADE A		2017	BAE SYSTEMS ORDNANCE SYSTEMS / KINGSPORT, TN	Option / FFP	ROCK ISLAND ARSENAL, IL	Feb 2017	Feb 2018	468,567	13.25	Y		
COMP B TYPE I GRADE A		2018	BAE SYSTEMS ORDNANCE SYSTEMS / KINGSPORT, TN	Option / FFP	PICATINNY ARSENAL, NJ	Feb 2018	Feb 2019	238,365	12.00	Y		

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33	P-1 Line Item Number / Title: E25500 / 120MM Mortar, All Types	Item Number / Title [DODIC]: E25507 / CTG, MORTAR, 120MM FRTR M931 SERIES W/PRACT FUZE [CA09]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	122,525	105,035	101,783	-	101,783
Gross/Weapon System Cost (\$ in Millions)	416.912	46.862	54.333	51.328	-	51.328
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	416.912	46.862	54.333	51.328	-	51.328
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	416.912	46.862	54.333	51.328	-	51.328

(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 Dollars)	-	-	-	-	-	-

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP) ^(†)	90.86	43,992	3.997	74.43	122,525	9.120	101.95	105,035	10.708	78.02	101,783	7.941	-	-	-	78.02	101,783	7.941
FIN ASSEMBLY, M31 ^(†)	38.60	45,312	1.749	40.00	126,201	5.048	45.00	108,097	4.864	45.89	104,836	4.811	-	-	-	45.89	104,836	4.811
IGNITION CARTRIDGE, M1020 ^(†)	20.75	45,312	0.940	22.51	126,201	2.841	24.51	108,097	2.649	24.11	104,836	2.528	-	-	-	24.11	104,836	2.528
PROPELLANT CHARGE, M234A1 ^(†)	16.03	181,247	2.905	17.52	504,803	8.844	27.71	432,389	11.981	28.26	419,345	11.851	-	-	-	28.26	419,345	11.851
SHELL BODY, 120MM FRPC ^(†)	87.75	45,312	3.976	86.29	126,201	10.890	150.32	108,097	16.249	153.32	104,836	16.073	-	-	-	153.32	104,836	16.073
FUZE PRACTICE, M781 ^(†)	17.83	45,312	0.808	19.54	126,201	2.466	19.74	108,097	2.134	21.56	104,836	2.260	-	-	-	21.56	104,836	2.260
FUZE ADAPTER, 120MM ^(†)	8.98	45,312	0.407	13.89	126,201	1.753	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	14.783	-	-	40.961	-	-	48.587	-	-	45.464	-	-	-	-	-	45.464
<i>Subtotal: Hardware Cost</i>	-	-	14.783	-	-	40.961	-	-	48.587	-	-	45.464	-	-	-	-	-	45.464
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	0.322	-	-	0.727	-	-	0.580	-	-	0.730	-	-	-	-	-	0.730

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33		P-1 Line Item Number / Title: E25500 / 120MM Mortar, All Types
ID Code (A=Service Ready, B=Not Service Ready) : A		MDAP/MAIS Code:
Item Number / Title [DODIC]: E25507 / CTG, MORTAR, 120MM FRTR M931 SERIES W/PRACT FUZE [CA09]		

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	0.322	-	-	0.727	-	-	0.580	-	-	0.730	-	-	-	-	-	0.730
Support - Production Engineering Cost																		
Production Engineering	-	-	401.808	-	-	5.174	-	-	5.165	-	-	5.133	-	-	-	-	-	5.133
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	401.808	-	-	5.174	-	-	5.165	-	-	5.133	-	-	-	-	-	5.133
Gross/Weapon System Cost	-	-	416.912	-	122,525	46.862	-	105,035	54.333	-	101,783	51.328	-	-	-	-	101,783	51.328

(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33			P-1 Line Item Number / Title: E25500 / 120MM Mortar, All Types					Item Number / Title [DODIC]: E25507 / CTG, MORTAR, 120MM FRTR M931 SERIES W/PRACT FUZE [CA09]				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
LOAD, ASSEMBLE, PACK (LAP)		2016	GEN DYNAMICS ORD & TAC SYS - / LE GARDEUR, CANADA	Option / IDIQ	PICATINNY ARSENAL, NJ	May 2016	May 2018	122,525	74.43	Y		
LOAD, ASSEMBLE, PACK (LAP)		2017	GEN DYNAMICS ORD & TAC SYS - / LE GARDEUR, CANADA	Option / IDIQ	PICATINNY ARSENAL, NJ	May 2017	May 2019	105,035	101.95	Y		
LOAD, ASSEMBLE, PACK (LAP)		2018	GEN DYNAMICS ORD & TAC SYS - / LE GARDEUR, CANADA	Option / IDIQ	PICATINNY ARSENAL, NJ	May 2018	May 2020	101,783	78.02	Y		
FIN ASSEMBLY, M31		2016	MACHINING TECHNOLOGIES INC / SALISBURY, MD	Option / FFP	PICATINNY ARSENAL, NJ	Feb 2016	Aug 2017	126,201	40.00	Y		
FIN ASSEMBLY, M31		2017	MACHINING TECHNOLOGIES INC / SALISBURY, MD	Option / FFP	PICATINNY ARSENAL, NJ	Dec 2016	Jun 2018	108,097	45.00	Y		
FIN ASSEMBLY, M31		2018	MACHINING TECHNOLOGIES INC / SALISBURY, MD	Option / FFP	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	104,836	45.89	Y		
IGNITION CARTRIDGE, M1020		2016	NAMMO POCAL INC. / SCRANTON, PA	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2016	Aug 2017	126,201	22.51	Y		
IGNITION CARTRIDGE, M1020		2017	NAMMO POCAL INC. / SCRANTON, PA	C / IDIQ	PICATINNY ARSENAL, NJ	Mar 2017	Sep 2018	108,097	24.51	Y		
IGNITION CARTRIDGE, M1020		2018	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	104,836	24.11	Y		
PROPELLANT CHARGE, M234A1		2016	GENERAL DYNAMICS ORD & TAC / MARION, IL	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2016	Dec 2017	504,803	17.52	Y		
PROPELLANT CHARGE, M234A1		2017	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2017	Dec 2018	432,389	27.71	Y		
PROPELLANT CHARGE, M234A1		2018	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	419,345	28.26	Y		
SHELL BODY, 120MM FRPC		2016	MEDICO INDUSTRIES INC. / WILKES BARRE, PA	Option / FFP	PICATINNY ARSENAL, NJ	Apr 2016	Oct 2017	126,201	86.29	Y		
SHELL BODY, 120MM FRPC		2017	MEDICO INDUSTRIES INC. / WILKES BARRE, PA	Option / FFP	PICATINNY ARSENAL, NJ	Jun 2017	Dec 2018	108,097	150.32	Y		
SHELL BODY, 120MM FRPC		2018	TO BE SELECTED / TBS02	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	104,836	153.32	Y		
FUZE PRACTICE, M781		2016	NAMMO POCAL INC. / SCRANTON, PA	Option / IDIQ	PICATINNY ARSENAL, NJ	Jun 2016	Dec 2017	126,201	19.54	Y		
FUZE PRACTICE, M781		2017	NAMMO POCAL INC. / SCRANTON, PA	Option / IDIQ	PICATINNY ARSENAL, NJ	Jun 2017	Dec 2018	108,097	19.74	Y		
FUZE PRACTICE, M781		2018	TO BE SELECTED / TBS02	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	104,836	21.56	Y		
FUZE ADAPTER, 120MM		2016	MEDICO INDUSTRIES INC. / WILKES BARRE, PA	C / IDIQ	PICATINNY ARSENAL, NJ	Apr 2016	Oct 2017	126,201	13.89	Y		

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33	P-1 Line Item Number / Title: E25500 / 120MM Mortar, All Types	Item Number / Title [DODIC]: E25507 / CTG, MORTAR, 120MM FRTR M931 SERIES W/PRACT FUZE [CA09]

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Exhibit P-5, Cost Analysis: FY 2018 Army											Date: May 2017							
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33					P-1 Line Item Number / Title: E25500 / 120MM Mortar, All Types						Item Number / Title [DODIC]: E91300 / CTG, MORTAR, 120MM WP SMOKE M929 SERIES W/MOFM [CA03]							
ID Code (A=Service Ready, B=Not Service Ready) : A											MDAP/MAIS Code:							
Resource Summary				Prior Years		FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO		FY 2018 Total	
Procurement Quantity (Units in Each)				-		12,673			-			10,590			-		10,590	
Gross/Weapon System Cost (\$ in Millions)				178.497		18.434			-			16.800			-		16.800	
Less PY Advance Procurement (\$ in Millions)				-		-			-			-			-		-	
Net Procurement (P-1) (\$ in Millions)				178.497		18.434			-			16.800			-		16.800	
Plus CY Advance Procurement (\$ in Millions)				-		-			-			-			-		-	
Total Obligation Authority (\$ in Millions)				178.497		18.434			-			16.800			-		16.800	
<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 Dollars)				-		1,454.59			-			1,586.40			-		1,586.40	

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP) ^(†)	383.69	9,374	3.597	411.10	12,673	5.210	-	-	-	479.44	10,590	5.077	-	-	-	479.44	10,590	5.077
FIN ASSEMBLY, M31 ^(†)	38.60	9,655	0.373	40.00	13,053	0.522	-	-	-	45.88	10,907	0.500	-	-	-	45.88	10,907	0.500
IGNITION CARTRIDGE, M1020 ^(†)	20.75	9,655	0.200	22.51	13,053	0.294	-	-	-	24.11	10,907	0.263	-	-	-	24.11	10,907	0.263
PROPELLANT CHARGE, M234A1 ^(†)	16.03	38,621	0.619	17.52	52,213	0.915	-	-	-	28.25	43,630	1.233	-	-	-	28.25	43,630	1.233
SHELL BODY, 120MM SMK ^(†)	217.75	9,655	2.102	224.28	13,053	2.928	-	-	-	324.00	10,907	3.534	-	-	-	324.00	10,907	3.534
FUZE MOFM, M734A1 ^(†)	248.33	9,655	2.398	265.85	13,053	3.470	-	-	-	271.13	10,907	2.957	-	-	-	271.13	10,907	2.957
BURSTER ASSEMBLY, M86 ^(†)	51.89	9,655	0.501	46.30	13,053	0.604	-	-	-	49.59	10,907	0.541	-	-	-	49.59	10,907	0.541
BURSTER HOUSING, 120MM SMOKE ^(†)	32.86	9,655	0.317	29.41	13,053	0.384	-	-	-	31.37	10,907	0.342	-	-	-	31.37	10,907	0.342
FIBER CONTAINER PA 167, 120MM ^(†)	11.26	9,655	0.109	12.48	13,053	0.163	-	-	-	12.98	10,907	0.142	-	-	-	12.98	10,907	0.142

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33	P-1 Line Item Number / Title: E25500 / 120MM Mortar, All Types	Item Number / Title [DODIC]: E91300 / CTG, MORTAR, 120MM WP SMOKE M929 SERIES W/MOFM [CA03]

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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
METAL CONTAINER PA 154, 120MM ^(†)	55.70	4,874	0.271	61.65	6,590	0.406	-	-	-	60.59	5,506	0.334	-	-	-	60.59	5,506	0.334
<i>Subtotal: Recurring Cost</i>	-	-	10.487	-	-	14.896	-	-	-	-	-	14.922	-	-	-	-	-	14.922
<i>Subtotal: Hardware Cost</i>	-	-	10.487	-	-	14.896	-	-	-	-	-	14.922	-	-	-	-	-	14.922
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	0.071	-	-	0.252	-	-	-	-	-	0.090	-	-	-	-	-	0.090
First Article Test	-	-	-	-	-	1.604	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	0.071	-	-	1.856	-	-	-	-	-	0.090	-	-	-	-	-	0.090
Support - Production Engineering Cost																		
Production Engineering	-	-	167.939	-	-	1.682	-	-	-	-	-	1.787	-	-	-	-	-	1.787
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	167.939	-	-	1.682	-	-	-	-	-	1.787	-	-	-	-	-	1.787
Gross/Weapon System Cost	-	-	178.497	1,454.59	12,673	18.434	-	-	-	1,586.40	10,590	16.800	-	-	-	1,586.40	10,590	16.800

(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33			P-1 Line Item Number / Title: E25500 / 120MM Mortar, All Types					Item Number / Title [DODIC]: E91300 / CTG, MORTAR, 120MM WP SMOKE M929 SERIES W/MOFM [CA03]				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
LOAD, ASSEMBLE, PACK (LAP)		2016	PINE BLUFF ARSENAL / PINE BLUFF, AR	PO	PICATINNY ARSENAL, NJ	Dec 2015	Dec 2018	12,673	411.10	Y		
LOAD, ASSEMBLE, PACK (LAP)		2018	PINE BLUFF ARSENAL / PINE BLUFF, AR	PO	PICATINNY ARSENAL, NJ	Jan 2018	Jan 2020	10,590	479.44	Y		
FIN ASSEMBLY, M31		2016	MACHINING TECHNOLOGIES INC / SALISBURY, MD	Option / FFP	PICATINNY ARSENAL, NJ	Feb 2016	Aug 2017	13,053	40.00	Y		
FIN ASSEMBLY, M31		2018	MACHINING TECHNOLOGIES INC / SALISBURY, MD	Option / FFP	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	10,907	45.88	Y		
IGNITION CARTRIDGE, M1020		2016	NAMMO POCAL INC. / SCRANTON, PA	Option / IDIQ	PICATINNY ARSENAL, NJ	Feb 2016	Aug 2017	13,053	22.51	Y		
IGNITION CARTRIDGE, M1020		2018	TO BE SELECTED / TBS01	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	10,907	24.11	Y		
PROPELLANT CHARGE, M234A1		2016	GENERAL DYNAMICS ORD & TAC / MARION, IL	C / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2016	Dec 2017	52,213	17.52	Y		
PROPELLANT CHARGE, M234A1		2018	TO BE SELECTED / TBS01	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	43,630	28.25	Y		
SHELL BODY, 120MM SMK		2016	MEDICO INDUSTRIES INC. / WILKES BARRE, PA	Option / FFP	PICATINNY ARSENAL, NJ	Apr 2016	Oct 2017	13,053	224.28	Y		
SHELL BODY, 120MM SMK		2018	TO BE SELECTED / TBS01	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	10,907	324.00	Y		
FUZE MOFM, M734A1		2016	L-3 FUZING & ORDANCE SYSTEMS / CINCINNATI, OH	Option / FFP	PICATINNY ARSENAL, NJ	Feb 2017	Oct 2018	13,053	265.85	Y		
FUZE MOFM, M734A1		2018	L-3 FUZING & ORDANCE SYSTEMS / CINCINNATI, OH	Option / FFP	PICATINNY ARSENAL, NJ	Feb 2018	Oct 2019	10,907	271.13	Y		
BURSTER ASSEMBLY, M86		2016	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Jan 2016	Jul 2017	13,053	46.30	Y		
BURSTER ASSEMBLY, M86		2018	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Jan 2018	Jul 2019	10,907	49.59	Y		
BURSTER HOUSING, 120MM SMOKE		2016	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Jan 2016	Jul 2017	13,053	29.41	Y		
BURSTER HOUSING, 120MM SMOKE		2018	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Jan 2018	Jul 2019	10,907	31.37	Y		
FIBER CONTAINER PA 167, 120MM		2016	UNITED AMMUNITION CONTAINER / WYNNEWOOD, PA	Option / FFP	PICATINNY ARSENAL, NJ	Feb 2016	Aug 2017	13,053	12.48	Y		
FIBER CONTAINER PA 167, 120MM		2018	TO BE SELECTED / TBS01	C / FFP	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	10,907	12.98	Y		
METAL CONTAINER PA 154, 120MM		2016	BWAY CORPORATION / ATLANTA, GA	Option / FFP	PICATINNY ARSENAL, NJ	Apr 2016	Oct 2017	6,590	61.65	Y		

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 33			P-1 Line Item Number / Title: E25500 / 120MM Mortar, All Types				Item Number / Title [DODIC]: E91300 / CTG, MORTAR, 120MM WP SMOKE M929 SERIES W/MOFM [CA03]					
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
METAL CONTAINER PA 154, 120MM		2018	BWAY CORPORATION / ATLANTA, GA	Option / FFP	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	5,506	60.59	Y		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 35: Tank Ammunition	P-1 Line Item Number / Title: E22203 / Cartridges, Tank, 105MM And 120MM, All Types
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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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	3,665.114	115.190	144.667	133.500	-	133.500	147.928	194.558	220.235	184.205	-	4,805.397
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	3,665.114	115.190	144.667	133.500	-	133.500	147.928	194.558	220.235	184.205	-	4,805.397
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	3,665.114	115.190	144.667	133.500	-	133.500	147.928	194.558	220.235	184.205	-	4,805.397

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

Description:

This budget line includes CARTRIDGE, TANK, 105MM and 120MM ALL TYPES:

(E22125) M724A2 Cartridge replaces the (E22100) M724A1 Cartridge and provides the Army with a range limited (7,000 meters, maximum) round which can be safely fired at all training sites. The Cartridge, M724A2, 105mm Target Practice Discarding Sabot with Tracer (TPDS-T) is used for gunnery training in the Army's 105mm Stryker Brigade Combat Team (SBCT) Mobile Gun System (MGS). This discarding sabot round is similar in external appearance and is ballistically similar out to 2,000 meters with the M900, Armor Piercing Fin Stabilized Discarding Sabot w/Tracer Cartridge. It is used as a training surrogate for the M900 Cartridge used by the MGS. The M724A2 Cartridge consists of a deep drawn steel cartridge case, electric primer, propellant and a projectile consisting of a sub-projectile (steel core, windshield, fin and tracer) and aluminum sabot. This item is Code A, approved for service use.

(E73201) Cartridge, 120mm, Target Practice Multi Purpose-Tracer (TPMP-T) M1002 is a target practice cartridge that simulates the size, weight, ballistics and the loader's function of setting the nose switch of the High Explosive Multi-Purpose cartridge M830A1. This round is fired from the M256 120mm smoothbore cannon on the M1A1/M1A2 Abrams Tank. The projectile is inert and composed of an aluminum body, steel nose with dummy plastic switch, aluminum tailcone, aluminum sabot, nylon obturators and tracer. The tailcone imparts spin to the projectile in flight for stabilization and provides the mechanism to limit the projectile's maximum range. The M1002 replaces the M831A1 cartridge. Tank crews will conduct live fire training with the cartridge to achieve and maintain gunnery proficiency. This item is Code A, approved for service use.

(E73400) 120mm M865 Target Practice Cone-Stabilized Discarding Sabot with Tracer (TPCSDS-T) is a target practice round that simulates the ballistics of the 120mm M829 Series Armor Piercing Fin-Stabilized Discarding Sabot with Tracer (APFSDS-T) round. This round is fired from the M256 120mm smoothbore cannon on the M1A1/M1A2 Abrams Tank. The projectile is inert and is composed of a steel core, aluminum fin, aluminum sabots, nylon obturator and tracer. The fin imparts spin to the projectile in flight for stabilization and provides the mechanism to limit the projectile's maximum range. Tank crews will conduct live fire training with the cartridge to achieve and maintain gunnery proficiency. This item is Code A, approved for service use.

(E78007) The 120mm M830A1 High Explosive Anti-Tank, Multi-Purpose w/Tracer,(HEAT-MP-T) cartridge is designed for use against light armor, buildings and bunkers, as well as providing self-defense capability against attack helicopters. The lethal mechanism includes a shaped-charged warhead and blast effect. This round is fired from the M256 120MM smooth-bore cannon mounted on the Abrams tank. Additionally, the M830A1 is effective against the side and rear aspects of tanks and dismantled anti-tank and automatic weapon teams (targets not suitable to kinetic energy penetrator cartridges). The fixed round utilizes a combustible cartridge case affixed to a steel stub base and loaded with granular propellant. The fin-stabilized, high chrome alloy steel projectile body contains press-loaded high explosive and a

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 35: Tank Ammunition		P-1 Line Item Number / Title: E22203 / Cartridges, Tank, 105MM And 120MM, All Types
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>precision copper liner. The fuze is armed during launch and initiated by an impact switch or proximity sensor, depending upon the operational mode selected by the ammo loader. This item is Code A, approved for service use.</p> <p>(E88106) 120mm M829A4 Armor Piercing Fin Stabilized, Discarding Sabot with Tracer (APFSDS-T) cartridge is the follow on to the M829A3 APFSDS-T cartridge. The M829A4 is the most effective anti-armor kinetic energy cartridge fired from the M256 120mm smoothbore cannon on the M1A1/M1A2 Abrams Tank. This cartridge has been designed to defeat advances in armor protection, specifically advancement in explosive reactive armor (ERA). The cartridge incorporates advancements in propulsion, using a temperature insensitive propellant, novel penetrator design, and an advanced composite sabot. The projectile system consists of a depleted uranium penetrator mated to a drag reducing windshield and flight stabilizing multi-bladed fin, all secured for launch with a composite sabot. The M829A4 captures several new technologies along with components previously used on previous APFSDS-T cartridges, but incorporates technology advancements to yield significant improvement in performance over previous fielded cartridges. This item is Code A, approved for service use.</p>		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 35: Tank Ammunition

P-1 Line Item Number / Title:
E22203 / Cartridges, Tank, 105MM And 120MM, All Types

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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 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	E22125 / CTG, 105mm Tank TPDS-T, M724A2 (Short Rg KE Trnr) [CA58]	P-5a	A		2,641 / 13.127	1,022 / 5.800	1,438 / 5.900	3,064 / 8.500	- / -	3,064 / 8.500
P-5	E73201 / CTG, TANK, 120MM M1002 TP MULTI PUR-TRACE (TPMP-T) [CA31]	P-5a, P-21	A		180,284 / 387.002	8,589 / 32.500	9,892 / 53.328	19,801 / 53.100	- / -	19,801 / 53.100
P-5	E73400 / CTG TANK 120MM TPCSDS-T M865 [C785]		A		3,649,000 / 2,619.559	- / 28.263	- / 31.900	- / 32.800	- / -	- / 32.800
P-5	E78007 / CTG, TANK, 120MM HEAT-MP-T M830A1 [C791]				- / 565.934	- / -	- / 8.999	- / -	- / -	- / -
P-5	E88106 / CTG, TANK, 120MM APFSDS-T, M829A4 [CA64]	P-5a, P-21	A		4,690 / 79.489	3,359 / 48.627	3,410 / 44.540	2,606 / 39.100	- / -	2,606 / 39.100
P-40	Total Gross/Weapon System Cost				- / 3,665.114	- / 115.190	- / 144.667	- / 133.500	- / -	- / 133.500

*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 2018 Base Budget supports critical Army Title 10 war reserve/operational, training, and test requirements IAW DoD Instruction 3000.04 (Munitions Requirements Process) and AR 5-13 (Total Army Munitions Requirements Process and Prioritization System). War reserve requirements support OSD-approved Combatant Commander Operational Plans, Homeland Defense, and other OSD-directed missions. Training requirements support individual and collective training of Active and Reserve Component forces at Army schools, home station, and the combined training centers. Test requirements support the development, fielding, safety, and quality assurance of Army munitions and equipment throughout their life-cycle.

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.

FY 2018 Base procurement dollars in the amount of \$133.500 million supports the procurement of .026 million cartridges.

(E22125) M724A2 – This is a training unique item not used in combat. The FY 2018 request supports annual training and builds a depot level in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$8.500 million supports the procurement of .003 million M724A2 cartridges.

TYPE CLASSIFICATION DATE: 2016

(E78007) M830A1 (HEAT-MP-T) - This is a war reserve item used in combat. The request builds a war reserve inventory in accordance with the Army's procurement goals.

TYPE CLASSIFICATION DATE: 1993

(E73201) M1002 (TPMP-T) - This is a training unique item not used in combat. The FY 2018 request supports annual training and builds a depot level in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$53.100 million supports the procurement of .020 million M1002 cartridges and recapitalization.

TYPE CLASSIFICATION DATE: 2006

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 35: Tank Ammunition		P-1 Line Item Number / Title: E22203 / Cartridges, Tank, 105MM And 120MM, All Types
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>(E73400) M865 (TPCSDS-T) - This is a training unique item not used in combat. FY 2018 request supports annual training and builds a depot level in accordance with the Army's procurement goals. The FY 2018 request provides a safer round by incorporating safety initiatives such as a safer case. FY 2018 Base procurement dollars in the amount of \$32.800 million supports recapitalizing .037 million M865 cartridges.</p> <p>TYPE CLASSIFICATION DATE: 1984</p> <p>(E88106) M829A4 (APFSDS-T) - This is a war reserve item used in combat. The FY 2018 request builds a war reserve inventory in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$39.100 million supports the procurement of .003 million M829A4 cartridges.</p> <p>TYPE CLASSIFICATION DATE: 2015</p>		

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 35		P-1 Line Item Number / Title: E22203 / Cartridges, Tank, 105MM And 120MM, All Types
		Item Number / Title [DODIC]: E22125 / CTG, 105mm Tank TPDS-T, M724A2 (Short Rg KE Trnr) [CA58]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	2,641	1,022	1,438	3,064	-	3,064
Gross/Weapon System Cost (\$ in Millions)	13.127	5.800	5.900	8.500	-	8.500
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	13.127	5.800	5.900	8.500	-	8.500
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	13.127	5.800	5.900	8.500	-	8.500

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

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	4,970.47	5,675.15	4,102.92	2,774.15	-	2,774.15

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND ^(†)	4,526.00	2,641	11.953	2,875.48	1,022	2.939	2,513.00	1,438	3.614	2,044.00	3,064	6.263	-	-	-	2,044.00	3,064	6.263
Subtotal: Recurring Cost	-	-	11.953	-	-	2.939	-	-	3.614	-	-	6.263	-	-	-	-	-	6.263
Subtotal: Hardware Cost	-	-	11.953	-	-	2.939	-	-	3.614	-	-	6.263	-	-	-	-	-	6.263
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	0.060	-	-	0.060	-	-	0.061	-	-	-	-	-	0.061
Subtotal: Support - Acceptance Testing Cost	-	-	-	-	-	0.060	-	-	0.060	-	-	0.061	-	-	-	-	-	0.061
Support - Product Improvement Cost																		
Production Verification Test	-	-	1.054	-	-	0.365	-	-	0.361	-	-	0.478	-	-	-	-	-	0.478
Subtotal: Support - Product Improvement Cost	-	-	1.054	-	-	0.365	-	-	0.361	-	-	0.478	-	-	-	-	-	0.478
Support - Production Engineering Cost																		
Production Engineering	-	-	0.120	-	-	2.436	-	-	1.865	-	-	1.698	-	-	-	-	-	1.698
Subtotal: Support - Production Engineering Cost	-	-	0.120	-	-	2.436	-	-	1.865	-	-	1.698	-	-	-	-	-	1.698
Gross/Weapon System Cost	4,970.47	2,641	13.127	5,675.15	1,022	5.800	4,102.92	1,438	5.900	2,774.15	3,064	8.500	-	-	-	2,774.15	3,064	8.500

(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 35			P-1 Line Item Number / Title: E22203 / Cartridges, Tank, 105MM And 120MM, All Types					Item Number / Title [DODIC]: E22125 / CTG, 105mm Tank TPDS-T, M724A2 (Short Rg KE Trnr) [CA58]				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
COMPLETE ROUND		2016	ALLIANT TECHSYSTEMS / PLYMOUTH, MN	C / FFP	PICATINNY ARSENAL, NJ	Aug 2016	Aug 2017	1,022	2,875.48	Y		
COMPLETE ROUND		2017	ALLIANT TECHSYSTEMS / PLYMOUTH, MN	C / FFP	PICATINNY ARSENAL, NJ	Mar 2017	Mar 2018	1,438	2,513.00	Y		
COMPLETE ROUND		2018	ALLIANT TECHSYSTEMS / PLYMOUTH, MN	C / FFP	PICATINNY ARSENAL, NJ	Mar 2018	Mar 2019	3,064	2,044.00	Y		

Remarks:
 FY 2016, FY 2017 and FY 2018 complete round is awarded as an option to the existing contract. This is a training standard item. FY 2018 Base procurement dollars in the amount of \$5.900 million supports annual training and builds a depot level in accordance with Army's procurement goals.

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 35	P-1 Line Item Number / Title: E22203 / Cartridges, Tank, 105MM And 120MM, All Types	Item Number / Title [DODIC]: E73201 / CTG, TANK, 120MM M1002 TP MULTI PUR-TRACE (TPMP-T) [CA31]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	180,284	8,589	9,892	19,801	-	19,801
Gross/Weapon System Cost (\$ in Millions)	387.002	32.500	53.328	53.100	-	53.100
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	387.002	32.500	53.328	53.100	-	53.100
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	387.002	32.500	53.328	53.100	-	53.100

(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 Dollars)	2,146.62	3,783.91	5,391.02	2,681.68	-	2,681.68

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND ^(†)	2,115.71	182,918	387.001	2,803.88	8,589	24.083	2,993.00	9,892	29.607	2,273.92	19,801	45.026	-	-	-	2,273.92	19,801	45.026
Subtotal: Recurring Cost	-	-	387.001	-	-	24.083	-	-	29.607	-	-	45.026	-	-	-	-	-	45.026
Subtotal: Hardware Cost	-	-	387.001	-	-	24.083	-	-	29.607	-	-	45.026	-	-	-	-	-	45.026
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	0.429	-	-	0.621	-	-	0.806	-	-	-	-	-	0.806
Subtotal: Support - Acceptance Testing Cost	-	-	-	-	-	0.429	-	-	0.621	-	-	0.806	-	-	-	-	-	0.806
Support - Product Improvement Cost																		
Safety	-	-	-	-	-	1.329	-	-	2.593	-	-	1.474	-	-	-	-	-	1.474
Reliability	-	-	-	-	-	0.116	-	-	1.209	-	-	0.785	-	-	-	-	-	0.785
Subtotal: Support - Product Improvement Cost	-	-	-	-	-	1.445	-	-	3.802	-	-	2.259	-	-	-	-	-	2.259
Support - Production Engineering Cost																		
Production Engineering	-	-	0.001	-	-	3.868	-	-	4.225	-	-	5.001	-	-	-	-	-	5.001
Subtotal: Support - Production Engineering Cost	-	-	0.001	-	-	3.868	-	-	4.225	-	-	5.001	-	-	-	-	-	5.001
Support - Quality Assurance Cost																		
Quality Assurance	-	-	-	-	-	0.008	-	-	0.008	-	-	0.009	-	-	-	-	-	0.009

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 35	P-1 Line Item Number / Title: E22203 / Cartridges, Tank, 105MM And 120MM, All Types	Item Number / Title [DODIC]: E73201 / CTG, TANK, 120MM M1002 TP MULTI PUR-TRACE (TPMP-T) [CA31]
ID Code (A=Service Ready, B=Not Service Ready) : A		MDAP/MAIS Code:

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	-	-	-	0.008	-	-	0.008	-	-	0.009	-	-	-	-	-	0.009
Support - Recapitalization Cost																		
Recapitalization	-	-	-	-	-	2.668	-	-	15.065	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Recapitalization Cost</i>	-	-	-	-	-	2.668	-	-	15.065	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	2,146.62	180,284	387.002	3,783.91	8,589	32.500	5,391.02	9,892	53.328	2,681.68	19,801	53.100	-	-	-	2,681.68	19,801	53.100

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

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 35			P-1 Line Item Number / Title: E22203 / Cartridges, Tank, 105MM And 120MM, All Types				Item Number / Title [DODIC]: E73201 / CTG, TANK, 120MM M1002 TP MULTI PUR-TRACE (TPMP-T) [CA31]				

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>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
COMPLETE ROUND ^(†)		2016	GENERAL DYNAMICS ORD AND TACT / ST PETERSBURG, FL	SS / FFP	ROCK ISLAND ARSENAL, IL	Mar 2016	Aug 2017	4,807	2,803.88	Y		
COMPLETE ROUND ^(†)		2016	ALLIANT TECHSYSTEMS / PLYMOUTH, MN	SS / FFP	ROCK ISLAND ARSENAL, IL	Mar 2016	Apr 2018	3,782	2,803.88	Y		
COMPLETE ROUND ^(†)		2017	GENERAL DYNAMICS ORD AND TACT / ST PETERSBURG, FL	SS / FFP	ROCK ISLAND ARSENAL, IL	Mar 2017	Apr 2018	4,946	2,993.00	Y		
COMPLETE ROUND ^(†)		2017	ALLIANT TECHSYSTEMS / PLYMOUTH, MN	SS / FFP	ROCK ISLAND ARSENAL, IL	Mar 2017	Apr 2018	4,946	2,993.00	Y		
COMPLETE ROUND ^(†)		2018	GENERAL DYNAMICS ORD AND TACT / ST PETERSBURG, FL	SS / FFP	ROCK ISLAND ARSENAL, IL	Mar 2018	Feb 2019	10,891	2,273.92	Y		
COMPLETE ROUND ^(†)		2018	ALLIANT TECHSYSTEMS / PLYMOUTH, MN	SS / FFP	ROCK ISLAND ARSENAL, IL	Mar 2018	Feb 2019	8,910	2,273.92	Y		

^(†) indicates the presence of a P-21

Remarks:

Hardware unit prices are an average unit price for multiple producers.

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Exhibit P-21, Production Schedule: FY 2018 Army													Date: May 2017													
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 35							P-1 Line Item Number / Title: E22203 / Cartridges, Tank, 105MM And 120MM, All Types													Item Number / Title [DODIC]: E73201 / CTG, TANK, 120MM M1002 TP MULTI PUR-TRACE (TPMP-T) [CA31]						

Cost Elements <i>(Units in Thousands)</i>						Fiscal Year 2016												Fiscal Year 2017												B A L A N C E	
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016												Calendar Year 2017												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
COMPLETE ROUND																															
Prior Years Deliveries: 182918																															
	1	2016	ARMY	4.807	.000	4.807																							2.880	1.927	.000
	2	2016	ARMY	3.782	.000	3.782																									3.782
	1	2017	ARMY	4.946	.000	4.946																									4.946
	2	2017	ARMY	4.946	.000	4.946																									4.946
	1	2018	ARMY	10.891	.000	10.891																									10.891
	2	2018	ARMY	8.910	.000	8.910																									8.910
							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: FY 2018 Army															Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 35										P-1 Line Item Number / Title: E22203 / Cartridges, Tank, 105MM And 120MM, All Types										Item Number / Title [DODIC]: E73201 / CTG, TANK, 120MM M1002 TP MULTI PUR-TRACE (TPMP-T) [CA31]									

Cost Elements <i>(Units in Thousands)</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			
COMPLETE ROUND																																	
Prior Years Deliveries: 182918																																	
	1	2016	ARMY	4.807	4.807	.000																							.000				
	2	2016	ARMY	3.782	.000	3.782	-	-	-	-	-	-	1.000	1.000	1.000	.782														.000			
	1	2017	ARMY	4.946	.000	4.946	-	-	-	-	-	-	.414	.412	.412	.412	.412	.412	.412	.412	.412	.412	.412	.412	.412	.412	.412	.412	.000				
	2	2017	ARMY	4.946	.000	4.946	-	-	-	-	-	-	.414	.412	.412	.412	.412	.412	.412	.412	.412	.412	.412	.412	.412	.412	.412	.412	.000				
	1	2018	ARMY	10.891	.000	10.891							A	-	-	-	-	-	-	-	-	-	-	.914	.907	.907	.907	.907	.907	.907	.907	3.628	
	2	2018	ARMY	8.910	.000	8.910							A	-	-	-	-	-	-	-	-	-	-	.748	.742	.742	.742	.742	.742	.742	.742	2.968	
							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			

UNCLASSIFIED

Exhibit P-21, Production Schedule: FY 2018 Army															Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 35										P-1 Line Item Number / Title: E22203 / Cartridges, Tank, 105MM And 120MM, All Types										Item Number / Title [DODIC]: E73201 / CTG, TANK, 120MM M1002 TP MULTI PUR-TRACE (TPMP-T) [CA31]									

Cost Elements <i>(Units in Thousands)</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	ACCEP T P R I O R T O 1 O C T 2 0 1 9	BAL D U E A S O F 1 O C T	Calendar Year 2020												Calendar Year 2021												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L		A U G	S E P
COMPLETE ROUND																															
Prior Years Deliveries: 182918																															
	1	2016	ARMY	4.807	4.807	.000																							.000		
	2	2016	ARMY	3.782	3.782	.000																							.000		
	1	2017	ARMY	4.946	4.946	.000																							.000		
	2	2017	ARMY	4.946	4.946	.000																							.000		
	1	2018	ARMY	10.891	7.263	3.628	.907	.907	.907	.907																			.000		
	2	2018	ARMY	8.910	5.942	2.968	.742	.742	.742	.742																			.000		
							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: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 35		P-1 Line Item Number / Title: E22203 / Cartridges, Tank, 105MM And 120MM, All Types
		Item Number / Title [DODIC]: E73201 / CTG, TANK, 120MM M1002 TP MULTI PUR-TRACE (TPMP-T) [CA31]

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	GENERAL DYNAMICS ORD AND TACT - ST PETERSBURG, FL	100	2,880	7,800	6	6	11	17	6	6	11	17
2	ALLIANT TECHSYSTEMS - PLYMOUTH, MN	100	5,600	11,200	6	6	11	17	6	6	11	17

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

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

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 35	P-1 Line Item Number / Title: E22203 / Cartridges, Tank, 105MM And 120MM, All Types	Item Number / Title [DODIC]: E73400 / CTG TANK 120MM TPCSDS-T M865 [C785]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	3,649,000	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	2,619.559	28.263	31.900	32.800	-	32.800
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	2,619.559	28.263	31.900	32.800	-	32.800
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	2,619.559	28.263	31.900	32.800	-	32.800

(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 Dollars)	717.88	-	-	-	-	-

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND	715.27	3,649,000	2,610.020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	2,610.020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware Cost	-	-	2,610.020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	-	-	-	1.202	-	-	0.824	-	-	-	-	-	0.824
Subtotal: Support - Acceptance Testing Cost	-	-	-	-	-	-	-	-	1.202	-	-	0.824	-	-	-	-	-	0.824
Support - Product Improvement Cost																		
Reliability	-	-	-	-	-	1.100	-	-	1.142	-	-	1.148	-	-	-	-	-	1.148
Safety	-	-	-	-	-	2.442	-	-	1.561	-	-	0.848	-	-	-	-	-	0.848
Subtotal: Support - Product Improvement Cost	-	-	-	-	-	3.542	-	-	2.703	-	-	1.996	-	-	-	-	-	1.996
Support - Production Engineering Cost																		
Production Engineering	-	-	9.521	-	-	2.058	-	-	1.276	-	-	2.563	-	-	-	-	-	2.563
Subtotal: Support - Production Engineering Cost	-	-	9.521	-	-	2.058	-	-	1.276	-	-	2.563	-	-	-	-	-	2.563
Support - Quality Assurance Cost																		
Quality Assurance	-	-	-	-	-	0.008	-	-	0.009	-	-	0.009	-	-	-	-	-	0.009
Subtotal: Support - Quality Assurance Cost	-	-	-	-	-	0.008	-	-	0.009	-	-	0.009	-	-	-	-	-	0.009

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 35	P-1 Line Item Number / Title: E22203 / Cartridges, Tank, 105MM And 120MM, All Types	Item Number / Title [DODIC]: E73400 / CTG TANK 120MM TPCSDS-T M865 [C785]
ID Code (A=Service Ready, B=Not Service Ready) : A		MDAP/MAIS Code:

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Support - Recapitalization Cost																		
Recapitalization	-	-	-	-	-	22.655	-	-	26.710	-	-	27.408	-	-	-	-	-	27.408
<i>Subtotal: Support - Recapitalization Cost</i>	-	-	-	-	-	22.655	-	-	26.710	-	-	27.408	-	-	-	-	-	27.408
Gross/Weapon System Cost	717.88	3,649,000	2,619.559	-	-	28.263	-	-	31.900	-	-	32.800	-	-	-	-	-	32.800

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 35	P-1 Line Item Number / Title: E22203 / Cartridges, Tank, 105MM And 120MM, All Types	Item Number / Title [DODIC]: E78007 / CTG, TANK, 120MM HEAT- MP-T M830A1 [C791]

ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:			
Resource Summary		Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)		-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)		565.934	-	8.999	-	-	-
Less PY Advance Procurement (\$ in Millions)		-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)		565.934	-	8.999	-	-	-
Plus CY Advance Procurement (\$ in Millions)		-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)		565.934	-	8.999	-	-	-
<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 Dollars)		-	-	-	-	-	-

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	-	-	-	0.234	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	-	-	-	-	-	-	0.234	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	565.934	-	-	-	-	-	0.630	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	565.934	-	-	-	-	-	0.630	-	-	-	-	-	-	-	-	-
Support - Quality Assurance Cost																		
Quality Assurance	-	-	-	-	-	-	-	-	0.003	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	-	-	-	-	-	-	0.003	-	-	-	-	-	-	-	-	-
Support - Recapitalization Cost																		
Recapitalization	-	-	-	-	-	-	-	-	8.132	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Recapitalization Cost</i>	-	-	-	-	-	-	-	-	8.132	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	-	-	565.934	-	-	-	-	-	8.999	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 35		P-1 Line Item Number / Title: E22203 / Cartridges, Tank, 105MM And 120MM, All Types
		Item Number / Title [DODIC]: E88106 / CTG, TANK, 120MM APFSDS-T, M829A4 [CA64]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	4,690	3,359	3,410	2,606	-	2,606
Gross/Weapon System Cost (\$ in Millions)	79.489	48.627	44.540	39.100	-	39.100
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	79.489	48.627	44.540	39.100	-	39.100
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	79.489	48.627	44.540	39.100	-	39.100

(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 Dollars)	16,948.61	14,476.63	13,061.58	15,003.84	-	15,003.84

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND ^(†)	13,500.00	5,289	71.402	11,646.00	3,359	39.119	11,200.00	3,410	38.192	13,370.00	2,606	34.842	-	-	-	13,370.00	2,606	34.842
Subtotal: Recurring Cost	-	-	71.402	-	-	39.119	-	-	38.192	-	-	34.842	-	-	-	-	-	34.842
Subtotal: Hardware Cost	-	-	71.402	-	-	39.119	-	-	38.192	-	-	34.842	-	-	-	-	-	34.842
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	-	-	-	0.255	-	-	0.266	-	-	-	-	-	0.266
First Article Test	-	-	-	-	-	0.201	-	-	0.188	-	-	0.177	-	-	-	-	-	0.177
Subtotal: Support - Acceptance Testing Cost	-	-	-	-	-	0.201	-	-	0.443	-	-	0.443	-	-	-	-	-	0.443
Support - Non-Recurring Support Cost																		
Value Engineering	-	-	-	-	-	5.013	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Support - Non-Recurring Support Cost	-	-	-	-	-	5.013	-	-	-	-	-	-	-	-	-	-	-	-
Support - Product Improvement Cost																		
Production Verification Test	-	-	-	-	-	-	-	-	0.213	-	-	0.219	-	-	-	-	-	0.219
Safety	-	-	-	-	-	1.000	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Support - Product Improvement Cost	-	-	-	-	-	1.000	-	-	0.213	-	-	0.219	-	-	-	-	-	0.219
Support - Production Engineering Cost																		

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 35		P-1 Line Item Number / Title: E22203 / Cartridges, Tank, 105MM And 120MM, All Types
ID Code (A=Service Ready, B=Not Service Ready) : A		MDAP/MAIS Code:
Item Number / Title [DODIC]: E88106 / CTG, TANK, 120MM APFSDS-T, M829A4 [CA64]		

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Production Engineering	-	-	8.087	-	-	3.179	-	-	5.692	-	-	3.596	-	-	-	-	-	3.596
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	8.087	-	-	3.179	-	-	5.692	-	-	3.596	-	-	-	-	-	3.596
Support - Study & Analysis Cost																		
Study & Analysis	-	-	-	-	-	0.115	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Study & Analysis Cost</i>	-	-	-	-	-	0.115	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	16,948.61	4,690	79.489	14,476.63	3,359	48.627	13,061.58	3,410	44.540	15,003.84	2,606	39.100	-	-	-	15,003.84	2,606	39.100

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

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 35			P-1 Line Item Number / Title: E22203 / Cartridges, Tank, 105MM And 120MM, All Types				Item Number / Title [DODIC]: E88106 / CTG, TANK, 120MM APFSDS-T, M829A4 [CA64]				

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>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
COMPLETE ROUND ^(†)		2016	ALLIANT TECHSYSTEMS / PLYMOUTH, MN	C / FFP	PICATINNY ARSENAL, NJ	Aug 2016	Feb 2018	3,359	11,646.00	Y		
COMPLETE ROUND ^(†)		2017	ALLIANT TECHSYSTEMS / PLYMOUTH, MN	SS / FFP	PICATINNY ARSENAL, NJ	Aug 2017	Sep 2018	3,410	11,200.00	Y		
COMPLETE ROUND ^(†)		2018	ALLIANT TECHSYSTEMS / PLYMOUTH, MN	SS / FFP	PICATINNY ARSENAL, NJ	Mar 2018	Jun 2019	2,606	13,370.00	Y		

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: FY 2018 Army																Date: May 2017									
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 35									P-1 Line Item Number / Title: E22203 / Cartridges, Tank, 105MM And 120MM, All Types									Item Number / Title [DODIC]: E88106 / CTG, TANK, 120MM APFSDS-T, M829A4 [CA64]							

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2016														Fiscal Year 2017												B A L A N C E																		
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEP T P R I O R T O 1 O C T 2 0 1 5	BAL D U E A S O F 1 O C T	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																			
COMPLETE ROUND																																																	
Prior Years Deliveries: 5289																																																	
1		2016	ARMY	3,359	0	3,359																								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-		3,359			
1		2017	ARMY	3,410	0	3,410																																								A -	-		3,410
1		2018	ARMY	2,606	0	2,606																																										2,606	
							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: FY 2018 Army															Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 35										P-1 Line Item Number / Title: E22203 / Cartridges, Tank, 105MM And 120MM, All Types										Item Number / Title [DODIC]: E88106 / CTG, TANK, 120MM APFSDS-T, M829A4 [CA64]									

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						
COMPLETE ROUND																																				
Prior Years Deliveries: 5289																																				
1	2016	ARMY		3,359	0	3,359	-	-	-	-	1,000	1,000	1,000	359																					0	
1	2017	ARMY		3,410	0	3,410	-	-	-	-	-	-	-	-	-	-	-	286	284	284	284	284	284	284	284	284	284	284	284	284	284	284	284	0		
1	2018	ARMY		2,606	0	2,606									A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	219	217	217	217	1,736
							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						

UNCLASSIFIED

Exhibit P-21, Production Schedule: FY 2018 Army															Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 35										P-1 Line Item Number / Title: E22203 / Cartridges, Tank, 105MM And 120MM, All Types										Item Number / Title [DODIC]: E88106 / CTG, TANK, 120MM APFSDS-T, M829A4 [CA64]									

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					
COMPLETE ROUND																																			
Prior Years Deliveries: 5289																																			
1	2016	ARMY		3,359	3,359	0																													0
1	2017	ARMY		3,410	3,410	0																													0
1	2018	ARMY		2,606	870	1,736	217	217	217	217	217	217	217																					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					

UNCLASSIFIED

Exhibit P-21, Production Schedule: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 35		P-1 Line Item Number / Title: E22203 / Cartridges, Tank, 105MM And 120MM, All Types
		Item Number / Title [DODIC]: E88106 / CTG, TANK, 120MM APFSDS-T, M829A4 [CA64]

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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	ALLIANT TECHSYSTEMS - PLYMOUTH, MN	100	500	1,000	6	9	15	24	6	6	14	20

"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: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 37: Artillery Ammunition	P-1 Line Item Number / Title: E15101 / Artillery Cartridges, 75MM & 105MM, All Types
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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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	2,773.234	62.756	69.290	44.200	-	44.200	60.674	54.002	46.800	56.741	-	3,167.697
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	2,773.234	62.756	69.290	44.200	-	44.200	60.674	54.002	46.800	56.741	-	3,167.697
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	2,773.234	62.756	69.290	44.200	-	44.200	60.674	54.002	46.800	56.741	-	3,167.697

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

Description:

(E15101)Artillery Cartridges, 75MM And 105MM, All Types
This budget line includes Cartridge, Artillery, 75mm & 105mm, All Types.

(E15200)CTG, ARTY, 75MM BLANK, M337A1

The 75mm M337A2 is a non-tactical blank cartridge fired from a M116 Howitzer that is used in burial, retreat ceremonies and VIP Salutes. It consists of a cartridge case containing loosely packed black powder and a press-fitted percussion primer. A fiberglass wad is inserted over the black powder and a polystyrene closing cup is cemented in place with a polyester resin adhesive. When the firing pin of the weapon strikes the primer, a flash is generated which ignites the black powder charge producing flash, smoke, and a loud report to simulate weapon firing. This item is Code A, approved for service use.

(E21501)CTG, ARTY, 105MM HE, M1 W/O FUZE

The 105mm M1 High Explosive (HE) cartridge contains a HE fill and is used primarily for training although some cartridges are expended in combat operations for fragmentation and blast. The cartridge is loaded with an M67 propellant charge, consisting of seven numbered increment bags sewn together in numerical order. Projectile function is dependent upon the fuze used and may function on impact (instantaneous or delay), above ground at a predetermined height or in proximity to the target area. Fuze function detonates the HE projectile filler resulting in projectile fragmentation and blast. Range varies from 3.5 to 11.3 kilometers, depending on the number of charge bags used. The program remanufactures/recapitalizes the remaining unserviceable cartridges through replacement of M67 Prop Charge and Primer at a reduced cost over new production to provide a cost effective training cartridge. Funding for the 105MM HE, M1 program in FY 2016 through FY 2018 is for recapitalization. This item is Code A, approved for service use.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 37: Artillery Ammunition

P-1 Line Item Number / Title:
E15101 / Artillery Cartridges, 75MM & 105MM, All Types

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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 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	E15200 / CTG, ARTY, 75MM BLANK, M337A1 [C025]	P-5a	A		- / 59.454	- / -	64,948 / 7.000	- / -	- / -	- / -
P-5	E21501 / CTG, ARTY, 105MM HE, M1 W/O FUZE [C445]		A		- / 2,713.780	- / 62.756	- / 62.290	- / 44.200	- / -	- / 44.200
P-40	Total Gross/Weapon System Cost				- / 2,773.234	- / 62.756	- / 69.290	- / 44.200	- / -	- / 44.200

*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 2018 Base Budget supports critical Army Title 10 war reserve/operational, training, and test requirements IAW DoD Instruction 3000.04 (Munitions Requirements Process) and AR 5-13 (Total Army Munitions Requirements Process and Prioritization System). War reserve requirements support OSD-approved Combatant Commander Operational Plans, Homeland Defense, and other OSD-directed missions. Training requirements support individual and collective training of Active and Reserve Component forces at Army schools, home station, and the combined training centers. Test requirements support the development, fielding, safety, and quality assurance of Army munitions and equipment throughout their life-cycle.
 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." FY 2018 Base procurement dollars in the amount of \$44.200 million supports 180,000 RECAP Cartridges.

(E15200)CTG, ARTY, 75MM Blank, M337A1
 This is a training unique item not used in combat. Request supports annual training and builds a depot level in accordance with the Army procurement goals.
 TYPE CLASSIFICATION DATE: 1975

(E21501)CTG, ARTY, 105MM HE, M1 W/O FUZE
 This program will remanufacture/recapitalize unserviceable rounds in the inventory.
 This is a training standard item used in both training and combat. FY 2018 request supports annual training and builds a war reserve inventory in accordance with the Army procurement goals. FY 2018 Base procurement dollars in the amount of \$44.200 million will supports production of 180,000 recapitalized cartridges.
 TYPE CLASSIFICATION DATE: 1966

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37	P-1 Line Item Number / Title: E15101 / Artillery Cartridges, 75MM & 105MM, All Types	Item Number / Title [DODIC]: E15200 / CTG, ARTY, 75MM BLANK, M337A1 [C025]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity <i>(Units in Each)</i>	-	-	64,948	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	59.454	-	7.000	-	-	-
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	59.454	-	7.000	-	-	-
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	59.454	-	7.000	-	-	-

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

Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-
Gross/Weapon System Unit Cost <i>(\$ in Dollars)</i>	-	-	107.78	-	-	-

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP) ^(†)	-	-	59.454	-	-	-	81.62	64,948	5.301	-	-	-	-	-	-	-	-	-
BLACK POWDER CLASS 1 ^(†)	-	-	-	-	-	-	15.37	64,948	0.998	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	<i>59.454</i>	-	-	-	-	-	<i>6.299</i>	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware Cost</i>	-	-	<i>59.454</i>	-	-	-	-	-	<i>6.299</i>	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	-	-	-	0.701	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	-	-	-	<i>0.701</i>	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	-	-	59.454	-	-	-	107.78	64,948	7.000	-	-	-	-	-	-	-	-	-

(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37			P-1 Line Item Number / Title: E15101 / Artillery Cartridges, 75MM & 105MM, All Types					Item Number / Title [DODIC]: E15200 / CTG, ARTY, 75MM BLANK, M337A1 [C025]				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
LOAD, ASSEMBLE, PACK (LAP)		2017	AMERICAN ORDNANCE LLC (IAAP) / MIDDLETOWN, IA	Option / FFP	ROCK ISLAND ARSENAL, IL	Jul 2017	Jul 2018	64,948	81.62	Y		
BLACK POWDER CLASS 1		2017	GOEX POWDER, INC. / MINDEN, LA	SS / FFP	ROCK ISLAND ARSENAL, IL	Jun 2017	Apr 2018	64,948	15.37	Y		

Remarks:
FY 2017 is a delivery order to an existing contract.

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37	P-1 Line Item Number / Title: E15101 / Artillery Cartridges, 75MM & 105MM, All Types	Item Number / Title [DODIC]: E21501 / CTG, ARTY, 105MM HE, M1 W/O FUZE [C445]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	2,713.780	62.756	62.290	44.200	-	44.200
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	2,713.780	62.756	62.290	44.200	-	44.200
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	2,713.780	62.756	62.290	44.200	-	44.200

(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 Dollars</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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Support - Recapitalization Cost																		
Recapitalization	-	-	2,713.780	-	-	62.756	-	-	62.290	-	-	44.200	-	-	-	-	-	44.200
<i>Subtotal: Support - Recapitalization Cost</i>	-	-	2,713.780	-	-	62.756	-	-	62.290	-	-	44.200	-	-	-	-	-	44.200
Gross/Weapon System Cost	-	-	2,713.780	-	-	62.756	-	-	62.290	-	-	44.200	-	-	-	-	-	44.200

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 37: Artillery Ammunition	P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES
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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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,543.667	87.995	142.101	187.149	-	187.149	140.735	154.600	171.842	130.519	-	2,558.608
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,543.667	87.995	142.101	187.149	-	187.149	140.735	154.600	171.842	130.519	-	2,558.608
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,543.667	87.995	142.101	187.149	-	187.149	140.735	154.600	171.842	130.519	-	2,558.608

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

Description:

(E89500)ARTILLERY PROJECTILE, 155MM, ALL TYPES

This budget line includes Projectiles, Artillery, 155mm, All Types.

(E21618) PROJ, ARTY, 155MM EXT RANGE MARKING RD M110A3

The 155mm M110A3 Smoke White Phosphorous (WP) Artillery Round utilizes projectile bodies generated from an on-going M483 Dual Purpose Improved Conventional Munition (DPICM) demilitarization program and incorporates a more producible WP Bulk-filled Canister with 11.0 lbs of WP that provides smoke spotting capability to a maximum range of 22.5 kilometers providing increased operational effectiveness and improved training.

This item is Code B, not approved for service use.

(E26904) PROJ, ARTY, 155MM IR ILLUM M1123

The 155mm M1123 Infrared Illumination Projectile is used with night vision devices to illuminate a designated target area to a maximum range of 22.5 kilometers. The M1123 utilizes projectile bodies generated from an on-going M483 Dual Purpose Improved Conventional Munition (DPICM) demilitarization program and leverages the payload contained in the M1066 IR Illuminating Projectile. The M1123 contains a Canister Loading Assembly, Expulsion Charge, and numerous spacers. The Canister Loading Assembly consists of an IR Illuminating Candle, Main Parachute, Drogue Parachute, Delay, and Secondary Expulsion Charge. The outer shell of the canister is fitted with three longitudinal fins. The projectile uses an M762 series Electronic Time Fuze. When the fuze functions, the primary expelling charge ignites, forcing the drogue parachute and canister assembly against the base plate, rupturing the base pins and expelling the canister and parachute. The drogue parachute deploys and the canister fins extend. The expelling charge also ignites the Delay in the canister nose. The Delay ignites the secondary expelling charge within the canister after 6.5 - 9 seconds, igniting the candle and expelling the main parachute. With the main parachute open, the illuminate candle descends at 15 feet per second and burns for 120 seconds minimum. The M1123 provides Infrared battlefield illumination that is 2.4x larger in diameter than the M1124 Visible Light Illumination projectile.

This item is Code A, approved for service use.

(E26900) PROJ, ARTY, 155MM VL ILLUM M1124

The 155mm M1124 Visual Light Illumination Projectile is fired from 155mm howitzers and is used to illuminate the battlefield to a maximum range of 22.5 kilometers. The M1124 utilizes projectile bodies generated from an on-going M483 Dual Purpose Improved Conventional Munition (DPICM) demilitarization program and leverages the payload contained in the M485A2 VL Illuminating Projectile. The M1124 contains a Canister Loading Assembly, Expulsion Charge, and numerous spacers. The Canister Loading Assembly consists of a VL Illuminating Candle, Main Parachute, Drogue Parachute, Delay, and

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 37: Artillery Ammunition		P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>Secondary Expulsion Charge. The outer shell of the canister is fitted with three longitudinal fins. The projectile uses an M762 series Electronic Time Fuze. When the fuze functions, the primary expelling charge ignites, forcing the drogue parachute and canister assembly against the base plate, rupturing the base pins and expelling the canister and parachute. The drogue parachute then deploys and the canister fins extend. The expelling charge also ignites the delay element in the canister nose. The delay element ignites the secondary expelling charge within the canister after 6.5 - 9 seconds, igniting the candle and expelling the main parachute. With the main parachute open, the illumination candle descends at 15 feet per second and burns for 75 seconds minimum producing approximately 1,000,000 candlepower. This item is Code A, approved for service use.</p> <p>(E27603) PROJ, ARTY, 155MM HE IM TRAINING M1122 The 155mm M1122 High Explosive (HE) Projectile will be the primary HE round used for training. The M1122 is a lower cost HE training round. The M1122 will replace the M804A1 and M107 Projectiles for training. It utilizes M483A1 DPICM metal parts from an ongoing M483A1 demil effort, is filled with high density concrete to simulate the weight of the M795 HE Projectile, and incorporates several Insensitive Munitions (IM) technologies (IMX-101 explosive fill, PBXN-9 Supplementary Charge, Plastic Fuze Well Liner and Meltable Fuze Plug) to increase survivability and safety. The M1122 will replicate the flight characteristics of the wartime M795 HE Projectile with a maximum range of 22.5 kilometers. This item is Code A, approved for service use.</p> <p>(E66800)PROJ, ARTY, 155MM HE, M795 The M795 High Explosive (HE) Projectile is the primary HE round used for warfare operations with maximum range of 22.5 kilometers. The M795 incorporates Insensitive Munitions (IM) technologies that reduces vulnerability from unplanned stimuli e.g. fire/heat, shock and impact, while maintaining or exceeding the same level of effectiveness in combat. The 155mm M795 has a high fragmentation steel (HF1) body projectile filled with 23.8 pounds of IMX101 Explosive fill, PBXN-9 Supplementary Charge, and Meltable Fuze Plug. The projectile can use several different fuzes (impact, mechanical time, electronic time and short intrusion proximity). It is used for conventional fire support for harassment and interdiction, fragmentation and blast effect. The M795 projectile is employed against personnel, trucks, electronic surveillance and target acquisition devices, supply points, command and control and communications (C3) installations, and mechanized and armored forces. This item is Code A, approved for service use.</p> <p>(E21615) PROJ, ARTY, 155MM SMOKE M1125 The 155mm Smoke M1125 Artillery Round utilizes projectile bodies generated from an on-going M483 Dual Purpose Improved Conventional Munition (DPICM) demilitarization program. M1125 will incorporate a metal chloride composition with hexachloroethane known as HX (technical name not yet defined) into four smoke canisters to enhance screening and obscuration while reducing toxicity to a maximum range of 22.5 kilometers providing increased operational effectiveness and improved training. This item is Code B, not approved for service use.</p> <p>(E27001) PROJ, ARTY, 155MM HC SMOKE M116 Series The M116 Series base ejection projectile has a hollow steel casing containing four canisters filled with HC (white) smoke composition. These smoke canisters are stacked within the projectile and separated by felt spacers. Upon fuze function, an expelling charge consisting of 0.34 pounds of black powder flashes through the central tube to ignite the smoke canisters, blow off the base and dispenses all smoke canisters. An effective smoke cloud is produced within 30 seconds, and continues for approximately 1.5 minutes. This item is Code A, approved for service use</p> <p>(E68500) PROJ, ARTY, 155MM DPICM BASEBLED M864 The 155mm projectile replacement for Dual Purpose Improved Conventional Munition (DPICM) capability which will be lost 01 January 2019 due to policy restrictions. Capability will provide lethal effects against disbursed and poorly located light, medium and heavy armored targets by procuring sensor fuzed projectiles. This is a directed procurement by the Vice Chief of Staff of the Army as a bridging strategy to fill a critical capability gap from the loss of DPICM and a planned follow-on program of record. This item is Code A, approved for service use.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 37: Artillery Ammunition	P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Exhibits Schedule				Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 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)
P-5	E21615 / PROJ, ARTY, 155MM, SMOKE M1125 [DZ08]		B		- / 10.000	- / -	- / 2.238	- / -	- / -
P-5	E21618 / PROJ, ARTY, 155MM EXT RANGE SPOTTING RD M110A3 [DZ09]	P-5a	B		- / 9.162	- / -	5,366 / 6.696	- / -	- / -
P-5	E26900 / PROJ, ARTY, 155MM VL ILLUM, M485 / M1124 [DA57]	P-5a	A		- / 289.522	- / -	7,332 / 11.480	- / -	- / -
P-5	E26904 / PROJ, ARTY, 155MM IR ILLUM M1066 / M1123 [DA56]	P-5a	A		- / 50.737	8,368 / 12.600	- / -	8,810 / 13.300	- / -
P-5	E27001 / PROJ, 155MM ARTY Smoke, M116 Series	P-5a	A		- / -	- / -	- / -	2,000 / 5.000	- / -
P-5	E27603 / PROJ, ARTY, 155MM HE IM TRAINING M1122	P-5a, P-21	A		- / 49.340	91,176 / 40.514	125,062 / 61.839	121,554 / 65.400	- / -
P-5	E66800 / PROJ, ARTY, 155MM HE, M795 [DA54]	P-5a	A		- / 326.143	21,052 / 34.881	41,990 / 59.848	16,573 / 28.000	- / -
P-5	E68500 / PROJ, ARTY, 155MM DPICM BASEBLED M864 [D864]	P-5a, P-21	A		- / 808.763	- / -	- / -	1,250 / 75.449	- / -
P-40	Total Gross/Weapon System Cost				- / 1,543.667	- / 87.995	- / 142.101	- / 187.149	- / 187.149

*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 2018 Base Budget supports critical Army Title 10 war reserve/operational, training, and test requirements IAW DoD Instruction 3000.04 (Munitions Requirements Process) and AR 5-13 (Total Army Munitions Requirements Process and Prioritization System). War reserve requirements support OSD-approved Combatant Commander Operational Plans, Homeland Defense, and other OSD-directed missions. Training requirements support individual and collective training of Active and Reserve Component forces at Army schools, home station, and the combined training centers. Test requirements support the development, fielding, safety, and quality assurance of Army munitions and equipment throughout their life-cycle.

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.

FY 2018 Base procurement dollars in the amount of \$187.149 million supports production of 150,187 projectiles.

(E21618) PROJ, ARTY, 155MM EXT RANGE SPOTTING RD M110A3

This item is a training standard item used in both training and combat. Request supports annual training and build a war reserve inventory in accordance with the Army's procurement goals.
TYPE CLASSIFICATION DATE: 1972

(E26900) PROJ, ARTY, 155MM VL ILLUM, M485 / M1124

This is a training standard item used in training and combat. Request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals.
TYPE CLASSIFICATION DATE: 1970

(E26904) PROJ, ARTY, 155MM IR ILLUM M1066 / M1123

This item is a training standard item used in both training and combat. FY2018 request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$13.300 million supports production of 8,810 projectiles.
TYPE CLASSIFICATION: 2010

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 37: Artillery Ammunition		P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>(E27603) PROJ, ARTY, 155MM HE IM TRAINING M1122 This is a training unique item not used in combat. FY 2018 request supports annual training and builds a depot level inventory in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$65.400 million supports production of 121,554 projectiles. TYPE CLASSIFICATION DATE: 2010</p> <p>(E66800) PROJ, ARTY, 155MM HE, M795 This is a war reserve item used in combat. FY 2018 request builds a war reserve inventory in accordance with Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$28.000 million supports production of 16,573 projectiles. TYPE CLASSIFICATION DATE: 1982</p> <p>(E21615) PROJ, ARTY, 155MM SMOKE, M1125 This item is a training standard item used in both training and combat. Request supports annual training and build a war reserve inventory in accordance with the Army's procurement goals. TYPE CLASSIFICATION DATE: 2017</p> <p>(E27001) PROJ, ARTY, 155MM HC SMOKE M116 Series This item is a training standard item used in both training and combat. FY 2018 Request supports annual training and build a war reserve inventory in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$5.000 million supports production of 2,000 projectiles. The 155mm Smoke M116 Artillery requirement was initiated based upon REF 10 Liner which required annual delivery of 1,000 M116A1 HC Smoke Projectiles (D506) to support training. E27001 is a new start in FY 2018.</p> <p>(E68500) PROJ, ARTY, 155MM DPICM BASEBLED M864 This is a war reserve item. The FY 2018 request will build a war reserve inventory in accordance with the Army procurement goals. The FY 2018 procurement dollars in the amount of \$75.449 million supports production of 1,250 projectiles. E68500 is a new start in FY 2018. TYPE CLASSIFICATION DATE: 1991</p>		

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37	P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES	Item Number / Title [DODIC]: E21615 / PROJ, ARTY, 155MM, SMOKE M1125 [DZ08]

ID Code (A=Service Ready, B=Not Service Ready) : B	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	10.000	-	2.238	-	-	-
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	10.000	-	2.238	-	-	-
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	10.000	-	2.238	-	-	-

(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 Dollars)	-	-	-	-	-	-

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND	822.23	12,162	10.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	10.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware Cost</i>	-	-	10.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - Non-Recurring Support Cost																		
Facilitization	-	-	-	-	-	-	-	-	2.238	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Non-Recurring Support Cost</i>	-	-	-	-	-	-	-	-	2.238	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	-	-	10.000	-	-	-	-	-	2.238	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37	P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES	Item Number / Title [DODIC]: E21618 / PROJ, ARTY, 155MM EXT RANGE SPOTTING RD M110A3 [DZ09]

ID Code (A=Service Ready, B=Not Service Ready) : B	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	-	5,366	-	-	-
Gross/Weapon System Cost (\$ in Millions)	9.162	-	6.696	-	-	-
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	9.162	-	6.696	-	-	-
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	9.162	-	6.696	-	-	-

(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 Dollars)	-	-	1,247.86	-	-	-

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
Load, Assemble, Pack (Lap) ^(†)	-	-	-	-	-	-	412.51	5,366	2.214	-	-	-	-	-	-	-	-	-
Plug, Lifting, Melttable For Im ^(†)	-	-	-	-	-	-	19.87	5,473	0.109	-	-	-	-	-	-	-	-	-
SMOKE CANNISTER ASSEMBLY ^(†)	-	-	-	-	-	-	493.85	5,580	2.756	-	-	-	-	-	-	-	-	-
MODIFIED SUPPLEMENTAL CHARGE, PBXN9 ^(†)	-	-	-	-	-	-	39.56	5,419	0.214	-	-	-	-	-	-	-	-	-
DOWNLOAD, CLEAN AND INSPECT ^(†)	-	-	-	-	-	-	102.25	6,439	0.658	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	5.951	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	-	-	-	5.951	-	-	-	-	-	-	-	-	-
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	-	-	-	0.075	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	-	-	-	-	-	-	0.075	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	9.162	-	-	-	-	-	0.670	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37		P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES
ID Code (A=Service Ready, B=Not Service Ready) : B		MDAP/MAIS Code:
Item Number / Title [DODIC]: E21618 / PROJ, ARTY, 155MM EXT RANGE SPOTTING RD M110A3 [DZ09]		

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	9.162	-	-	-	-	-	0.670	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	-	-	9.162	-	-	-	1,247.86	5,366	6.696	-	-	-	-	-	-	-	-	-

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

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37			P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES				Item Number / Title [DODIC]: E21618 / PROJ, ARTY, 155MM EXT RANGE SPOTTING RD M110A3 [DZ09]				

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>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
Load, Assemble, Pack (Lap)		2017	PINE BLUFF ARSENAL / PINE BLUFF, AR	PO	PICATINNY ARSENAL, NJ	Jan 2017	Jan 2019	5,366	412.51	Y		
Plug, Lifting, Melttable For Im		2017	POLYMER TECHNOLOGIES, INC / CLIFTON, NJ	Option / FFP	PICATINNY ARSENAL, NJ	Mar 2017	Sep 2018	5,473	19.87	Y		
SMOKE CANNISTER ASSEMBLY		2017	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Mar 2017	Sep 2018	5,580	493.85	Y		
MODIFIED SUPPLEMENTAL CHARGE, PBXN9		2017	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Feb 2017	Aug 2018	5,419	39.56	Y		
DOWNLOAD, CLEAN AND INSPECT		2017	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Feb 2017	Aug 2018	6,439	102.25	Y		

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37	P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES	Item Number / Title [DODIC]: E26900 / PROJ, ARTY, 155MM VL ILLUM, M485 / M1124 [DA57]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	-	7,332	-	-	-
Gross/Weapon System Cost (\$ in Millions)	289.522	-	11.480	-	-	-
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	289.522	-	11.480	-	-	-
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	289.522	-	11.480	-	-	-

(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 Dollars)	-	-	1,565.74	-	-	-

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP) ^(†)	-	-	289.522	-	-	-	298.86	7,332	2.191	-	-	-	-	-	-	-	-	-
DOWNLOAD, CLEAN AND INSPECT ^(†)	-	-	-	-	-	-	102.25	7,698	0.787	-	-	-	-	-	-	-	-	-
METAL PARTS SETS ^(†)	-	-	-	-	-	-	339.22	7,332	2.487	-	-	-	-	-	-	-	-	-
VL ILLUM CANNISTER ^(†)	-	-	-	-	-	-	341.30	7,478	2.552	-	-	-	-	-	-	-	-	-
CANISTER MPTS ASSY, 155MM ILLUM ^(†)	-	-	-	-	-	-	60.82	7,478	0.455	-	-	-	-	-	-	-	-	-
CANISTER BASE ASSY, 155MM ILLUM ^(†)	-	-	-	-	-	-	19.03	7,478	0.142	-	-	-	-	-	-	-	-	-
M10 EXPULSION CHARGE ASSEMBLY ^(†)	-	-	-	-	-	-	99.40	7,478	0.743	-	-	-	-	-	-	-	-	-
PARACHUTE MAIN, 155MM ILLUM ^(†)	-	-	-	-	-	-	35.14	7,478	0.263	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: FY 2018 Army												Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37						P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES						Item Number / Title [DODIC]: E26900 / PROJ, ARTY, 155MM VL ILLUM, M485 / M1124 [DA57]					
ID Code (A=Service Ready, B=Not Service Ready) : A												MDAP/MAIS Code:					

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
PARACHUTE MAIN SUPPORTS, 155MM ILLUM ^(†)	-	-	-	-	-	-	3.22	29,914	0.096	-	-	-	-	-	-	-	-	-
PARACHUTE DROGUE ASSEMBLY, 155MM ILLUM ^(†)	-	-	-	-	-	-	21.09	7,478	0.158	-	-	-	-	-	-	-	-	-
DELAY ELEMENT, 155MM ILLUM ^(†)	-	-	-	-	-	-	42.29	7,478	0.316	-	-	-	-	-	-	-	-	-
WOOD PALLET (HEAT TREATED) ^(†)	-	-	-	-	-	-	93.19	953	0.089	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	289.522	-	-	-	-	-	10.280	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware Cost</i>	-	-	289.522	-	-	-	-	-	10.280	-	-	-	-	-	-	-	-	-
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	-	-	-	0.050	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	-	-	-	-	-	-	0.050	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	-	-	-	1.151	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	-	-	-	1.151	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	-	-	289.522	-	-	-	1,565.74	7,332	11.480	-	-	-	-	-	-	-	-	-

^(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37			P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES				Item Number / Title [DODIC]: E26900 / PROJ, ARTY, 155MM VL ILLUM, M485 / M1124 [DA57]				

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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
LOAD, ASSEMBLE, PACK (LAP)		2017	PINE BLUFF ARSENAL / PINE BLUFF, AR	PO	PICATINNY ARSENAL, NJ	Jan 2017	Jan 2019	7,332	298.86	Y		
DOWNLOAD, CLEAN AND INSPECT		2017	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Feb 2017	Aug 2018	7,698	102.25	Y		
METAL PARTS SETS		2017	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Jan 2017	Jul 2018	7,332	339.22	Y		
VL ILLUM CANNISTER		2017	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Jan 2017	Jul 2018	7,478	341.30	Y		
CANISTER MPTS ASSY, 155MM ILLUM		2017	TO BE SELECTED / TBS01	C / FFP	PICATINNY ARSENAL, NJ	Jun 2017	Feb 2018	7,478	60.82	Y		
CANISTER BASE ASSY, 155MM ILLUM		2017	TO BE SELECTED / TBS01	C / FFP	PICATINNY ARSENAL, NJ	Jun 2017	Feb 2018	7,478	19.03	Y		
M10 EXPULSION CHARGE ASSEMBLY		2017	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Jan 2017	Jul 2018	7,478	99.40	Y		
PARACHUTE MAIN, 155MM ILLUM		2017	TO BE SELECTED / TBS01	C / IDIQ	ROCK ISLAND ARSENAL, IL	Mar 2017	Sep 2018	7,478	35.14	Y		
PARACHUTE MAIN SUPPORTS, 155MM ILLUM		2017	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Jan 2017	Jul 2018	29,914	3.22	Y		
PARACHUTE DROGUE ASSEMBLY, 155MM ILLUM		2017	TO BE SELECTED / TBS01	C / IDIQ	ROCK ISLAND ARSENAL, IL	Mar 2017	Sep 2018	7,478	21.09	Y		
DELAY ELEMENT, 155MM ILLUM		2017	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	ROCK ISLAND ARSENAL, IL	Jan 2017	Jul 2018	7,478	42.29	Y		
WOOD PALLET (HEAT TREATED)		2017	PINE BLUFF ARSENAL / PINE BLUFF, AR	PO	PICATINNY ARSENAL, NJ	Jun 2017	Dec 2018	953	93.19	Y		

Remarks:
Parachute Main and Drogue Assembly: IDIQ contract awarded to Yoland Corp INC., Brooklyn, NY.

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Exhibit P-5, Cost Analysis: FY 2018 Army						Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37				P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES			Item Number / Title [DODIC]: E26904 / PROJ, ARTY, 155MM IR ILLUM M1066 / M1123 [DA56]		
ID Code (A=Service Ready, B=Not Service Ready) : A						MDAP/MAIS Code:			
Resource Summary				Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)				-	8,368	-	8,810	-	8,810
Gross/Weapon System Cost (\$ in Millions)				50.737	12.600	-	13.300	-	13.300
Less PY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)				50.737	12.600	-	13.300	-	13.300
Plus CY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)				50.737	12.600	-	13.300	-	13.300
<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 Dollars)				-	1,505.74	-	1,509.65	-	1,509.65

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP) ^(†)	261.04	11,107	2.899	292.87	8,368	2.451	-	-	-	349.43	8,810	3.078	-	-	-	349.43	8,810	3.078
DOWNLOAD, CLEAN AND INSPECT ^(†)	82.50	11,662	0.962	70.39	8,786	0.618	-	-	-	77.22	9,250	0.714	-	-	-	77.22	9,250	0.714
METAL PARTS SETS ^(†)	305.37	11,107	3.392	292.70	8,368	2.449	-	-	-	345.96	8,810	3.048	-	-	-	345.96	8,810	3.048
IR ILLUM CANNISTER ^(†)	-	-	-	298.72	8,535	2.550	-	-	-	343.16	8,986	3.084	-	-	-	343.16	8,986	3.084
CANISTER MPTS ASSY, 155MM ILLUM ^(†)	57.57	11,329	0.652	49.29	8,535	0.421	-	-	-	52.01	8,986	0.467	-	-	-	52.01	8,986	0.467
CANISTER BASE ASSY, 155MM ILLUM ^(†)	14.03	11,329	0.159	15.54	8,535	0.133	-	-	-	19.42	8,986	0.175	-	-	-	19.42	8,986	0.175
PARACHUTE MAIN, 155MM ILLUM ^(†)	34.18	11,329	0.387	37.80	8,535	0.323	-	-	-	40.75	8,986	0.366	-	-	-	40.75	8,986	0.366
PARACHUTE MAIN SUPPORTS, 155MM ILLUM ^(†)	3.10	45,317	0.140	2.93	34,141	0.100	-	-	-	5.15	35,944	0.185	-	-	-	5.15	35,944	0.185
PARACHUTE DROGUE	17.18	11,329	0.195	16.90	8,535	0.144	-	-	-	21.51	8,986	0.193	-	-	-	21.51	8,986	0.193

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Exhibit P-5, Cost Analysis: FY 2018 Army												Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37						P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES						Item Number / Title [DODIC]: E26904 / PROJ, ARTY, 155MM IR ILLUM M1066 / M1123 [DA56]					
ID Code (A=Service Ready, B=Not Service Ready) : A												MDAP/MAIS Code:					

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
ASSEMBLY, 155MM ILLUM ^(†)																		
WOOD PALLET (HEAT TREATED) ^(†)	84.93	1,444	0.123	91.33	1,088	0.099	-	-	-	95.12	1,145	0.109	-	-	-	95.12	1,145	0.109
M10 EXPULSION CHARGE ASSEMBLY ^(†)	15.50	11,329	0.176	15.30	8,535	0.131	-	-	-	17.15	8,986	0.154	-	-	-	17.15	8,986	0.154
DELAY ELEMENT, 155MM ILLUM ^(†)	35.46	11,329	0.402	31.40	8,535	0.268	-	-	-	38.45	8,986	0.346	-	-	-	38.45	8,986	0.346
<i>Subtotal: Recurring Cost</i>	-	-	9.487	-	-	9.686	-	-	-	-	-	11.919	-	-	-	-	-	11.919
<i>Subtotal: Hardware Cost</i>	-	-	9.487	-	-	9.686	-	-	-	-	-	11.919	-	-	-	-	-	11.919
Support - Production Engineering Cost																		
Production Engineering	-	-	41.250	-	-	2.913	-	-	-	-	-	1.381	-	-	-	-	-	1.381
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	41.250	-	-	2.913	-	-	-	-	-	1.381	-	-	-	-	-	1.381
Gross/Weapon System Cost	-	-	50.737	1,505.74	8,368	12.600	-	-	-	1,509.65	8,810	13.300	-	-	-	1,509.65	8,810	13.300

^(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37			P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES					Item Number / Title [DODIC]: E26904 / PROJ, ARTY, 155MM IR ILLUM M1066 / M1123 [DA56]				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
LOAD, ASSEMBLE, PACK (LAP)		2016	PINE BLUFF ARSENAL / PINE BLUFF, AR	PO	PICATINNY ARSENAL, NJ	Feb 2016	Feb 2018	8,368	292.87	Y		
LOAD, ASSEMBLE, PACK (LAP)		2018	PINE BLUFF ARSENAL / PINE BLUFF, AR	PO	PICATINNY ARSENAL, NJ	Jan 2018	Jan 2020	8,810	349.43	Y		
DOWNLOAD, CLEAN AND INSPECT		2016	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	May 2016	Nov 2017	8,786	70.39	Y		
DOWNLOAD, CLEAN AND INSPECT		2018	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	9,250	77.22	Y		
METAL PARTS SETS		2016	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Feb 2016	Aug 2017	8,368	292.70	Y		
METAL PARTS SETS		2018	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	8,810	345.96	Y		
IR ILLUM CANNISTER		2016	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Feb 2016	Aug 2017	8,535	298.72	Y		
IR ILLUM CANNISTER		2018	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	8,986	343.16	Y		
CANISTER MPTS ASSY, 155MM ILLUM		2016	WOODLAWN MANUFACTURING INC / MARSHALL, TX	Option / FFP	PICATINNY ARSENAL, NJ	Apr 2016	Oct 2017	8,535	49.29	Y		
CANISTER MPTS ASSY, 155MM ILLUM		2018	TO BE SELECTED / TBS01	Option / FFP	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	8,986	52.01	Y		
CANISTER BASE ASSY, 155MM ILLUM		2016	WOODLAWN MANUFACTURING INC / MARSHALL, TX	Option / FFP	PICATINNY ARSENAL, NJ	Apr 2016	Oct 2017	8,535	15.54	Y		
CANISTER BASE ASSY, 155MM ILLUM		2018	TO BE SELECTED / TBS01	Option / FFP	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	8,986	19.42	Y		
PARACHUTE MAIN, 155MM ILLUM		2016	YOLAND CORPORATION / BROOKLYN, NY	Option / IDIQ	PICATINNY ARSENAL, NJ	Apr 2016	Oct 2017	8,535	37.80	Y		
PARACHUTE MAIN, 155MM ILLUM		2018	YOLAND CORPORATION / BROOKLYN, NY	Option / IDIQ	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	8,986	40.75	Y		
PARACHUTE MAIN SUPPORTS, 155MM ILLUM		2016	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Feb 2016	Aug 2017	34,141	2.93	Y		
PARACHUTE MAIN SUPPORTS, 155MM ILLUM		2018	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	35,944	5.15	Y		
PARACHUTE DROGUE ASSEMBLY, 155MM ILLUM		2016	YOLAND CORPORATION / BROOKLYN, NY	Option / IDIQ	ROCK ISLAND ARSENAL, IL	Apr 2016	Oct 2017	8,535	16.90	Y		
PARACHUTE DROGUE ASSEMBLY, 155MM ILLUM		2018	YOLAND CORPORATION / BROOKLYN, NY	Option / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	8,986	21.51	N		
WOOD PALLET (HEAT TREATED)		2016	KNOX CNTY ASSOC RETARDED / VINCENNES, IN	C / FFP	PICATINNY ARSENAL, NJ	Mar 2016	Sep 2017	1,088	91.33	Y		

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37			P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES					Item Number / Title [DODIC]: E26904 / PROJ, ARTY, 155MM IR ILLUM M1066 / M1123 [DA56]				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
WOOD PALLET (HEAT TREATED)		2018	PINE BLUFF ARSENAL / PINE BLUFF, AR	PO	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	1,145	95.12	Y		
M10 EXPULSION CHARGE ASSEMBLY		2016	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Feb 2016	Aug 2017	8,535	15.30	Y		
M10 EXPULSION CHARGE ASSEMBLY		2018	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	8,986	17.15	Y		
DELAY ELEMENT, 155MM ILLUM		2016	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Feb 2016	Aug 2017	8,535	31.40	Y		
DELAY ELEMENT, 155MM ILLUM		2018	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	8,986	38.45	Y		

Remarks:
Parachute Main and Drogue Assembly: IDIQ contract awarded to Yoland Corp INC., Brooklyn, NY.

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37	P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES	Item Number / Title [DODIC]: E27001 / PROJ, 155MM ARTY Smoke, M116 Series

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	2,000	-	2,000
Gross/Weapon System Cost <i>(\$ in Millions)</i>	-	-	-	5.000	-	5.000
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	-	-	-	5.000	-	5.000
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	-	-	-	5.000	-	5.000

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

Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-
Gross/Weapon System Unit Cost <i>(\$ in Dollars)</i>	-	-	-	2,500.00	-	2,500.00

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND ^(†)	-	-	-	-	-	-	-	-	-	2,212.50	2,000	4.425	-	-	-	2,212.50	2,000	4.425
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	4.425	-	-	-	-	-	4.425
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	-	-	-	-	-	-	4.425	-	-	-	-	-	4.425
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	-	-	-	-	-	-	0.075	-	-	-	-	-	0.075
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.075	-	-	-	-	-	0.075
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	-	-	-	-	-	-	0.500	-	-	-	-	-	0.500
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.500	-	-	-	-	-	0.500
Gross/Weapon System Cost	-	-	-	-	-	-	-	-	-	2,500.00	2,000	5.000	-	-	-	2,500.00	2,000	5.000

(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37			P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES					Item Number / Title [DODIC]: E27001 / PROJ, 155MM ARTY Smoke, M116 Series				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
COMPLETE ROUND		2018	PINE BLUFF ARSENAL / PINE BLUFF, AR	PO	PICATINNY ARSENAL, NJ	Jan 2018	Jan 2020	2,000	2,212.50	Y		

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37		P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES
		Item Number / Title [DODIC]: E27603 / PROJ, ARTY, 155MM HE IM TRAINING M1122

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	91,176	125,062	121,554	-	121,554
Gross/Weapon System Cost (\$ in Millions)	49.340	40.514	61.839	65.400	-	65.400
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	49.340	40.514	61.839	65.400	-	65.400
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	49.340	40.514	61.839	65.400	-	65.400

(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 Dollars)	-	-	-	-	-	-

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP) ^(†)	370.11	19,864	7.352	305.22	91,176	27.829	332.76	125,062	41.616	337.40	121,554	41.012	-	-	-	337.40	121,554	41.012
WOODEN PALLET, IMX ^(†)	100.86	2,582	0.260	110.62	11,853	1.311	93.19	16,258	1.515	115.00	15,802	1.817	-	-	-	115.00	15,802	1.817
PLUG, LIFTING, MELTABLE FOR IM ^(†)	17.45	20,261	0.354	19.11	92,999	1.777	19.87	127,563	2.535	12.00	123,985	1.488	-	-	-	12.00	123,985	1.488
SUPPLEMENTAL CHARGE, PBXNg ^(†)	23.77	20,261	0.482	20.08	92,999	1.867	26.11	127,563	3.331	35.34	123,985	4.382	-	-	-	35.34	123,985	4.382
EXPLOSIVE FILL IMX-101 ^(†)	20.64	59,592	1.230	-	-	-	16.55	375,186	6.209	19.50	364,662	7.111	-	-	-	19.50	364,662	7.111
<i>Subtotal: Recurring Cost</i>	-	-	9.677	-	-	32.785	-	-	55.205	-	-	55.810	-	-	-	-	-	55.810
<i>Subtotal: Hardware Cost</i>	-	-	9.677	-	-	32.785	-	-	55.205	-	-	55.810	-	-	-	-	-	55.810
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	37.574	-	-	1.500	-	-	0.650	-	-	0.650	-	-	-	-	-	0.650
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	37.574	-	-	1.500	-	-	0.650	-	-	0.650	-	-	-	-	-	0.650
Support - Engineering Change Proposals Cost																		
Engineering Change Proposals	-	-	-	-	-	-	-	-	0.600	-	-	3.449	-	-	-	-	-	3.449

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37	P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES	Item Number / Title [DODIC]: E27603 / PROJ, ARTY, 155MM HE IM TRAINING M1122

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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Support - Engineering Change Proposals Cost</i>	-	-	-	-	-	-	-	-	0.600	-	-	3.449	-	-	-	-	-	3.449
Support - Product Improvement Cost																		
Reliability	-	-	-	-	-	2.134	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Product Improvement Cost</i>	-	-	-	-	-	2.134	-	-	-	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	2.088	-	-	3.500	-	-	5.383	-	-	5.491	-	-	-	-	-	5.491
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	2.088	-	-	3.500	-	-	5.383	-	-	5.491	-	-	-	-	-	5.491
Support - Staging and Transportation Cost																		
Staging and Transportation	-	-	-	-	-	0.596	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Staging and Transportation Cost</i>	-	-	-	-	-	0.596	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	-	-	49.340	-	91,176	40.514	-	125,062	61.839	-	121,554	65.400	-	-	-	-	121,554	65.400

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

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37			P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES				Item Number / Title [DODIC]: E27603 / PROJ, ARTY, 155MM HE IM TRAINING M1122				

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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
LOAD, ASSEMBLE, PACK (LAP) ^(†)		2016	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Feb 2016	Feb 2019	45,588	305.22	Y		
LOAD, ASSEMBLE, PACK (LAP) ^(†)		2016	MCALESTER ARMY AMMUNITION / MCALESTER, OK	PO	PICATINNY ARSENAL, NJ	Feb 2016	Feb 2019	45,588	305.22	Y		
LOAD, ASSEMBLE, PACK (LAP) ^(†)		2017	CRANE ARMY AMMO ACTIVITY / CRANE, IN	PO	PICATINNY ARSENAL, NJ	Jun 2017	Jun 2020	62,531	332.76	Y		
LOAD, ASSEMBLE, PACK (LAP) ^(†)		2017	MCALESTER ARMY AMMUNITION / MCALESTER, OK	PO	PICATINNY ARSENAL, NJ	Jan 2017	Jan 2020	62,531	332.76	Y		
LOAD, ASSEMBLE, PACK (LAP) ^(†)		2018	MCALESTER ARMY AMMUNITION / MCALESTER, OK	PO	PICATINNY ARSENAL, NJ	Jan 2018	Jan 2021	121,554	337.40	Y		
WOODEN PALLET, IMX		2016	KNOX CNTY ASSOC RETADED / VINCENNES, IN	Option / FFP	ROCK ISLAND ARSENAL, IL	Mar 2016	Sep 2017	11,853	110.62	Y		
WOODEN PALLET, IMX		2017	KNOX CNTY ASSOC RETADED / VINCENNES, IN	Option / FFP	ROCK ISLAND ARSENAL, IL	Jun 2017	Dec 2018	16,258	93.19	Y		
WOODEN PALLET, IMX		2018	TO BE SELECTED / TBS01	C / FFP	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	15,802	115.00	Y		
PLUG, LIFTING, MELTABLE FOR IM		2016	POLYMER TECHNOLOGIES, INC / CLIFTON, NJ	Option / FFP	PICATINNY ARSENAL, NJ	Apr 2017	Apr 2018	92,999	19.11	Y		
PLUG, LIFTING, MELTABLE FOR IM		2017	POLYMER TECHNOLOGIES, INC / CLIFTON, NJ	Option / FFP	PICATINNY ARSENAL, NJ	Apr 2017	Oct 2018	127,563	19.87	Y		
PLUG, LIFTING, MELTABLE FOR IM		2018	TO BE SELECTED / TBS01	C / FFP	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	123,985	12.00	Y		
SUPPLEMENTAL CHARGE, PBXN9		2016	CHEMRING ORDNANCE, INC. / PERRY, FL	Option / IDIQ	ROCK ISLAND ARSENAL, IL	May 2016	Nov 2017	92,999	20.08	Y		
SUPPLEMENTAL CHARGE, PBXN9		2017	CHEMRING ORDNANCE, INC. / PERRY, FL	Option / IDIQ	ROCK ISLAND ARSENAL, IL	Jun 2017	Jun 2018	127,563	26.11	Y		
SUPPLEMENTAL CHARGE, PBXN9		2018	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Feb 2019	123,985	35.34	Y		
EXPLOSIVE FILL IMX-101		2017	BAE SYSTEMS ORDNANCE SYSTEMS / KINGSPORT, TN	Option / FFP	ROCK ISLAND ARSENAL, IL	May 2017	Nov 2019	375,186	16.55	Y		
EXPLOSIVE FILL IMX-101		2018	BAE SYSTEMS ORDNANCE SYSTEMS / KINGSPORT, TN	Option / FFP	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2020	364,662	19.50	Y		

^(†) indicates the presence of a P-21

Remarks:

Supplemental Charge, PBXN9 Is and IDIQ contract awarded to multiple contractors. Requirements will be competed among the following contractors: DZI Lonestar LLC., Texarkana, TX and Chemring Ordnance, INC., Perry FL.

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Exhibit P-21, Production Schedule: FY 2018 Army													Date: May 2017																
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37						P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES												Item Number / Title [DODIC]: E27603 / PROJ, ARTY, 155MM HE IM TRAINING M1122											

Cost Elements <i>(Units in Thousands)</i>						Fiscal Year 2016												Fiscal Year 2017												B A L A N C E	
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016												Calendar Year 2017												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
LOAD, ASSEMBLE, PACK (LAP)																															
Prior Years Deliveries: 19864																															
	1	2016	ARMY	45.588	.000	45.588																									
	2	2016	ARMY	45.588	.000	45.588																									
	1	2017	ARMY	62.531	.000	62.531																									
	2	2017	ARMY	62.531	.000	62.531																									
	2	2018	ARMY	121.554	.000	121.554																									

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Exhibit P-21, Production Schedule: FY 2018 Army														Date: May 2017															
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37										P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES										Item Number / Title [DODIC]: E27603 / PROJ, ARTY, 155MM HE IM TRAINING M1122									

Cost Elements <i>(Units in Thousands)</i>					Fiscal Year 2018														Fiscal Year 2019														B A L A N C E				
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018														Calendar Year 2019																
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P							
LOAD, ASSEMBLE, PACK (LAP)																																					
Prior Years Deliveries: 19864																																					
	1	2016	ARMY	45.588	.000	45.588	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.000	13.000	13.000	6.588					.000
	2	2016	ARMY	45.588	.000	45.588	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.000	13.000	13.000	6.588					.000
	1	2017	ARMY	62.531	.000	62.531	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62.531
	2	2017	ARMY	62.531	.000	62.531	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62.531
	2	2018	ARMY	121.554	.000	121.554				A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	121.554	

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Exhibit P-21, Production Schedule: FY 2018 Army													Date: May 2017																		
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37						P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES													Item Number / Title [DODIC]: E27603 / PROJ, ARTY, 155MM HE IM TRAINING M1122												

Cost Elements <i>(Units in Thousands)</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			

LOAD, ASSEMBLE, PACK (LAP)																																			
Prior Years Deliveries: 19864																																			
1	2016	ARMY	45.588	45.588	.000																														.000
2	2016	ARMY	45.588	45.588	.000																														.000
1	2017	ARMY	62.531	.000	62.531	-	-	-	-	-	-	-	-	13.000	13.000	13.000	13.000	10.531																	.000
2	2017	ARMY	62.531	.000	62.531	-	-	-	13.000	13.000	13.000	13.000	10.531																						.000
2	2018	ARMY	121.554	.000	121.554	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.554
						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: FY 2018 Army				Date: May 2017							
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37				P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES				Item Number / Title [DODIC]: E27603 / PROJ, ARTY, 155MM HE IM TRAINING M1122			

Cost Elements <i>(Units in Thousands)</i>					Fiscal Year 2022												Fiscal Year 2023												B A L A N C E		
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
LOAD, ASSEMBLE, PACK (LAP)																															
Prior Years Deliveries: 19864																															
	1	2016	ARMY	45.588	45.588	.000																							.000		
	2	2016	ARMY	45.588	45.588	.000																							.000		
	1	2017	ARMY	62.531	62.531	.000																							.000		
	2	2017	ARMY	62.531	62.531	.000																							.000		
	2	2018	ARMY	121.554	117.000	4.554	4.554																						.000		
							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: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37		P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES
		Item Number / Title [DODIC]: E27603 / PROJ, ARTY, 155MM HE IM TRAINING M1122

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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	CRANE ARMY AMMO ACTIVITY - CRANE, IN	5,000	13,000	30,000	5	5	36	41	4	4	36	40
2	MCALESTER ARMY AMMUNITION - MCALESTER, OK	5,000	13,000	30,000	5	5	36	41	4	4	36	40

"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: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37		P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES
		Item Number / Title [DODIC]: E66800 / PROJ, ARTY, 155MM HE, M795 [DA54]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	21,052	41,990	16,573	-	16,573
Gross/Weapon System Cost (\$ in Millions)	326.143	34.881	59.848	28.000	-	28.000
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	326.143	34.881	59.848	28.000	-	28.000
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	326.143	34.881	59.848	28.000	-	28.000

(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 Dollars)	-	1,656.90	1,425.29	1,689.49	-	1,689.49

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP) ^(†)	330.96	13,891	4.597	330.00	21,052	6.947	336.44	41,990	14.127	268.07	16,573	4.443	-	-	-	268.07	16,573	4.443
PLUG, LIFTING, MELTABLE FOR IM ^(†)	17.45	14,169	0.247	19.11	21,473	0.410	19.87	42,830	0.851	12.00	16,904	0.203	-	-	-	12.00	16,904	0.203
SUPPLEMENTAL CHARGE, PBXN9 ^(†)	23.77	14,169	0.337	20.68	21,473	0.444	-	-	-	-	-	-	-	-	-	-	-	-
IMX 104 SUPPLEMENTARY CHARGE ^(†)	-	-	-	-	-	-	26.10	42,830	1.118	26.61	16,904	0.450	-	-	-	26.61	16,904	0.450
WOODEN PALLET, IMX ^(†)	100.88	1,806	0.182	110.68	2,737	0.303	93.19	5,458	0.509	100.00	2,154	0.215	-	-	-	100.00	2,154	0.215
EXPLOSIVE FILL IMX-101 ^(†)	15.58	458,403	7.142	16.30	694,716	11.324	16.55	1,385,670	22.933	19.50	546,909	10.665	-	-	-	19.50	546,909	10.665
M795 IM METAL PART ^(†)	341.61	14,169	4.840	439.23	21,473	9.432	402.13	42,830	17.223	428.35	16,904	7.241	-	-	-	428.35	16,904	7.241
<i>Subtotal: Recurring Cost</i>	<i>-</i>	<i>-</i>	<i>17.346</i>	<i>-</i>	<i>-</i>	<i>28.860</i>	<i>-</i>	<i>-</i>	<i>56.761</i>	<i>-</i>	<i>-</i>	<i>23.216</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>23.216</i>
<i>Subtotal: Hardware Cost</i>	<i>-</i>	<i>-</i>	<i>17.346</i>	<i>-</i>	<i>-</i>	<i>28.860</i>	<i>-</i>	<i>-</i>	<i>56.761</i>	<i>-</i>	<i>-</i>	<i>23.216</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>23.216</i>
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	306.607	-	-	0.248	-	-	0.135	-	-	0.109	-	-	-	-	-	0.109
First Article Test	-	-	-	-	-	1.700	-	-	-	-	-	1.874	-	-	-	-	-	1.874

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Exhibit P-5, Cost Analysis: FY 2018 Army												Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37						P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES						Item Number / Title [DODIC]: E66800 / PROJ, ARTY, 155MM HE, M795 [DA54]					
ID Code (A=Service Ready, B=Not Service Ready) : A												MDAP/MAIS Code:					

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	306.607	-	-	1.948	-	-	0.135	-	-	1.983	-	-	-	-	-	1.983
Support - Product Improvement Cost																		
Insensitive Munitions	-	-	-	-	-	1.966	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Product Improvement Cost</i>	-	-	-	-	-	1.966	-	-	-	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	2.190	-	-	2.107	-	-	2.953	-	-	2.800	-	-	-	-	-	2.800
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	2.190	-	-	2.107	-	-	2.953	-	-	2.800	-	-	-	-	-	2.800
Gross/Weapon System Cost	-	-	326.143	1,656.90	21,052	34.881	1,425.29	41,990	59.848	1,689.49	16,573	28.000	-	-	-	1,689.49	16,573	28.000

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

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37				P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES				Item Number / Title [DODIC]: E66800 / PROJ, ARTY, 155MM HE, M795 [DA54]				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
LOAD, ASSEMBLE, PACK (LAP)		2016	AMERICAN ORDNANCE LLC (IAAP) / MIDDLETOWN, IA	Option / FFP	ROCK ISLAND ARSENAL, IL	May 2016	May 2019	21,052	330.00	Y		
LOAD, ASSEMBLE, PACK (LAP)		2017	AMERICAN ORDNANCE LLC (IAAP) / MIDDLETOWN, IA	Option / FFP	ROCK ISLAND ARSENAL, IL	May 2017	May 2020	41,990	336.44	Y		
LOAD, ASSEMBLE, PACK (LAP)		2018	AMERICAN ORDNANCE LLC (IAAP) / MIDDLETOWN, IA	Option / FFP	ROCK ISLAND ARSENAL, IL	May 2018	May 2021	16,573	268.07	Y		
PLUG, LIFTING, MELTABLE FOR IM		2016	POLYMER TECHNOLOGIES, INC / CLIFTON, NJ	Option / FFP	PICATINNY ARSENAL, NJ	Mar 2016	Sep 2017	21,473	19.11	Y		
PLUG, LIFTING, MELTABLE FOR IM		2017	POLYMER TECHNOLOGIES, INC / CLIFTON, NJ	Option / FFP	PICATINNY ARSENAL, NJ	Mar 2017	Sep 2018	42,830	19.87	Y		
PLUG, LIFTING, MELTABLE FOR IM		2018	POLYMER TECHNOLOGIES, INC / CLIFTON, NJ	Option / FFP	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	16,904	12.00	Y		
SUPPLEMENTAL CHARGE, PBXN9		2016	CHEMRING ORDNANCE, INC. / PERRY, FL	C / IDIQ	ROCK ISLAND ARSENAL, IL	Sep 2016	Mar 2017	21,473	20.68	Y		
IMX 104 SUPPLEMENTARY CHARGE		2017	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Mar 2017	Sep 2018	42,830	26.10	Y		
IMX 104 SUPPLEMENTARY CHARGE		2018	TO BE SELECTED / TBS02	C / IDIQ	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	16,904	26.61	Y		
WOODEN PALLET, IMX		2016	KNOX CNTY ASSOC RETARDED / VINCENNES, IN	Option / FFP	ROCK ISLAND ARSENAL, IL	Mar 2016	Sep 2017	2,737	110.68	Y		
WOODEN PALLET, IMX		2017	KNOX CNTY ASSOC RETARDED / VINCENNES, IN	Option / FFP	ROCK ISLAND ARSENAL, IL	Jun 2017	Dec 2018	5,458	93.19	Y		
WOODEN PALLET, IMX		2018	TO BE SELECTED / TBS02	C / FFP	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2019	2,154	100.00	Y		
EXPLOSIVE FILL IMX-101		2016	BAE SYSTEMS ORDNANCE SYSTEMS / KINGSPORT, TN	Option / FFP	ROCK ISLAND ARSENAL, IL	Jul 2016	Jan 2019	694,716	16.30	Y		
EXPLOSIVE FILL IMX-101		2017	BAE SYSTEMS ORDNANCE SYSTEMS / KINGSPORT, TN	Option / FFP	ROCK ISLAND ARSENAL, IL	Feb 2017	Oct 2018	1,385,670	16.55	Y		
EXPLOSIVE FILL IMX-101		2018	BAE SYSTEMS ORDNANCE SYSTEMS / KINGSPORT, TN	Option / FFP	ROCK ISLAND ARSENAL, IL	Feb 2018	Aug 2020	546,909	19.50	Y		
M795 IM METAL PART		2016	GENERAL DYNAMICS ORD AND TACT / SCRANTON, PA	Option / FFP	PICATINNY ARSENAL, NJ	Dec 2016	Jun 2017	21,473	439.23	Y		
M795 IM METAL PART		2017	TO BE SELECTED / TBS02	C / IDIQ	PICATINNY ARSENAL, NJ	Jun 2017	Dec 2018	42,830	402.13	Y		
M795 IM METAL PART		2018	TO BE SELECTED / TBS02	C / IDIQ	PICATINNY ARSENAL, NJ	Feb 2018	Aug 2019	16,904	428.35	Y		

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37	P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES	Item Number / Title [DODIC]: E68500 / PROJ, ARTY, 155MM DPICM BASEBLED M864 [D864]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	-	-	1,250	-	1,250
Gross/Weapon System Cost (\$ in Millions)	808.763	-	-	75.449	-	75.449
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	808.763	-	-	75.449	-	75.449
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	808.763	-	-	75.449	-	75.449

(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 Dollars)	-	-	-	60,359.20	-	60,359.20

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND ^(†)	-	-	-	-	-	-	-	-	-	57,000.00	1,250	71.250	-	-	-	57,000.00	1,250	71.250
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	71.250	-	-	-	-	-	71.250
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	-	-	-	-	-	-	71.250	-	-	-	-	-	71.250
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	-	-	-	-	-	-	1.362	-	-	-	-	-	1.362
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	-	-	-	-	-	-	-	-	-	1.362	-	-	-	-	-	1.362
Support - Production Engineering Cost																		
Production Engineering	-	-	808.763	-	-	-	-	-	-	-	-	2.837	-	-	-	-	-	2.837
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	808.763	-	-	-	-	-	-	-	-	2.837	-	-	-	-	-	2.837
Gross/Weapon System Cost	-	-	808.763	-	-	-	-	-	-	60,359.20	1,250	75.449	-	-	-	60,359.20	1,250	75.449

(†) indicates the presence of a P-5a

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37			P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES				Item Number / Title [DODIC]: E68500 / PROJ, ARTY, 155MM DPICM BASEBLED M864 [D864]					
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
COMPLETE ROUND ^(†)		2018	TO BE SELETCTED / TO BE SELECTED	TBD	PICATINNY ARSENAL, NJ	Apr 2018	Apr 2019	1,250	57,000.00	Y		

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37		P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES
		Item Number / Title [DODIC]: E68500 / PROJ, ARTY, 155MM DPICM BASEBLED M864 [D864]

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

COMPLETE ROUND																																						
1	2018	ARMY		1,250	0	1,250							A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100	100	100	100	100	650			

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Exhibit P-21, Production Schedule: FY 2018 Army															Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37										P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES										Item Number / Title [DODIC]: E68500 / PROJ, ARTY, 155MM DPICM BASEBLED M864 [D864]									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2020										Fiscal Year 2021										BALANCE	
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

COMPLETE ROUND																														0
1	2018	ARMY	1,250	600	650	100	100	100	100	100	150																			

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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UNCLASSIFIED

Exhibit P-21, Production Schedule: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37		P-1 Line Item Number / Title: E89500 / ARTILLERY PROJECTILE, 155MM, ALL TYPES
		Item Number / Title [DODIC]: E68500 / PROJ, ARTY, 155MM DPICM BASEBLED M864 [D864]

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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	TO BE SELETCTED - TO BE SELECTED	50	100	200	6	6	12	18	6	6	12	18

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

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

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 37: Artillery Ammunition	P-1 Line Item Number / Title: E80100 / Proj 155mm Extended Range M982
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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: 0604814A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	6,643	538	2,211	480	266	746	480	480	480	480	5,692	17,750
Gross/Weapon System Cost (<i>\$ in Millions</i>)	673.740	65.518	174.740	49.000	23.234	72.234	50.000	51.200	52.000	53.100	726.426	1,918.958
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	673.740	65.518	174.740	49.000	23.234	72.234	50.000	51.200	52.000	53.100	726.426	1,918.958
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	673.740	65.518	174.740	49.000	23.234	72.234	50.000	51.200	52.000	53.100	726.426	1,918.958

(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 Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	101,421.04	121,780.67	79,032.11	102,083.33	87,345.86	96,828.42	104,166.67	106,666.67	108,333.33	110,625.00	127,622.28	108,110.31

Description:

This budget line item includes the Excalibur family of munitions for the use in the M777A2 Lightweight 155mm Howitzer (LW155), the M109A6 Paladin Howitzer, the M109A7 Paladin PIM Howitzer and the Swedish Archer Howitzer.

(E80100) Excalibur is a Precision Guided Extended Range 155mm Artillery projectile providing Brigade Combat Teams an organic precision fires capability. Additionally it provides improved fire support capability due to its increased range of 40.5 kilometers and demonstrated accuracy of less than 3 meters radial miss distances, which enables a first round effect on target reducing the number of rounds required while reducing collateral damage. Excalibur is compatible with the M777A2 Lightweight 155mm Howitzer (LW155), the M109A6 Paladin Howitzer, the M109A7 Paladin PIM Howitzer, and the Swedish Archer Howitzer. Excalibur provides a 35% range increase over current Rocket Assisted Projectiles with a less than 10 meter circular error probable requirement at all ranges. Excalibur is resistant to Global Positioning System (GPS) jamming. This item is Code A, approved for service use.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 37: Artillery Ammunition

P-1 Line Item Number / Title:
E80100 / Proj 155mm Extended Range M982

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604814A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 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	E80103 / PROJ, ARTY, 155MM EXTENDED RANGE M982-U EXCALIBUR [DA58]	P-5a, P-21	A	366	6,643 / 673.740	538 / 65.518	2,211 / 174.740	480 / 49.000	266 / 23.234	746 / 72.234
P-40	Total Gross/Weapon System Cost				6,643 / 673.740	538 / 65.518	2,211 / 174.740	480 / 49.000	266 / 23.234	746 / 72.234

*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:
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.

(E80100) Excalibur is currently fielded and in use by units throughout Afghanistan and deployed globally to support other Military Contingency Operations. Excalibur is an International Cooperative Development program, teamed with the Kingdom of Sweden (KoS), which contributed resources towards the development in accordance with an established Project Agreement. Excalibur Increment Ia-1 was initially fielded to units in Iraq and Afghanistan in response to an urgent need request in support of Operation Iraqi Freedom (as of September 2010 re-named to Operation New Dawn) and Operation Enduring Freedom. Increment Ia-2 was fielded in early FY 2012 and greatly increases range from 25.2 kilometers to 40.5 kilometers. Excalibur Increment Ib provides further performance improvements while significantly lowering unit costs.

Increment Ib completed a successful Initial Operational Test and Evaluation in February 2014 as well as a Full Rate Production Decision Review in June 2014. The Excalibur Increment Ib projectile was Type Classified and Full Material Released in June 2014.

This is a war reserve item currently being used in combat. The FY 2018 request builds a war reserve inventory in accordance with the Army procurement goals. FY 2018 Base procurement dollars in the amount of \$49.000 million supports the procurement of 480 Increment Ib projectiles.

The FY 2018 OCO includes a total of \$23.234 million to support the COCOM requirement for unit equipment sets to deter potential adversaries, of which \$19.045 million is for European Reassurance Initiative (ERI) to procure 220 Increment Ib and \$4.189 million is for Operation Inherent Resolve for ISIL to procure 46 Increment Ib projectiles.

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37	P-1 Line Item Number / Title: E80100 / Proj 155mm Extended Range M982	Item Number / Title [DODIC]: E80103 / PROJ, ARTY, 155MM EXTENDED RANGE M982-U EXCALIBUR [DA58]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code: 366
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	6,643	538	2,211	480	266	746
Gross/Weapon System Cost (\$ in Millions)	673.740	65.518	174.740	49.000	23.234	72.234
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	673.740	65.518	174.740	49.000	23.234	72.234
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	673.740	65.518	174.740	49.000	23.234	72.234

(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 Dollars)	101,421.04	121,780.67	79,032.11	102,083.33	87,345.86	96,828.42

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND ^(†)	98,518.83	6,643	654.461	68,448.00	538	36.825	68,448.00	295	20.192	84,212.00	480	40.422	84,212.00	266	22.400	84,212.00	746	62.822
COMPLETE ROUND (PB17 Amendment) ^(†)	-	-	-	-	-	-	68,448.00	1,916	131.146	-	-	-	-	-	-	-	-	-
CONTAINER, EXCALIBUR ^(†)	2,203.90	6,643	14.641	2,183.00	538	1.174	2,183.00	2,211	4.827	2,359.00	480	1.132	2,359.00	266	0.627	2,359.00	746	1.760
<i>Subtotal: Recurring Cost</i>	-	-	<i>669.101</i>	-	-	<i>37.999</i>	-	-	<i>156.165</i>	-	-	<i>41.554</i>	-	-	<i>23.028</i>	-	-	<i>64.582</i>
<i>Subtotal: Hardware Cost</i>	-	-	669.101	-	-	37.999	-	-	156.165	-	-	41.554	-	-	23.028	-	-	64.582
Software Cost																		
Non Recurring Cost																		
Operation Flight Software Upgrade	-	-	-	-	-	6.250	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	<i>6.250</i>	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Software Cost</i>	-	-	-	-	-	6.250	-	-	-	-	-	-	-	-	-	-	-	-
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	0.631	-	-	0.700	-	-	1.100	-	-	0.500	-	-	0.206	-	-	0.706
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	0.631	-	-	0.700	-	-	1.100	-	-	0.500	-	-	0.206	-	-	0.706

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37	P-1 Line Item Number / Title: E80100 / Proj 155mm Extended Range M982	Item Number / Title [DODIC]: E80103 / PROJ, ARTY, 155MM EXTENDED RANGE M982-U EXCALIBUR [DA58]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code: 366
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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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Support - Engineering Change Proposals Cost																		
Engineering Change Proposals	-	-	-	-	-	1.800	-	-	3.000	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Engineering Change Proposals Cost</i>	-	-	-	-	-	1.800	-	-	3.000	-	-	-	-	-	-	-	-	-
Support - Hardware Analysis Cost																		
Hardware Analysis	-	-	-	-	-	4.750	-	-	4.000	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Hardware Analysis Cost</i>	-	-	-	-	-	4.750	-	-	4.000	-	-	-	-	-	-	-	-	-
Support - Inertial Measurement Qualification Cost																		
Inertial Measurement Qualification	-	-	-	-	-	4.000	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Inertial Measurement Qualification Cost</i>	-	-	-	-	-	4.000	-	-	-	-	-	-	-	-	-	-	-	-
Support - Product Improvement Cost																		
Reliability	-	-	-	-	-	3.000	-	-	3.000	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Product Improvement Cost</i>	-	-	-	-	-	3.000	-	-	3.000	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	3.425	-	-	6.301	-	-	6.625	-	-	6.446	-	-	-	-	-	6.446
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	3.425	-	-	6.301	-	-	6.625	-	-	6.446	-	-	-	-	-	6.446
Support - Quality Assurance Cost																		
Quality Assurance	-	-	0.582	-	-	0.718	-	-	0.850	-	-	0.500	-	-	-	-	-	0.500
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	0.582	-	-	0.718	-	-	0.850	-	-	0.500	-	-	-	-	-	0.500
Gross/Weapon System Cost	101,421.04	6,643	673.740	121,780.67	538	65.518	79,032.11	2,211	174.740	102,083.33	480	49.000	87,345.86	266	23.234	96,828.42	746	72.234

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

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37			P-1 Line Item Number / Title: E80100 / Proj 155mm Extended Range M982				Item Number / Title [DODIC]: E80103 / PROJ, ARTY, 155MM EXTENDED RANGE M982-U EXCALIBUR [DA58]				

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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
COMPLETE ROUND ^(†)		2016	RAYTHEON MISSILE SYSTEMS CO / TUCSON, AZ	Option / FFP	PICATINNY ARSENAL, NJ	Nov 2015	Nov 2016	538	68,448.00	Y		
COMPLETE ROUND ^(†)		2017	RAYTHEON MISSILE SYSTEMS CO / TUCSON, AZ	Option / FFP	PICATINNY ARSENAL, NJ	Dec 2016	Jan 2018	295	68,448.00	Y		
COMPLETE ROUND ^(†)		2018	RAYTHEON MISSILE SYSTEMS CO / TUCSON, AZ	SS / FFP	PICATINNY ARSENAL, NJ	Mar 2018	Mar 2019	746	84,212.00	Y		
COMPLETE ROUND (PB17 Amendment)		2017	RAYTHEON MISSILE SYSTEMS CO / TUCSON, AZ	Option / FFP	PICATINNY ARSENAL, NJ	Sep 2017	Jan 2018	1,916	68,448.00	Y		
CONTAINER, EXCALIBUR		2016	RAYTHEON MISSILE SYSTEMS / TUCSON, AZ	Option / FFP	PICATINNY ARSENAL, NJ	Nov 2015	Nov 2016	538	2,183.00	Y		
CONTAINER, EXCALIBUR		2017	RAYTHEON MISSILE SYSTEMS / TUCSON, AZ	Option / FFP	PICATINNY ARSENAL, NJ	May 2017	Jan 2018	2,211	2,183.00	Y		
CONTAINER, EXCALIBUR		2018	RAYTHEON MISSILE SYSTEMS / TUCSON, AZ	SS / FFP	PICATINNY ARSENAL, NJ	Mar 2018	Mar 2019	746	2,359.00	Y		

^(†) indicates the presence of a P-21

Remarks:
FY 2016 and FY 2017 are options of original competitive contract awarded in 2008.

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Exhibit P-21, Production Schedule: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37		P-1 Line Item Number / Title: E80100 / Proj 155mm Extended Range M982
		Item Number / Title [DODIC]: E80103 / PROJ, ARTY, 155MM EXTENDED RANGE M982-U EXCALIBUR [DA58]

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2016														Fiscal Year 2017														B A L A N C E		
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEP T P R I O R T O 1 O C T 2 0 1 5	BAL D U E A S O F 1 O C T	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					
COMPLETE ROUND																																			
Prior Years Deliveries: 6643																																			
	1	2016	ARMY	538	0	538		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43					
	1	2017	ARMY	295	0	295																								295					
	1	2018	ARMY	746	0	746																								746					
								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				

UNCLASSIFIED

Exhibit P-21, Production Schedule: FY 2018 Army															Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37										P-1 Line Item Number / Title: E80100 / Proj 155mm Extended Range M982										Item Number / Title [DODIC]: E80103 / PROJ, ARTY, 155MM EXTENDED RANGE M982-U EXCALIBUR [DA58]									

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2018															Fiscal Year 2019												B A L A N C E		
O C C #	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				
COMPLETE ROUND																																		
Prior Years Deliveries: 6643																																		
1	2016	ARMY		538	495	43	43																							0				
1	2017	ARMY		295	0	295	-	-	-	25	25	25	25	25	25	25	25	25	25	20											0			
1	2018	ARMY		746	0	746																								310				
							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: FY 2018 Army															Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37										P-1 Line Item Number / Title: E80100 / Proj 155mm Extended Range M982										Item Number / Title [DODIC]: E80103 / PROJ, ARTY, 155MM EXTENDED RANGE M982-U EXCALIBUR [DA58]									

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	ACCEP T P R I O R T O 1 O C T 2 0 1 9	BAL D U E A S O F 1 O C T	Calendar Year 2020														Calendar Year 2021														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
COMPLETE ROUND																																			
Prior Years Deliveries: 6643																																			
1	2016	ARMY		538	538	0																								0					
1	2017	ARMY		295	295	0																								0					
1	2018	ARMY		746	436	310	62	62	62	62	62																			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: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37		P-1 Line Item Number / Title: E80100 / Proj 155mm Extended Range M982
Item Number / Title [DODIC]: E80103 / PROJ, ARTY, 155MM EXTENDED RANGE M982-U EXCALIBUR [DA58]		

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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 MISSILE SYSTEMS CO - TUCSON, AZ	40	125	250	3	18	12	30	3	6	12	18

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

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

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 37: Artillery Ammunition	P-1 Line Item Number / Title: E27501 / Artillery Propellants, Fuzes and Primers, All
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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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	984.466	80.024	152.203	83.046	20.023	103.069	91.938	91.539	107.817	150.225	-	1,761.281
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	984.466	80.024	152.203	83.046	20.023	103.069	91.938	91.539	107.817	150.225	-	1,761.281
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	984.466	80.024	152.203	83.046	20.023	103.069	91.938	91.539	107.817	150.225	-	1,761.281

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

Description:

(E27501)Artillery Propellants, Fuzes and Primers, All Types.

(ER8021)ARTY, 155MM PROP CHG, MACS M232 SERIES

The Modular Artillery Charge System (MACS) M232 "High Zone" is intended for use with all United States 155mm cannon field artillery systems. The M232 "High Zone" increment is designed to achieve ranges from 10 to 40 kilometers. Each MACS increment includes propellant, an ignition system, and a combustible case. Performance enhancing additives are included in the M232 "High Zone" increment. Packaging permits long-term storage and helps protect the items from unplanned stimuli.

This item is Code A, approved for service use.

(E62208)ARTY, FUZE PD M739A1

The M739A1 Point Detonating (PD) and Delay Fuze is the Army's preferred, primary fuze for 105mm and 155mm projectiles to address point detonating/delay artillery functions. The M739A1 fuze contains an Impact Delay Module (IDM) assembly. The IDM provides fuze initiation delay based upon the completion of mechanical actions caused by projectile deceleration and will function immediately after passing through the target.

This item is Code A, approved for service use.

(E63000) ARTY, 155MM PRIMER PERCUSSION M82 SERIES

The M82 Percussion Primer is intended for use with all United States 155mm cannon field artillery systems. The M82 Series Percussion Primer is used to initiate the burning of propellant charges and consists of a cylindrical brass case with an extraction flange which contains a base plunger, an ignition element which contains Primer #34 and a container loaded with 22 grains of black powder.

This item is Code A, approved for service use.

(E99250)ARTY, FUZE, PRECISION GUIDANCE KIT (PGK)

The Precision Guidance Kit (PGK) is a Global Positioning System (GPS) guidance kit with point detonating and height of burst fuzing functions. PGK provides near precision accuracy and efficiency for 155mm M795 and M549A1 high explosive (HE) projectiles and compatible with the M777A2 Lightweight 155mm Howitzer (LW155) and the M109A6 Paladin Howitzer. Using an integrated GPS receiver, the PGK corrects the inherent errors associated with ballistic firing solutions and reduces the number of projectiles required to execute fire missions. This item is Code A, approved for service use.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 37: Artillery Ammunition

P-1 Line Item Number / Title:
E27501 / Artillery Propellants, Fuzes and Primers, All

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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 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	E62208 / ARTY, FUZE PD M739A1 [N340]	P-5a, P-21	A		- / 190.543	146,864 / 13.700	392,554 / 34.334	326,425 / 32.626	- / -	326,425 / 32.626
P-5	E63000 / ARTY, 155MM PRIMER PERCUSSION M82 Series [N523]		A		- / 37.783	- / 0.120	78,823 / 2.707	86,105 / 2.080	- / -	86,105 / 2.080
P-5	E99250 / ARTY, FUZE, PRECISION GUIDANCE KIT (PGK) [NA29]	P-5a, P-21	A		12,324 / 164.768	6,406 / 64.324	11,757 / 115.162	4,209 / 48.340	2,121 / 20.023	6,330 / 68.363
P-5	ER8021 / ARTY, 155MM PROP CHG, MACS M232 SERIES [DA13]		A		- / 591.372	- / 1.880	- / -	- / -	- / -	- / -
P-40	Total Gross/Weapon System Cost				- / 984.466	- / 80.024	- / 152.203	- / 83.046	- / 20.023	- / 103.069

*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 2018 Base Budget supports critical Army Title 10 war reserve/operational, training, and test requirements IAW DoD Instruction 3000.04 (Munitions Requirements Process) and AR 5-13 (Total Army Munitions Requirements Process and Prioritization System). War reserve requirements support OSD-approved Combatant Commander Operational Plans, Homeland Defense, and other OSD-directed missions. Training requirements support individual and collective training of Active and Reserve Component forces at Army schools, home station, and the combined training centers. Test requirements support the development, fielding, safety, and quality assurance of Army munitions and equipment throughout their life-cycle.

FY 2018 OCO request supports procurement of critical Army munitions consumed in support of deployed units' ongoing military operations.

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.

FY 2018 Base procurement dollars in the amount of \$83.046 million supports production of 330,634 fuzes and 86,105 primers.
 FY 2018 OCO includes \$16.678 million to support the COCOM requirement for unit equipment sets to deter potential adversaries and support European Reassurance Initiative. The procurement includes 1,749 fuzes.
 FY 2018 OCO requests supports procurement of critical Army munitions consumed in the support of Operation Inherent Resolve for ISIL. The procurement includes \$3.345 million for production of 372 fuzes.

(E62208)ARTY, FUZE PD M739A1
 This is a training standard item used in training and combat. FY 2018 request supports annual training and a builds a war reserve inventory in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$32.626 million supports production of 326,425 fuzes.
 TYPE CLASSIFICATION: 1982

(E63000)ARTY, 155MM PRIMER PERCUSSION M82 Series
 This is a training standard item used in training and combat. FY 2018 request builds a War Reserve inventory and supports annual training in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$2.080 million supports production of 86,105 primers.
 TYPE CLASSIFICATION DATE: MAY 1961

(ER8021)ARTY, 155MM PROP CHG, MACS M232 SERIES
 This item is a training standard item used in both training and combat. Request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 37: Artillery Ammunition		P-1 Line Item Number / Title: E27501 / Artillery Propellants, Fuzes and Primers, All
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		
TYPE CLASSIFICATION DATE: 2001		
(E99250) ARTY, FUZE, PRECISION GUIDANCE KIT (PGK) This item is a war reserve item used in both training and combat. FY 2018 request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$48.340 million supports the procurement of 4,209 PGK fuzes. FY 2018 OCO procurement dollars in the amount of \$20.023 million supports the procurement of 2,121 PGK fuzes; \$16.678 million is for the production of 1,749 fuzes to support the COCOM requirement for unit equipment sets to deter potential adversaries and support European Reassurance Initiative (ERI), and \$3.345 million is for the production of 372 fuzes to be consumed in support of Operation Inherent Resolve for ISIL. TYPE CLASSIFICATION DATE: October 2015		

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37		P-1 Line Item Number / Title: E27501 / Artillery Propellants, Fuzes and Primers, All
		Item Number / Title [DODIC]: E62208 / ARTY, FUZE PD M739A1 [N340]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	146,864	392,554	326,425	-	326,425
Gross/Weapon System Cost (\$ in Millions)	190.543	13.700	34.334	32.626	-	32.626
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	190.543	13.700	34.334	32.626	-	32.626
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	190.543	13.700	34.334	32.626	-	32.626

(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 Dollars)	-	93.28	87.46	99.95	-	99.95

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND ^(†)	-	-	190.543	74.46	146,864	10.935	77.69	392,554	30.498	86.01	326,425	28.076	-	-	-	86.01	326,425	28.076
Subtotal: Recurring Cost	-	-	190.543	-	-	10.935	-	-	30.498	-	-	28.076	-	-	-	-	-	28.076
Subtotal: Hardware Cost	-	-	190.543	-	-	10.935	-	-	30.498	-	-	28.076	-	-	-	-	-	28.076
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	0.588	-	-	1.545	-	-	1.288	-	-	-	-	-	1.288
Subtotal: Support - Acceptance Testing Cost	-	-	-	-	-	0.588	-	-	1.545	-	-	1.288	-	-	-	-	-	1.288
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	2.177	-	-	2.292	-	-	3.263	-	-	-	-	-	3.263
Subtotal: Support - Production Engineering Cost	-	-	-	-	-	2.177	-	-	2.292	-	-	3.263	-	-	-	-	-	3.263
Gross/Weapon System Cost	-	-	190.543	93.28	146,864	13.700	87.46	392,554	34.334	99.95	326,425	32.626	-	-	-	99.95	326,425	32.626

(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37			P-1 Line Item Number / Title: E27501 / Artillery Propellants, Fuzes and Primers, All					Item Number / Title [DODIC]: E62208 / ARTY, FUZE PD M739A1 [N340]				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
COMPLETE ROUND ^(†)		2016	ACTION MANUFACTURING COMPANY / BRISTOL, PA	Option / FFP	PICATINNY ARSENAL, NJ	Jul 2016	Jul 2019	146,864	74.46	Y		
COMPLETE ROUND ^(†)		2017	TO BE SELECTED / TBS01	C / IDIQ	PICATINNY ARSENAL, NJ	Sep 2017	Sep 2020	392,554	77.69	Y		
COMPLETE ROUND ^(†)		2018	TO BE SELECTED / TBS01	C / IDIQ	PICATINNY ARSENAL, NJ	May 2018	May 2021	326,425	86.01	Y		

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: FY 2018 Army				Date: May 2017							
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37				P-1 Line Item Number / Title: E27501 / Artillery Propellants, Fuzes and Primers, All				Item Number / Title [DODIC]: E62208 / ARTY, FUZE PD M739A1 [N340]			

Cost Elements <i>(Units in Thousands)</i>						Fiscal Year 2016												Fiscal Year 2017												B A L A N C E	
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016												Calendar Year 2017												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
COMPLETE ROUND																															
	1	2016	ARMY	146.864	.000	146.864																								146.864	
	1	2016	AFSO (+)	22.644	.000	22.644																								22.644	
	1	2016	MC (+)	126.480	.000	126.480																								126.480	
	1	2016	Total	295.988	.000	295.988																								295.988	
	2	2017	ARMY	392.554	.000	392.554																							A -	392.554	
	2	2017	AFSO (+)	11.712	.000	11.712																							A -	11.712	
	2	2017	Total	404.266	.000	404.266																							-	404.266	
	2	2018	ARMY	326.425	.000	326.425																								326.425	
	2	2018	MC (+)	5.447	.000	5.447																								5.447	
	2	2018	Total	331.872	.000	331.872																								331.872	
							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: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37		P-1 Line Item Number / Title: E27501 / Artillery Propellants, Fuzes and Primers, All
		Item Number / Title [DODIC]: E62208 / ARTY, FUZE PD M739A1 [N340]

Cost Elements <i>(Units in Thousands)</i>						Fiscal Year 2018												Fiscal Year 2019												B A L A N C E		
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018												Calendar Year 2019													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P	
COMPLETE ROUND																																
	1	2016	ARMY	146.864	.000	146.864	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22.500	22.500	22.500	79.364
	1	2016	AFSO ^(†)	22.644	.000	22.644	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22.644
	1	2016	MC ^(†)	126.480	.000	126.480	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17.500	17.500	17.500	73.980
	1	2016	Total	295.988	.000	295.988	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40.000	40.000	40.000	175.988
	2	2017	ARMY	392.554	.000	392.554	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	392.554
	2	2017	AFSO ^(†)	11.712	.000	11.712	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.712
	2	2017	Total	404.266	.000	404.266	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	404.266
	2	2018	ARMY	326.425	.000	326.425									A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	326.425
	2	2018	MC ^(†)	5.447	.000	5.447									A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.447
	2	2018	Total	331.872	.000	331.872									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	331.872
							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: FY 2018 Army															Date: May 2017									
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37										P-1 Line Item Number / Title: E27501 / Artillery Propellants, Fuzes and Primers, All										Item Number / Title [DODIC]: E62208 / ARTY, FUZE PD M739A1 [N340]				

Cost Elements <i>(Units in Thousands)</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	
COMPLETE ROUND																																
	1	2016	ARMY	146.864	67.500	79.364	16.666	13.974	17.500	20.630	10.594	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.000			
	1	2016	AFSO (+)	22.644	.000	22.644	-	-	-	-	-	-	-	-	22.644	-	-	-	-	-	-	-	-	-	-	-	-	-	.000			
	1	2016	MC (+)	126.480	52.500	73.980	11.667	12.693	17.500	14.370	17.750	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.000				
	1	2016	Total	295.988	120.000	175.988	28.333	26.667	35.000	35.000	28.344	-	-	-	22.644	-	-	-	-	-	-	-	-	-	-	-	-	-	.000			
	2	2017	ARMY	392.554	.000	392.554	-	-	-	-	-	-	-	-	-	-	8.845	38.887	40.000	40.000	40.000	40.000	40.000	40.000	40.000	40.000	27.673	27.673	27.673	21.803	.000	
	2	2017	AFSO (+)	11.712	.000	11.712	-	-	-	-	-	11.712	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.000			
	2	2017	Total	404.266	.000	404.266	-	-	-	-	-	11.712	-	-	-	-	8.845	38.887	40.000	40.000	40.000	40.000	40.000	40.000	40.000	40.000	40.000	27.673	27.673	27.673	21.803	.000
	2	2018	ARMY	326.425	.000	326.425	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.869	12.327	12.327	18.197	35.000	241.705	
	2	2018	MC (+)	5.447	.000	5.447	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.447	-	-	-	-	.000	
	2	2018	Total	331.872	.000	331.872	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.316	12.327	12.327	18.197	35.000	241.705	
							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: FY 2018 Army															Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37										P-1 Line Item Number / Title: E27501 / Artillery Propellants, Fuzes and Primers, All										Item Number / Title [DODIC]: E62208 / ARTY, FUZE PD M739A1 [N340]									

Cost Elements <i>(Units in Thousands)</i>					Fiscal Year 2022												Fiscal Year 2023												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 2 1	BAL D U E A S O F 1 O C T	Calendar Year 2022												Calendar Year 2023												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L		A U G	S E P
COMPLETE ROUND																															
	1	2016	ARMY	146.864	146.864	.000																							.000		
	1	2016	AFSO (+)	22.644	22.644	.000																							.000		
	1	2016	MC (+)	126.480	126.480	.000																							.000		
	1	2016	Total	295.988	295.988	.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.000		
	2	2017	ARMY	392.554	392.554	.000																							.000		
	2	2017	AFSO (+)	11.712	11.712	.000																							.000		
	2	2017	Total	404.266	404.266	.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.000		
	2	2018	ARMY	326.425	84.720	241.705	35.000	35.000	35.000	35.000	35.000	35.000	31.705																.000		
	2	2018	MC (+)	5.447	5.447	.000	-	-	-	-	-	-	-																.000		
	2	2018	Total	331.872	90.167	241.705	35.000	35.000	35.000	35.000	35.000	31.705	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.000			
							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: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37		P-1 Line Item Number / Title: E27501 / Artillery Propellants, Fuzes and Primers, All
		Item Number / Title [DODIC]: E62208 / ARTY, FUZE PD M739A1 [N340]

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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	ACTION MANUFACTURING COMPANY - BRISTOL, PA	20,000	35,000	40,000	10	10	36	46	10	10	36	46
2	TO BE SELECTED - TBS01	20,000	35,000	40,000	8	8	36	44	8	8	36	44

(‡) 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: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37		P-1 Line Item Number / Title: E27501 / Artillery Propellants, Fuzes and Primers, All
		Item Number / Title [DODIC]: E63000 / ARTY, 155MM PRIMER PERCUSSION M82 Series [N523]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	-	78,823	86,105	-	86,105
Gross/Weapon System Cost (\$ in Millions)	37.783	0.120	2.707	2.080	-	2.080
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	37.783	0.120	2.707	2.080	-	2.080
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	37.783	0.120	2.707	2.080	-	2.080

(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 Dollars)	-	-	34.34	24.16	-	24.16

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND	-	-	37.783	-	-	-	20.75	78,823	1.636	21.16	86,105	1.822	-	-	-	21.16	86,105	1.822
<i>Subtotal: Recurring Cost</i>	-	-	37.783	-	-	-	-	-	1.636	-	-	1.822	-	-	-	-	-	1.822
Subtotal: Hardware Cost	-	-	37.783	-	-	-	-	-	1.636	-	-	1.822	-	-	-	-	-	1.822
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	-	-	-	0.050	-	-	0.050	-	-	-	-	-	0.050
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	-	-	-	-	-	-	0.050	-	-	0.050	-	-	-	-	-	0.050
Support - Engineering Change Proposals Cost																		
Engineering Change Proposals	-	-	-	-	-	-	-	-	0.150	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Engineering Change Proposals Cost</i>	-	-	-	-	-	-	-	-	0.150	-	-	-	-	-	-	-	-	-
Support - Product Improvement Cost																		
Production Qualification Test	-	-	-	-	-	-	-	-	0.667	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Product Improvement Cost</i>	-	-	-	-	-	-	-	-	0.667	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	0.120	-	-	0.204	-	-	0.208	-	-	-	-	-	0.208

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37	P-1 Line Item Number / Title: E27501 / Artillery Propellants, Fuzes and Primers, All	Item Number / Title [DODIC]: E63000 / ARTY, 155MM PRIMER PERCUSSION M82 Series [N523]
ID Code (A=Service Ready, B=Not Service Ready) : A		MDAP/MAIS Code:

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	0.120	-	-	0.204	-	-	0.208	-	-	-	-	-	0.208
Gross/Weapon System Cost	-	-	37.783	-	-	0.120	34.34	78,823	2.707	24.16	86,105	2.080	-	-	-	24.16	86,105	2.080

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Exhibit P-5, Cost Analysis: FY 2018 Army													Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37						P-1 Line Item Number / Title: E27501 / Artillery Propellants, Fuzes and Primers, All						Item Number / Title [DODIC]: E99250 / ARTY, FUZE, PRECISION GUIDANCE KIT (PGK) [NA29]						
ID Code (A=Service Ready, B=Not Service Ready) : A									MDAP/MAIS Code:									
Resource Summary				Prior Years		FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total				
Procurement Quantity (Units in Each)				12,324		6,406		11,757		4,209		2,121		6,330				
Gross/Weapon System Cost (\$ in Millions)				164.768		64.324		115.162		48.340		20.023		68.363				
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Net Procurement (P-1) (\$ in Millions)				164.768		64.324		115.162		48.340		20.023		68.363				
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Total Obligation Authority (\$ in Millions)				164.768		64.324		115.162		48.340		20.023		68.363				
<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 Dollars)				13,369.69		10,041.21		9,795.19		11,484.91		9,440.36		10,799.84				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND ^(†)	-	-	-	8,638.32	6,406	55.337	8,691.00	5,889	51.181	8,966.25	4,209	37.739	8,966.25	2,121	19.017	8,966.25	6,330	56.756
COMPLETE ROUND (PB17 Amendment) ^(†)	-	-	-	-	-	-	8,691.00	5,868	50.999	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	55.337	-	-	102.180	-	-	37.739	-	-	19.017	-	-	56.756
Non Recurring Cost																		
Rhapsody II ASIC Chips LTB	-	-	-	-	-	-	149.00	10,000	1.490	149.00	5,000	0.745	-	-	-	149.00	5,000	0.745
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	-	-	-	1.490	-	-	0.745	-	-	-	-	-	0.745
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	55.337	-	-	103.670	-	-	38.484	-	-	19.017	-	-	57.501
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	0.900	-	-	2.500	-	-	1.089	-	-	1.006	-	-	2.095
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	-	-	-	0.900	-	-	2.500	-	-	1.089	-	-	1.006	-	-	2.095
Support - Engineering Change Proposals Cost																		
Engineering Change Proposals	-	-	-	-	-	0.039	-	-	1.000	-	-	1.500	-	-	-	-	-	1.500
<i>Subtotal: Support - Engineering Change Proposals Cost</i>	-	-	-	-	-	0.039	-	-	1.000	-	-	1.500	-	-	-	-	-	1.500

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Exhibit P-5, Cost Analysis: FY 2018 Army												Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37						P-1 Line Item Number / Title: E27501 / Artillery Propellants, Fuzes and Primers, All						Item Number / Title [DODIC]: E99250 / ARTY, FUZE, PRECISION GUIDANCE KIT (PGK) [NA29]					
ID Code (A=Service Ready, B=Not Service Ready) : A												MDAP/MAIS Code:					

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	6.476	-	-	6.420	-	-	6.500	-	-	-	-	-	6.500
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	6.476	-	-	6.420	-	-	6.500	-	-	-	-	-	6.500
Support - Training Cost																		
Equipment	-	-	164.768	-	-	1.572	-	-	1.572	-	-	0.767	-	-	-	-	-	0.767
<i>Subtotal: Support - Training Cost</i>	-	-	164.768	-	-	1.572	-	-	1.572	-	-	0.767	-	-	-	-	-	0.767
Gross/Weapon System Cost	13,369.69	12,324	164.768	10,041.21	6,406	64.324	9,795.19	11,757	115.162	11,484.91	4,209	48.340	9,440.36	2,121	20.023	10,799.84	6,330	68.363

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

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37			P-1 Line Item Number / Title: E27501 / Artillery Propellants, Fuzes and Primers, All				Item Number / Title [DODIC]: E99250 / ARTY, FUZE, PRECISION GUIDANCE KIT (PGK) [NA29]				

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>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
COMPLETE ROUND ^(†)		2016	ALLIANT TECHSYSTEMS / PLYMOUTH, MN	Option / FFP	PICATINNY ARSENAL, NJ	Mar 2016	Jun 2018	6,406	8,638.32	Y		
COMPLETE ROUND ^(†)		2017	ALLIANT TECHSYSTEMS / PLYMOUTH, MN	Option / FFP	PICATINNY ARSENAL, NJ	Feb 2017	Mar 2019	5,889	8,691.00	Y		
COMPLETE ROUND ^(†)		2018	ALLIANT TECHSYSTEMS / PLYMOUTH, MN	SS / FFP	PICATINNY ARSENAL, NJ	Mar 2018	Mar 2020	6,330	8,966.25	Y		
COMPLETE ROUND (PB17 Amendment)		2017	ALLIANT TECHSYSTEMS / PLYMOUTH, MN	Option / FFP	PICATINNY ARSENAL, NJ	May 2017	Jun 2019	5,868	8,691.00	Y		

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: FY 2018 Army														Date: May 2017															
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37										P-1 Line Item Number / Title: E27501 / Artillery Propellants, Fuzes and Primers, All										Item Number / Title [DODIC]: E99250 / ARTY, FUZE, PRECISION GUIDANCE KIT (PGK) [NA29]									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2016														Fiscal Year 2017														B A L A N C E	
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016														Calendar Year 2017														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
COMPLETE ROUND																																			
	1	2016	ARMY	6,406	0	6,406																							6,406						
	1	2016	MC (†)	2,154	0	2,154																							2,154						
	1	2016	Total	8,560	0	8,560																							8,560						
	1	2017	ARMY	5,889	0	5,889																							5,889						
	1	2017	MC (†)	2,517	0	2,517																							2,517						
	1	2017	Total	8,406	0	8,406																							8,406						
	1	2018	ARMY	6,330	0	6,330																							6,330						
	1	2018	MC (†)	1,916	0	1,916																							1,916						
	1	2018	Total	8,246	0	8,246																							8,246						
							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: FY 2018 Army															Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37										P-1 Line Item Number / Title: E27501 / Artillery Propellants, Fuzes and Primers, All										Item Number / Title [DODIC]: E99250 / ARTY, FUZE, PRECISION GUIDANCE KIT (PGK) [NA29]									

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2018															Fiscal Year 2019															B A L A N C E		
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018															Calendar Year 2019															
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P							
COMPLETE ROUND																																					
	1	2016	ARMY	6,406	0	6,406	-	-	-	-	-	-	-	-	-	1,100	1,100	1,100	1,100	1,100	906	-	-									0					
	1	2016	MC (†)	2,154	0	2,154	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68	1,100	986								0					
	1	2016	Total	8,560	0	8,560	-	-	-	-	-	-	-	-	-	1,100	1,100	1,100	1,100	1,100	974	1,100	986	-	-	-	-	-	-	-	0						
	1	2017	ARMY	5,889	0	5,889	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	491	491	491	491	491	491	491	2,452					
	1	2017	MC (†)	2,517	0	2,517	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	210	210	210	210	210	210	1,047						
	1	2017	Total	8,406	0	8,406	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	701	701	701	701	701	701	701	3,499						
	1	2018	ARMY	6,330	0	6,330																									6,330						
	1	2018	MC (†)	1,916	0	1,916																									1,916						
	1	2018	Total	8,246	0	8,246																									8,246						
							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: FY 2018 Army															Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37										P-1 Line Item Number / Title: E27501 / Artillery Propellants, Fuzes and Primers, All										Item Number / Title [DODIC]: E99250 / ARTY, FUZE, PRECISION GUIDANCE KIT (PGK) [NA29]									

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					
COMPLETE ROUND																																			
	1	2016	ARMY	6,406	6,406	0																													0
	1	2016	MC (†)	2,154	2,154	0																													0
	1	2016	Total	8,560	8,560	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
	1	2017	ARMY	5,889	3,437	2,452	491	491	491	491	488																								0
	1	2017	MC (†)	2,517	1,470	1,047	210	210	210	210	207																								0
	1	2017	Total	8,406	4,907	3,499	701	701	701	701	695	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
	1	2018	ARMY	6,330	0	6,330	-	-	-	-	-	487	487	487	502	552	552	552	552	552	552	552	552	503										0	
	1	2018	MC (†)	1,916	0	1,916	-	-	-	-	-	236	149	150	150	150	150	150	155	155	155	155	161											0	
	1	2018	Total	8,246	0	8,246	-	-	-	-	-	723	636	637	652	702	702	702	707	707	707	707	664	-	-	-	-	-	-	-	-	-	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: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37		P-1 Line Item Number / Title: E27501 / Artillery Propellants, Fuzes and Primers, All
		Item Number / Title [DODIC]: E99250 / ARTY, FUZE, PRECISION GUIDANCE KIT (PGK) [NA29]

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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	ALLIANT TECHSYSTEMS - PLYMOUTH, MN	333	1,100	2,200	13	9	27	36	3	6	24	30

(‡) 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: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 37		P-1 Line Item Number / Title: E27501 / Artillery Propellants, Fuzes and Primers, All
		Item Number / Title [DODIC]: ER8021 / ARTY, 155MM PROP CHG, MACS M232 SERIES [DA13]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	591.372	1.880	-	-	-	-
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	591.372	1.880	-	-	-	-
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	591.372	1.880	-	-	-	-

(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 Dollars)	-	-	-	-	-	-

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP)	-	-	591.372	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	591.372	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware Cost</i>	-	-	591.372	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - Product Improvement Cost																		
Reliability	-	-	-	-	-	1.880	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Product Improvement Cost</i>	-	-	-	-	-	1.880	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	-	-	591.372	-	-	1.880	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 43: Mines **P-1 Line Item Number / Title:** EA0800 / Mines & Clearing Charges, All Types

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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	56.475	-	16.866	3.942	11.615	15.557	16.027	16.205	12.000	12.000	-	145.130
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	56.475	-	16.866	3.942	11.615	15.557	16.027	16.205	12.000	12.000	-	145.130
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	56.475	-	16.866	3.942	11.615	15.557	16.027	16.205	12.000	12.000	-	145.130

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

Description:

This budget line includes Mines and Mine Clearing Charges, All Types.

E72800 MK7Mod2 The Anti-Personnel Obstacle Breaching System (APOBS) is used by dismounted troops in combat operations to clear a lane through wire obstacles and anti-personnel mines. This item is a lightweight, self-contained, 1 shot expendable system that is transported and deployed by a 2 man team. It consists of a line charge/fuze assembly and a rocket motor assembly. APOBS uses the EX126 Mod 0 rocket motor to propel a line charge over the obstacle. The line is then exploded, clearing a lane. The APOBS System is being actively used in Combat Engineering Operations. This item is Code A, approved for service use.

Justification:

FY 2018 Base Budget supports critical Army Title 10 war reserve/operational, training, and test requirements IAW DoD Instruction 3000.04 (Munitions Requirements Process) and AR 5-13 (Total Army Munitions Requirements Process and Prioritization System). War reserve requirements support OSD-approved Combatant Commander Operational Plans, Homeland Defense, and other OSD-directed missions. Training requirements support individual and collective training of Active and Reserve Component forces at Army schools, home station, and the combined training centers. Test requirements support the development, fielding, safety, and quality assurance of Army munitions and equipment throughout their life-cycle.

FY 2018 Base Procurement dollars in the amount of \$3.942 million supports production of 1 Variant of Mines & Clearing Charges.
 FY 2018 OCO Procurement dollars in the amount of \$11.615 million supports production of 1 Variant of Mines & Clearing Charges.

(E72800) Anti-Personnel Obstacle Breaching System (APOBS)

This is a training standard item used in training and combat. The FY 2018 request supports annual training and builds a war reserve in accordance with the Army's procurement goals.

The FY 2018 Base procurement dollars in the amount of \$3.942 million supports the production of 263 APOBS.

The FY 2018 OCO includes \$11.615 million to support the COCOM requirement for unit equipment sets to deter potential adversaries and support the European Reassurance Initiative. The procurement includes 945 APOBS.

TYPE CLASSIFICATION DATE: July 2001

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 44: Networked Munitions	P-1 Line Item Number / Title: E95900 / Spider Network Munitions, All Types
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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: 0604808A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	-	10.353	-	-	-	-	-	-	-	-	10.353
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	-	10.353	-	-	-	-	-	-	-	-	10.353
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	-	10.353	-	-	-	-	-	-	-	-	10.353

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

Description:

This budget line includes Anti-Personnel Landmine Alternatives (APLA), All Types.

E91700 Spider is a hand emplaced, remotely controlled, anti-personnel munition system that was designed to replace the capability of the persistent anti-personnel landmines banned from use after December 2010 per US Landmine policy. Spider, as a Man-in-the-Loop system, offers numerous capabilities for asymmetric warfare focusing on small unit force protection. The system is made up of four subsystems: Man-in-the-Loop (the human operator), Remote Control Station (RCS), the system command and control station, Repeater (a communication link to the munitions that provides extended range), and Munition Control Units (MCU) delivers anti-personnel effects. The Spider is designed to mitigate the indiscriminate initiation of the lethal mechanism. A Soldier/Marine makes a conscious decision to engage a target with the lethal mechanism. Spider's sensor capabilities and controlled munitions provide needed force protection and battlefield shaping. Spider allows measured and graduated responses including sense only, non lethal, and lethal modes. Spider also supports net-centric operations by feeding situational awareness information (location and status) into the Battle Command system. The Spider system with its many desirable features makes it a versatile weapon system that has significant utility across the full spectrum of military operations and will support current and future operations. This item is Code A, approved for service use. Type Classification Standard and Full Materiel Release were achieved in July and September 2013 respectively.

E91741 - The MCUs are munitions strategically placed to provide the barrier capability of an obstacle. The baseline MCU employs up to six (6) replaceable Miniature Grenade Launchers (MGLs) or up to six (6) Munition Adapter Modules (MAMs), and a replaceable Extended Range Tripline Sensor (ERTS) module with six (6) triplines. This item is Code A, approved for service use.

E91711 - The Miniature-Grenade Launcher (MGL) consists of a grenade assembly composed of a high explosive fragmenting warhead that provides lethal effects when launched from a Spider MCU. This item is Code A, approved for service use.

E91721 - The Extended Range Tripline Sensor (ERTS) module enables the remote deployment of six (6) triplines. The ERTS provides a silent (from enemy perspective) intrusion detection capability alerting the RCS operator of the enemy presence in the munition field. When deployed, the triplines travel 10 to 12 meters along an axis (depending on wind speed and direction) corresponding to the six launch azimuths of the grenades providing approximately 20 to 24 meters of ERTS tripline diameter coverage. The ERTS do not have to be deployed or installed until the tactical scenario calls for their deployment. This item is Code A, approved for service use.

Justification:

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 44: Networked Munitions		P-1 Line Item Number / Title: E95900 / Spider Network Munitions, All Types
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0604808A
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 is a training standard item used in both training and combat.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 45: Rockets **P-1 Line Item Number / Title:** EA4000 / Shoulder Launched Munitions, All Types

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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	385.743	7.500	101.210	5.000	25.000	30.000	3.000	3.000	19.000	27.540	-	576.993
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	385.743	7.500	101.210	5.000	25.000	30.000	3.000	3.000	19.000	27.540	-	576.993
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	385.743	7.500	101.210	5.000	25.000	30.000	3.000	3.000	19.000	27.540	-	576.993

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

Description:

This budget line includes Shoulder Launched Munitions, All Types.

(E36101) Launcher and Cartridge 84MM M136A1 (AT4CS-RS) - The AT4 is the Army's primary shoulder launched, lightweight, anti-armor weapon. The AT4-Confined Space (CS) weapon is a safety enhanced version of the M136 AT4 Weapon. The AT4-CS is a self-contained weapon consisting of a free-flight, fin-stabilized, rocket packed in an expendable, 1-piece launch tube. The recoilless design permits accurate delivery of the 84mm high explosive Anti-Armor warhead out to 250 meters. The AT4-CS incorporates a safety modification to the propulsion system that significantly reduces the weapon's back blast and launch signature. This will allow the user to safely fire the weapon from a protected area or enclosed space during close combat operations. This item is Code A, approved for service use.

(E36401) Charge, Backblast Sim, F/SUBCAL ADPTR553B CARLGUST - The 7.62MM 553B Sub-Caliber Backblast Simulator is a charge which produces a real-feel backblast for user. This item is Code A, approved for service use.

(E36402) Cap, Percussion, W/HLDR, F/SUBCAL ADPTR553B CARLGUST - The 7.62MM 553B Sub-Caliber Cap with Holder maintains the position of the individual components of the 553B Sub-Caliber Adapter System.

(E36403) CTG, 7.62MM Tracer, F/SUBCAL ADPTR CARL GUSTAF - The 7.62MM 553B Sub-Caliber Adapter makes it possible to raise the level of proficiency and reduce training costs to a low level both at the firing range and during live firing exercises.

(E36404) CTG, Gun, HEDP 502, 84MM CARL GUSTAF (MAAWS) - For rapid response forces that must have the ability to combat many types of threat, the 84 mm HEDP 502 (High Explosive Dual Purpose) is effective against light-armored vehicles, concrete and brick walls, field fortifications, and bunkers.

(E36405) CTG, Gun, HE 441D, 84MM CARL GUSTAF (MAAWS) - For combating troops in the open, behind cover, or in slit trenches as well as soft-skinned vehicles and similar types of targets, the 84 mm HE 441D (High Explosive) can be set for impact or air burst detonation. (E36406) CTG, Gun, TGT PRAC-TR 141, 84MM CARL GUSTAF (MAAWS) - The 84 mm TPT 141 (Training Practice Tracer) is the ideal training round for reducing training costs but still retaining the right weapon "feel" and live firing experience.

(E36406) CTG, Gun, TGT PRAC-TR 141, 84MM CARL GUSTAF (MAAWS) - The 84MM TPT 141 (Training Practice Tracer) is the ideal training round for reducing training costs but still retaining the right weapon "feel" and live firing experience. This item is Code A, approved for service use.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 45: Rockets		P-1 Line Item Number / Title: EA4000 / Shoulder Launched Munitions, All Types
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>(E36901) ROCKET, PRACTICE, 21MM SUBCALIBER for Shoulder Launched Munitions (SLM) simulates the firing of unguided shoulder fired munitions. It simulates the tactical munitions flight trajectory, but with less noise and backblast. It is currently used by Navy and Marine Corps to simulate the M72 LAW. It has also been adapted to the M141 Bunker Defeat Munition (BDM) and is used in New Equipment Training (NET)/Mobile Training Teams (MTT).</p> <p>(E88401) The Bunker Defeat Munition (BDM) is a single-shot, disposable, shoulder launched rocket propelled munition used to defeat earth and timber field fortifications (bunkers) out to 250 meters. The system also defeats lightly armored vehicles and breaches masonry walls using its 83 millimeter high explosive, dual-purpose rocket. The item is Code A, approved for service use.</p>		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 45: Rockets **P-1 Line Item Number / Title:** EA4000 / Shoulder Launched Munitions, All Types

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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 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	E36101 / AT4-Confined Space (AT4-CS), M136A1 [CA30]	P-5a	A		- / 129.076	- / -	9,771 / 44.784	- / -	- / -	- / -
P-5	E36401 / CHARGE, BACKBLAST SIM, F/SUBCAL ADPTR553B CARLGUST [L612]		A		- / -	150,235 / 1.000	- / -	- / -	- / -	- / -
P-5	E36402 / CAP, PERCUSSION W/HLDR F/SUBCAL ADPTR553B CARLGUST [L498]		A		- / -	1,211,271 / 1.000	- / -	- / -	- / -	- / -
P-5	E36403 / CTG, 7.62MM TRACER 553 F/SUBCAL ADAPTR CARL GUSTAF [A254]		A		- / -	379,215 / 1.000	- / -	- / -	- / -	- / -
P-5	E36404 / CTG, GUN, HEDP 502, 84MM CARL GUSTAF (MAAWS) [CA21]		A		- / -	497 / 1.500	834 / 3.000	216 / 1.500	- / -	216 / 1.500
P-5	E36405 / CTG, GUN, HE 441D, 84MM CARL GUSTAF (MAAWS) [CA27]		A		- / -	545 / 1.500	834 / 3.000	138 / 1.000	- / -	138 / 1.000
P-5	E36406 / CTG, GUN, TGT PRAC-TR 141, 84MM CARL GUSTAF(MAAWS) [CA10]		A		- / -	1,987 / 1.500	6,233 / 3.000	205 / 0.500	- / -	205 / 0.500
P-5	E36901 / ROCKET, PRACTICE, 21MM SUBCALIBER FOR SLM [HA21]		A		9,227,000 / 5.767	- / -	19,005 / 2.000	- / -	- / -	- / -
P-5	E88401 / BUNKER DEFEAT MUNITION, 83mm Rkt & Launcher, M141 [HA08]	P-5a, P-21	A		13,938 / 250.899	- / -	2,041 / 45.426	76 / 2.000	1,603 / 25.000	1,679 / 27.000
P-40	Total Gross/Weapon System Cost				- / 385.743	- / 7.500	- / 101.210	- / 5.000	- / 25.000	- / 30.000

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

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

Justification:

FY 2018 Base Budget supports critical Army Title 10 war reserve/operational, training, and test requirements IAW DoD Instruction 3000.04 (Munitions Requirements Process) and AR 5-13 (Total Army Munitions Requirements Process and Prioritization System). War reserve requirements support OSD-approved Combatant Commander Operational Plans, Homeland Defense, and other OSD-directed missions. Training requirements support individual and collective training of Active and Reserve Component forces at Army schools, home station, and the combined training centers. Test requirements support the development, fielding, safety, and quality assurance of Army munitions and equipment throughout their life-cycle.

FY 2018 OCO funds are required to replenish munitions expended in combat operations in OFS-Afghanistan Theater.

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.

FY 2018 Base procurement dollars in the amount of \$5.000 million supports procurement of four variants of Shoulder Launched Munitions.

FY 2018 OCO procurement dollars in the amount of \$25.000 million supports the procurement of 1603 Shoulder Launched Munitions.

(E36101) Launcher and Cartridge 84MM M136A1 (AT4CS-RS) - This is a training standard used in both training and combat. The request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goal. Type Classification Date: 2009

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 45: Rockets		P-1 Line Item Number / Title: EA4000 / Shoulder Launched Munitions, All Types
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>(E36401) CHG, Backblast Sim, F/Subcal ADPTR553B Carl Gustaf - This is a training unique item not used in combat. The request supports annual training and builds a depot level in accordance with the Army's procurement goal. Type Classification Date: TBD</p> <p>(E36402) Cap, Percussion W/HLDR F/Subcal ADPTR553B Carl Gustaf - This is a training unique item not used in combat. The request supports annual training and builds a depot level in accordance with the Army's procurement goal. Type Classification Date: TBD</p> <p>(E36403) CTG, 7.62MM Tracer 553 F/Subcal ADPTR Carl Gustaf - This is a training unique item not used in combat. The request supports annual training and builds a depot level in accordance with the Army's procurement goal. Type Classification Date: TBD</p> <p>(E36404) CTG, Gun, HEDP 502, 84MM CARL GUSTAF (MAAWS) - This is a training standard item used in both training and combat. The request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goal. FY 2018 Base procurement dollars in the amount of \$1.500 million supports the procurement of 216 Rounds. Type Classification Date: TBD</p> <p>(E36405) CTG, Gun, HE 441D, 84MM CARL GUSTAF (MAAWS) - This is a training standard used in both training and combat. The request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goal. FY 2018 Base procurement dollars in the amount of \$1.000 million supports the procurement of 138 Rounds. Type Classification Date: TBD</p> <p>(E36406) CTG, Gun, TGT PRAC-TR 141, 84MM CARL GUSTAF (MAAWS) - This is a training unique item not used in combat. The request supports annual training and builds a depot level in accordance with the Army's procurement goal. FY 2018 Base procurement dollars in the amount of \$0.500 million supports the procurement of 205 Rounds. Type Classification Date: TBD</p> <p>(E36901) ROCKET, PRACTICE, 21MM SUBCALIBER for Shoulder Launched Munitions (SLM) - This is a training unique item not used in combat. The request supports annual training and builds a depot level in accordance with the Army's procurement goal. Type Classification Date: 1993</p> <p>(E88401) BUNKER DEFEAT MUNITION, 83mm Rkt & Launcher, M141 - This is a training standard item used in both training and combat. FY 2018 Base procurement dollars in the amount of \$2.000 million supports the procurement of 76 rounds. The FY 2018 OCO funds in the amount of \$25.000 million supports the procurement of 1603 rounds that are required to replenish munitions expended in combat operations in OFS-Afghanistan Theater. Type Classification Date: 2008</p>		

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 45	P-1 Line Item Number / Title: EA4000 / Shoulder Launched Munitions, All Types	Item Number / Title [DODIC]: E36101 / AT4-Confined Space (AT4-CS), M136A1 [CA30]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	-	9,771	-	-	-
Gross/Weapon System Cost (\$ in Millions)	129.076	-	44.784	-	-	-
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	129.076	-	44.784	-	-	-
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	129.076	-	44.784	-	-	-

(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 Dollars)	-	-	4,583.36	-	-	-

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND ^(†)	-	-	129.076	-	-	-	4,260.16	9,771	41.626	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	129.076	-	-	-	-	-	41.626	-	-	-	-	-	-	-	-	-
Subtotal: Hardware Cost	-	-	129.076	-	-	-	-	-	41.626	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	-	-	-	3.158	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	-	-	-	3.158	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	-	-	129.076	-	-	-	4,583.36	9,771	44.784	-	-	-	-	-	-	-	-	-

^(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 45			P-1 Line Item Number / Title: EA4000 / Shoulder Launched Munitions, All Types				Item Number / Title [DODIC]: E36101 / AT4-Confined Space (AT4-CS), M136A1 [CA30]					
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
COMPLETE ROUND		2017	TO BE SELECTED / TBS01	C / FFP	PICATINNY ARSENAL, NJ	Sep 2017	Sep 2019	9,771	4,260.16	Y		

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 45	P-1 Line Item Number / Title: EA4000 / Shoulder Launched Munitions, All Types	Item Number / Title [DODIC]: E36401 / CHARGE, BACKBLAST SIM, F/SUBCAL ADPTR553B CARLGUST [L612]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (<i>Units in Each</i>)	-	150,235	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	1.000	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	1.000	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	1.000	-	-	-	-

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	6.66	-	-	-	-

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND	-	-	-	5.57	150,235	0.837	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	<i>0.837</i>	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	<i>0.837</i>	-	-	-	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	0.163	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	<i>0.163</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	-	-	-	6.66	150,235	1.000	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 45	P-1 Line Item Number / Title: EA4000 / Shoulder Launched Munitions, All Types	Item Number / Title [DODIC]: E36402 / CAP, PERCUSSION W/HLDR F/SUBCAL ADPTR553B CARLGUST [L498]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (<i>Units in Each</i>)	-	1,211,271	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	1.000	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	1.000	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	1.000	-	-	-	-

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	0.83	-	-	-	-

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND	-	-	-	0.69	1,211,271	0.836	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	<i>0.836</i>	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	<i>0.836</i>	-	-	-	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	0.163	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	<i>0.163</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	-	-	-	0.83	1,211,271	1.000	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 45	P-1 Line Item Number / Title: EA4000 / Shoulder Launched Munitions, All Types	Item Number / Title [DODIC]: E36403 / CTG, 7.62MM TRACER 553 F/SUBCAL ADAPTR CARL GUSTAF [A254]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (<i>Units in Each</i>)	-	379,215	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	1.000	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	1.000	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	1.000	-	-	-	-

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	2.64	-	-	-	-

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND	-	-	-	2.21	379,215	0.838	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	<i>0.838</i>	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	<i>0.838</i>	-	-	-	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	0.163	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	<i>0.163</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	-	-	-	2.64	379,215	1.000	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 45		P-1 Line Item Number / Title: EA4000 / Shoulder Launched Munitions, All Types
		Item Number / Title [DODIC]: E36404 / CTG, GUN, HEDP 502, 84MM CARL GUSTAF (MAAWS) [CA21]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	497	834	216	-	216
Gross/Weapon System Cost (\$ in Millions)	-	1.500	3.000	1.500	-	1.500
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	1.500	3.000	1.500	-	1.500
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	-	1.500	3.000	1.500	-	1.500

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

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	3,018.11	3,597.12	6,944.44	-	6,944.44

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND	-	-	-	2,363.35	497	1.175	2,801.00	834	2.336	4,090.00	216	0.883	-	-	-	4,090.00	216	0.883
Subtotal: Recurring Cost	-	-	-	-	-	1.175	-	-	2.336	-	-	0.883	-	-	-	-	-	0.883
Subtotal: Hardware Cost	-	-	-	-	-	1.175	-	-	2.336	-	-	0.883	-	-	-	-	-	0.883
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	0.081	-	-	-	-	-	0.084	-	-	-	-	-	0.084
Subtotal: Support - Acceptance Testing Cost	-	-	-	-	-	0.081	-	-	-	-	-	0.084	-	-	-	-	-	0.084
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	0.244	-	-	0.664	-	-	0.532	-	-	-	-	-	0.532
Subtotal: Support - Production Engineering Cost	-	-	-	-	-	0.244	-	-	0.664	-	-	0.532	-	-	-	-	-	0.532
Gross/Weapon System Cost	-	-	-	3,018.11	497	1.500	3,597.12	834	3.000	6,944.44	216	1.500	-	-	-	6,944.44	216	1.500

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 45		P-1 Line Item Number / Title: EA4000 / Shoulder Launched Munitions, All Types
		Item Number / Title [DODIC]: E36405 / CTG, GUN, HE 441D, 84MM CARL GUSTAF (MAAWS) [CA27]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	545	834	138	-	138
Gross/Weapon System Cost (\$ in Millions)	-	1.500	3.000	1.000	-	1.000
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	1.500	3.000	1.000	-	1.000
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	-	1.500	3.000	1.000	-	1.000

(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 Dollars)	-	2,752.29	3,597.12	7,246.38	-	7,246.38

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND	-	-	-	2,143.49	545	1.168	2,801.00	834	2.336	4,028.00	138	0.556	-	-	-	4,028.00	138	0.556
Subtotal: Recurring Cost	-	-	-	-	-	1.168	-	-	2.336	-	-	0.556	-	-	-	-	-	0.556
Subtotal: Hardware Cost	-	-	-	-	-	1.168	-	-	2.336	-	-	0.556	-	-	-	-	-	0.556
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	0.087	-	-	-	-	-	0.091	-	-	-	-	-	0.091
Subtotal: Support - Acceptance Testing Cost	-	-	-	-	-	0.087	-	-	-	-	-	0.091	-	-	-	-	-	0.091
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	0.245	-	-	0.664	-	-	0.354	-	-	-	-	-	0.354
Subtotal: Support - Production Engineering Cost	-	-	-	-	-	0.245	-	-	0.664	-	-	0.354	-	-	-	-	-	0.354
Gross/Weapon System Cost	-	-	-	2,752.29	545	1.500	3,597.12	834	3.000	7,246.38	138	1.000	-	-	-	7,246.38	138	1.000

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 45	P-1 Line Item Number / Title: EA4000 / Shoulder Launched Munitions, All Types	Item Number / Title [DODIC]: E36406 / CTG, GUN, TGT PRAC-TR 141, 84MM CARL GUSTAF(MAAWS) [CA10]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	1,987	6,233	205	-	205
Gross/Weapon System Cost (\$ in Millions)	-	1.500	3.000	0.500	-	0.500
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	1.500	3.000	0.500	-	0.500
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	-	1.500	3.000	0.500	-	0.500

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

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	754.91	481.31	2,439.02	-	2,439.02

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND	-	-	-	574.43	1,987	1.141	375.00	6,233	2.337	1,406.00	205	0.288	-	-	-	1,406.00	205	0.288
Subtotal: Recurring Cost	-	-	-	-	-	1.141	-	-	2.337	-	-	0.288	-	-	-	-	-	0.288
Subtotal: Hardware Cost	-	-	-	-	-	1.141	-	-	2.337	-	-	0.288	-	-	-	-	-	0.288
Support - Acceptance Testing Cost																		
Acceptance Test	-	-	-	-	-	0.033	-	-	-	-	-	0.034	-	-	-	-	-	0.034
Subtotal: Support - Acceptance Testing Cost	-	-	-	-	-	0.033	-	-	-	-	-	0.034	-	-	-	-	-	0.034
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	0.326	-	-	0.663	-	-	0.177	-	-	-	-	-	0.177
Subtotal: Support - Production Engineering Cost	-	-	-	-	-	0.326	-	-	0.663	-	-	0.177	-	-	-	-	-	0.177
Gross/Weapon System Cost	-	-	-	754.91	1,987	1.500	481.31	6,233	3.000	2,439.02	205	0.500	-	-	-	2,439.02	205	0.500

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 45	P-1 Line Item Number / Title: EA4000 / Shoulder Launched Munitions, All Types	Item Number / Title [DODIC]: E36901 / ROCKET, PRACTICE, 21MM SUBCALIBER FOR SLM [HA21]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (<i>Units in Each</i>)	9,227,000	-	19,005	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	5.767	-	2.000	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	5.767	-	2.000	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	5.767	-	2.000	-	-	-

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	0.63	-	105.24	-	-	-

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
Complete Round	0.62	9,227,000	5.721	-	-	-	89.45	19,005	1.700	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	5.721	-	-	-	-	-	1.700	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware Cost</i>	-	-	5.721	-	-	-	-	-	1.700	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	-	-	-	0.300	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	-	-	-	0.300	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	0.63	9,227,000	5.767	-	-	-	105.24	19,005	2.000	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 45	P-1 Line Item Number / Title: EA4000 / Shoulder Launched Munitions, All Types	Item Number / Title [DODIC]: E88401 / BUNKER DEFEAT MUNITION, 83mm Rkt & Launcher, M141 [HA08]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (<i>Units in Each</i>)	13,938	-	2,041	76	1,603	1,679
Gross/Weapon System Cost (<i>\$ in Millions</i>)	250.899	-	45.426	2.000	25.000	27.000
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	250.899	-	45.426	2.000	25.000	27.000
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	250.899	-	45.426	2.000	25.000	27.000

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	18,001.08	-	22,256.74	26,315.79	15,595.76	16,081.00

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
BUNKER DEFEAT MUNITION (BDM) ^(†)	18,001.05	13,938	250.899	-	-	-	21,583.29	2,041	44.051	15,583.22	76	1.184	15,583.22	1,603	24.980	15,583.22	1,679	26.164
<i>Subtotal: Recurring Cost</i>	-	-	250.899	-	-	-	-	-	44.051	-	-	1.184	-	-	24.980	-	-	26.164
<i>Subtotal: Hardware Cost</i>	-	-	250.899	-	-	-	-	-	44.051	-	-	1.184	-	-	24.980	-	-	26.164
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	-	-	-	1.374	-	-	0.816	-	-	0.020	-	-	0.836
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	-	-	-	1.374	-	-	0.816	-	-	0.020	-	-	0.836
Gross/Weapon System Cost	18,001.08	13,938	250.899	-	-	-	22,256.74	2,041	45.426	26,315.79	76	2.000	15,595.76	1,603	25.000	16,081.00	1,679	27.000

(†) indicates the presence of a P-5a

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 45			P-1 Line Item Number / Title: EA4000 / Shoulder Launched Munitions, All Types				Item Number / Title [DODIC]: E88401 / BUNKER DEFEAT MUNITION, 83mm Rkt & Launcher, M141 [HA08]				

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>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
BUNKER DEFEAT MUNITION (BDM) ^(f)		2017	TO BE SELECTED / TBS01	C / FFP	OTHER	Apr 2018	Oct 2019	2,041	21,583.29	Y		
BUNKER DEFEAT MUNITION (BDM) ^(f)		2018	TO BE SELECTED / TBS01	C / FFP	PICATINNY ARSENAL, NJ	Apr 2018	Jul 2019	1,679	15,583.22	Y		

^(f) indicates the presence of a P-21

UNCLASSIFIED

Exhibit P-21, Production Schedule: FY 2018 Army															Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 45										P-1 Line Item Number / Title: EA4000 / Shoulder Launched Munitions, All Types										Item Number / Title [DODIC]: E88401 / BUNKER DEFEAT MUNITION, 83mm Rkt & Launcher, M141 [HA08]									

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

BUNKER DEFEAT MUNITION (BDM)																																				
Prior Years Deliveries: 13938																																				
1	2017	ARMY	2,041	0	2,041																															2,041
1	2018	ARMY	1,679	0	1,679																															479
						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							

UNCLASSIFIED

Exhibit P-21, Production Schedule: FY 2018 Army															Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 45										P-1 Line Item Number / Title: EA4000 / Shoulder Launched Munitions, All Types										Item Number / Title [DODIC]: E88401 / BUNKER DEFEAT MUNITION, 83mm Rkt & Launcher, M141 [HA08]									

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										
BUNKER DEFEAT MUNITION (BDM)																																								
Prior Years Deliveries: 13938																																								
	1	2017	ARMY	2,041	0	2,041	700	700	641																															0
	1	2018	ARMY	1,679	1,200	479	400	79																															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: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 45		P-1 Line Item Number / Title: EA4000 / Shoulder Launched Munitions, All Types
		Item Number / Title [DODIC]: E88401 / BUNKER DEFEAT MUNITION, 83mm Rkt & Launcher, M141 [HA08]

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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	TO BE SELECTED - TBS01	100	700	1,400	8	8	18	26	6	6	15	21

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

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

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 45: Rockets **P-1 Line Item Number / Title:** E37300 / Rocket, Hydra 70, All Types

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	130,508	69,929	90,482	60,684	151,166	3,410	3,211	328	3,945	Continuing	Continuing
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	171.193	140.064	161.155	75.820	236.975	92.088	76.818	50.100	80.569	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	171.193	140.064	161.155	75.820	236.975	92.088	76.818	50.100	80.569	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	171.193	140.064	161.155	75.820	236.975	92.088	76.818	50.100	80.569	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 Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	1,311.74	2,002.95	1,781.07	1,249.42	1,567.65	27,005.28	23,923.39	152,743.90	20,423.07	Continuing	Continuing

Description:

The Hydra-70 Product Office is the executive procurement agent for all services, for all variants of 2.75" rockets. This budget line procures all Hydra-70 rocket types in support of operational, training and war reserve requirements. The system provides combat overmatch capability and ensures the availability of munitions to support combat operations. This system of aerial rockets is used by Army aircraft (AH-64 Apache, H-60 Blackhawk and Special Operations aircraft). The unguided systems perform a number of roles including anti-materiel, anti-personnel, air-to-ground suppression and illumination. The guided system is used to provide increased accuracy over the unguided munitions in precision strikes against lightly armored and soft point targets enabling better conformance to restricted rules of engagement. This Hydra-70 rocket funding also supports the entire Hydra-70 Rocket System to include resolution of obsolescence, safety, insensitive munitions, reliability, weapon integration activities, test sets, engineering changes, production issues and guidance section repair kits.

NOTE: QTY EA

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 45: Rockets **P-1 Line Item Number / Title:** E37300 / Rocket, Hydra 70, All Types

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

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 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	E37412 / AMMO-Hydra, Aviation Rocket Procurement, Unguided	P-5a, P-21			- / -	130,019 / 168.203	68,089 / 126.997	88,482 / 98.649	60,603 / 73.000	149,085 / 171.649
P-5	E37413 / AMMO-Hydra, Aviation Rocket Procurement, Guided	P-5a, P-21			- / -	489 / 2.990	1,840 / 13.067	2,000 / 62.506	81 / 2.820	2,081 / 65.326
P-40	Total Gross/Weapon System Cost				- / -	130,508 / 171.193	69,929 / 140.064	90,482 / 161.155	60,684 / 75.820	151,166 / 236.975

*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 Hydra-70 Product Office is the executive procurement agent for all services, for all variants of 2.75 Rockets. This budget activity includes both training standard items and items that may be used in both training and combat. The Fiscal Year (FY) 2018 procurement supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$161.155 million will procure 88,482 unguided Hydra-70 Rockets and 2,000 guidance sections. FY 2018 OCO funding levels will replace and replenish rockets expended in wartime operations. FY 2018 OCO procurement dollars in the amount of \$75.820 million will procure 60,603 unguided Hydra-70 Rockets and 81 guidance sections. Procurement funding is required in FY 2018 in order to support the new Hydra-70 guided rockets requirements. The Army intends to convert any price advantage created through contract negotiations, other service procurement, and/or Foreign Military Sales (FMS) to increase procurement of 2.75 rockets.

"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: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 45	P-1 Line Item Number / Title: E37300 / Rocket, Hydra 70, All Types	Item Number / Title [DODIC]: E37412 / AMMO-Hydra, Aviation Rocket Procurement, Unguided

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (<i>Units in Each</i>)	-	130,019	68,089	88,482	60,603	149,085
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	168.203	126.997	98.649	73.000	171.649
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	168.203	126.997	98.649	73.000	171.649
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	168.203	126.997	98.649	73.000	171.649

(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 Dollars</i>)	-	1,293.68	1,865.16	1,114.90	1,204.56	1,151.35

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
Complete Round ^(t)	-	-	-	987.90	130,019	128.446	1,369.81	68,089	93.269	934.95	88,482	82.726	1,052.84	60,603	63.805	982.87	149,085	146.531
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	<i>128.446</i>	-	-	<i>93.269</i>	-	-	<i>82.726</i>	-	-	<i>63.805</i>	-	-	<i>146.531</i>
<i>Subtotal: Flyaway Cost</i>	-	-	-	-	-	128.446	-	-	93.269	-	-	82.726	-	-	63.805	-	-	146.531
Support Cost																		
Component Eng Spt (Other Gov't Agencies)	-	-	-	-	-	27.360	-	-	21.124	-	-	11.679	-	-	5.453	-	-	17.132
Prod/Sys Engineering/Program Management	-	-	-	-	-	12.397	-	-	12.604	-	-	4.244	-	-	3.742	-	-	7.986
<i>Subtotal: Support Cost</i>	-	-	-	-	-	<i>39.757</i>	-	-	<i>33.728</i>	-	-	<i>15.923</i>	-	-	<i>9.195</i>	-	-	<i>25.118</i>
Gross/Weapon System Cost	-	-	-	1,293.68	130,019	168.203	1,865.16	68,089	126.997	1,114.90	88,482	98.649	1,204.56	60,603	73.000	1,151.35	149,085	171.649

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

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 45			P-1 Line Item Number / Title: E37300 / Rocket, Hydra 70, All Types				Item Number / Title [DODIC]: E37412 / AMMO-Hydra, Aviation Rocket Procurement, Unguided				

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>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
Complete Round ^(†)		2016	General Dynamics / Williston, VT	C / FFP	Redstone Arsenal, AL	Jul 2016	Dec 2017	130,019	987.90	Y		Apr 2013
Complete Round ^(†)		2017	General Dynamics / Williston, VT	C / FFP	Redstone Arsenal, AL	Mar 2017	Sep 2018	68,089	1,369.81	Y		Apr 2013
Complete Round ^(†)		2018	General Dynamics / Williston, VT	C / FFP	Redstone Arsenal, AL	Mar 2018	Sep 2019	149,085	982.87	Y		Apr 2013

^(†) indicates the presence of a P-21

Remarks:

- QTY EA for delivery schedule.
- Contractor minimum sustainment rate for the total of all variants is 80,000 rockets annually.
- FY17 & FY18 are contract option years.

- Other services and FMS customers are shown on the P-21 delivery schedule.

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Exhibit P-21, Production Schedule: FY 2018 Army												Date: May 2017											
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 45						P-1 Line Item Number / Title: E37300 / Rocket, Hydra 70, All Types						Item Number / Title [DODIC]: E37412 / AMMO-Hydra, Aviation Rocket Procurement, Unguided											

Cost Elements <i>(Units in Thousands)</i>						Fiscal Year 2016												Fiscal Year 2017												BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016												Calendar Year 2017												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
Complete Round																															
	1	2016	ARMY	130.019	.000	130.019																								130.019	
	1	2016	NAVY (+)	28.939	.000	28.939																								28.939	
	1	2016	FMS (+)	103.595	.000	103.595																								103.595	
	1	2016	AF (+)	24.492	.000	24.492																								24.492	
	1	2016	Total	287.045	.000	287.045																							287.045		
	1	2017	ARMY	68.089	.000	68.089																								68.089	
	1	2017	NAVY (+)	32.808	.000	32.808																								32.808	
	1	2017	FMS (+)	140.404	.000	140.404																								140.404	
	1	2017	AF (+)	6.497	.000	6.497																								6.497	
	1	2017	Total	247.798	.000	247.798																							247.798		
	1	2018	ARMY	149.085	.000	149.085																								149.085	
	1	2018	NAVY (+)	60.760	.000	60.760																								60.760	
	1	2018	FMS (+)	47.234	.000	47.234																								47.234	
	1	2018	AF (+)	1.429	.000	1.429																								1.429	
	1	2018	Total	258.508	.000	258.508																							258.508		
							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: FY 2018 Army																		Date: May 2017											
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 45										P-1 Line Item Number / Title: E37300 / Rocket, Hydra 70, All Types										Item Number / Title [DODIC]: E37412 / AMMO-Hydra, Aviation Rocket Procurement, Unguided									

Cost Elements <i>(Units in Thousands)</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					
Complete Round																																			
1	2016	ARMY	130.019	.000	130.019	-	-	3.334	3.326	3.334	3.334	3.334	3.334	3.334	19.334	19.334	19.334	22.870	25.817	-	-	-								.000					
1	2016	NAVY (‡)	28.939	.000	28.939	-	-	-	-	-	-	-	-	-	18.422	-	9.411	1.106	-	-	-	-	-							.000					
1	2016	FMS (‡)	103.595	.000	103.595	-	-	-	-	-	-	-	-	-	-	-	-	.299	-	33.120	39.988	30.188							.000						
1	2016	AF (‡)	24.492	.000	24.492	-	-	-	-	-	-	-	-	-	-	-	4.500	7.561	7.517	4.914	-	-	-						.000						
1	2016	Total	287.045	.000	287.045	-	-	3.334	3.326	3.334	3.334	3.334	3.334	3.334	21.756	19.334	33.245	28.001	30.686	30.731	33.120	39.988	30.188	-	-	-	-	-	.000						
1	2017	ARMY	68.089	.000	68.089	-	-	-	-	-	-	-	-	-	-	-	-	5.675	5.674	5.674	5.674	5.674	5.674	5.674	5.674	5.674	5.674	5.674	.000						
1	2017	NAVY (‡)	32.808	.000	32.808	-	-	-	-	-	-	-	-	-	-	-	-	2.734	2.734	2.734	2.734	2.734	2.734	2.734	2.734	2.734	2.734	2.734	.000						
1	2017	FMS (‡)	140.404	.000	140.404	-	-	-	-	-	-	-	-	-	-	-	-	11.704	11.700	11.700	11.700	11.700	11.700	11.700	11.700	11.700	11.700	11.700	.000						
1	2017	AF (‡)	6.497	.000	6.497	-	-	-	-	-	-	-	-	-	-	-	-	.542	.542	.542	.542	.542	.541	.541	.541	.541	.541	.541	.000						
1	2017	Total	247.798	.000	247.798	-	-	-	-	-	-	-	-	-	-	-	-	20.655	20.650	20.650	20.650	20.650	20.649	20.649	20.649	20.649	20.649	20.649	.000						
1	2018	ARMY	149.085	.000	149.085																								12.424	136.661					
1	2018	NAVY (‡)	60.760	.000	60.760																								5.063	55.697					
1	2018	FMS (‡)	47.234	.000	47.234																								3.936	43.298					
1	2018	AF (‡)	1.429	.000	1.429																								.120	1.309					
1	2018	Total	258.508	.000	258.508																								21.543	236.965					
						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: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 45		P-1 Line Item Number / Title: E37300 / Rocket, Hydra 70, All Types
		Item Number / Title [DODIC]: E37412 / AMMO-Hydra, Aviation Rocket Procurement, Unguided

Cost Elements <i>(Units in Thousands)</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		
Complete Round																																	
1	2016	ARMY	130.019	130.019	.000																								.000				
1	2016	NAVY (+)	28.939	28.939	.000																								.000				
1	2016	FMS (+)	103.595	103.595	.000																								.000				
1	2016	AF (+)	24.492	24.492	.000																								.000				
1	2016	Total	287.045	287.045	.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.000				
1	2017	ARMY	68.089	68.089	.000																								.000				
1	2017	NAVY (+)	32.808	32.808	.000																								.000				
1	2017	FMS (+)	140.404	140.404	.000																								.000				
1	2017	AF (+)	6.497	6.497	.000																								.000				
1	2017	Total	247.798	247.798	.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.000				
1	2018	ARMY	149.085	12.424	136.661	12.424	12.424	12.424	12.424	12.424	12.424	12.424	12.423	12.423	12.423														.000				
1	2018	NAVY (+)	60.760	5.063	55.697	5.063	5.063	5.063	5.063	5.063	5.063	5.063	5.064	5.064	5.064														.000				
1	2018	FMS (+)	47.234	3.936	43.298	3.936	3.936	3.936	3.936	3.936	3.936	3.936	3.936	3.937	3.937														.000				
1	2018	AF (+)	1.429	.120	1.309	.119	.119	.119	.119	.119	.119	.119	.119	.119	.119														.000				
1	2018	Total	258.508	21.543	236.965	21.542	21.542	21.542	21.542	21.542	21.542	21.543	21.542	21.543	21.543	-	-	-	-	-	-	-	-	-	-	-	-	-	.000				
						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: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 45		P-1 Line Item Number / Title: E37300 / Rocket, Hydra 70, All Types
		Item Number / Title [DODIC]: E37412 / AMMO-Hydra, Aviation Rocket Procurement, Unguided

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	General Dynamics - Williston, VT	80,000	250,000	350,000	7	6	18	24	7	6	18	24

Remarks:
Production rates for MSR, 1-8-5 and Max are actual quantities. System will not validate with below instructions.

(‡) 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: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 45	P-1 Line Item Number / Title: E37300 / Rocket, Hydra 70, All Types	Item Number / Title [DODIC]: E37413 / AMMO-Hydra, Aviation Rocket Procurement, Guided

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity <i>(Units in Each)</i>	-	489	1,840	2,000	81	2,081
Gross/Weapon System Cost <i>(\$ in Millions)</i>	-	2.990	13.067	62.506	2.820	65.326
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	-	2.990	13.067	62.506	2.820	65.326
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	-	2.990	13.067	62.506	2.820	65.326

(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 Dollars)</i>	-	6,114.52	7,101.63	31,253.00	34,814.81	31,391.64

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
Complete Round ^(t)	-	-	-	6,114.52	489	2.990	6,707.07	1,840	12.341	28,888.00	2,000	57.776	28,888.89	81	2.340	28,888.03	2,081	60.116
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	2.990	-	-	12.341	-	-	57.776	-	-	2.340	-	-	60.116
<i>Subtotal: Flyaway Cost</i>	-	-	-	-	-	2.990	-	-	12.341	-	-	57.776	-	-	2.340	-	-	60.116
Support Cost																		
Prod/Sys Eng/Prog Mgt	-	-	-	-	-	-	-	-	0.584	-	-	4.730	-	-	0.480	-	-	5.210
Component Eng Spt (OGAs)	-	-	-	-	-	-	-	-	0.142	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support Cost</i>	-	-	-	-	-	-	-	-	0.726	-	-	4.730	-	-	0.480	-	-	5.210
Gross/Weapon System Cost	-	-	-	6,114.52	489	2.990	7,101.63	1,840	13.067	31,253.00	2,000	62.506	34,814.81	81	2.820	31,391.64	2,081	65.326

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

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Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 45			P-1 Line Item Number / Title: E37300 / Rocket, Hydra 70, All Types				Item Number / Title [DODIC]: E37413 / AMMO-Hydra, Aviation Rocket Procurement, Guided					

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>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
Complete Round ^(†)		2016	BAE Systems / Nashua, NH	SS / FFP	Pax River, MD	Aug 2016	Jan 2017	489	6,114.52			
Complete Round ^(†)		2017	BAE Systems / Nashua, NH	SS / FFP	Pax River, MD	Mar 2017	Oct 2017	1,840	6,707.07			
Complete Round ^(†)		2018	BAE Systems / Nashua, NH	SS / FFP	Pax River, MD	May 2018	Oct 2018	2,081	28,888.03			

^(†) indicates the presence of a P-21

Remarks:

- QTY EA for delivery schedule.
- FY17 & FY18 are contract option years.

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Exhibit P-21, Production Schedule: FY 2018 Army			Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 45		P-1 Line Item Number / Title: E37300 / Rocket, Hydra 70, All Types	Item Number / Title [DODIC]: E37413 / AMMO-Hydra, Aviation Rocket Procurement, Guided

Cost Elements <i>(Units in Each)</i>		Fiscal Year 2016													Fiscal Year 2017													BALANCE								
O C R #	M F R FY	SERVICE	PROC QTY	ACCEP T T O 1 O C T 2015	BAL DUE A S O F 1 O C T	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						
Complete Round																																				
1	2016	ARMY	489	0	489												A	-	-	-	-	-	160	-	-	160	-	-	169			0				
1	2017	ARMY	1,840	0	1,840																					A	-	-	-	-	-	-			1,840	
1	2018	ARMY	2,081	0	2,081																														2,081	

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Exhibit P-21, Production Schedule: FY 2018 Army															Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 45										P-1 Line Item Number / Title: E37300 / Rocket, Hydra 70, All Types										Item Number / Title [DODIC]: E37413 / AMMO-Hydra, Aviation Rocket Procurement, Guided									

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
Complete Round																														
1		2016	ARMY	489	489	0																								0
1		2017	ARMY	1,840	0	1,840	153	153	153	153	153	153	153	154	154	154	154													0
1		2018	ARMY	2,081	0	2,081																								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: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 45		P-1 Line Item Number / Title: E37300 / Rocket, Hydra 70, All Types
		Item Number / Title [DODIC]: E37413 / AMMO-Hydra, Aviation Rocket Procurement, Guided

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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	BAE Systems - Nashua, NH	200	1,000	10,000	0	0	0	0	0	2	11	13

Remarks:
Guidance systems are procured on a Navy contract.

"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: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 47: Other Ammunition	P-1 Line Item Number / Title: E61000 / CAD/PAD, All Types
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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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	127.885	5.639	4.914	7.441	-	7.441	7.984	6.103	6.225	6.350	-	172.541
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	127.885	5.639	4.914	7.441	-	7.441	7.984	6.103	6.225	6.350	-	172.541
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	127.885	5.639	4.914	7.441	-	7.441	7.984	6.103	6.225	6.350	-	172.541

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

Description:

Includes Cartridge Actuated Devices (CAD) and Propellant Actuated Devices (PAD) all types.

CAD/PAD are used in various escape and jettison systems on all types of Army aircraft. They are required to support aircraft escape, safety, and jettison systems and mission essential needs. Items are subject to shelf and service life restrictions and, therefore, require replacement at specified intervals.

Justification:

FY 2018 Base Budget supports critical Army Title 10 war reserve/operational, training, and test requirements IAW DoD Instruction 3000.04 (Munitions Requirements Process) and AR 5-13 (Total Army Munitions Requirements Process and Prioritization System). War reserve requirements support OSD-approved Combatant Commander Operational Plans, Homeland Defense, and other OSD-directed missions. Training requirements support individual and collective training of Active and Reserve Component forces at Army schools, home station, and the combined training centers. Test requirements support the development, fielding, safety, and quality assurance of Army munitions and equipment throughout their life-cycle.

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.

The FY 2018 program is required to assure availability of replacement items when needed and avoid grounding aircraft or rendering aircraft partially mission capable.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 47: Other Ammunition	P-1 Line Item Number / Title: E55400 / Demolition Munitions, All Types
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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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	398.336	13.751	12.753	19.345	-	19.345	40.575	24.468	20.739	19.137	-	549.104
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	398.336	13.751	12.753	19.345	-	19.345	40.575	24.468	20.739	19.137	-	549.104
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	398.336	13.751	12.753	19.345	-	19.345	40.575	24.468	20.739	19.137	-	549.104

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

Description:

This budget line includes Demolition Munitions, All Types.

(E45403) Magneto-Inductive (MI) Firing Device Receiver (M40) has the capability of detonating a secondary explosive lead, an M7 non-electric military blasting cap or Modernized Demolition Initiator. It is the receiver for the M156 Remote Firing Device, which can provide reliable wireless initiation of demolition charges through all mediums. This item is Code A, approved for service use.

(E45404) The M17A1 Receiver, Radio Frequency Remote Activation Munition System (RF-RAMS) (DODIC MP47) is a one-time use receiver that provides the un-tethered capability to wirelessly function/initiate demolition charges or munitions up to and beyond 5 KM line-of-sight/non line-of-sight, once it receives the correct programmed coded signal from the MK152 RF-RAMS transmitter. The Receiver is programmed in the field by an RF-RAMS Transmitter and subsequently responds only to that transmitter. The M17A1 Receiver is a single use item, which is capable of functioning non electric blasting caps or detonation cord. This item is Code B, not approved for service use.

(E50510) Demo Kit, Blasting: Munition Array Charge, XM335, is the neutralizing component to the Standoff Robotic Explosive Hazard Detection System (SREHD), formerly known as the Autonomous Mine Detection System (AMDS). SREHD provides increased survivability through mine and explosive hazards stand-off detection, marking and neutralization capability for the dismounted soldier. The SREHD system is a single payload mounted on a Man Transportable Robotic System (MTRS) platform to conduct all phases of counter explosive hazard detection, marking, and neutralization missions without reconfiguration by combining the detect/mark system with the ability to deploy a neutralizer. To neutralize explosive hazards, the SREHD payload deploys the XM335, a three shape charge array, on top of the target. The shape charges are tailored to penetrate overburden, casing and impact detonate the explosive fill. The neutralizer is detonated using the existing Remote Activation Munition System (RAMS), along with the M50 Shock Tube Initiator. The SREHD system is currently in Engineering Manufacturing Development (EMD), with Milestone (MS) C/Type Classification (TC) Standard in 4th Quarter FY 2017 for Low Rate Initial Production (LRIP) and Full Material Release (FMR) in 4th Quarter FY 2018 for Full Rate Production (FRP). This item is Code B, not approved for service use until Type Classification Standard and Full Material Release.

(E50601) Charge Demolition Block Comp C-4 1-1/4 LB M112 is the primary demolition explosive used by the U.S. Army. The M112 Demolition Block is used for general demolition and, in particular, for destruction of captured enemy ammunition. The block demolition charge consists of 1-1/4 pounds of composition C-4 plastic explosive packed in a Mylar-film bag. Pressure sensitive adhesive tape is provided on one of the rectangular surfaces, allowing quick emplacement by the individual soldier on the object to be destroyed. The explosive may be cut and/or removed from its wrapper and hand molded into a desired shape suited to the target. Upon detonation, the shock wave destroys the target by cutting, breaching or cratering. This item is Code A, approved for service use.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 47: Other Ammunition		P-1 Line Item Number / Title: E55400 / Demolition Munitions, All Types
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>(E51400) M186 Demolition Charge is a 50 foot roll of flexible explosive. It is 3 inches wide and 1/4 inch thick. It can be easily cut and formed into various shapes and is primarily used as a cutting charge. This item is Code A, approved for service use.</p> <p>(E52000) The M4A1 Selectable Light Weight Attack Munition (SLAM) is a multipurpose munition designed to be readily portable and hand-emplaced against lightly armored vehicles, parked aircraft, wheeled or tracked support vehicles, and ammunition or fuel storage sites. The SLAM can be used either day or night during all weather conditions. Man-in-the-loop is required in all attack modes. The improved M4A1 SLAM has several producibility and safety enhancements; these include charges to the mode/time selector switch, housing base and cover assembly and passive sensor assembly. A battery bleed resistor was added for improved safety. This item is Code A, approved for service use.</p> <p>(E52500) Cap Blasting Electric M6 is used to initiate high explosives. It is initiated by an electrical charge from a blasting machine or other source of electric power. Blasting cap M6 consists of a base charge of RDX, an intermediate charge of lead azide and an ignition charge of smokeless powder, potassium chlorate and lead salt of dinitro cresol in an aluminum alloy cup. Two 12-foot lead wires, connected by a bridge wire in the ignition charge, extend through a rubber plug assembly in the open end of the cup. This item is Code A, approved for service use.</p> <p>(E54100) Detonating Cord is used to prime and detonate explosive charges. Unlike the time fuze, which burns slowly, detonating cord burns almost instantaneously. It is used to link a series of near simultaneous charges. The Type 1, Class E detonating cord consists of a core of high velocity explosive in a seamless textile tube. The tube is covered with a thin layer of asphalt and sheathed in an outer cover of plastic coated textile. The plastic outer cover is smooth and colored olive drab. This item is Code A, approved for service use.</p> <p>(E56500) Time Blasting Fuze M700 is used to initiate an M7 non-electric blasting cap, which in turn initiates a main charge. It is ignited with an M60 or M81 firing device. The fuze is olive drab with a single yellow band spaced every 18 inches, and a double yellow band spaced every 90 inches to enable the soldier to cut the desired length of fuze without additional measuring tools. The soldier attaches the fuze to the blasting cap with crimping pliers. This item is Code A, Approved for service use.</p> <p>(E59100) The Cartridge Impulse Electrically Initiated is used in Explosive Ordnance Disposal (EOD) tools and equipment. It is an electrically initiated, gas producing device. It is initiated with an MK1-2 squib in place of the percussion primer. This item is Code A, approved for service use.</p> <p>(E76701) The Cutter, High Explosive MK23 MOD 1, is an Explosive Ordnance Disposal (EOD) tool. It is initiated with a blasting cap and uses an explosive formed penetrator to disable a target munition. This item is restricted in the Army to EOD use only. This item is Code A, approved for service use.</p> <p>(E76702) The Cutter, High Explosive MK24 MOD 1, is an Explosive Ordnance Disposal (EOD) tool. It is initiated with a blasting cap and uses an explosive formed penetrator to disable a target munition. This item is restricted in the Army to EOD use only. This item is Code A, approved for service use.</p> <p>(E76728) MK 788-0, Main Charge Disrupter is a device used to render-safe unexploded ordnance (UXO). Upon initiation, the device attacks and neutralizes the main charge explosive by generating reactions up to and including low-order detonations. It is a non-developmental item (NDI) consisting of an energetic tool (ET), a demolition material interface adapter, and an emplacement stand. The MCD provides EOD with an improved neutralization capability in situations where the use of more traditional methods (attacking the fuzing mechanism or high-order detonation) is not possible or desired. This item is Code B, not approved for service use.</p> <p>(E78201) The M980 Demolition Charge is a 20 pound, 38 foot roll of flexible explosive. It is 10 inches wide and .083 inches thick. It can be easily cut and formed into various shapes and is primarily used as a cutting charge. This item is Code A, approved for service use.</p> <p>(E81302) Cap Blasting Non-Elec, W/30 ft Shock Tube is part of the family of Modern Demolition Initiators (MDI). It consists of a blasting cap which is factory sealed to a length of shock tube. The tube is activated using an M81 igniter. A shock wave travels the length of the tube, with a delay measured in milliseconds, and ignites the blasting cap which in turn initiates the main charge. The MDI is not susceptible to electrostatic discharge or Radio Frequency (RF) jamming. The 30 foot length is generally used as a linking charge for a series of demolitions. This item is Code A, approved for service use.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 47: Other Ammunition		P-1 Line Item Number / Title: E55400 / Demolition Munitions, All Types
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>(E81307) Igniter, Time Fuze and Shock Tube, M81 is a device, hand held by the individual Soldier, with a small primer charge that will activate the M700 Time Fuze as well as a shock tube. It is the primary device for all non-electrical demolition initiation. This item is Code A, approved for service use.</p> <p>(E99903) Blast Cap, Non-Elec: 500Ft Minitube, M21 is part of the family of Modern Demolition Initiators (MDI). It consists of an initiating component used to activate standard military explosives and demolition devices. The MDI is not susceptible to electrostatic discharge or Radio Frequency (RF) jamming. This item is Code A, approved for service use.</p> <p>(E99905) Blast Cap, Non-Elec, 1000Ft Minitube, M23 is part of the family of Modern Demolition Initiators (MDI). It consists of an initiating component used to activate standard military explosives and demolition devices. The MDI is not susceptible to electrostatic discharge or Radio Frequency (RF) jamming. This item is Code A, approved for service use.</p>		
<p>Justification: 2018 Base Budget support critical Army Title 10 war reserve/operational, training, and test requirements IAW DoD Instruction 3000.04 (Munitions Requirements Process) and AR 5-13 (Total Army Munitions Requirements Process and Prioritization System). War reserve requirements support OSD-approved Combatant Commander Operational Plans, Homeland Defense, and other OSD-directed missions. Training requirements support individual and collective training of Active and Reserve Component forces at Army schools, home station and the combined training centers. Test requirements support the development, fielding, safety and quality assurance of Army munitions and equipment throughout their life-cycle.</p> <p>In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.</p> <p>The FY 2018 Base procurement dollars in the amount of \$19.345 million supports production of 14 variants of Demolitions.</p> <p>(E45403) Magneto-Inductive (MI) Firing Device Receiver (M40) This is a training standard item used in training and combat. Request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. TYPE CLASSIFICATION DATE: June 2011</p> <p>(E45404) M17A1 Receiver, Radio Frequency Remote Activation Munition System (RF-RAMS) This is a training standard item used in training and combat. The FY 2018 request supports annual training and builds a war reserve in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$1.200 million supports the production of RF-RAMS. TYPE CLASSIFICATION DATE: 2001</p> <p>(E50510) Demo Kit, Blasting: Munition Array Charge, XM335 This is a training standard item used in both training and combat. The FY 2018 request supports annual training and builds a war reserve inventory in accordance with Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$1.586 million supports the production of 348 XM335 Munition Array Charges. E50510 is a new start in FY 2018. TYPE CLASSIFICATION DATE: 2019</p> <p>(E50601) Charge Demo BLK Comp C-4 1-1/4 LB M112 This is a training standard item used in training and combat. FY 2018 request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$0.200 million supports the production of 4,535 Demolitions Blocks, C-4. TYPE CLASSIFICATION DATE: 1964</p> <p>(E51400) M186 Demolition Charge This is a training standard item used in training and combat. The FY 2018 request supports annual training and builds a war reserve in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$1.500 million supports the production of 19,959 Demolition Charges. E51400 is a new start in FY 2018.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 47: Other Ammunition		P-1 Line Item Number / Title: E55400 / Demolition Munitions, All Types
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		
TYPE CLASSIFICATION DATE: 1968		
(E52000) Selectable Light Weight Attack Munition (SLAM) This is a training standard item used in training and combat. The FY 2018 request supports annual training and builds a war reserve in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$0.816 million supports the production of SLAMs. E52000 is a new start in FY 2018. TYPE CLASSIFICATION DATE: 2011		
(E52500) Cap, Blasting Electric M6 This is a training standard item used in training and combat. The FY 2018 request supports annual training and builds a war reserve inventory in accordance with Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$1.641 million supports the production of 43,501 Blasting Caps. TYPE CLASSIFICATION DATE: January 1960		
(E54100) Detonating Cord, Type 1 This is a training standard item used in training and combat. FY 2018 request supports annual training and builds a war reserve inventory in accordance with Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$3.300 million supports the production of 7.114 million feet of Type 1 Detonating Cord. TYPE CLASSIFICATION DATE: 1958		
(E56500) Time Blasting Fuze M700 This is a training standard item used in training and combat. The FY 2018 request supports annual training and builds a war reserve in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$0.350 million supports the production of 269,829 Blasting Fuzes. E56500 is a new start in FY 2018. TYPE CLASSIFICATION DATE: January 1958		
(E59100) The Cartridge Impulse Electrically Initiated is used in Explosive Ordnance Disposal (EOD) tools and equipment. This is a training standard item used in training and combat. FY 2018 request supports annual training and builds a war reserve inventory in accordance with Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$1.033 million supports production of 8,131 Cartridges. TYPE CLASSIFICATION DATE: EOD Item Navy Configured		
(E76701) Cutter High Explosive MK23, MOD 1, is an Explosive Ordnance Disposal (EOD) tool. This is a training standard item used in training and combat. Request supports annual training and builds a war reserve inventory in accordance with Army's procurement goals. TYPE CLASSIFICATION DATE: EOD Item Navy Configured		
(E76702) Cutter High Explosive MK24, MOD 1, is an Explosive Ordnance Disposal (EOD) tool. This is a training standard item used in training and combat. Request supports annual training and builds a war reserve inventory in accordance with Army's procurement goals. TYPE CLASSIFICATION DATE: EOD Item Navy Configured		
(E76728) MK 788-0, Main Charge Disrupter This is a training standard item used in training and combat. FY 2018 request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$0.064 million supports procurement of 94 Disrupters. TYPE CLASSIFICATION DATE: EOD Item Navy Configured		
(E78201) M980 Demolition Charge, 38 foot Sheet Explosive This is a training standard item used in training and combat. FY 2018 request supports annual training and builds a war reserve inventory in accordance with Army's procurement goals.		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 47: Other Ammunition		P-1 Line Item Number / Title: E55400 / Demolition Munitions, All Types
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>FY 2018 Base procurement dollars in the amount of \$1.200 million supports production of 34,235 feet of Sheet Explosive. TYPE CLASSIFICATION DATE: EOD Item Navy Configured</p> <p>(E81302) Cap Blasting Non-Electric, W/30 ft Shock Tube is part of the family of Modernized Demolition Initiators. This is a training standard item used in training and combat. Request supports annual training and builds a war reserve inventory in accordance with Army's procurement goals. TYPE CLASSIFICATION DATE: April 1996</p> <p>(E81307) Igniter, Time Fuze and Shock Tube, M81 This is a training standard item used in training and combat. FY 2018 request supports annual training and builds a war reserve inventory in accordance with Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$1.058 million supports production of 155,992 Igniters. TYPE CLASSIFICATION DATE: April 1996</p> <p>(E99903) Blast Cap, Non-Elec: 500Ft Minitube, M21 is part of the family of Modern Demolition Initiators (MDI). This is a training standard item used in training and combat. FY 2018 request supports annual training and builds a war reserve inventory in accordance with Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$2.647 million supports production of 34,555 Blasting Caps. TYPE CLASSIFICATION DATE: April 1996</p> <p>(E99905) Blast Cap, Non-Elec, 1000Ft Minitube, M23 is part of the family of Modern Demolition Initiators (MDI). This is a training standard item used in training and combat. FY 2018 request supports annual training and builds a war reserve inventory in accordance with Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$2.750 million supports production of 23,999 Blasting Caps. TYPE CLASSIFICATION DATE: April 1996</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 47: Other Ammunition	P-1 Line Item Number / Title: E34000 / Grenades, All Types
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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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	957.658	19.993	26.903	22.759	-	22.759	25.779	23.340	23.760	40.714	-	1,140.906
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	957.658	19.993	26.903	22.759	-	22.759	25.779	23.340	23.760	40.714	-	1,140.906
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	957.658	19.993	26.903	22.759	-	22.759	25.779	23.340	23.760	40.714	-	1,140.906

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

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

Description:

This budget line includes Grenades, All Types.

(E31900)FUZE GRENADE HAND PRAC M228

Fuze Grenade Hand Practice M228 is a pyrotechnic delay-igniting fuze (delay time of 4 to 5.5 seconds) for use with the M69 practice grenade body. The assembled grenade is identical in size, shape and weight to the M67 fragmentation hand grenade, and is used to learn and practice grenade throwing skills. The fuze contains a primer and a pyrotechnic delay column. A striker, striker spring, safety lever, safety pin with pull ring, safety clip, and igniter assembly are assembled to the body. This item is Code A, approved for service use.

(E32000)GRENADE HAND FRAG DELAY M67

Grenade Hand Fragmentation Delay M67 consists of a 2.5-inch diameter steel sphere that is designed to burst into numerous fragments when detonated. The grenade body is filled with 5.4 ounces of high explosive, Composition B. Each grenade is fitted with an M213 fuze that initiates the explosive charge 4 to 5.5 seconds after release of the safety lever. The M67 Hand Grenade provides the Warfighter with the capability to conduct pre-mobilization training and the capability to conduct close combat operations. This item is Code A, approved for service use.

(E34001)GRENADE HAND SMOKE GREEN M18

Grenade Hand Smoke Green M18 is used by the Warfighter for ground-to-air or ground-to-ground signaling while conducting training and combat operations. Each grenade will emit smoke for 50 to 90 seconds. The grenade body is made of thin sheet metal, filled with starter patches and a green smoke composition. The Hand Grenade Fuze M201A1 is a pyrotechnic delay-igniting fuze. The body contains a primer, first-fire mix, pyrotechnic delay column, and ignition mixture. Assembled to the body are a striker, striker spring, safety lever, and safety pin with pull ring. This item is Code A, approved for service use.

(E34002)GRENADE HAND SMOKE YELLOW M18

Grenade Hand Smoke Yellow M18 is used by the Warfighter for ground-to-air or ground-to-ground signaling while conducting training and combat operations. Each grenade will emit smoke for 50 to 90 seconds. The grenade body is made of thin sheet metal, filled with starter patches and a yellow smoke composition. The Hand Grenade Fuze M201A1 is a pyrotechnic delay-igniting fuze. The body contains a primer, first-fire mix, pyrotechnic delay column, and ignition mixture. Assembled to the body are a striker, striker spring, safety lever, and safety pin with pull ring. This item is Code A, approved for service use.

(E34004)GRENADE HAND SMOKE VIOLET M18

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 47: Other Ammunition		P-1 Line Item Number / Title: E34000 / Grenades, All Types
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>Grenade Hand Smoke Violet M18 is used by the Warfighter for ground-to-air or ground-to-ground signaling while conducting training and combat operations. Each grenade will emit smoke for 50 to 90 seconds. The grenade body is made of thin sheet metal, filled with starter patches and a violet smoke composition. The Hand Grenade Fuze M201A1 is a pyrotechnic delay-igniting fuze. The body contains a primer, first-fire mix, pyrotechnic delay column and ignition mixture. Assembled to the body are a striker, striker spring, safety lever, and safety pin with pull ring. This item is Code A, approved for service use.</p> <p>(E69300)GRENADE HAND SMOKE WHITE M83 Grenade Hand Smoke (White) M83 provides the Warfighter the capability to generate white smoke for screening activities while conducting small unit operations. It is also used for ground-to-air signaling. This grenade is the tactical replacement for the M8 HC Smoke Grenade, which was found to be carcinogenic. The duration of smoke screen or signal is 25 to 70 seconds, average burn time. The grenade body is a cylinder of thin sheet metal. It is filled with non-toxic smoke mixture topped with a starter patch. The Hand Grenade Fuze M201A1 is a pyrotechnic delay-igniting fuze. The body contains a primer, first-fire mix, pyrotechnic delay column, and ignition mixture. Assembled to the body are a striker, striker spring, safety lever, and safety pin with pull ring. This item is Code A, approved for service use.</p> <p>(E34250)GRENADE HAND OFFENSIVE MK3 SERIES W/FUZE MK3 Hand Grenade consists of a 2.5 inch diameter plastic hexagonal body that is designed to burst and provide overpressure effective against enemy troops in indoor and close combat environments where fragments are not desired to reduce collateral damage. The grenade body is filled with 8oz of high explosive Pax-3. Each grenade is fitted with an M213 fuze that initiates the explosive charge 4 to 5.5 seconds after release of safety lever. MK3 will be replaced by XM111. XM111 provides the warfighter with the capability to conduct pre-mobilization training and the capability to conduct close combat operations. This item is code B, approved for restricted use.</p> <p>(E35800)BODY GRENADE HAND PRAC M69 Body, Grenade Hand Practice M69 is a reusable metal fuze body used with the M228 practice hand grenade fuze, which provides a pyrotechnic delay smoke and bang effect to simulate the M67 fragmentation grenade. The assembled grenade (body and fuze) is identical in size, shape and weight to the M67 fragmentation hand grenade and is used to learn and practice grenade throwing skills. This item is Code A, approved for service use.</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date: May 2017**

Appropriation / Budget Activity / Budget Sub Activity:
2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 47: Other Ammunition

P-1 Line Item Number / Title:
E34000 / Grenades, All Types

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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 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	E31900 / FUZE GRENADE HAND PRAC M228 [G878]		A		36,245,265 / 260.241	- / 3.080	- / 2.502	- / 2.504	- / -	- / 2.504
P-5	E32000 / GRENADE HAND FRAG DELAY M67 [G881]	P-5a	A		9,388,300 / 294.511	145,237 / 7.751	313,744 / 15.976	198,276 / 10.181	- / -	198,276 / 10.181
P-5	E34001 / GRENADE HAND SMOKE GREEN M18 [G940]		A		3,809,224 / 159.874	46,704 / 2.790	44,336 / 2.875	43,766 / 2.987	- / -	43,766 / 2.987
P-5	E34002 / GRENADE HAND SMOKE YELLOW M18 [G945]		A		1,962,683 / 85.573	27,936 / 1.800	26,911 / 1.836	26,119 / 1.872	- / -	26,119 / 1.872
P-5	E34004 / GRENADE HAND SMOKE VIOLET M18 [G955]		A		1,151,167 / 52.240	9,456 / 0.700	10,085 / 0.714	9,835 / 0.728	- / -	9,835 / 0.728
P-5	E34250 / GRENADE, HAND, OFFENSIVE, MK3 SERIES, W/FUZE [GG37]		B		- / -	- / -	- / -	2,161 / 0.927	- / -	2,161 / 0.927
P-5	E35800 / BODY GRENADE HAND PRAC M69 [G811]		A		- / 1.730	- / -	- / -	8,706 / 0.500	- / -	8,706 / 0.500
P-5	E69300 / GRENADE HAND SMOKE (WHITE) M83 [G982]		A		5,063,788 / 103.200	81,946 / 3.872	52,542 / 3.000	53,221 / 3.060	- / -	53,221 / 3.060
P-40	Total Gross/Weapon System Cost				- / 957.658	- / 19.993	- / 26.903	- / 22.759	- / -	- / 22.759

*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 2018 Base Budget supports critical Army Title 10 war reserve/operational, training, and test requirements IAW DoD Instruction 3000.04 (Munitions Requirements Process) and AR 5-13 (Total Army Munitions Requirements Process and Prioritization System). War reserve requirements support OSD-approved Combatant Commander Operational Plans, Homeland Defense, and other OSD-directed missions. Training requirements support individual and collective training of Active and Reserve Component forces at Army schools, home station, and the combined training centers. Test requirements support the development, fielding, safety, and quality assurance of Army munitions and equipment throughout their life-cycle.

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.

The FY 2018 Base procurement dollars in the amount of \$22.759 million supports procurement of eight variants of Grenades.

(E31900)FUZE GRENADE HAND PRAC M228

This is a training unique item not used in combat. FY 2018 procurement supports annual training and builds a depot level in accordance with Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$2.504 million supports the Recapitalization of 469,371 fuzes.

TYPE CLASSIFICATION DATE: March 1971

(E32000)GRENADE HAND FRAG DELAY M67

This is a training standard item used in both training and combat. FY 2018 procurement supports annual training and builds a war reserve inventory in accordance with Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$10.181 million supports the procurement of 198,276 grenades.

TYPE CLASSIFICATION DATE: March 1970

(E34001)GRENADE HAND SMOKE GREEN M18

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 47: Other Ammunition		P-1 Line Item Number / Title: E34000 / Grenades, All Types
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>This is a training standard item used in both training and combat. FY 2018 procurement supports annual training and builds a war reserve inventory in accordance with Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$2.987 million supports the procurement of 43,766 grenades. TYPE CLASSIFICATION DATE: September 1943</p> <p>(E34002)GRENADE HAND SMOKE YELLOW M18 This is a training standard item used in both training and combat. FY 2018 procurement supports annual training and builds war reserve inventory in accordance with Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$1.872 million supports the procurement of 26,119 grenades. TYPE CLASSIFICATION DATE: September 1943</p> <p>(E34004)GRENADE HAND SMOKE VIOLET M18 This is a training standard item used in both training and in combat. FY 2018 procurement supports annual training and builds a war reserve inventory in accordance with Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$0.728 million supports the procurement of 9,835 grenades. TYPE CLASSIFICATION DATE: September 1943</p> <p>(E69300)GRENADE HAND SMOKE WHITE M83 This is a training standard item used in both training and combat. FY 2018 procurement supports annual training and builds a war reserve inventory in accordance with Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$3.060 million supports the procurement of 53,221 grenades. TYPE CLASSIFICATION DATE: July 1994</p> <p>(E34250)GRENADE HAND OFFENSIVE MK3 SERIES This is a training standard item used in both training and combat. FY 2018 procurement supports annual training and builds a war reserve inventory in accordance with Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$.927 million supports the procurement of 2,161 grenades.E34250 is a new start in FY 2018. TYPE CLASSIFICATION DATE: November 1970</p> <p>(E35800)BODY GRENADE HAND PRAC M69 This is a training standard item used in both training and combat. FY 2018 procurement supports annual training and builds a war reserve inventory in accordance with Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$.500 million supports the procurement of 8,706 grenades. E35800 is a new start in FY 2018. TYPE CLASSIFICATION DATE: March 1971</p>		

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 47	P-1 Line Item Number / Title: E34000 / Grenades, All Types	Item Number / Title [DODIC]: E31900 / FUZE GRENADE HAND PRAC M228 [G878]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	36,245,265	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	260.241	3.080	2.502	2.504	-	2.504
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	260.241	3.080	2.502	2.504	-	2.504
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	260.241	3.080	2.502	2.504	-	2.504

(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 Dollars)	7.18	-	-	-	-	-

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND	7.18	36,245,265	260.241	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	260.241	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware Cost	-	-	260.241	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - Product Improvement Cost																		
Safety	-	-	-	-	-	2.301	-	-	1.715	-	-	1.745	-	-	-	-	-	1.745
Subtotal: Support - Product Improvement Cost	-	-	-	-	-	2.301	-	-	1.715	-	-	1.745	-	-	-	-	-	1.745
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	0.776	-	-	0.787	-	-	0.759	-	-	-	-	-	0.759
Subtotal: Support - Production Engineering Cost	-	-	-	-	-	0.776	-	-	0.787	-	-	0.759	-	-	-	-	-	0.759
Support - Quality Assurance Cost																		
Quality Assurance	-	-	-	-	-	0.003	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Support - Quality Assurance Cost	-	-	-	-	-	0.003	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	7.18	36,245,265	260.241	-	-	3.080	-	-	2.502	-	-	2.504	-	-	-	-	-	2.504

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 47	P-1 Line Item Number / Title: E34000 / Grenades, All Types	Item Number / Title [DODIC]: E32000 / GRENADE HAND FRAG DELAY M67 [G881]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	9,388,300	145,237	313,744	198,276	-	198,276
Gross/Weapon System Cost (\$ in Millions)	294.511	7.751	15.976	10.181	-	10.181
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	294.511	7.751	15.976	10.181	-	10.181
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	294.511	7.751	15.976	10.181	-	10.181

(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 Dollars)	31.37	53.37	50.92	51.35	-	51.35

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE GRENADE ^(t)	31.37	9,388,300	294.511	36.27	145,237	5.268	43.12	313,744	13.530	38.62	198,276	7.657	-	-	-	38.62	198,276	7.657
Subtotal: Recurring Cost	-	-	294.511	-	-	5.268	-	-	13.529	-	-	7.657	-	-	-	-	-	7.657
Subtotal: Hardware Cost	-	-	294.511	-	-	5.268	-	-	13.529	-	-	7.657	-	-	-	-	-	7.657
Support - Product Improvement Cost																		
Reliability	-	-	-	-	-	0.086	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Support - Product Improvement Cost	-	-	-	-	-	0.086	-	-	-	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	2.381	-	-	2.438	-	-	2.493	-	-	-	-	-	2.493
Subtotal: Support - Production Engineering Cost	-	-	-	-	-	2.381	-	-	2.438	-	-	2.493	-	-	-	-	-	2.493
Support - Quality Assurance Cost																		
Quality Assurance	-	-	-	-	-	0.017	-	-	0.008	-	-	0.030	-	-	-	-	-	0.030
Subtotal: Support - Quality Assurance Cost	-	-	-	-	-	0.017	-	-	0.008	-	-	0.030	-	-	-	-	-	0.030
Gross/Weapon System Cost	31.37	9,388,300	294.511	53.37	145,237	7.751	50.92	313,744	15.976	51.35	198,276	10.181	-	-	-	51.35	198,276	10.181

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

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: FY 2018 Army							Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 47			P-1 Line Item Number / Title: E34000 / Grenades, All Types				Item Number / Title [DODIC]: E32000 / GRENADE HAND FRAG DELAY M67 [G881]				

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>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
COMPLETE GRENADE		2016	DAY & ZIMMERMANN LONE STAR / TEXARKANA, TX	C / FFP	ROCK ISLAND ARSENAL, IL	Apr 2016	Oct 2017	145,237	36.27	Y		
COMPLETE GRENADE		2017	DAY & ZIMMERMANN LONE STAR / TEXARKANA, TX	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2017	Sep 2018	313,744	43.12	Y		
COMPLETE GRENADE		2018	DAY & ZIMMERMANN LONE STAR / TEXARKANA, TX	C / FFP	ROCK ISLAND ARSENAL, IL	Mar 2018	Sep 2019	198,276	38.62	Y		

Remarks:
FY 2017 and FY 2018 is a delivery order to an existing contract FY 2017 is a delivery order to an existing contract

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 47		P-1 Line Item Number / Title: E34000 / Grenades, All Types
		Item Number / Title [DODIC]: E34001 / GRENADE HAND SMOKE GREEN M18 [G940]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	3,809,224	46,704	44,336	43,766	-	43,766
Gross/Weapon System Cost (\$ in Millions)	159.874	2.790	2.875	2.987	-	2.987
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	159.874	2.790	2.875	2.987	-	2.987
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	159.874	2.790	2.875	2.987	-	2.987

(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 Dollars)	41.97	59.74	64.85	68.25	-	68.25

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
Load, Assemble, Pack (Lap)	41.97	3,809,244	159.874	33.49	46,704	1.564	35.94	44,336	1.593	38.20	43,766	1.672	-	-	-	38.20	43,766	1.672
FUZE,HAND GRENADE M201	-	-	-	8.52	48,572	0.414	8.78	46,109	0.405	9.00	45,516	0.410	-	-	-	9.00	45,516	0.410
Grenade, Metal Parts Set	-	-	-	1.95	50,440	0.098	1.95	47,882	0.093	1.95	47,267	0.092	-	-	-	1.95	47,267	0.092
<i>Subtotal: Recurring Cost</i>	-	-	<i>159.874</i>	-	-	<i>2.076</i>	-	-	<i>2.092</i>	-	-	<i>2.174</i>	-	-	-	-	-	<i>2.174</i>
<i>Subtotal: Hardware Cost</i>	-	-	<i>159.874</i>	-	-	<i>2.076</i>	-	-	<i>2.092</i>	-	-	<i>2.174</i>	-	-	-	-	-	<i>2.174</i>
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	0.708	-	-	0.776	-	-	0.808	-	-	-	-	-	0.808
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	<i>0.708</i>	-	-	<i>0.776</i>	-	-	<i>0.808</i>	-	-	-	-	-	<i>0.808</i>
Support - Quality Assurance Cost																		
Quality Assurance	-	-	-	-	-	0.006	-	-	0.007	-	-	0.006	-	-	-	-	-	0.006
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	-	-	-	<i>0.006</i>	-	-	<i>0.007</i>	-	-	<i>0.006</i>	-	-	-	-	-	<i>0.006</i>
Gross/Weapon System Cost	41.97	3,809,224	159.874	59.74	46,704	2.790	64.85	44,336	2.875	68.25	43,766	2.987	-	-	-	68.25	43,766	2.987

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 47	P-1 Line Item Number / Title: E34000 / Grenades, All Types	Item Number / Title [DODIC]: E34002 / GRENADE HAND SMOKE YELLOW M18 [G945]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (<i>Units in Each</i>)	1,962,683	27,936	26,911	26,119	-	26,119
Gross/Weapon System Cost (<i>\$ in Millions</i>)	85.573	1.800	1.836	1.872	-	1.872
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	85.573	1.800	1.836	1.872	-	1.872
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	85.573	1.800	1.836	1.872	-	1.872

(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 Dollars</i>)	43.60	64.43	68.22	71.67	-	71.67

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
Load, Assemble, Pack (Lap)	43.60	1,962,683	85.573	36.28	27,936	1.014	38.88	26,911	1.046	41.13	26,119	1.074	-	-	-	41.13	26,119	1.074
FUZE,HAND GRENADE M201	-	-	-	8.52	29,053	0.248	8.78	27,987	0.246	9.00	27,163	0.244	-	-	-	9.00	27,163	0.244
Grenade, Metal Parts Set	-	-	-	1.95	30,171	0.059	1.95	29,063	0.057	1.95	28,208	0.055	-	-	-	1.95	28,208	0.055
<i>Subtotal: Recurring Cost</i>	-	-	<i>85.573</i>	-	-	<i>1.320</i>	-	-	<i>1.349</i>	-	-	<i>1.374</i>	-	-	-	-	-	<i>1.374</i>
<i>Subtotal: Hardware Cost</i>	-	-	<i>85.573</i>	-	-	<i>1.320</i>	-	-	<i>1.349</i>	-	-	<i>1.374</i>	-	-	-	-	-	<i>1.374</i>
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	0.474	-	-	0.480	-	-	0.491	-	-	-	-	-	0.491
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	<i>0.474</i>	-	-	<i>0.480</i>	-	-	<i>0.491</i>	-	-	-	-	-	<i>0.491</i>
Support - Quality Assurance Cost																		
Quality Assurance	-	-	-	-	-	0.006	-	-	0.007	-	-	0.007	-	-	-	-	-	0.007
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	-	-	-	<i>0.006</i>	-	-	<i>0.007</i>	-	-	<i>0.007</i>	-	-	-	-	-	<i>0.007</i>
Gross/Weapon System Cost	43.60	1,962,683	85.573	64.43	27,936	1.800	68.22	26,911	1.836	71.67	26,119	1.872	-	-	-	71.67	26,119	1.872

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 47	P-1 Line Item Number / Title: E34000 / Grenades, All Types	Item Number / Title [DODIC]: E34004 / GRENADE HAND SMOKE VIOLET M18 [G955]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	1,151,167	9,456	10,085	9,835	-	9,835
Gross/Weapon System Cost (\$ in Millions)	52.240	0.700	0.714	0.728	-	0.728
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	52.240	0.700	0.714	0.728	-	0.728
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	52.240	0.700	0.714	0.728	-	0.728

(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 Dollars)	45.38	74.03	70.80	74.02	-	74.02

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
Load, Assemble, Pack (Lap)	45.38	1,151,167	52.240	38.20	9,456	0.361	40.89	10,085	0.412	43.15	9,835	0.424	-	-	-	43.15	9,835	0.424
FUZE,HAND GRENADE M201	-	-	-	8.52	9,834	0.084	8.78	10,488	0.092	9.00	10,228	0.092	-	-	-	9.00	10,228	0.092
Grenade, Metal Parts Set	-	-	-	1.95	10,212	0.020	1.95	10,891	0.021	1.95	10,621	0.021	-	-	-	1.95	10,621	0.021
<i>Subtotal: Recurring Cost</i>	-	-	52.240	-	-	0.465	-	-	0.526	-	-	0.537	-	-	-	-	-	0.537
<i>Subtotal: Hardware Cost</i>	-	-	52.240	-	-	0.465	-	-	0.526	-	-	0.537	-	-	-	-	-	0.537
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	0.229	-	-	0.183	-	-	0.187	-	-	-	-	-	0.187
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	0.229	-	-	0.183	-	-	0.187	-	-	-	-	-	0.187
Support - Quality Assurance Cost																		
Quality Assurance	-	-	0.000	-	-	0.006	-	-	0.006	-	-	0.004	-	-	-	-	-	0.004
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	0.000	-	-	0.006	-	-	0.006	-	-	0.004	-	-	-	-	-	0.004
Gross/Weapon System Cost	45.38	1,151,167	52.240	74.03	9,456	0.700	70.80	10,085	0.714	74.02	9,835	0.728	-	-	-	74.02	9,835	0.728

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 47	P-1 Line Item Number / Title: E34000 / Grenades, All Types	Item Number / Title [DODIC]: E34250 / GRENADE, HAND, OFFENSIVE, MK3 SERIES, W/FUZE [GG37]

ID Code (A=Service Ready, B=Not Service Ready) : B	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	2,161	-	2,161
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	-	-	0.927	-	0.927
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	-	-	0.927	-	0.927
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	-	-	0.927	-	0.927

(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 Dollars</i>)	-	-	-	428.97	-	428.97

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND	-	-	-	-	-	-	-	-	-	91.80	2,161	0.198	-	-	-	91.80	2,161	0.198
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.198	-	-	-	-	-	0.198
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.198	-	-	-	-	-	0.198
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	-	-	-	-	-	-	0.724	-	-	-	-	-	0.724
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.724	-	-	-	-	-	0.724
Support - Quality Assurance Cost																		
Quality Assurance	-	-	-	-	-	-	-	-	-	-	-	0.005	-	-	-	-	-	0.005
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.005	-	-	-	-	-	0.005
Gross/Weapon System Cost	-	-	-	-	-	-	-	-	-	428.97	2,161	0.927	-	-	-	428.97	2,161	0.927

UNCLASSIFIED

Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 47	P-1 Line Item Number / Title: E34000 / Grenades, All Types	Item Number / Title [DODIC]: E35800 / BODY GRENADE HAND PRAC M69 [G811]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	8,706	-	8,706
Gross/Weapon System Cost <i>(\$ in Millions)</i>	1.730	-	-	0.500	-	0.500
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	1.730	-	-	0.500	-	0.500
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	1.730	-	-	0.500	-	0.500

(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 Dollars)</i>	-	-	-	57.43	-	57.43

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
COMPLETE ROUND	-	-	1.730	-	-	-	-	-	-	14.94	8,706	0.130	-	-	-	14.94	8,706	0.130
<i>Subtotal: Recurring Cost</i>	-	-	<i>1.730</i>	-	-	-	-	-	-	-	-	<i>0.130</i>	-	-	-	-	-	<i>0.130</i>
Subtotal: Hardware Cost	-	-	1.730	-	-	-	-	-	-	-	-	0.130	-	-	-	-	-	0.130
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	-	-	-	-	-	-	0.365	-	-	-	-	-	0.365
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	-	-	-	-	-	-	<i>0.365</i>	-	-	-	-	-	<i>0.365</i>
Support - Quality Assurance Cost																		
Quality Assurance	-	-	-	-	-	-	-	-	-	-	-	0.005	-	-	-	-	-	0.005
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	-	-	-	-	-	-	-	-	-	<i>0.005</i>	-	-	-	-	-	<i>0.005</i>
Gross/Weapon System Cost	-	-	1.730	-	-	-	-	-	-	57.43	8,706	0.500	-	-	-	57.43	8,706	0.500

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 01 / 47	P-1 Line Item Number / Title: E34000 / Grenades, All Types	Item Number / Title [DODIC]: E69300 / GRENADE HAND SMOKE (WHITE) M83 [G982]

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	5,063,788	81,946	52,542	53,221	-	53,221
Gross/Weapon System Cost (\$ in Millions)	103.200	3.872	3.000	3.060	-	3.060
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	103.200	3.872	3.000	3.060	-	3.060
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	103.200	3.872	3.000	3.060	-	3.060

(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 Dollars)	20.38	47.26	57.10	57.50	-	57.50

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
LOAD, ASSEMBLE, PACK (LAP)	20.38	5,063,788	103.200	24.05	81,946	1.971	25.34	52,542	1.331	28.50	53,221	1.517	-	-	-	28.50	53,221	1.517
FUZE,HAND GRENADE M201	-	-	-	8.52	85,224	0.726	8.78	54,643	0.480	9.00	55,349	0.498	-	-	-	9.00	55,349	0.498
GRENADE, METAL PARTS SET	-	-	-	1.95	88,502	0.173	1.95	56,745	0.111	1.95	57,478	0.112	-	-	-	1.95	57,478	0.112
<i>Subtotal: Recurring Cost</i>	-	-	<i>103.200</i>	-	-	<i>2.869</i>	-	-	<i>1.922</i>	-	-	<i>2.127</i>	-	-	-	-	-	<i>2.127</i>
<i>Subtotal: Hardware Cost</i>	-	-	<i>103.200</i>	-	-	<i>2.869</i>	-	-	<i>1.922</i>	-	-	<i>2.127</i>	-	-	-	-	-	<i>2.127</i>
Support - Production Engineering Cost																		
Production Engineering	-	-	-	-	-	0.995	-	-	1.070	-	-	0.925	-	-	-	-	-	0.925
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	-	-	-	<i>0.995</i>	-	-	<i>1.070</i>	-	-	<i>0.925</i>	-	-	-	-	-	<i>0.925</i>
Support - Quality Assurance Cost																		
Quality Assurance	-	-	-	-	-	0.008	-	-	0.008	-	-	0.008	-	-	-	-	-	0.008
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	-	-	-	<i>0.008</i>	-	-	<i>0.008</i>	-	-	<i>0.008</i>	-	-	-	-	-	<i>0.008</i>
Gross/Weapon System Cost	20.38	5,063,788	103.200	47.26	81,946	3.872	57.10	52,542	3.000	57.50	53,221	3.060	-	-	-	57.50	53,221	3.060

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 47: Other Ammunition	P-1 Line Item Number / Title: E46900 / Signals, All Types
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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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	648.514	17.761	12.518	2.583	1.013	3.596	17.502	19.024	18.089	34.489	-	771.493
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	648.514	17.761	12.518	2.583	1.013	3.596	17.502	19.024	18.089	34.489	-	771.493
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	648.514	17.761	12.518	2.583	1.013	3.596	17.502	19.024	18.089	34.489	-	771.493

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

Description:

This budget line includes Signals, All Types.

(E49500) FUSEE WARNING RR RED 20 MIN M72

COTS item. Item is a red railroad or highway flare and available commercially. The purpose of the M72 is to outline emergency airfield boundaries under poor visibility conditions, as well as for recognition and signaling along railroads rights-of-way. This item is Code A, approved for service use.

(E42010) Flares And Markers, Watercraft

The marker is launched from high-speed aircraft or helicopters in either day or night to mark the course of enemy submarines in antisubmarine warfare operations. They can be used for any type of air to sea surface marking that are referenced by smoke and flame. This item is Code A, approved for service use.

(E62900) SMOKE POT PRACTICE M8

The M8 Smoke Pot is a five-gallon metal pail containing about 25 pounds of environmentally acceptable smoke mixture. It is initiated by a pyrotechnic delay igniting fuze. After ignition and about a 25-second delay, a dense smoke cloud is produced for screening purposes to conceal troop, vehicle, or other march movements. It is deployed in a similar manner as the service smoke pots, M4 series and M5. It is used by the individual Soldier in squad, company and battalion units. This item is Code A, approved for service use.

(E46400) Signal, Hand Held Red Star Cluster M158

The Family of Hand Held Signals are individually launched pyrotechnics used for signaling and illumination. The payload is launched by a small, fin stabilized rocket and reaches a height of 725 feet. The M158 is the red star cluster signal used primarily as a distress signal. The payload is a cluster of five flares that burn for approximately 10 seconds. This item is Code A, approved for service use.

(E46500) Signal, Hand Held White Star Cluster M159

The Family of Hand Held Signals are individually launched pyrotechnics used for signaling and illumination. The payload is launched by a small, fin stabilized rocket and reaches a height of 725 feet. The M159 is a white star cluster used primarily for signaling. The payload is a cluster of five flares that burn for approximately 10 seconds. This item is Code A, approved for service use.

(E46700) Signal, Hand Held Red parachute Flare M126A1

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 47: Other Ammunition		P-1 Line Item Number / Title: E46900 / Signals, All Types
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>The Family of Hand Held Signals are individually launched pyrotechnics used for signaling and illumination. The payload is launched by a small, fin stabilized rocket and reaches a height of 725 feet. The M126A1 is a red parachute flare used primarily as a distress signal. The flare burns for approximately 30 seconds. This item is Code A, approved for service use.</p> <p>(E46800) Signal, Hand Held White Parachute Flare M127 The Family of Hand Held Signals are individually launched pyrotechnics used for signaling and illumination. The payload is launched by a small, fin stabilized rocket and reaches a height of 725 feet. The M127A1 is a white parachute flare used primarily for illumination. The flare burns for approximately 30 seconds. This item is Code A, approved for service use.</p> <p>(E47000) Signal, Hand Held Green Star Cluster M125A1 The Family of Hand Held Signals which are individually launched pyrotechnics used for signaling and illumination. The payload is launched by a small, fin stabilized rocket and reaches a height of 725 feet. M125A1 is a green star cluster signal used for signaling and illuminating missions. The payload is a cluster of five flares that burn for approximately 10 seconds. This item is Code A, approved for service use.</p> <p>(E49100) Flare, AC Countermeasure, M206 Magnesium Teflon IR The M206 flares are part of a family of advanced IR decoy flares designed for use by Army helicopters and fixed wing aircraft to meet advanced threats in current and future operational environments. This flare is a Magnesium Teflon Viton flare. When used together with the M212, a spectrally matched flare, and the M211, a pyrophoric alloy material payload that reacts with air to emit intense IR radiation, it provides protection against a wide range of surface to air threats. This item is Code A, approved for service use.</p> <p>(E57600) CTG 25.4 MM DECOY CHAFF M839 The M839 is part of a family of advanced radar frequency (RF) Chaff decoys designed for use by Army helicopters and fixed wing aircraft against radar controlled weapon systems. The M839 is in a 1x1x8 form factor in a plastic case. The decoy payload is composed of strands of aluminum coated glass fibers and dipoles. The M839 is delivered with the BBU-35/B and/or M796 impulse cartridge by electrical initiation of the impulse cartridge, When chaff is dispensed, it generates a reflected return signal which obstructs/confuses enemy radar and prevents Army aircraft detection. When used together, the RR170 and M839, provides protection against a wide range of surface-to-air missile (SAM) threats. This item is Code A, approved for service use.</p> <p>(E88900) Flare AC Cntermeasure M211 Pyrophoric Msl IR Decoy These flares are part of the advanced infrared (IR) decoy/flares design, which are dispensed from Army aircraft to protect against advanced Man-portable Air Defense Systems (MANPADS) in current and future operational environments. The M211 uses a special high surface area metal foil, which rapidly oxidizes when exposed to oxygen. When one of the flares is dispensed from the host aircraft, the special pyrophoric material payload reacts with air to emit intense IR radiation that is not visible to the naked eye. The IR radiation diverts heat-seeking missiles away from the aircraft. When used together with the M212, a spectrally matched flare, and the M206, a Magnesium Teflon Viton flare, the flares provide protection against a wide range MANPADS. This item is Code A, approved for service use.</p> <p>(E57605) CTG, 25.4mm, Decoy,Chaff,RR170 (w/Mk1 impulse ctg) The RR170 is part of a family of advanced Radar Frequency (RF) chaff decoys designed for use by both rotary and fixed wing Army aircraft to defeat advance threats in current and future operational environments. The RR170 payload is made up of strands of aluminum coated glass fibers and loaded into a plastic outer case. When chaff is dispensed, it generates a reflected return signal which obstructs/confuses enemy radar and prevents Army aircraft detection. When used together, the RR170 and M839, provides protection against a wide range of surface-to-air missile (SAM) threats. This item is Code A, approved for service use.</p>		
Justification: FY 2018 Base Budget supports critical Army Title 10 war reserve/operational, training, and test requirements IAW DoD Instruction 3000.04 (Munitions Requirements Process) and AR 5-13 (Total Army Munitions Requirements Process and Prioritization System). War reserve requirements support OSD-approved Combatant Commander Operational Plans, Homeland Defense, and other OSD-directed missions. Training requirements support individual and collective training of Active and Reserve Component forces at Army schools, home station, and the combined training centers. Test requirements support the development, fielding, safety, and quality assurance of Army munitions and equipment throughout their life-cycle. <p>FY 2018 OCO funds are required to replenish munitions expended in combat operations in OFS-Afghanistan Theater</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 47: Other Ammunition		P-1 Line Item Number / Title: E46900 / Signals, All Types
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>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>FY 2018 Base procurement dollars in the amount of \$2.583 million supports production of 3 variants of Signals. FY 2018 OCO procurement dollars in the amount of \$1.013 million supports production of 1 variant of Signals.</p> <p>(E49500) FUSEE WARNING RR RED 20 MIN M72 This is a training standard item used in both training and combat. The request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goal. TYPE CLASSIFICATION DATE: NA</p> <p>(E42010) Flares and Markers, Watercraft This is a training standard item used in both training and combat. FY 2018 request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. The FY 2018 Base procurement dollars in the amount of \$1.101 million supports the procurement of 2,826 markers. TYPE CLASSIFICATION DATE: 2011</p> <p>(E62900) Smoke Pot Practice M8 This is a training standard item used in both training and combat. The request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goal. TYPE CLASSIFICATION DATE: 1994</p> <p>(E46400) Signal, Hand Held Red Star Cluster M158 This is a training standard item used in both training and combat. The request supports annual training and builds a war reserve inventory in accordance with the Army procurement goals. TYPE CLASSIFICATION DATE: 1983</p> <p>(E46500) Signal, Hand Held White Star Cluster M159 This is a training standard item used in both training and in combat. The request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goal. TYPE CLASSIFICATION DATE: 1983</p> <p>(E46700) Signal, Hand Held Red parachute Flare M126A1 This is a training standard item used in both training and combat. FY 2018 procurement supports annual training and builds a war reserve inventory in accordance with Army's procurement goals. The FY 2018 Base procurement dollars in the amount of \$0.463 million supports the procurement of 3,954 hand held signals. E46700 is a new start in FY 2018. TYPE CLASSIFICATION DATE: 1983</p> <p>(E46800) Signal, Hand Held White Parachute Flare M127A1 This is a training standard item used both training and combat. The request supports annual training and builds a war reserve inventory in accordance with Army's procurement goals. The FY 2018 Base procurement dollars in the amount of \$1.019 million supports the procurement of 8,873 Signals. TYPE CLASSIFICATION DATE: 1983</p> <p>(E47000) Signal, Hand Held Green Star Cluster M125A1 This is a training standard item used in both training and combat. The request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goal. TYPE CLASSIFICATION DATE: 1983</p> <p>(E49100) Flare, AC Countermeasure, M206 Magnesium Teflon IR</p>		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 47: Other Ammunition		P-1 Line Item Number / Title: E46900 / Signals, All Types
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>This is a training standard item used in both training and combat. The request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goal. FY 2018 OCO funds are required to replenish munitions expended in combat operations by Apache helicopters in OFS-Afghanistan. The FY 2018 OCO procurement dollars in the amount of \$1.013 million support the procurement of 28,834 Signals. TYPE CLASSIFICATION DATE: 1978</p> <p>(E57600) CTG, 25.4mm, Decoy,Chaff,M839 Series (Ctg+Chaff) This is a training standard item used in both training and combat. The request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goal. TYPE CLASSIFICATION DATE: Prior to 1980</p> <p>(E88900) AC Countermeasure M211Pyrophoric Msl IR Decoy This is a training standard item used in both training and combat. The request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goal. TYPE CLASSIFICATION DATE: 2002</p> <p>(E57605) CTG, 25.4mm, Decoy,Chaff,RR170 (w/Mk1 impulse ctg) This is a training standard item used in both training and combat. The request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goal. TYPE CLASSIFICATION DATE: Prior to 1980</p>		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 47: Other Ammunition	P-1 Line Item Number / Title: E51200 / Simulators, All Types
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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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	237.421	9.749	7.412	13.084	-	13.084	14.418	17.241	18.224	14.810	-	332.359
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	237.421	9.749	7.412	13.084	-	13.084	14.418	17.241	18.224	14.810	-	332.359
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	237.421	9.749	7.412	13.084	-	13.084	14.418	17.241	18.224	14.810	-	332.359

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

Description:

This budget line includes Simulators, All Types.

(E49700) M115A2 Artillery Ground Burst Simulator is a hand thrown device that is used in training to simulate battlefield noise and effects (shell in flight and ground explosion) during troop maneuvers. The simulator has a 6-10 second delay followed by a 2-4 second whistle ending with a flash and loud report; the surface danger zone is 35 meters. This item is Code A, approved for service use.

(E50200) M116A1 Hand Grenade Simulator is a hand-thrown device and is used in training to simulate battlefield noise and effects during troop maneuvers. It has a 5 to 10 second delay and a 15 meter surface danger zone. This item is Code A, approved for service use.

(E70600) M22 Anti-Tank Weapon Effect Signature Simulator (ATWESS) Guided Missile (GM) Rocket Simulator is used to simulate the TOW, DRAGON or VIPER, including report, flash and smoke through use of an adapter. It is compatible with the Multiple Integrated Laser Engagement System (MILES). This item is Code A, approved for service use.

(E88404) Simulators, Non-standard, Special Effects for CTCs Black smoke cartridge to simulate target kill. This item is launched with Omega 60 Force on target. This item is in development which is part of the Special Use Ammo Family. After Development, this item will be Code B, approved for restricted use.

Justification:

FY 2018 Base Budget supports critical Army Title 10 war reserve/operational, training, and test requirements IAW DoD Instruction 3000.04 (Munitions Requirements Process) and AR 5-13 (Total Army Munitions Requirements Process and Prioritization System). War reserve requirements support OSD-approved Combatant Commander Operational Plans, Homeland Defense, and other OSD-directed missions. Training requirements support individual and collective training of Active and Reserve Component forces at Army schools, home station and the combined training centers. Test requirements support the development, fielding, safety and quality assurance of Army munitions and equipment throughout their life-cycle.

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.

FY 2018 Base procurement dollars in the amount of \$13.084 million supports production of four variants of simulators.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 47: Other Ammunition		P-1 Line Item Number / Title: E51200 / Simulators, All Types
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>E88404 - SIMULATORS, NON STANDARD, SPECIAL EFFECTS FOR CTCS This is a training unique item not used in combat. FY 2018 request supports annual training and builds a depot level in accordance with Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$1.632 million supports production of 100,921 Non Standard Simulators. TYPE CLASSIFICATION DATE: TBD</p> <p>E49700 - SIMULATOR PROJ GND BURST M115A2 This is a training unique item not used in combat. FY 2018 request supports annual training and builds a depot level in accordance with Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$5.200 million supports production of 181,098 Ground Burst Simulators. TYPE CLASSIFICATION DATE: 1962</p> <p>E50200 - SIMULATOR HAND GRENADE M116A1 This is a training unique item not used in combat. FY 2018 request supports annual training and builds a depot level in accordance with Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$4.314 million supports production of 126,484 hand grenade simulators. TYPE CLASSIFICATION DATE: 1960</p> <p>E70600 - SIMULATOR ANTITANK GM RKT M22 (ATWESS) This is a training unique item not used in combat. FY 2018 request supports annual training and builds a depot level in accordance with Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$1.938 million supports production of 101,252 Anti-Tank simulators. TYPE CLASSIFICATION DATE: 1984</p>		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 50: Miscellaneous	P-1 Line Item Number / Title: EB0016 / Ammo Components, All Types
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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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	706.598	3.521	12.726	12.237	-	12.237	11.080	10.135	10.336	10.543	-	777.176
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	706.598	3.521	12.726	12.237	-	12.237	11.080	10.135	10.336	10.543	-	777.176
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	706.598	3.521	12.726	12.237	-	12.237	11.080	10.135	10.336	10.543	-	777.176

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

Description:

(EB0016) AMMO Components supports Special Tests, First Article Test, Renovation of Field Stocks and Proof of Acceptance Tests; and are used in both training and combat ammunition.

Justification:

FY 2018 Ammo Components support Special Tests, First Article Test, Renovation of Field Stocks and Proof of Acceptance Tests. It also supports the renovation of unserviceable training and combat ammunition to bring them back to a serviceable condition at a cost that is less than new procurement.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 50: Miscellaneous	P-1 Line Item Number / Title: E91901 / Non-Lethal Ammunition, All Types
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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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	15.296	1.700	6.873	1.500	-	1.500	1.400	0.300	-	3.295	-	30.364
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	15.296	1.700	6.873	1.500	-	1.500	1.400	0.300	-	3.295	-	30.364
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	15.296	1.700	6.873	1.500	-	1.500	1.400	0.300	-	3.295	-	30.364

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

Description:

This budget line item procures Non-Lethal Ammunition, All Types.

(E86401) CTG 12 GA NL, EXT RG, MARK XM1116

The XM1116 is a 12 gauge low velocity cartridge fired from a standard, 3 inch chamber, manually operated shotgun. It utilizes a drag stabilized bean bag design with fluorescent green marking powder to deliver a strong, non-penetrating blow to the body. This cartridge has an effective range of approximately 30 to 50 meters. This item is Code B, not approved for service use.

(E89002) CTG, 40MM AIRBURST F M203 XM1112

The Cartridge 40 Millimeter Airburst for M203 XM1112 is intended to have an effective range between 35 to 300 meters. It contains a proximity fuze with programmable option. It is intended to deliver multiple non-lethal effects: flash-blindness, temporary hearing shift. The XM1112 is intended to deliver consistent non-lethal effects regardless of range setting. It will have a user settable delay option for room clearing. It is fully compatible with existing 40 millimeter M203/M320 weapons platforms without any modifications. The XM1112 will deliver non-lethal effects lasting at least 20 seconds. This item is Code A, approved for service use.

(E91505) CTG NL FIRING DEVICE: TASER, XP25

The Cartridge, NL Firing Device is a 25-foot single shot fired from the Launched Electrode Stun Device (LESD), which is a hand held device used for Electro-Muscular Incapacitation (EMI). This cartridge is a conducted energy weapon that delivers an incapacitating electrical shock capable of arcing through 2 inches of clothing. Maximum effective range is 15 feet. This item is Code A, approved for service use.

Justification:

FY 2018 Base Budget supports critical Army Title 10 war reserve/operational, training, and test requirements IAW DoD Instruction 3000.04 (Munitions Requirements Process) and AR 5-13 (Total Army Munitions Requirements Process and Prioritization System). War reserve requirements support OSD-approved Combatant Commander Operational Plans, Homeland Defense, and other OSD-directed missions. Training requirements support individual and collective training of Active and Reserve Component forces at Army schools, home station, and the combined training centers. Test requirements support the development, fielding, safety, and quality assurance of Army munitions and equipment throughout their life-cycle.

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

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 50: Miscellaneous		P-1 Line Item Number / Title: E91901 / Non-Lethal Ammunition, All Types
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		

The FY 2018 Base procurement dollars in the amount of \$1.500 million supports production of 2 variants of Non-Lethal Ammunition.

(E86401) Ctg, 12G, Non-Lethal, Ext RG, Marking M1116 Series

This is a training standard item used in both training and combat. The procurement supports annual training and builds a war reserve inventory in accordance with Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$1.200 million will procure 136,339 units.

TYPE CLASSIFICATION DATE: October 2015

(E89002) CTG, 40MM AIRBURST F M203 XM1112

This is a training standard item used in both training and combat. The procurement supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. TYPE CLASSIFICATION DATE: TBD

(E91505) Ctg, NL Firing Device: Taser XP25 f/X26E Taser

This is a training standard item used in both training and combat. The request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goal. FY 2018 Base procurement dollars in the amount of \$0.300 million will procure 5,384 units.

TYPE CLASSIFICATION DATE: August 2011

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 50: Miscellaneous	P-1 Line Item Number / Title: EA0055 / Items Less Than \$5 Million (AMMO)
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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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	153.902	4.945	10.006	10.730	-	10.730	9.668	10.196	10.087	9.572	-	219.106
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	153.902	4.945	10.006	10.730	-	10.730	9.668	10.196	10.087	9.572	-	219.106
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	153.902	4.945	10.006	10.730	-	10.730	9.668	10.196	10.087	9.572	-	219.106

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

Description:

This budget line includes Miscellaneous Ammunition Items Under \$5 million.

(E01700) CTG CAL .22 LR MATCH F/PISTOL is used in .22 caliber Remington Model 40X-H1 rifles for military marksmanship training. This item is Code A, approved for service use.

(E03001) CTG, CAL .30 BLANK is used for ceremonial purposes and training in the M1 Garand rifles. It can be identified by the absence of a bullet and a rosette crimped casemouth. This item is Code A, approved for service use.

(E03710) CTG .338 Lapua Magnum XM1154 procurement supports the Precision Sniper Rifle. It consists of an Armor Piercing (AP) Bullet, brass cartridge case, large rifle lead, styphnate primer, and smokeless small arms propellant. This item is Code B, not approved for service use.

(E03715) CTG .338 Lapua Magnum MK330 procurement supports the Precision Sniper Rifle. It consists of an Open Tip Match (OTM) Bullet, brass cartridge case, large rifle lead, styphnate primer, and smokeless small arms propellant. This item is Code B, not approved for service use.

(E99101) Special Training Ammo includes non-standard munitions and energetic materials to support the training of US Army troops in accordance with HQDA G3 approved authorizations.

(E99105) Soldier Enhancement Program Ammo. The Soldier Enhancement Program (SEP) was established by the National Defense Authorization Act for Fiscal Year 1990 and 1991. The SEP evaluates available Commercial Off the Shelf (COTS), Government Off the Shelf (GOTS) and Non-Developmental Items (NDI) equipment to determine if items have the potential to provide increased combat effectiveness to the Soldier. The SEP procures selected types of equipment designed to increase Soldiers' mission command, situational awareness and operational effectiveness. SEP AMMO provides a means of procuring COTS/GOTS/NDI ammunition to be evaluated by Soldiers for potential Army use.

(E99222) Foreign Weapons Training Ammunition. Foreign weapons ammunition is munitions that has not been Type Classified, Materiel Released or Fielded for standard use by US Army or other DoD services. It is not stocked/procured in standard DoD supply system. Funds will be used to purchase foreign (Non NATO) standard munitions, training devices and materials, shipping, conduct safety and quality assessments, and market research.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 50: Miscellaneous		P-1 Line Item Number / Title: EA0055 / Items Less Than \$5 Million (AMMO)
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		
(EA0600) Ammunition Program Support includes ammunition program support to enhance the management of ammunition.		
(EA0960) USAMTU FT BENNING. This budget line funds procurement of non-standard munitions and energetic materials to support marksmanship training throughout the US Army, in accordance with HQDA G3 approved authorizations.		
<p>Justification: FY 2018 Base Budget supports critical Army Title 10 war reserve/operational, training, and test requirements IAW DoD Instruction 3000.04 (Munitions Requirements Process) and AR 5-13 (Total Army Munitions Requirements Process and Prioritization System). War reserve requirements support OSD-approved Combatant Commander Operational Plans, Homeland Defense, and other OSD-directed missions. Training requirements support individual and collective training of Active and Reserve Component forces at Army schools, home station, and the combined training centers. Test requirements support the development, fielding, safety, and quality assurance of Army munitions and equipment throughout their life-cycle.</p> <p>In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.</p> <p>The FY 2018 Base procurement dollars in the amount of \$10.730 million supports procurement of 2.718 million cartridges.</p> <p>(E01700) CTG CAL .22 LR MATCH F/PISTOL is a training standard item used in training and combat. The FY 2018 request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$0.074 million supports the procurement of 0.324 million .22 LR MATCH cartridges. Type classification date: April 1988</p> <p>(E03001) CTG, CAL .30 BLANK is a training unique item not used in combat. The FY 2018 request supports annual training and builds a depot level in accordance with the Army's procurement goals. FY 2018 Base procurement dollars in the amount of \$1.000 million supports the procurement of 2.394 million CAL .30 BLANK cartridges. E03001 is a new start in FY 2018. Type classification date: 1917</p> <p>(E03710) CTG .338 Lapua Magnum XM1154 is a training standard item used in both training and combat. The request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. Type classification date: Pending</p> <p>(E03715) CTG .338 Lapua Magnum MK330 is a training standard item used in both training and combat. The request supports annual training and builds a war reserve inventory in accordance with the Army's procurement goals. Type classification date: Pending</p> <p>(E99101) Special Training Ammunition. The FY 2018 funds will procure non-standard munitions and energetic materials to support the training of US Army troops in accordance with HQDA G3 approved authorizations. FY 2018 Base procurement dollars in the amount of \$1.582 million supports Special Training Ammunition initiatives.</p> <p>(E99105) Soldier Enhancement Program Ammunition. The FY 2018 request procures approved COTS, GOTS, and NDIs ammunition that will be evaluated by Soldiers for potential use by the Army or used for evaluation of SEP weapons. FY 2018 Base procurement dollars in the amount of \$0.248 million supports Soldier Enhancement Program Ammunition initiatives.</p> <p>(E99222) Foreign Weapons Training Ammunition. FY 2018 funds will be used to procure Non Standard Ammunition (NSA), related Non Standard Weapons Systems (NSWS), as well as related training aids for Army units supporting the Regionally Aligned Forces (RAF) mission. Army units will conduct preparation training with Nonstandard weapons and munitions before deployment in order to be trained to support</p>		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 50: Miscellaneous		P-1 Line Item Number / Title: EA0055 / Items Less Than \$5 Million (AMMO)
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>requirements, including operational missions, bilateral and multilateral military exercises and security cooperation activities. FY 2018 Base procurement dollars in the amount of \$0.500 million supports Non Standard Ammunition initiatives.</p> <p>(EA0960) USAMTU Ft. BENNING. The FY 2018 \$1.811 million request supports the procurement of non-standard munitions and energetic materials to support marksmanship training throughout the US. Army, in accordance with HQDA G3 approved authorizations.</p> <p>(EA0600) Ammunition Program Support. The FY 2018 request in the amount of \$5.515 million supports Ammunition Program Support activities that focus on enhancing the management of ammunition.</p>		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 50: Miscellaneous	P-1 Line Item Number / Title: EA0575 / Ammunition Peculiar Equipment
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	317.256	14.249	17.275	16.425	-	16.425	19.745	21.787	21.886	23.854	-	452.477
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	317.256	14.249	17.275	16.425	-	16.425	19.745	21.787	21.886	23.854	-	452.477
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	317.256	14.249	17.275	16.425	-	16.425	19.745	21.787	21.886	23.854	-	452.477

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

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

Description:

The Ammunition Peculiar Equipment (APE) program provides support for ammunition operations including surveillance, demilitarization (demil), maintenance, renovation, modification, packaging, and preservation per Army Regulation 700-20, Ammunition Peculiar Equipment. APE is developed, acquired, and supervised through the Single Manager for Conventional Ammunition per DoD Instruction 5160.68. APE provides equipment items specifically designed, fabricated, procured, tested, and adopted for use in worldwide United States (US) military ammunition depot operations on conventional ammunition. APE maintains a central source of standard, modern, safe, efficient, reliable, and environmentally acceptable equipment for ammunition operations. This equipment is different from production line plant equipment as it disassembles ammunition items into components, sorts and removes hazardous materials to reduce human interaction and improves personnel safety. Maintenance APE is also designed to perform cleaning and renovation functions on ammunition subjected to deterioration effects (rust, corrosion, weathering, etc) during its storage life. APE supporting surveillance is key to stockpile sampling and functional testing of the items to assure readiness for combat or training. Demilitarization APE is similar to maintenance APE, but must go further in disassembly to destroy hazardous components, sort and reclaim salvageable parts or metals.

Justification:

FY 2018 Base procurement dollars in the amount of \$16.425 million will provide APE that must be available to perform ammunition depot operations for conventional ammunition. APE is required to support the Ammunition Stockpile Reliability Program, Surveillance Program, equipment for worldwide maintenance and demilitarization, prepositioned ships, and Government-Owned, Contractor-Operated plants as Government Furnished Equipment. The APE assets maintain and verify the quality of the ammunition stockpile; thereby saving the cost of purchasing new replacement ammunition. APE proficiently executes the ammunition demilitarization mission to safely perform disassembly, destruction, or removal processes with an emphasis on recycling, re-utilization and preserving demilitarization assets in a manner that supports ammunition sustainment, safety and environmental compliance.

The program provides global support to the US Military Services for ammunition sustainment and demilitarization operations, including deployment, operations and support of the Ammunition Supply Point (ASP) suites. The ASP suites include APE, which will increase the efficiency of the receipt, inspection and issuance of ammunition to the warfighter. Deployment of APE to support ASP suites will increase efficiencies for ammunition sustainment operations by reducing logistics burdens and related risks. This allows for better primary mission readiness, enhanced hazardous operations safety and more efficient operating conditions requiring less ammunition retrograde/demilitarization by providing capability to preserve ammunition assets.

The APE program supports multiple demilitarization processes across the Army's organic base; one of the most widely utilized capabilities is the APE 1236 incinerator and support equipment. The program performed a downtime and efficiency study of this equipment and began implementing initial equipment upgrades and modifications in accordance with a priority roadmap. These modifications will continue

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 50: Miscellaneous		P-1 Line Item Number / Title: EA0575 / Ammunition Peculiar Equipment
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>throughout and beyond FY 2018. FY 2018 dollars will be used to procure, install, integrate and test upgrades at tier 1 and 2 organic facilities. The program will also provide updated specific facility documentations including: technical drawing packages, standard operating procedures, hazard analyses and equipment maintenance responsibilities and procedures.</p>		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 01: Ammunition / BSA 50: Miscellaneous	P-1 Line Item Number / Title: EA0550 / First Destination Transportation (AMMO)
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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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	932.047	14.695	14.951	15.221	-	15.221	13.000	15.871	16.141	16.415	-	1,038.341
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	932.047	14.695	14.951	15.221	-	15.221	13.000	15.871	16.141	16.415	-	1,038.341
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	932.047	14.695	14.951	15.221	-	15.221	13.000	15.871	16.141	16.415	-	1,038.341

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

Description:

Transportation funds are required to support the distribution of Army ammunition end items and components (Interim Transportation). Distribution originates from and to CONUS and OCONUS manufacturing plants/contractors, and/or assembly points, e.g., Army Ammunition Plants (AAPs), Arsenals; Defense Contract Management Centers to include Off Shore Procurement Contractors shipping under F.O.B Origin terms. Requirements are either destined for CONUS depots for acceptance into the Army Supply System, to CONUS Customers, to CONUS Arsenals, and to ports of embarkation in support of the Call Forward Program, i.e., Training, War Reserves or the Overseas Contingency Operations (OCO).

Justification:

FY 2018 request supports centrally funded distribution of Army ammunition end items and components (Interim Transportation).

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 02: Ammunition Production Base Support / BSA 10: Production Base Support	P-1 Line Item Number / Title: EP1000 / Provision of Industrial Facilities
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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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	7,362.388	221.703	404.659	329.356	-	329.356	226.383	229.412	231.625	235.763	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	7,362.388	221.703	404.659	329.356	-	329.356	226.383	229.412	231.625	235.763	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	7,362.388	221.703	404.659	329.356	-	329.356	226.383	229.412	231.625	235.763	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 Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This budget line provides funding for modernization efforts at Government-Owned, Contractor-Operated Army Ammunition Plants (AAPs) and commercial facilities, including replacement of obsolete or worn production equipment, correction of deficiencies and upgrade of infrastructures. The Industrial Facilities (IF) budget line also establishes, augments and improves ammunition production capabilities through strategic modernization efforts, expands production capacity, maintains environmental compliance, and improves quality of work environment and safety at ammunition plants, as well as emergency modernization and associated construction to address production disruptions at various sites.

This budget line provides funding for preservation, storage and movement of real property facilities and equipment required for anticipated future requirements at active and inactive Army ammunition installations, also known as Layaway of Industrial Facilities (LIF) activities. Funding will also support consolidation of laid-away production equipment and redistribution of production equipment that cannot be stored on-site. Laid-away efforts will also include retaining critical operational and technical knowledge of production equipment, such as engineering designs, process data and control manufacturing practices. Efforts will also include safety-related decontamination, disposal and demolition of production equipment and facilities, and environmental site assessments.

Procurement funds also support the Maintenance of Inactive Facilities (MIF) to include utilities, buildings, plant equipment, special tooling, and special test equipment being retained to support future production requirements. Additional efforts include support of associated MIF costs such as grounds maintenance, fire protection, equipment security, and administrative support.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 02: Ammunition Production Base Support / BSA 10: Production Base Support **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

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

Line Item MDAP/MAIS Code: N/A

Project Schedule		Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Project	Total Cost (\$ M)	Total Cost (\$ M)	Total Cost (\$ M)	Total Cost (\$ M)	Total Cost (\$ M)	Total Cost (\$ M)
Production Support		-	221.703	404.659	329.356	-	329.356
	Maintenance of Inactive Facilities	-	1.287	6.157	6.298	-	6.298
P-25	Maintenance of Inactive Facilities	-	1.287	6.157	6.298	-	6.298
	Holston Army Ammunition Plant	-	149.532	116.307	168.229	-	168.229
P-25	Insensitive Munitions (IM) Weak Nitric Acid Recovery (NAC/SAC)	-	146.764	-	-	-	-
P-25	Install Additional Anoxic Basins 7E and 8E	-	-	6.708	-	-	-
P-25	Upgrade PCS7 Network	-	1.574	-	-	-	-
P-25	Modernization of Lacquer Preparation Facility	-	-	0.988	-	-	-
P-25	Dewatering Technology Improvements (Design)	-	-	1.407	-	-	-
P-25	Mitigate High Melt Explosives (HMX) Pump Grinding Single Point Failure (SPF), Design	-	-	1.557	-	-	-
P-25	Reduce Repetitive Manual Handling	-	-	4.981	-	-	-
P-25	Modernize Employee Change House Facilities	-	-	0.934	-	-	-
P-25	Functional and Sensitivity Testing Facility	-	-	1.557	-	-	-
P-25	Install Additional Multi-Media Filters, Industrial Wastewater Treatment Facility (IWWTF)	-	-	10.979	-	-	-
P-25	Install Wastewater Anaerobic Filtration (3W & 4W)	-	-	12.443	-	-	-
P-25	Electrical System Modernization Upgrades, Building 203	-	-	3.709	-	-	-
P-25	Mobile RDX Filtration System	-	-	3.113	-	-	-
P-25	Mod Kettle Drying Equipment, Design	-	-	1.349	-	-	-
P-25	Modernized Melt-Cast Facility, Design	-	-	1.482	-	-	-
P-25	Elevator and Lift Upgrades	-	-	-	6.518	-	6.518
P-25	X-Ray Tech Improvements, Safety Risk Reduction (Pckg Fac)	-	-	-	7.764	-	7.764
P-25	Sewer Line Replacement, Ph 1	-	-	-	7.871	-	7.871
P-25	Improve Scrubber Technology, Predesign	-	-	-	1.487	-	1.487
P-25	Boiler Optimization, NESHAP Reqmts	-	1.194	-	-	-	-
P-25	Ansol Treatment Design	-	-	-	5.000	-	5.000
P-25	Combined Nitration/Wash Facility, Design	-	-	-	13.000	-	13.000
P-25	FEM RDX Wastewater Point Source Treatment, Design	-	-	-	5.000	-	5.000
P-25	Natural Gas fired Stream Plant, Design/Construct	-	-	23.000	-	-	-
P-25	WAARP Facility Train II, B4, Design	-	-	3.000	-	-	-
P-25	Ceiling Replacements, Production Buildings	-	-	-	6.146	-	6.146
P-25	Thermal Treatment Technology Alternative to Open Burning, Ph 2	-	-	1.900	-	-	-
P-25	SNA Capacity Improvements at 320 Tank Farm, Design/Construction	-	-	10.000	-	-	-
P-25	New Analytical Lab Design	-	-	-	2.393	-	2.393
P-25	New Fluid Energy Mill (FEM) Facility, Phase 3	-	-	-	20.000	-	20.000

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date: May 2017**

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 02: Ammunition Production Base Support / BSA 10: Production Base Support	P-1 Line Item Number / Title: EP1000 / Provision of Industrial Facilities
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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

Project Schedule		Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Project	Total Cost (\$ M)	Total Cost (\$ M)	Total Cost (\$ M)	Total Cost (\$ M)	Total Cost (\$ M)	Total Cost (\$ M)
P-25	Activate Building G-3 for RDX/NQ Recrystallization Construction, Phase 3	-	-	-	25.000	-	25.000
P-25	RDX Employee Change House	-	-	6.000	-	-	-
P-25	Ansol Filtration Mod, Design	-	-	2.000	-	-	-
P-25	IMX Production Building - Design	-	-	-	3.000	-	3.000
P-25	Modernize B235 Filter Press, Ph 2	-	-	-	6.500	-	6.500
P-25	Magazine Vent Replacement	-	-	5.400	-	-	-
P-25	Area B Third Acid Train Design/Construct	-	-	-	40.000	-	40.000
P-25	Additional Trailer Storage Capacity, Design/Construction	-	-	12.000	-	-	-
P-25	Holston Landfill Expansion, Ph 3	-	-	1.800	-	-	-
P-25	Plant-Wide Building Deluge Upgrades	-	-	-	8.750	-	8.750
P-25	Critical Roof Replacement, Ph 2	-	-	-	2.450	-	2.450
P-25	Boxway Upgrade for Spill Prevention & Containment	-	-	-	7.350	-	7.350
	Layaway Of Industrial Facilities	-	10.464	11.047	11.234	-	11.234
P-25	Layaway Of Industrial Facilities	-	10.464	11.047	11.234	-	11.234
	Iowa Army Ammunition Plant	-	-	19.746	14.408	-	14.408
P-25	General Road Improvements (Road I & Line 2)	-	-	5.840	-	-	-
P-25	Replace Water Main Services, L Shops	-	-	3.512	-	-	-
P-25	Rail System Upgrade - Yards E and C, D, L, and Line 3	-	-	3.790	-	-	-
P-25	Insulate Ceiling & Interior Walls, Line 3A	-	-	0.889	-	-	-
P-25	Air Compressor Replacement/System Rebuild	-	-	0.505	-	-	-
P-25	Energy Efficiency Improvements, Low Cost Energy Conservation Measures	-	-	0.359	-	-	-
P-25	Improve Restrooms/Break Rooms, Line 2 Pdn Area	-	-	0.601	-	-	-
P-25	IAAAP Footprint Reduction - Melt Pour Operations Phase I, Design	-	-	-	9.600	-	9.600
P-25	Sewer Rehabilitation, Ph 1	-	-	2.991	-	-	-
P-25	Gate 3 Upgrade	-	-	-	2.423	-	2.423
P-25	Roof Replacement, Production Areas, Ph 1	-	-	-	2.385	-	2.385
P-25	Underground Electrical Upgrades	-	-	1.259	-	-	-
	Lake City Army Ammunition Plant	-	11.765	23.018	42.691	-	42.691
P-25	Small Caliber Modernization, Production Line Upgrades	-	4.391	9.800	20.070	-	20.070
P-25	Exterior Steam Main Supports	-	2.223	-	5.445	-	5.445
P-25	Building 15 Programmable Logic Control (PLC) and Economizer Upgrade	-	2.885	-	-	-	-
P-25	Structural Upgrades (Buildings 1, 2, 3, and 35), Design	-	2.159	-	-	-	-
P-25	Water Supply and Water Tower Upgrades	-	-	0.656	-	-	-
P-25	Primer Assembly Wing, Building 35, HVAC(Design)	-	-	0.311	1.111	-	1.111

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
 2034A: Procurement of Ammunition, Army / BA 02: Ammunition Production Base Support / BSA 10: Production Base Support

P-1 Line Item Number / Title:
 EP1000 / Provision of Industrial Facilities

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

Line Item MDAP/MAIS Code: N/A

Project Schedule		Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Project	Total Cost (\$ M)	Total Cost (\$ M)	Total Cost (\$ M)	Total Cost (\$ M)	Total Cost (\$ M)	Total Cost (\$ M)
P-25	Decontamination Facility, Design	-	-	1.038	-	-	-
P-25	Building 3 Lighting Switchgear	-	-	0.913	-	-	-
P-25	Building 2 Interior Switchgear	-	-	0.464	-	-	-
P-25	19 Series Buildings - Controls and Monitoring Upgrades	-	-	0.670	-	-	-
P-25	Building 1 & 2 Load Center Transformer Replacement	-	-	0.386	3.176	-	3.176
P-25	Noise Abatement in Production & Testing Buildings, Design	-	-	1.038	-	-	-
P-25	Building 15 Boiler Plant, Conceptual Design/Requirement Determination	-	-	0.311	2.858	-	2.858
P-25	Electrical Switchgear Upgrade, Bldg 35	-	-	0.623	-	-	-
P-25	Bldg 91C Centrifugal Compressor	-	-	1.708	-	-	-
P-25	Building 35 Wash Pad Replacement	-	-	-	0.799	-	0.799
P-25	HVAC Modifications, Upgrade Prod Bldg Wings	-	-	5.100	-	-	-
P-25	Building 85 Kill Tanks, Design	-	-	-	0.524	-	0.524
P-25	Powder Elevator Replacement, Bldgs 1 &	-	-	-	2.080	-	2.080
P-25	New Emergency Fire Doors (PW)	-	-	-	0.805	-	0.805
P-25	Bldgs 12B, 93 Roof Replacement	-	-	-	1.137	-	1.137
P-25	Protective Structure Design for Site Plan Compliance	-	-	-	0.617	-	0.617
P-25	Building 6 Electrical Upgrades	-	-	-	1.218	-	1.218
P-25	Communication Lines, System Analysis & Design	-	-	-	0.612	-	0.612
P-25	Boiler Optimization (MACT Compliance)	-	0.107	-	-	-	-
P-25	IWTP Lagoon Liners	-	-	-	2.239	-	2.239
	Radford Army Ammunition Plant	-	38.181	223.487	75.184	-	75.184
P-25	Construct New Nitrocellulose (NC) Facility	-	13.847	150.880	-	-	-
P-25	Solvent Propellant Manufacturing Facility (Preliminary Design)	-	-	5.656	-	-	-
P-25	Acid Area Improvements, Ph 3	-	6.012	-	5.730	-	5.730
P-25	Near-Term Ethyl Cellulose (EC) Line Upgrade	-	-	2.335	-	-	-
P-25	Acid Sewer Upgrades, Ph 3	-	-	8.199	-	-	-
P-25	Sanitary Sewer Collection & Treatment (Assessment & Design)	-	-	3.557	-	-	-
P-25	Water Intake Pump Upgrade (Building 407)	-	-	0.551	-	-	-
P-25	Nitric Acid Concentrator/Sulfuric Acid Concentrator (NAC/SAC) Improvements	-	-	9.650	-	-	-
P-25	Water Distribution Replacement, Design	-	-	5.000	-	-	-
P-25	Plant Operations, Major Maintenance	-	-	8.600	28.686	-	28.686
P-25	Alternate Nitrate Ester Manufacturing Facility, Design	-	-	-	4.205	-	4.205
P-25	Replace Chemical Grind, Design	-	-	-	3.235	-	3.235
P-25	Industrial Sewer Upgrades & Rehabilitation, Ph 2	-	-	-	9.984	-	9.984

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date: May 2017**

Appropriation / Budget Activity / Budget Sub Activity:
2034A: Procurement of Ammunition, Army / BA 02: Ammunition Production Base Support / BSA 10: Production Base Support

P-1 Line Item Number / Title:
EP1000 / Provision of Industrial Facilities

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

Line Item MDAP/MAIS Code: N/A

Project Schedule		Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Project	Total Cost (\$ M)	Total Cost (\$ M)	Total Cost (\$ M)	Total Cost (\$ M)	Total Cost (\$ M)	Total Cost (\$ M)
P-25	Lightning Protection, Production Areas, Ph 1	-	-	4.300	-	-	-
P-25	Plant-Wide Road Upgrades	-	-	-	1.996	-	1.996
P-25	Energetic Waste Incinerator Upgrades	-	6.915	-	-	-	-
P-25	Package Boiler Facility	-	11.407	2.459	-	-	-
P-25	Solventless Propellant Mfg Fac, Preliminary Design	-	-	4.000	-	-	-
P-25	Modernize Nitroglycerin (NG) Facility, Design	-	-	4.800	-	-	-
P-25	Upgrade Settling Basins, Bldg 409	-	-	9.600	-	-	-
P-25	Acid Sewer Treatment Upgrades (Lime Slaker)	-	-	3.900	-	-	-
P-25	Barricade Replacement	-	-	-	5.170	-	5.170
P-25	Structural Repair, Assessment & Study	-	-	-	0.504	-	0.504
P-25	Upgrade Facility Change Houses	-	-	-	3.750	-	3.750
P-25	Electrical Distribution System Upgrades, Ph 2 – CAST Circuit Replacement	-	-	-	11.924	-	11.924
	Scranton Army Ammunition Plant	-	-	-	1.033	-	1.033
P-25	Rehab Forge Shop Casting Platform	-	-	-	1.033	-	1.033
	Various Army Ammunition Plants	-	8.992	3.795	8.750	-	8.750
P-25	Engineering in Support of Provision of Industrial Facilities	-	8.992	3.795	8.750	-	8.750
	Yuma Proving Ground / Aberdeen Test Center	-	1.482	1.102	1.529	-	1.529
P-25	Replace Test Instrumentation in Production Acceptance Testing (Ammunition)	-	1.482	1.102	1.529	-	1.529
	Total Gross/Weapon System Cost	-	221.703	404.659	329.356	-	329.356

*For the P-17 and P-25, the Project column displays a three-level indentation: Project Category (e.g., Environmental), followed by the Facility, followed by the Project Name. Exhibits with no Project Category are included under the "Uncategorized" category. For the P-26, the Project column displays a two-level indentation: Project Type (e.g., Inactive Plants, Inactive Lines at Contractor Plants and Inactive Lines at Active Plants), followed by the Facility. Note also that although all P-17, P-25 and P-26 projects are shown in the project schedule, not all projects will have a corresponding exhibit. A P-17 or P-25 exhibit is only included if data beyond the Project Number, Project Title and Cost are included (for example: for the P-17, Description, Manufacturer, etc.; for the P-25, Narrative Explanation, Cost Elements, Principle Milestones, etc.). A P-26 exhibit is only included if data beyond Project Type and Total Cost are included (for example, Description, Contractor, Maintenance/Recurring/Environmental/Other costs, etc.).

Justification:
FY 2018 Base procurement dollars in the amount of \$329.356 million will support modernization projects to include replacement of sewer lines at Holston Army Ammunition Plant (AAP), modernization upgrades to the small caliber production lines at Lake City AAP, and upgrades to the industrial sewer lines at Radford AAP. Funds will support infrastructure upgrades at Holston, Iowa, Lake City, Radford, and Scranton AAP. Funds will also support modernization projects to expand the production capacity of RDX at Holston AAP. Efforts include design of new nitration and wash facility, activation of building G-3 for RDX and nitroguanidine (NQ) recrystallization production processes, and modernization efforts to improve ANSOL treatment requirements. Funds will also support critical work environmental projects, including improvements for personnel safety and health, and efforts to maintain environmental compliance at the ammunition plants. Funds will provide for engineering support of industrial facilities, pre-design efforts for future-year modernization projects and procurement efforts at Aberdeen and Yuma Test Centers to include production acceptance tests for various ammunition end items.

FY 2018 funding also supports the protection and preservation of industrial facilities at active and inactive Army ammunition installations and equipment that are no longer required for current production but must be retained for future peacetime or emergency production needs. Funds support the decontamination and demolition of excess production equipment and facilities buildings at Lake city and Radford AAP and the layaway of various load, assemble and pack production lines at Milan AAP. Funds will also support the disposal of excess equipment at McAlester AAP.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 02: Ammunition Production Base Support / BSA 10: Production Base Support		P-1 Line Item Number / Title: EP1000 / Provision of Industrial Facilities
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		

FY 2018 funding supports the care and maintenance of laid-away equipment and facilities at active and inactive ammunition installations.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Maintenance of Inactive Facilities **Project Number:** 5184073 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Maintenance of Inactive Facilities Facility Location: Various AAPs Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	1.287	6.157	6.298	-	6.298							
Total Project Cost	1.287	6.157	6.298	-	6.298	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount \$6.298 million supports the care and maintenance of laid-away equipment and facilities at active and inactive ammunition installations.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Insensitive Munitions (IM) Weak Nitric Acid Recovery (NAC/SAC) **Project Number:** 5163673 **Project Category:** Production Support

End Item Supported Model: IM Explosives (IMX)-101, IMX-104, Picatinny Arsenal Expl (PAX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	65.788	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Jul 2014 Final Design Complete: Dec 2015 Initial/Final Project Award: Sep 2013 / Sep 2016 Construction Complete: Jun 2019 Equipment Installation Complete: Jun 2019 Prove Out Begins: Jun 2019 Prove Out Complete: Jul 2019						
B. Equipment Cost	58.714	-	-	-	-							
C. Equipment Installation Cost	13.500	-	-	-	-							
D. Contractor Support Cost	8.500	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	0.262	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	146.764	-	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 Procurement dollars in the amount of \$146.764 million supports construction and commissioning of a Nitric Acid Concentrator / Sulfuric Acid Concentrator (NAC/SAC) facility at Holston Army Ammunition Plant (AAP). This facility will recover the spent acid used in IM Explosives (IMX)-101, IMX-104 manufacturing and other Dinitroanisole and Nitrotriazalone IMX bases. This project will provide Holston AAP with the capability to reconcentrate spent nitric acid in order to avoid disposal costs and capacity issues as IMX production increases. Additionally, the new facility can mitigate a critical supply chain issue in the production of strong nitric acid within the National Technology and Industrial Base.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Install Additional Anoxic Basins 7E and 8E **Project Number:** 5173761 **Project Category:** Production Support

End Item Supported Model: Research & Development Explosives (RDX), High Melt Explosives (HMX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO				
A. Construction Cost	-	3.474	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Aug 2016 Initial/Final Project Award: Jan 2017 Construction Complete: Jan 2019 Equipment Installation Complete: Jan 2019 Prove Out Begins: Jan 2019 Prove Out Complete: Mar 2019				
B. Equipment Cost	-	0.935	-	-	-					
C. Equipment Installation Cost	-	0.844	-	-	-					
D. Contractor Support Cost	-	0.595	-	-	-					
E. Corps of Engineers Support Cost	-	-	-	-	-					
F. Other In-House Support Cost	-	0.105	-	-	-					
G. Total Facility Project Cost	-	-	-	-	-					
H. Other Costs	-	0.755	-	-	-					
Total Project Cost	-	6.708	-	-	-					
Related Projects										
	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date			

Narrative Explanation:
 Base procurement dollars in the amount of \$6.708 million supports the installation of two additional anoxic treatment cells at Holston Army Ammunition Plant's Wastewater Treatment Facility. The implementation of this project will ensure compliance with the National Pollutant Discharge Elimination System permit.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:**
EP1000 / Provision of Industrial Facilities

Project Title: Upgrade PCS7 Network **Project Number:** 5163786 **Project Category:** Production Support

End Item Supported Model: Research Development Explosives (RDX), High Melt Explosives (HMX), IMX **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO				
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Jul 2016 Initial/Final Project Award: Sep 2016 Construction Complete: Aug 2018 Equipment Installation Complete: Aug 2018 Prove Out Begins: Aug 2018 Prove Out Complete: Sep 2018				
B. Equipment Cost	0.693	-	-	-	-					
C. Equipment Installation Cost	0.818	-	-	-	-					
D. Contractor Support Cost	-	-	-	-	-					
E. Corps of Engineers Support Cost	-	-	-	-	-					
F. Other In-House Support Cost	-	-	-	-	-					
G. Total Facility Project Cost	-	-	-	-	-					
H. Other Costs	0.063	-	-	-	-					
Total Project Cost	1.574	-	-	-	-					
Related Projects										
	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date			

Narrative Explanation:
 Procurement dollars in the amount of \$1.574 million supports upgrades to control system computer workstations in various production buildings at Holston Army Ammunition Plant. The computer systems will be replaced with commercial-off-the-shelf systems that will enhance information assurance.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Modernization of Lacquer Preparation Facility **Project Number:** 5163972 **Project Category:** Production Support

End Item Supported Model: Research Development Explosives (RDX), High Melt Explosives (HMX), IMX **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Oct 2017 Initial/Final Project Award: Apr 2017 Construction Complete: Equipment Installation Complete: Jul 2018 Prove Out Begins: Jul 2018 Prove Out Complete: Sep 2018						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	0.988	-	-	-							
Total Project Cost	-	0.988	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 Base procurement dollars in the amount of \$0.988 million supports the second phase of the modernization of the lacquer preparation facility at Holston Army Ammunition Plant (AAP). This phase will design a modernized lacquer preparation facility which will include new instrumentation, agitator drives, and process improvements to provide improved batch processing capability. The lacquer preparation facility is an aging facility that is essential to the manufacture of mature and innovative Insensitive Munitions (IM). A malfunction of the outdated controls could lead to an extended shutdown of the lacquer preparation facility and affect Holston AAP's ability to manufacture IM product.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Dewatering Technology Improvements (Design) **Project Number:** 5173453 **Project Category:** Production Support

End Item Supported Model: Research & Development Explosive (RDX), High Melt Explosive (HMX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Mar 2017 Initial/Final Project Award: Mar 2017 / Mar 2017 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	0.145	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	1.262	-	-	-							
Total Project Cost	-	1.407	-	-	-							
							Related Projects					
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 Base procurement dollars in the amount of \$1.407 million supports this design phase to modernize Holston Army Ammunition Plant's dewatering buildings with new process equipment and upgraded infrastructure to remove water from the Research and Development Explosive/High Melt Explosive (RDX/HMX) explosive process. Employing up-to-date dewatering/filtering technology in these operations will yield improved throughput rates and labor efficiencies. It will also reduce the amount of RDX in the wastewater stream and the amount of RDX/HMX being discharged into the Holston River.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Mitigate High Melt Explosives (HMX) Pump Grinding Single Point Failure (SPF), Design **Project Number:** 5173578 **Project Category:** Production Support

End Item Supported Model: Research Develop Expl(RDX),High Melt Expl(HMX),Insensitive Mun Expl(IMX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Dec 2016 Final Design Complete: Dec 2016 Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	1.182	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	0.375	-	-	-							
Total Project Cost	-	1.557	-	-	-							
Related Projects											Project Number	Title

Narrative Explanation:
 Base procurement dollars in the amount of \$1.557 million supports design effort to eliminate the SPF for production of High Melt Explosive at Holston Army Ammunition Plant. It will also improve safety, quality and capability of production operations.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Reduce Repetitive Manual Handling **Project Number:** 5173627 **Project Category:** Production Support

End Item Supported Model: Research Develop Expl(RDX),High Melt Expl(HMX),Insensitive Mun Expl(IMX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO				
A. Construction Cost	-	1.202	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Dec 2017 Equipment Installation Complete: Dec 2017 Prove Out Begins: Jan 2018 Prove Out Complete: Feb 2018				
B. Equipment Cost	-	0.981	-	-	-					
C. Equipment Installation Cost	-	1.797	-	-	-					
D. Contractor Support Cost	-	0.413	-	-	-					
E. Corps of Engineers Support Cost	-	-	-	-	-					
F. Other In-House Support Cost	-	-	-	-	-					
G. Total Facility Project Cost	-	-	-	-	-					
H. Other Costs	-	0.588	-	-	-					
Total Project Cost	-	4.981	-	-	-					
Related Projects										
	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date			

Narrative Explanation:
 Base procurement dollars in the amount of \$4.981 million supports effort to reduce repetitive manual handling. It will eliminate manual handling which improves ergonomics and enhances safety. This effort will improve production efficiency and the quality of work environment at Holston Army Ammunition Plant.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Modernize Employee Change House Facilities **Project Number:** 5173629 **Project Category:** Production Support

End Item Supported Model: Research Develop Expl(RDX),High Melt Expl(HMX),Insensitive Mun Expl(IMX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: May 2017 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:	Related Projects					
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	0.934	-	-	-							
Total Project Cost	-	0.934	-	-	-							

Narrative Explanation:
 Base procurement dollars in the amount of \$0.934 million supports design effort to improve change house facilities, restrooms, showers, and lockers. It will also provide ventilation and air conditioning for change house facilities. This effort will improve the quality of work environment and support the projected increase of production at Holston Army Ammunition Plant.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Functional and Sensitivity Testing Facility **Project Number:** 5173748 **Project Category:** Production Support

End Item Supported Model: Research Develop Expl(RDX),High Melt Expl(HMX),Insensitive Mun Expl(IMX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant						
						Facility Location: Kingsport, Tennessee						
A. Construction Cost	-	1.292	-	-	-	Facility Type (GOGO, GOCO, COCO): GOCO						
B. Equipment Cost	-	-	-	-	-	Principal Milestones Month & Year						
C. Equipment Installation Cost	-	-	-	-	-	Concept Design Complete:						
D. Contractor Support Cost	-	0.161	-	-	-	Final Design Complete: Aug 2017						
E. Corps of Engineers Support Cost	-	-	-	-	-	Initial/Final Project Award: Jul 2017 / Jul 2017						
F. Other In-House Support Cost	-	-	-	-	-	Construction Complete: Dec 2017						
G. Total Facility Project Cost	-	-	-	-	-	Equipment Installation Complete: Dec 2017						
H. Other Costs	-	0.104	-	-	-	Prove Out Begins: Dec 2017						
Total Project Cost	-	1.557	-	-	-	Prove Out Complete: Jan 2018						
						Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 Base procurement dollars in the amount of \$1.557 million supports effort to relocate and upgrade the Energetic Testing Facility at Holston Army Ammunition Plant (AAP). This will expanded testing capabilities, lessen noise, improve site coordination of the area, and provide safer operations at Holston AAP.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Install Additional Multi-Media Filters, Industrial Wastewater Treatment Facility (IWWTF) **Project Number:** 5173752 **Project Category:** Production Support

End Item Supported Model: Research Develop Expl(RDX),High Melt Expl(HMX),Insensitive Mun Expl(IMX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO				
A. Construction Cost	-	5.699	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Sep 2016 Initial/Final Project Award: Feb 2017 Construction Complete: Feb 2019 Equipment Installation Complete: Feb 2019 Prove Out Begins: Feb 2019 Prove Out Complete: Apr 2019				
B. Equipment Cost	-	1.534	-	-	-					
C. Equipment Installation Cost	-	1.383	-	-	-					
D. Contractor Support Cost	-	0.974	-	-	-					
E. Corps of Engineers Support Cost	-	-	-	-	-					
F. Other In-House Support Cost	-	-	-	-	-					
G. Total Facility Project Cost	-	-	-	-	-					
H. Other Costs	-	1.389	-	-	-					
Total Project Cost	-	10.979	-	-	-					
Related Projects										
	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date			

Narrative Explanation:
 Base procurement dollars in the amount of \$10.979 million supports installation of additional multi-media filter sets at Holston Army Ammunition Plant. This will allow for uninterrupted manufacturing of Insensitive Munition Explosives (IMX)-101, Research and Development Explosives (RDX), and High Melt Explosives (HMX) production, improve treatment of nitrates loading into the IWWTF, and comply with the National Pollutant Discharge Elimination System permit.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Install Wastewater Anaerobic Filtration (3W & 4W) **Project Number:** 5173754 **Project Category:** Production Support

End Item Supported Model: Research Develop Expl(RDX),High Melt Expl(HMX),Insensitive Mun Expl(IMX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO				
A. Construction Cost	-	3.472	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Jun 2016 Initial/Final Project Award: Dec 2016 Construction Complete: Oct 2018 Equipment Installation Complete: Oct 2018 Prove Out Begins: Jan 2019 Prove Out Complete: Apr 2019				
B. Equipment Cost	-	3.224	-	-	-					
C. Equipment Installation Cost	-	2.920	-	-	-					
D. Contractor Support Cost	-	0.951	-	-	-					
E. Corps of Engineers Support Cost	-	-	-	-	-					
F. Other In-House Support Cost	-	-	-	-	-					
G. Total Facility Project Cost	-	-	-	-	-					
H. Other Costs	-	1.876	-	-	-					
Total Project Cost	-	12.443	-	-	-					
Related Projects										
	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date			

Narrative Explanation:
 Base procurement dollars in the amount of \$12.443 million supports installation of an additional anaerobic filtration system and associated equipment at Holston Army Ammunition Plant. The implementation of an additional anaerobic filtration system at the Industrial Wastewater Treatment Facility will allow for uninterrupted manufacturing and compliance with the National Pollutant Discharge Elimination System permit.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Electrical System Modernization Upgrades, Building 203 **Project Number:** 5173776 **Project Category:** Production Support

End Item Supported Model: Research Develop Expl(RDX),High Melt Expl(HMX),Insensitive Mun Expl(IMX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO				
A. Construction Cost	-	1.159	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Mar 2017 Construction Complete: Mar 2018 Equipment Installation Complete: Mar 2018 Prove Out Begins: Apr 2018 Prove Out Complete: Apr 2019				
B. Equipment Cost	-	0.870	-	-	-					
C. Equipment Installation Cost	-	0.847	-	-	-					
D. Contractor Support Cost	-	0.293	-	-	-					
E. Corps of Engineers Support Cost	-	-	-	-	-					
F. Other In-House Support Cost	-	-	-	-	-					
G. Total Facility Project Cost	-	-	-	-	-					
H. Other Costs	-	0.540	-	-	-					
Total Project Cost	-	3.709	-	-	-					
Related Projects										
	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date			

Narrative Explanation:
 Base procurement dollars in the amount of \$3.709 million supports effort to modernize electrical infrastructure within Holston Army Ammunition Plant's Filtered Water Facility (Building 203). The project will make the facility reliable and maintainable, easier to operate, meet changing flow rates, and increase electrical safety.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Mobile RDX Filtration System **Project Number:** 5175056 **Project Category:** Production Support

End Item Supported Model: Research Development Explosives (RDX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO														
A. Construction Cost	-	1.750	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Apr 2017 Construction Complete: Apr 2019 Equipment Installation Complete: Apr 2019 Prove Out Begins: May 2019 Prove Out Complete: Jun 2019														
B. Equipment Cost	-	1.000	-	-	-															
C. Equipment Installation Cost	-	0.250	-	-	-															
D. Contractor Support Cost	-	-	-	-	-															
E. Corps of Engineers Support Cost	-	-	-	-	-															
F. Other In-House Support Cost	-	-	-	-	-															
G. Total Facility Project Cost	-	-	-	-	-															
H. Other Costs	-	0.113	-	-	-															
Total Project Cost	-	3.113	-	-	-															
							Related Projects													
						<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Project Number</th> <th style="width: 40%;">Title</th> <th style="width: 15%;">FY & Appn</th> <th style="width: 10%;">Value (\$ M)</th> <th style="width: 10%;">Facing</th> <th style="width: 10%;">Start Date</th> <th style="width: 5%;">Compl Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date							
Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date														

Narrative Explanation:
 Base procurement dollars in the amount of \$3.113 million supports a mobile RDX filtration system and a point source RDX filtration system (Building L-8) at Holston Army Ammunition Plant (AAP). This effort supports the production and cleanout of RDX operations buildings which enables Holston AAP to maintain environmental compliance.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Mod Kettle Drying Equipment, Design **Project Number:** 5175058 **Project Category:** Production Support

End Item Supported Model: Research Development Explosives (RDX), High Melt Explosives (HMX), IMX **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO																										
						Principal Milestones						Month & Year																				
A. Construction Cost	-	-	-	-	-	Concept Design Complete:																										
B. Equipment Cost	-	-	-	-	-	Final Design Complete:																										
C. Equipment Installation Cost	-	-	-	-	-	Initial/Final Project Award:																										
D. Contractor Support Cost	-	-	-	-	-	Construction Complete:																										
E. Corps of Engineers Support Cost	-	-	-	-	-	Equipment Installation Complete:																										
F. Other In-House Support Cost	-	-	-	-	-	Prove Out Begins:																										
G. Total Facility Project Cost	-	-	-	-	-	Prove Out Complete:																										
H. Other Costs	-	1.349	-	-	-	<table border="1"> <thead> <tr> <th colspan="7">Related Projects</th> </tr> <tr> <th>Project Number</th> <th>Title</th> <th>FY & Appn</th> <th>Value (\$ M)</th> <th>Facing</th> <th>Start Date</th> <th>Compl Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>						Related Projects							Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date							
Related Projects																																
Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date																										
Total Project Cost	-	1.349	-	-	-																											

Narrative Explanation:
 Base procurement dollars in the amount of \$1.349 million supports design phase for modernization and installation of the kettle drying equipment at Holston Army Ammunition Plant. Kettle drying equipment supports RDX, HMX and IMX production.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Modernized Melt-Cast Facility, Design **Project Number:** 5175055 **Project Category:** Production Support

End Item Supported Model: Insensitive Munitions (IM) Explosives **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant						
						Facility Location: Kingsport, Tennessee						
A. Construction Cost	-	-	-	-	-	Facility Type (GOGO, GOCO, COCO): GOCO						
B. Equipment Cost	-	-	-	-	-	Principal Milestones Month & Year						
C. Equipment Installation Cost	-	-	-	-	-	Concept Design Complete:						
D. Contractor Support Cost	-	-	-	-	-	Final Design Complete:						
E. Corps of Engineers Support Cost	-	-	-	-	-	Initial/Final Project Award:						
F. Other In-House Support Cost	-	-	-	-	-	Construction Complete:						
G. Total Facility Project Cost	-	-	-	-	-	Equipment Installation Complete:						
H. Other Costs	-	1.482	-	-	-	Prove Out Begins:						
Total Project Cost	-	1.482	-	-	-	Prove Out Complete:						
						Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 Base procurement dollars in the amount of \$1.482 million supports design of a new melt-cast facility at Holston Army Ammunition Plant (AAP). This effort supports production of IM explosives ensuring Holston AAP retains capability to manufacture newly formulated explosives.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Elevator and Lift Upgrades **Project Number:** 5183785 **Project Category:** Production Support

End Item Supported Model: Research Development Explosives (RDX), High Melt Explosives (HMX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO				
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Nov 2018 Initial/Final Project Award: Mar 2018 Construction Complete: Jul 2020 Equipment Installation Complete: Dec 2020 Prove Out Begins: Dec 2020 Prove Out Complete: Mar 2021				
B. Equipment Cost	-	-	2.500	-	2.500					
C. Equipment Installation Cost	-	-	4.018	-	4.018					
D. Contractor Support Cost	-	-	-	-	-					
E. Corps of Engineers Support Cost	-	-	-	-	-					
F. Other In-House Support Cost	-	-	-	-	-					
G. Total Facility Project Cost	-	-	-	-	-					
H. Other Costs	-	-	-	-	-					
Total Project Cost	-	-	6.518	-	6.518					
Related Projects										
	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date			

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$6.518 million supports repair and installation of lift and elevator equipment at Holston Army Ammunition Plant. The existing elevator system has not been upgraded in several decades. The system experiences numerous failures and leaks. Routine maintenance is no longer feasible. This project will bring the building elevator systems in plant wide production buildings to modern safety standards, and significantly reduce risk of downtime of explosive operations.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: X-Ray Tech Improvements, Safety Risk Reduction (Pckg Fac) **Project Number:** 5183969 **Project Category:** Production Support

End Item Supported Model: Research Development Explosives (RDX), High Melt Explosives (HMX), IMX **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	2.750	-	2.750	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Apr 2019 Initial/Final Project Award: Apr 2018 Construction Complete: Apr 2020 Equipment Installation Complete: Apr 2020 Prove Out Begins: Apr 2020 Prove Out Complete: Oct 2020						
B. Equipment Cost	-	-	2.000	-	2.000							
C. Equipment Installation Cost	-	-	2.564	-	2.564							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	0.450	-	0.450							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	-	7.764	-	7.764							
							Related Projects					
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$7.764 million supports installation of X-ray technologies at Holston Army Ammunition Plant. These technologies would reduce risks associated with the shipment of foreign object contamination in the bulk explosives shipped to LAP facilities. The LAP activities involve further processing of the explosive materials, via drying, mixing, pressing, meltcast, curing, and milling operations, into final munitions systems. Metal, glass or other contamination are hazardous due to their ability to sensitize explosives.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Sewer Line Replacement, Ph 1 **Project Number:** 5183668 **Project Category:** Production Support

End Item Supported Model: Research Development Explosives (RDX), High Melt Explosives (HMX), IMX **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	5.357	-	5.357	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Jul 2018 Initial/Final Project Award: Apr 2018 Construction Complete: Feb 2020 Equipment Installation Complete: Mar 2020 Prove Out Begins: Apr 2020 Prove Out Complete: Apr 2020						
B. Equipment Cost	-	-	0.980	-	0.980							
C. Equipment Installation Cost	-	-	0.765	-	0.765							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	0.769	-	0.769							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	-	7.871	-	7.871							
											Related Projects	
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$7.871 million supports repair and replacement of industrial and sanitary sewer lines at Holston Army Ammunition Plant. The existing sewer system is aging and suffers significant leaks. Rain water infiltration has increased flow to the waste water treatment facility and impacted its ability to treat RDX. This effort will ensure Holston remains in compliance with EPA and other environmental regulations.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Improve Scrubber Technology, Predesign **Project Number:** 5183670 **Project Category:** Production Support

End Item Supported Model: Research Development Explosives (RDX), High Melt Explosives (HMX), IMX **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Feb 2019 Initial/Final Project Award: Feb 2018 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	1.487	-	1.487							
Total Project Cost	-	-	1.487	-	1.487							
							Related Projects					
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$1.487 million supports predesign effort to identify alternatives to update or replace the particulate scrubber technology currently employed at Holston Army Ammunition Plant. The existing technology was developed in the 1940s and is now obsolete. This project will increase the removal of explosive particles from the air and reduce safety risks to operations personnel.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Boiler Optimization, NESHAP Reqmts **Project Number:** 5163581 **Project Category:** Production Support

End Item Supported Model: Research Development Explosives (RDX), High Melt Explosives (HMX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO				
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: May 2016 Construction Complete: Equipment Installation Complete: Mar 2017 Prove Out Begins: Mar 2017 Prove Out Complete: May 2017				
B. Equipment Cost	0.325	-	-	-	-					
C. Equipment Installation Cost	0.600	-	-	-	-					
D. Contractor Support Cost	0.269	-	-	-	-					
E. Corps of Engineers Support Cost	-	-	-	-	-					
F. Other In-House Support Cost	-	-	-	-	-					
G. Total Facility Project Cost	-	-	-	-	-					
H. Other Costs	-	-	-	-	-					
Total Project Cost	1.194	-	-	-	-					
Related Projects										
	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date			

Narrative Explanation:
 Procurement dollars in the amount of \$1.194 million supports modernization upgrades of existing coal-fired boilers at Holston Army Ammunition Plant. Project will install a continuous emission monitoring system as well as optimization of the boilers to ensure compliance with the National Emission Standards for Hazardous Air Pollutants (NESHAP) Maximum Achievable Control Technology Standards (MACT).

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Ansol Treatment Design **Project Number:** 5185096 **Project Category:** Production Support

End Item Supported Model: Research Development Explosives (RDX), High Melt Explosives (HMX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: May 2019 Initial/Final Project Award: Mar 2018 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	5.000	-	5.000							
Total Project Cost	-	-	5.000	-	5.000							
						Related Projects						
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$5.000 million supports design of an Ammonium Nitrate Solution (ANSOL) treatment facility at Holston Army Ammunition Plant (AAP). In the past, ANSOL has been transferred as a low-cost feed stock into the ammonium nitrate/fuel oil (ANFO) explosives industry (mining, quarry, civil usages). Existing users of ANFO are not utilizing this material at this time due to composition fluctuations and odor issues. Failure to treat ANSOL will result shutdown of explosives production operations at Holston AAP.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Combined Nitration/Wash Facility, Design **Project Number:** 5185097 **Project Category:** Production Support

End Item Supported Model: Research Development Explosives (RDX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Jun 2018 Initial/Final Project Award: Nov 2017 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	13.000	-	13.000							
Total Project Cost	-	-	13.000	-	13.000							
							Related Projects					
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$13.000 million supports design of a combined Nitration/Wash facility at Holston Army Ammunition Plant. Additional capacities are required to meet future RDX production requirements.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: FEM RDX Wastewater Point Source Treatment, Design **Project Number:** 5185098 **Project Category:** Production Support

End Item Supported Model: Research Development Explosives (RDX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO							
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Nov 2019 / Mar 2018 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:							
B. Equipment Cost	-	-	-	-	-								
C. Equipment Installation Cost	-	-	-	-	-								
D. Contractor Support Cost	-	-	-	-	-								
E. Corps of Engineers Support Cost	-	-	-	-	-								
F. Other In-House Support Cost	-	-	-	-	-								
G. Total Facility Project Cost	-	-	-	-	-								
H. Other Costs	-	-	5.000	-	5.000								
Total Project Cost	-	-	5.000	-	5.000								
Related Projects							Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$5.000 million supports design of a FEM RDX Wastewater Point Source Treatment facility at Holston Army Ammunition Plant. Additional capacities are required to meet the future RDX production requirements.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Natural Gas fired Stream Plant, Design/Construct **Project Number:** 5185099 **Project Category:** Production Support

End Item Supported Model: Research Development Explosives (RDX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	23.000	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Mar 2020 Initial/Final Project Award: Nov 2017 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	23.000	-	-	-							
						Related Projects						
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 Base procurement dollars in the amount of \$23.000 million supports design and construction of a Natural Gas fired Stream Plant at Holston Army Ammunition Plant. Additional capacities are required to meet the future RDX production requirements.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:**
EP1000 / Provision of Industrial Facilities

Project Title: WAARP Facility Train II, B4, Design **Project Number:** 5185100 **Project Category:** Production Support

End Item Supported Model: Research Development Explosives (RDX), High Melt Explosives (HMX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO							
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Jun 2019 Initial/Final Project Award: Feb 2018 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:	Related Projects						
B. Equipment Cost	-	-	-	-	-		Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date
C. Equipment Installation Cost	-	-	-	-	-								
D. Contractor Support Cost	-	-	-	-	-								
E. Corps of Engineers Support Cost	-	-	-	-	-								
F. Other In-House Support Cost	-	-	-	-	-								
G. Total Facility Project Cost	-	-	-	-	-								
H. Other Costs	-	3.000	-	-	-								
Total Project Cost	-	3.000	-	-	-								

Narrative Explanation:
 Base procurement dollars in the amount of \$3.000 million supports the design of a second train to recover weak acetic acid for RDX/HMX production at Holston Army Ammunition Plant. Additional capacities are required to meeting the future RDX production requirements.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Ceiling Replacements, Production Buildings **Project Number:** 5185057 **Project Category:** Production Support

End Item Supported Model: Research & Development Explosive (RDX), High Melt Explosive (HMX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	5.346	-	5.346	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Mar 2019 Initial/Final Project Award: Mar 2018 Construction Complete: Sep 2020 Equipment Installation Complete: Prove Out Begins: Sep 2020 Prove Out Complete: Mar 2021						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	0.800	-	0.800							
Total Project Cost	-	-	6.146	-	6.146							
Related Projects											Project Number	Title

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$6.146 million supports replacement of production buildings ceilings at Holston Army Ammunition Plant. The ceilings have deteriorated and risk contamination of explosive manufacturing. The ceilings of buildings with highest priority for replacement are I-3, I-6, M-3, M-6, N-5, N-6, L-5, and L-8.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Thermal Treatment Technology Alternative to Open Burning, Ph 2 **Project Number:** 5183214 **Project Category:** Production Support

End Item Supported Model: Research Develop Expl(RDX),High Melt Expl(HMX),Insensitive Mun Expl(IMX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO							
A. Construction Cost	-	1.900	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Oct 2019 Initial/Final Project Award: Feb 2018 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:	Related Projects						
B. Equipment Cost	-	-	-	-	-		Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date
C. Equipment Installation Cost	-	-	-	-	-								
D. Contractor Support Cost	-	-	-	-	-								
E. Corps of Engineers Support Cost	-	-	-	-	-								
F. Other In-House Support Cost	-	-	-	-	-								
G. Total Facility Project Cost	-	-	-	-	-								
H. Other Costs	-	-	-	-	-								
Total Project Cost	-	1.900	-	-	-								

Narrative Explanation:
 Base procurement dollars in the amount of \$1.900 million supports the evaluation of thermal and non-thermal treatment technologies alternative to open burning at Holston Army Ammunition Plant (AAP). Contaminated materials including contaminated plastics, rubber and other materials are generated during the explosives manufacturing process. Holston AAP is required to reduce or eliminate open burning of Material Potentially Presenting an Explosive Hazard (MPPEH) in compliance with DoD Explosives Safety Board (DDESB) and Tennessee Department of Environment and Conservation (TDEC) requirements.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: SNA Capacity Improvements at 320 Tank Farm, Design/Construction **Project Number:** 5185102 **Project Category:** Production Support

End Item Supported Model: Research Development Explosives (RDX), High Melt Explosives (HMX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: May 2019 Initial/Final Project Award: May 2018 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:	Related Projects					
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	10.000	-	-	-							
Total Project Cost	-	10.000	-	-	-							
												Project Number

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$10.000 million supports design and construction of Strong Nitric Acid (SNA) Tank Farm at Holston Army Ammunition Plant. Currently there are only 2 SNA tanks that can receive tank car quantities, however four are required for RDX and HMX production. Two smaller (on-site) SNA tanks are not useable due to significant corrosion damage. Additional SNA storage and unloading capacity is needed to ensure reliability of supply for RDX and HMX.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: New Analytical Lab Design **Project Number:** 5188378 **Project Category:** Production Support

End Item Supported Model: Research Develop Expl(RDX),High Melt Expl(HMX),Insensitive Mun Expl(IMX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Feb 2020 Initial/Final Project Award: May 2018 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	2.393	-	2.393							
Total Project Cost	-	-	2.393	-	2.393							
							Related Projects					
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$2.393 million supports the design of a new analytical lab at Holston Army Ammunition Plant (AAP). The new facility would replace the current lab facility at HSAAP as well as provide expanded laboratory capabilities. The new Analytical Lab will be used for acceptance testing of all explosives produced at the facility. The new laboratory will be constructed to allow larger load limits within the lab facilities which will improve the throughput required by the increased production at Holston AAP.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: New Fluid Energy Mill (FEM) Facility, Phase 3 **Project Number:** 5185103 **Project Category:** Production Support

End Item Supported Model: Research Develop Expl(RDX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	12.500	-	12.500	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Apr 2018 Construction Complete: Sep 2020 Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	4.500	-	4.500							
C. Equipment Installation Cost	-	-	1.250	-	1.250							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	1.750	-	1.750							
Total Project Cost	-	-	20.000	-	20.000							
						Related Projects						
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$20.000 million supports the construction of a second FEM Facility dedicated to RDX at Holston Army Ammunition Plant. Currently, only one facility (Building N-3) can produce RDX FEM material, and its capacity is inadequate to support future demand. Future production requirements for CXM-AF-7 necessitate a significant increase in FEM production. FEM throughput is one of the main chokepoints in producing this product.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Activate Building G-3 for RDX/NQ Recrystallization Construction, Phase 3 **Project Number:** 5185104 **Project Category:** Production Support

End Item Supported Model: Research Develop Expl(RDX), Insensitive Mun Expl(IMX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	10.250	-	10.250	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Jun 2018 Construction Complete: Sep 2020 Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	7.500	-	7.500							
C. Equipment Installation Cost	-	-	4.500	-	4.500							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	2.750	-	2.750							
Total Project Cost	-	-	25.000	-	25.000	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$25.000 million supports this construction project to reactivate and modernize Building G-3 at Holston Army Ammunition Plant (AAP) to perform RDX/NQ Recrystallization and RDX formulation. This project will increase Holston AAP's capacity to produce RDX as well as continue to produce High Bulk Density Nitroguanidine (NQ) from the current industrial stock of NQ.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: RDX Employee Change House **Project Number:** 5185105 **Project Category:** Production Support

End Item Supported Model: Research Development Explosives (RDX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	4.750	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Aug 2017 Construction Complete: Aug 2019 Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	1.250	-	-	-							
Total Project Cost	-	6.000	-	-	-							
							Related Projects					
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 Base procurement dollars in the amount of \$6.000 million supports modernization of RDX change house facilities, restrooms, showers, and lockers. It will also provide ventilation and air conditioning for change house facilities. This effort will improve the quality of work environment and support the projected increase of production at Holston Army Ammunition Plant.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Ansol Filtration Mod, Design **Project Number:** 5185106 **Project Category:** Production Support

End Item Supported Model: Research Development Explosives (RDX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant						
						Facility Location: Kingsport, Tennessee						
A. Construction Cost	-	-	-	-	-	Facility Type (GOGO, GOCO, COCO): GOCO						
B. Equipment Cost	-	-	-	-	-	Principal Milestones					Month & Year	
C. Equipment Installation Cost	-	-	-	-	-	Concept Design Complete:					Jan 2018	
D. Contractor Support Cost	-	-	-	-	-	Final Design Complete:						
E. Corps of Engineers Support Cost	-	-	-	-	-	Initial/Final Project Award:						
F. Other In-House Support Cost	-	-	-	-	-	Construction Complete:						
G. Total Facility Project Cost	-	-	-	-	-	Equipment Installation Complete:						
H. Other Costs	-	2.000	-	-	-	Prove Out Begins:						
Total Project Cost	-	2.000	-	-	-	Prove Out Complete:						
						Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 Base procurement dollars in the amount of \$2.000 million supports design effort to improve filtration processes of Ammonium Nitrate Solution (ANSOL) at Holston Army Ammunition Plant. Effort will evaluate several technologies that will improve the filtration of ANSOL.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: IMX Production Building - Design **Project Number:** 5185107 **Project Category:** Production Support

End Item Supported Model: Insensitive Mun Expl(IMX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Jun 2019 Initial/Final Project Award: Jul 2018 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	3.000	-	3.000							
Total Project Cost	-	-	3.000	-	3.000							
							Related Projects					
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$3.000 million supports design of a second IMX Production Building at Holston Army Ammunition Plant. This production building will produce the additional required Dinitroanisole and Nitrotriazalone IMX base explosives to meet the projected requirements for IMX explosives.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Modernize B235 Filter Press, Ph 2 **Project Number:** 5173295 **Project Category:** Production Support

End Item Supported Model: Research & Development Explosives (RDX), High Melt Explosives (HMX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO														
A. Construction Cost	-	-	3.250	-	3.250	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Nov 2017 Construction Complete: Mar 2020 Equipment Installation Complete: Prove Out Begins: Apr 2020 Prove Out Complete: Aug 2020														
B. Equipment Cost	-	-	2.750	-	2.750															
C. Equipment Installation Cost	-	-	-	-	-															
D. Contractor Support Cost	-	-	-	-	-															
E. Corps of Engineers Support Cost	-	-	-	-	-															
F. Other In-House Support Cost	-	-	-	-	-															
G. Total Facility Project Cost	-	-	-	-	-															
H. Other Costs	-	-	0.500	-	0.500															
Total Project Cost	-	-	6.500	-	6.500															
							Related Projects													
						<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Project Number</th> <th style="width: 40%;">Title</th> <th style="width: 10%;">FY & Appn</th> <th style="width: 10%;">Value (\$ M)</th> <th style="width: 10%;">Facing</th> <th style="width: 10%;">Start Date</th> <th style="width: 10%;">Compl Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date							
Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date														

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$6.500 million supports installation of a new belt filter press with associated pumps, piping, power & controls at the Holston Army Ammunition Plant (AAP) Industrial Waste Water Treatment Facility (IWWTF) Building 235. Holston AAP is required to satisfy discharge regulations within the NPDES permit, which includes treated effluent limitations on Total Suspended Solids (TSS). TSS levels will increase due to the increased biological activity within the IWWTF

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Magazine Vent Replacement **Project Number:** 5173683 **Project Category:** Production Support

End Item Supported Model: Research Development Explosives (RDX), High Melt Explosives (HMX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO				
A. Construction Cost	-	2.750	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Sep 2017 Construction Complete: Jan 2019 Equipment Installation Complete: Feb 2019 Prove Out Begins: Feb 2019 Prove Out Complete: Jul 2019				
B. Equipment Cost	-	1.050	-	-	-					
C. Equipment Installation Cost	-	0.950	-	-	-					
D. Contractor Support Cost	-	-	-	-	-					
E. Corps of Engineers Support Cost	-	-	-	-	-					
F. Other In-House Support Cost	-	-	-	-	-					
G. Total Facility Project Cost	-	-	-	-	-					
H. Other Costs	-	0.650	-	-	-					
Total Project Cost	-	5.400	-	-	-					
Related Projects										
	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date			

Narrative Explanation:
 Procurement dollars in the amount of \$5.400 million supports purchase and installation of new magazine vents at Holston Army Ammunition Plant. This project will enhance the safety for each magazine and meet the requirements in Army Technical Manual 38-410, Storage and Handling of Hazardous Materials.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Area B Third Acid Train Design/Construct **Project Number:** 5185110 **Project Category:** Production Support

End Item Supported Model: Research Development Explosives (RDX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	40.000	-	40.000	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	-	40.000	-	40.000							
						Related Projects						
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$40.000 million supports design and construction of a third acid train facility at Holston Army Ammunition Plant. Additional capacities are required to meet future RDX production requirements.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Additional Trailer Storage Capacity, Design/Construction **Project Number:** 5175111 **Project Category:** Production Support

End Item Supported Model: Research Development Explosives (RDX) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO																										
						Principal Milestones						Month & Year																				
A. Construction Cost	-	12.000	-	-	-	Concept Design Complete:																										
B. Equipment Cost	-	-	-	-	-	Final Design Complete:																										
C. Equipment Installation Cost	-	-	-	-	-	Initial/Final Project Award:																										
D. Contractor Support Cost	-	-	-	-	-	Construction Complete:																										
E. Corps of Engineers Support Cost	-	-	-	-	-	Equipment Installation Complete:																										
F. Other In-House Support Cost	-	-	-	-	-	Prove Out Begins:																										
G. Total Facility Project Cost	-	-	-	-	-	Prove Out Complete:																										
H. Other Costs	-	-	-	-	-	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th align="center" colspan="7">Related Projects</th> </tr> <tr> <th align="center">Project Number</th> <th align="center">Title</th> <th align="center">FY & Appn</th> <th align="center">Value (\$ M)</th> <th align="center">Facing</th> <th align="center">Start Date</th> <th align="center">Compl Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>						Related Projects							Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date							
Related Projects																																
Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date																										
Total Project Cost	-	12.000	-	-	-																											

Narrative Explanation:
 Base procurement dollars in the amount of \$12.000 million supports design and construction of additional trailer storage at Holston Army Ammunition Plant. Additional capacities are required to meet future RDX production requirements.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army						Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10				P-1 Line Item Number / Title: EP1000 / Provision of Industrial Facilities				
Project Title: Holston Landfill Expansion, Ph 3				Project Number: 5173579		Project Category: Production Support		
End Item Supported Model: Research Development Explosives (RDX), High Melt Explosives (HMX), IMX						Annual Capacity Before / After (1-8-5): /		
Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO		
A. Construction Cost	-	-	-	-	-	Principal Milestones		
B. Equipment Cost	-	-	-	-	-	Month & Year		
C. Equipment Installation Cost	-	-	-	-	-	Concept Design Complete:		
D. Contractor Support Cost	-	-	-	-	-	Final Design Complete:		
E. Corps of Engineers Support Cost	-	-	-	-	-	Initial/Final Project Award: Aug 2017		
F. Other In-House Support Cost	-	-	-	-	-	Construction Complete:		
G. Total Facility Project Cost	-	-	-	-	-	Equipment Installation Complete:		
H. Other Costs	-	1.800	-	-	-	Prove Out Begins:		
Total Project Cost	-	1.800	-	-	-	Prove Out Complete:		
						Related Projects		
		Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:

Procurement dollars in the amount of \$1.800 million supports design of the landfill expansion at Holston Army Ammunition Plant. The design will support future landfill expansion to maintain compliance with Tennessee Department of Environment and Conservation.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Plant-Wide Building Deluge Upgrades **Project Number:** 5183751 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO				
A. Construction Cost	-	-	8.350	-	8.350	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Jun 2018 Construction Complete: Apr 2021 Equipment Installation Complete: Prove Out Begins: Prove Out Complete:				
B. Equipment Cost	-	-	-	-	-					
C. Equipment Installation Cost	-	-	-	-	-					
D. Contractor Support Cost	-	-	0.250	-	0.250					
E. Corps of Engineers Support Cost	-	-	-	-	-					
F. Other In-House Support Cost	-	-	-	-	-					
G. Total Facility Project Cost	-	-	-	-	-					
H. Other Costs	-	-	0.150	-	0.150					
Total Project Cost	-	-	8.750	-	8.750					
Related Projects										
	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date			

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$8.750 million supports upgrades to deluge systems in production buildings at Holston Army Ammunition Plant.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Critical Roof Replacement, Ph 2 **Project Number:** 5183160 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO				
A. Construction Cost	-	-	2.250	-	2.250	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Jun 2018 Construction Complete: Jun 2020 Equipment Installation Complete: Prove Out Begins: Prove Out Complete:				
B. Equipment Cost	-	-	-	-	-					
C. Equipment Installation Cost	-	-	-	-	-					
D. Contractor Support Cost	-	-	-	-	-					
E. Corps of Engineers Support Cost	-	-	-	-	-					
F. Other In-House Support Cost	-	-	-	-	-					
G. Total Facility Project Cost	-	-	-	-	-					
H. Other Costs	-	-	0.200	-	0.200					
Total Project Cost	-	-	2.450	-	2.450					
Related Projects										
	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date			

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$2.450 million supports second phase of roof replacements to critical production buildings at Holston Army Ammunition Plant.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Boxway Upgrade for Spill Prevention & Containment **Project Number:** 5183970 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Holston Army Ammunition Plant Facility Location: Kingsport, Tennessee Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	1.950	-	1.950	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Jun 2018 Construction Complete: Jun 2020 Equipment Installation Complete: Jun 2020 Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	2.070	-	2.070							
C. Equipment Installation Cost	-	-	2.000	-	2.000							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	0.589	-	0.589							
H. Other Costs	-	-	0.741	-	0.741							
Total Project Cost	-	-	7.350	-	7.350	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$7.350 million support upgrades and repairs the boxway network at Holston Army Ammunition Plant. Project will improve spill containment and storm water exclusion and enhance compliance with the facility's National Pollutant Discharge Elimination System permit and associated Spill Prevention, Control and Countermeasure Plan.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Layaway Of Industrial Facilities **Project Number:** 5188000 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Layaway Of Industrial Facilities Facility Location: Various AAPs Facility Type (GOGO, GOCO, COCO): GOCO							
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:							
B. Equipment Cost	-	-	-	-	-								
C. Equipment Installation Cost	-	-	-	-	-								
D. Contractor Support Cost	-	-	-	-	-								
E. Corps of Engineers Support Cost	-	-	-	-	-								
F. Other In-House Support Cost	-	-	-	-	-								
G. Total Facility Project Cost	-	-	-	-	-								
H. Other Costs	10.464	11.047	11.234	-	11.234								
Total Project Cost	10.464	11.047	11.234	-	11.234								
Related Projects							Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$11.234 million supports the protection and preservation of industrial facilities at active and inactive Army ammunition installations and equipment that are no longer required for current production but must be retained for future peacetime or emergency production needs. Funds support the decontamination and demolition of excess production equipment and facilities buildings at Lake city and Radford AAP and the layaway of various load, assemble and pack production lines at Milan AAP. Funds will also support the disposal of excess equipment at McAlester AAP.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army						Date: May 2017						
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10				P-1 Line Item Number / Title: EP1000 / Provision of Industrial Facilities								
Project Title: General Road Improvements (Road I & Line 2)				Project Number: 5XX3745		Project Category: Production Support						
End Item Supported Model: 40mm, Artillery, Mortar, Tank						Annual Capacity Before / After (1-8-5): /						
Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Iowa Army Ammunition Plant Facility Location: Middletown, Iowa Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	3.587	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Aug 2017 Construction Complete: Feb 2019 Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	2.253	-	-	-							
Total Project Cost	-	5.840	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:

Base procurement dollars in the amount of \$5.840 million supports improvements to Road I & Line 2 at Iowa Army Ammunition Plant. Roads have deteriorated to a condition in which routine maintenance is no longer economically feasible. Effort will rehabilitate approximately 3.5 miles of roadways.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Replace Water Main Services, L Shops **Project Number:** 5173366 **Project Category:** Production Support

End Item Supported Model: 120mm Tank, 155mm Artillery **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Iowa Army Ammunition Plant Facility Location: Middletown, Iowa Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	3.135	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Aug 2017 Construction Complete: Aug 2019 Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	0.377	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	3.512	-	-	-							
Related Projects												
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 Base procurement dollars in the amount of \$3.512 million supports replacing the Yard L and Shop Area domestic water supply system with new, like-sized polyvinyl chloride conduits at Iowa Army Ammunition Plant. The existing water mains and distribution system has corroded resulting in excessive line breaks, affecting the rate of water flow available to fire protection systems, and can interrupt production throughout the installation.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Rail System Upgrade - Yards E and C, D, L, and Line 3 **Project Number:** 5173794 **Project Category:** Production Support

End Item Supported Model: 40mm, Artillery, Mortars **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Iowa Army Ammunition Plant Facility Location: Middletown, Iowa Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	0.382	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Jun 2017 Construction Complete: Jun 2019 Equipment Installation Complete: Jun 2019 Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	2.906	-	-	-							
C. Equipment Installation Cost	-	0.361	-	-	-							
D. Contractor Support Cost	-	0.094	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	0.047	-	-	-							
Total Project Cost	-	3.790	-	-	-							
						Related Projects						
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 Base procurement dollars in the amount of \$3.790 million supports upgrades to rail tracks at Line 3 and Yards C, D, E, and L at Iowa Army Ammunition Plant. Project will assure continued viability of the installation's rail system for the transport of raw production materials and finished production. Rail systems supports 40mm, as well as 60mm, 81m, and 120mm mortars production.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Insulate Ceiling & Interior Walls, Line 3A **Project Number:** 5173905 **Project Category:** Production Support

End Item Supported Model: Artillery, Mortars **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Iowa Army Ammunition Plant Facility Location: Middletown, Iowa Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	0.794	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	0.095	-	-	-							
Total Project Cost	-	0.889	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 Base procurement dollars in the amount of \$0.889 million supports door replacement and insulating between rafters on the underside roof of seven buildings in production Line 3A for the loading of 60mm, 81mm, and 120mm mortars at Iowa Army Ammunition Plant. Effort will reduce energy consumption in the heating of production buildings on Line 3A.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Air Compressor Replacement/System Rebuild **Project Number:** 5173907 **Project Category:** Production Support

End Item Supported Model: 105/120mm Tank,105/155mm Artillery,Modular Artillery Charging Sys (MACS) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Iowa Army Ammunition Plant Facility Location: Middletown, Iowa Facility Type (GOGO, GOCO, COCO): GOCO					
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:					
B. Equipment Cost	-	0.380	-	-	-						
C. Equipment Installation Cost	-	0.112	-	-	-						
D. Contractor Support Cost	-	0.013	-	-	-						
E. Corps of Engineers Support Cost	-	-	-	-	-						
F. Other In-House Support Cost	-	-	-	-	-						
G. Total Facility Project Cost	-	-	-	-	-						
H. Other Costs	-	-	-	-	-						
Total Project Cost	-	0.505	-	-	-						
Related Projects											
	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date				

Narrative Explanation:
 Base procurement dollars in the amount of \$0.505 million supports replacement of various-sized air compressors at Iowa Army Ammunition Plant. The compressed air systems are antiquated and inadequate for the task of producing ammunition. Compressed air is critical to the operation of a load, assemble, and pack of 40mm, as well as 60mm, 81mm, and 120mm mortars.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Energy Efficiency Improvements, Low Cost Energy Conservation Measures **Project Number:** 5175019 **Project Category:** Production Support

End Item Supported Model: Artillery, Mine Clearing Line Charge (MICLIC), Tank **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Iowa Army Ammunition Plant Facility Location: Middletown, Iowa Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	0.203	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Aug 2017 Construction Complete: Jun 2018 Equipment Installation Complete: Jun 2018 Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	0.068	-	-	-							
C. Equipment Installation Cost	-	0.057	-	-	-							
D. Contractor Support Cost	-	0.031	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	0.359	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 Base procurement dollars in the amount of \$0.359 million supports identification and implementation of cost effective measures to reduce energy and steam consumption at Iowa Army Ammunition Plant. Effort supports the Army's energy goal for the National Technology Industrial Base.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Improve Restrooms/Break Rooms, Line 2 Pdn Area **Project Number:** 5173631 **Project Category:** Production Support

End Item Supported Model: Artillery **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Iowa Army Ammunition Plant Facility Location: Middletown, Iowa Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	0.325	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Aug 2017 Construction Complete: Aug 2018 Equipment Installation Complete: Aug 2018 Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	0.150	-	-	-							
C. Equipment Installation Cost	-	0.126	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	0.601	-	-	-							
							Related Projects					
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 Base procurement dollars in the amount of \$0.601 million supports improvements to restrooms and break rooms for Line 2 Production Areas at Iowa Army Ammunition Plant. Effort will improve the production workers' quality of work environment.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: IAAAP Footprint Reduction - Melt Pour Operations Phase I, Design **Project Number:** 5185030 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Iowa Army Ammunition Plant Facility Location: Middletown, Iowa Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: May 2018 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	9.600	-	9.600							
Total Project Cost	-	-	9.600	-	9.600							
							Related Projects					
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$9.600 million support Phase I design for footprint reduction at Iowa Army Ammunition Plant. Phase I will evaluate the transfer of Line 3A to the east side of the plant and reduce maintenance costs of the facility. Effort will also evaluate modernization of primary melt pour facility.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Sewer Rehabilitation, Ph 1 **Project Number:** 5185087 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Iowa Army Ammunition Plant Facility Location: Middletown, Iowa Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	2.607	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Sep 2017 Construction Complete: Mar 2019 Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	0.071	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	0.313	-	-	-							
Total Project Cost	-	2.991	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 Base procurement dollars in the amount of \$2.991 million support sewer rehabilitation at Iowa Army Ammunition Plant. Sewer infiltration and inflow (I&I) has reached levels that have exceeded compliance with state standards. This project will reduce the I&I rates so are system is compliance with the Iowa Department of Natural Resources (IDNR) standards.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Gate 3 Upgrade **Project Number:** 5185108 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Iowa Army Ammunition Plant Facility Location: Middletown, Iowa Facility Type (GOGO, GOCO, COCO): GOCO				
A. Construction Cost	-	-	1.850	-	1.850	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Mar 2018 Construction Complete: Mar 2020 Equipment Installation Complete: Prove Out Begins: Prove Out Complete:				
B. Equipment Cost	-	-	-	-	-					
C. Equipment Installation Cost	-	-	-	-	-					
D. Contractor Support Cost	-	-	0.250	-	0.250					
E. Corps of Engineers Support Cost	-	-	-	-	-					
F. Other In-House Support Cost	-	-	-	-	-					
G. Total Facility Project Cost	-	-	-	-	-					
H. Other Costs	-	-	0.323	-	0.323					
Total Project Cost	-	-	2.423	-	2.423					
Related Projects										
	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date			

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$2.423 million support Gate 3 upgrades at Iowa Army Ammunition Plant. This project includes upgrades and modernization of Gate 3 to meet Army standards for access control points.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Roof Replacement, Production Areas, Ph 1 **Project Number:** 5185036 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Iowa Army Ammunition Plant Facility Location: Middletown, Iowa Facility Type (GOGO, GOCO, COCO): GOCO				
A. Construction Cost	-	-	2.112	-	2.112	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Feb 2018 Construction Complete: Feb 2019 Equipment Installation Complete: Prove Out Begins: Prove Out Complete:				
B. Equipment Cost	-	-	-	-	-					
C. Equipment Installation Cost	-	-	-	-	-					
D. Contractor Support Cost	-	-	-	-	-					
E. Corps of Engineers Support Cost	-	-	-	-	-					
F. Other In-House Support Cost	-	-	-	-	-					
G. Total Facility Project Cost	-	-	-	-	-					
H. Other Costs	-	-	0.273	-	0.273					
Total Project Cost	-	-	2.385	-	2.385					
Related Projects										
	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date			

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$2.385 million supports roof replacement in Line 1 production areas at Iowa Army Ammunition Plant. Effort will improve safety and work environment within the production areas. Existing roofs have exceeded their life expectancy.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Underground Electrical Upgrades **Project Number:** 5175086 **Project Category:** Production Support

End Item Supported Model: 40mm **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Iowa Army Ammunition Plant Facility Location: Middletown, Iowa Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	0.931	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Aug 2017 Construction Complete: Feb 2018 Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	0.328	-	-	-							
Total Project Cost	-	1.259	-	-	-							
							Related Projects					
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 Base procurement dollars in the amount of \$1.259 million supports upgrades to underground electrical feeds at Iowa Army Ammunition Plant (AAP). The current Line 1 underground electrical feed at Iowa AAP has reached the end of its useful life. Project will bore and trench new electrical cable to feed Loops 1, 2, and 3 of the Line 1 electrical system. This effort will correct deficiencies and reduce the risk of production shutdown.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Small Caliber Modernization, Production Line Upgrades **Project Number:** 5XX3356 **Project Category:** Production Support

End Item Supported Model: .50 Cal (all types except SLAP-T), 5.56mm, 7.62mm (all types) **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Lake City Army Ammunition Plant Facility Location: Independence, Missouri Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	3.910	-	3.910	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Apr 2017 Initial/Final Project Award: Mar 2017 / May 2018 Construction Complete: Dec 2019 Equipment Installation Complete: Dec 2019 Prove Out Begins: Jan 2020 Prove Out Complete: Feb 2020						
B. Equipment Cost	2.088	6.936	8.500	-	8.500							
C. Equipment Installation Cost	2.024	2.039	5.500	-	5.500							
D. Contractor Support Cost	0.279	0.645	1.260	-	1.260							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	0.180	0.900	-	0.900							
Total Project Cost	4.391	9.800	20.070	-	20.070	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$20.070 million supports modernization improvements in small caliber ammunition manufacturing at Lake City Army Ammunition Plant. Upgrades are required due to the age of the equipment and extensive production requirements in recent years. Upgrades include replacement of 5.56mm Clip Carton Pack Machines, .50 Caliber Linker Machine Cartridge Feed and Link Feed system, 7.62mm Linker Machine Cartridge Feed and Link system, and Building 1 material handling upgrades. Effort will improve product quality, equipment reliability, availability, and maintainability, while addressing personnel safety.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Exterior Steam Main Supports **Project Number:** 5XX3778 **Project Category:** Production Support

End Item Supported Model: 5.56mm, 7.62mm, Cal .50 **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Lake City Army Ammunition Plant Facility Location: Independence, Missouri Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	1.835	-	5.025	-	5.025	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Jan 2017 Initial/Final Project Award: Sep 2016 Construction Complete: Nov 2017 Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	0.388	-	0.420	-	0.420							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	2.223	-	5.445	-	5.445							
											Related Projects	
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$5.445 million supports modernization of exterior steam supports at Lake City Army Ammunition Plant. Effort will evaluate existing steam main supports at the Primer Complex and design and install new steam supports as required. Effort will improve safety, reduce steam loss to manufacturing buildings and reduce risk of production interruptions for small caliber ammunition.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Building 15 Programmable Logic Control (PLC) and Economizer Upgrade **Project Number:** 5163780 **Project Category:** Production Support

End Item Supported Model: 5.56mm, 7.62mm, Cal .50 **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Lake City Army Ammunition Plant Facility Location: Independence, Missouri Facility Type (GOGO, GOCO, COCO): GOCO							
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Jan 2017 Initial/Final Project Award: Sep 2016 Construction Complete: Equipment Installation Complete: Feb 2018 Prove Out Begins: Feb 2018 Prove Out Complete: Mar 2018	Related Projects						
B. Equipment Cost	1.137	-	-	-	-		Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date
C. Equipment Installation Cost	1.335	-	-	-	-								
D. Contractor Support Cost	0.413	-	-	-	-								
E. Corps of Engineers Support Cost	-	-	-	-	-								
F. Other In-House Support Cost	-	-	-	-	-								
G. Total Facility Project Cost	-	-	-	-	-								
H. Other Costs	-	-	-	-	-								
Total Project Cost	2.885	-	-	-	-								

Narrative Explanation:
 Procurement dollars in the amount of \$2.885 million supports modernization upgrades to Building 15 Programmable Logic Control (PLC) and economizer at Lake City Army Ammunition Plant (AAP). Existing equipment does not meet National Fire Protection Agency code; equipment is obsolete and replacement parts are difficult to procure. This effort will design and install new economizers and PLC on boilers 1-4. This system serves as a safety device to prevent boiler explosions and will support production at Lake city AAP.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Structural Upgrades (Buildings 1, 2, 3, and 35), Design **Project Number:** 5163708 **Project Category:** Production Support

End Item Supported Model: 5.56mm, 7.62mm, .Cal .50, Enhanced Performing Rounds (EPRs), Links **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Lake City Army Ammunition Plant Facility Location: Independence, Missouri Facility Type (GOGO, GOCO, COCO): GOCO	
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Nov 2017 Initial/Final Project Award: Nov 2016 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:	
B. Equipment Cost	-	-	-	-	-		
C. Equipment Installation Cost	-	-	-	-	-		
D. Contractor Support Cost	-	-	-	-	-		
E. Corps of Engineers Support Cost	-	-	-	-	-		
F. Other In-House Support Cost	-	-	-	-	-		
G. Total Facility Project Cost	-	-	-	-	-		
H. Other Costs	2.159	-	-	-	-		
Total Project Cost	2.159	-	-	-	-		
Related Projects							
	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 Procurement dollars in the amount of \$2.159 million supports design effort to correct structural deficiencies found in Buildings 1, 2, 3, and 35 at Lake City Army Ammunition Plant. Based on a Building Structural Evaluation Study, these buildings are structurally unsafe. This effort will ensure the safety of personnel, protect production equipment, and assure Lake City AAP complies with Occupational Safety and Health Administration, National Fire Protection Agency, National Electrical Code, and Building Codes.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Water Supply and Water Tower Upgrades **Project Number:** 5173018 **Project Category:** Production Support

End Item Supported Model: 20mm, 5.56mm, 6.52mm, Cal .50 **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Lake City Army Ammunition Plant Facility Location: Independence, Missouri Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	0.585	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Apr 2018 Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	0.071	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	0.656	-	-	-							
						Related Projects						
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 Base procurement dollars in the amount of \$0.656 million supports modernization of Lake City Army Ammunition Plant's water tower to meet fire safety and ensure production continuity. Effort will replace the piping leading to the towers as well as the piping and valving in water tower pits. Water is vital in the production of small caliber ammunition and critical to the welfare personnel.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Primer Assembly Wing, Building 35, HVAC(Design) **Project Number:** 5XX3459 **Project Category:** Production Support

End Item Supported Model: 20mm, 5.56mm, 7.62mm, Cal .50 **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Lake City Army Ammunition Plant Facility Location: Independence, Missouri Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	0.650	-	0.650	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: May 2017 / May 2018 Construction Complete: Feb 2020 Equipment Installation Complete: Prove Out Begins: Mar 2020 Prove Out Complete: Apr 2020						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	0.034	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	0.277	0.461	-	0.461							
Total Project Cost	-	0.311	1.111	-	1.111	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$1.111 million supports modernization upgrades to the heating, ventilation and air conditioning (HVAC) throughout the primer assembly wing in Building 35 at Lake City Army Ammunition Plant. Proper temperature and conditioned air is important in producing consistent, high quality primers for 5.56mm, 7.62mm, and .50 cal, as well and helping to maintain employee health and alertness while handling explosives.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Decontamination Facility, Design **Project Number:** 5173714 **Project Category:** Production Support

End Item Supported Model: 5.56mm, 7.62mm, Cal .50 **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Lake City Army Ammunition Plant Facility Location: Independence, Missouri Facility Type (GOGO, GOCO, COCO): GOCO						
						Principal Milestones						Month & Year
A. Construction Cost	-	-	-	-	-	Concept Design Complete:						
B. Equipment Cost	-	-	-	-	-	Final Design Complete:						
C. Equipment Installation Cost	-	-	-	-	-	Initial/Final Project Award:						Apr 2017
D. Contractor Support Cost	-	-	-	-	-	Construction Complete:						
E. Corps of Engineers Support Cost	-	-	-	-	-	Equipment Installation Complete:						
F. Other In-House Support Cost	-	-	-	-	-	Prove Out Begins:						
G. Total Facility Project Cost	-	-	-	-	-	Prove Out Complete:						
H. Other Costs	-	1.038	-	-	-							
Total Project Cost	-	1.038	-	-	-							
						Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:

Base procurement dollars in the amount of \$1.038 million supports design of a decontamination facility with associated air pollution control equipment, support/storage building, and necessary utilities at Lake City Army Ammunition Plant. The new facility will provide an on-site safe method to decontaminate scrap equipment and metal parts exposed to explosives, in accordance with Department of Army procedures. This effort supports the production operations of small and medium caliber ammunition.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Building 3 Lighting Switchgear **Project Number:** 5173762 **Project Category:** Production Support

End Item Supported Model: 20mm, 7.62mm, Cal .50 **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Lake City Army Ammunition Plant Facility Location: Independence, Missouri Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	0.571	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Apr 2017 Construction Complete: Equipment Installation Complete: Dec 2018 Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	0.193	-	-	-							
C. Equipment Installation Cost	-	0.073	-	-	-							
D. Contractor Support Cost	-	0.076	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	0.913	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 Base procurement dollars in the amount of \$0.913 million supports an effort to install new lighting switchgear in Building 3 at Lake City Army Ammunition Plant. The primary switchgear is an original installation and components are obsolete and hard to procure, resulting in potential production interruption. This effort will provide a safe and reliable electrical distribution system in Building 3 and supports production of small caliber ammunition.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Building 2 Interior Switchgear **Project Number:** 5173763 **Project Category:** Production Support

End Item Supported Model: 5.56mm, Links **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Lake City Army Ammunition Plant Facility Location: Independence, Missouri Facility Type (GOGO, GOCO, COCO): GOCO														
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: May 2017 Construction Complete: Equipment Installation Complete: Jan 2018 Prove Out Begins: Prove Out Complete:														
B. Equipment Cost	-	0.399	-	-	-															
C. Equipment Installation Cost	-	0.058	-	-	-															
D. Contractor Support Cost	-	0.007	-	-	-															
E. Corps of Engineers Support Cost	-	-	-	-	-															
F. Other In-House Support Cost	-	-	-	-	-															
G. Total Facility Project Cost	-	-	-	-	-															
H. Other Costs	-	-	-	-	-															
Total Project Cost	-	0.464	-	-	-															
						Related Projects														
						<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Project Number</th> <th style="width: 40%;">Title</th> <th style="width: 15%;">FY & Appn</th> <th style="width: 10%;">Value (\$ M)</th> <th style="width: 10%;">Facing</th> <th style="width: 10%;">Start Date</th> <th style="width: 5%;">Compl Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date							
Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date														

Narrative Explanation:
 Base procurement dollars in the amount of \$0.464 million supports an effort to install new lighting switchgear in Building 2 at Lake City Army Ammunition Plant. The interior switchgear is over 25 years old and components are obsolete and hard to procure. This switchgear serves as the distribution for Building 2; therefore, failure could result in production interruption and or loss. This effort will provide a safe and reliable electrical distribution system in Building 2 and supports small caliber production.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:**
EP1000 / Provision of Industrial Facilities

Project Title: 19 Series Buildings - Controls and Monitoring Upgrades **Project Number:** 5173795 **Project Category:** Production Support

End Item Supported Model: 5.56mm, 7.62mm, Cal .50 **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Lake City Army Ammunition Plant Facility Location: Independence, Missouri Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	0.558	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: May 2017 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	0.072	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	0.040	-	-	-							
Total Project Cost	-	0.670	-	-	-							
						Related Projects						
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 Base procurement dollars in the amount of \$0.670 million supports installation of modulated Steam Valve with tunable temperature control loop in the Building 19 Series at Lake City Army Ammunition Plant (AAP). Project supports energy reduction efforts and small caliber ammunition production at Lake City AAP

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10	P-1 Line Item Number / Title: EP1000 / Provision of Industrial Facilities
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Project Title: Building 1 & 2 Load Center Transformer Replacement	Project Number: 5XX3611	Project Category: Production Support
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End Item Supported Model:	Annual Capacity Before / After (1-8-5): /
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Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Lake City Army Ammunition Plant Facility Location: Independence, Missouri Facility Type (GOGO, GOCO, COCO): GOCO				
A. Construction Cost	-	-	1.568	-	1.568	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Apr 2017 / May 2018 Construction Complete: May 2020 Equipment Installation Complete: May 2020 Prove Out Begins: Jun 2020 Prove Out Complete: Aug 2020				
B. Equipment Cost	-	-	0.750	-	0.750					
C. Equipment Installation Cost	-	-	0.500	-	0.500					
D. Contractor Support Cost	-	-	-	-	-					
E. Corps of Engineers Support Cost	-	-	-	-	-					
F. Other In-House Support Cost	-	-	-	-	-					
G. Total Facility Project Cost	-	-	-	-	-					
H. Other Costs	-	0.386	0.358	-	0.358					
Total Project Cost	-	0.386	3.176	-	3.176					
Related Projects										
	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date			

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$3.176 million supports replacement of Building 1 and 2 load center transformer at Lake City Army Ammunition Plant. The transformers are the main power conversion feeding the 5.56mm production operations. This effort will design and install electrical transformers to be used for production Buildings 1 and 2 substations. The existing transformers have exceeded their service life and failure of these transformers has the potential to interrupt 5.56mm production operations.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Noise Abatement in Production & Testing Buildings, Design **Project Number:** 5173635 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Lake City Army Ammunition Plant Facility Location: Independence, Missouri Facility Type (GOGO, GOCO, COCO): GOCO							
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Apr 2017 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:							
B. Equipment Cost	-	-	-	-	-								
C. Equipment Installation Cost	-	-	-	-	-								
D. Contractor Support Cost	-	-	-	-	-								
E. Corps of Engineers Support Cost	-	-	-	-	-								
F. Other In-House Support Cost	-	-	-	-	-								
G. Total Facility Project Cost	-	-	-	-	-								
H. Other Costs	-	1.038	-	-	-								
Total Project Cost	-	1.038	-	-	-								
Related Projects													
							Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 Base procurement dollars in the amount of \$1.038 million supports design of noise abatement systems in 5.56mm, 7.62mm, and .50 cal production and testing buildings at Lake City Army Ammunition Plant. Noise levels in the production buildings affect employees' ability to hear emergency warnings for storm, fire, and security alerts. This effort will identify sound emitting sources and develop solutions to minimize noise produced.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Building 15 Boiler Plant, Conceptual Design/Requirement Determination **Project Number:** 5XX3718 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Lake City Army Ammunition Plant Facility Location: Independence, Missouri Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	1.750	-	1.750	Principal Milestones Month & Year Concept Design Complete: Apr 2018 Final Design Complete: Apr 2017 / Apr 2018 Initial/Final Project Award: Apr 2017 / Apr 2018 Construction Complete: Jun 2020 Equipment Installation Complete: Jun 2020 Prove Out Begins: Jul 2020 Prove Out Complete: Sep 2020						
B. Equipment Cost	-	-	0.250	-	0.250							
C. Equipment Installation Cost	-	-	0.358	-	0.358							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	0.311	0.500	-	0.500							
Total Project Cost	-	0.311	2.858	-	2.858	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$2.858 million supports the investigation of the existing steam plant, evaluation of alternatives to constructing a new centralized steam plant (such as decentralization) and determine the necessity of building a new centralized steam plan to replace the aging Building 15 steam plant at Lake City Army Ammunition Plant (AAP). This will reduce the energy footprint at Lake City AAP, increase efficiencies and support production of small caliber ammunition.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Electrical Switchgear Upgrade, Bldg 35 **Project Number:** 5173662 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Lake City Army Ammunition Plant Facility Location: Independence, Missouri Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	0.575	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Apr 2017 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	0.048	-	-	-							
Total Project Cost	-	0.623	-	-	-							
						Related Projects						
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 Base procurement dollars in the amount of \$0.623 million supports electrical switchgear upgrades to Building 35 at Lake City Army Ammunition Plant. This switch gear supports primer manufacturing of small and medium caliber ammunition. The existing switch gear is approximately 70 years old, is original to the facility and no longer meets code or safety requirements. This effort will install a new switch gear that will reduce arc flash risk and meet NFPA 70E.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Bldg 91C Centrifugal Compressor **Project Number:** 5175059 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Lake City Army Ammunition Plant Facility Location: Independence, Missouri Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	0.525	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: May 2017 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	0.850	-	-	-							
C. Equipment Installation Cost	-	0.250	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	0.083	-	-	-							
Total Project Cost	-	1.708	-	-	-							
						Related Projects						
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 Base procurement dollars in the amount of \$1.708 million supports installation of an additional centrifugal compressor in Building 91C at Lake City Army Ammunition Plant (AAP). Effort will improve the reliability of compressed air availability. Compressed air supports all small caliber production requirements at Lake City AAP.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Building 35 Wash Pad Replacement **Project Number:** 5183799 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Lake City Army Ammunition Plant Facility Location: Independence, Missouri Facility Type (GOGO, GOCO, COCO): GOCO				
A. Construction Cost	-	-	0.499	-	0.499	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Mar 2018 Construction Complete: Mar 2019 Equipment Installation Complete: Prove Out Begins: Prove Out Complete:				
B. Equipment Cost	-	-	-	-	-					
C. Equipment Installation Cost	-	-	-	-	-					
D. Contractor Support Cost	-	-	-	-	-					
E. Corps of Engineers Support Cost	-	-	-	-	-					
F. Other In-House Support Cost	-	-	-	-	-					
G. Total Facility Project Cost	-	-	-	-	-					
H. Other Costs	-	-	0.300	-	0.300					
Total Project Cost	-	-	0.799	-	0.799					
Related Projects										
	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date			

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$0.799 million supports effort to correct structural deficiencies in the Building 35 Wash Pad area at Lake City Army Ammunition Plant.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: HVAC Modifications, Upgrade Prod Bldg Wings **Project Number:** 5183652 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Lake City Army Ammunition Plant Facility Location: Independence, Missouri Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Apr 2018 Initial/Final Project Award: Sep 2017 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:	Related Projects					
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	5.100	-	-	-							
Total Project Cost	-	5.100	-	-	-							
												Project Number

Narrative Explanation:
 Procurement dollars in the amount of \$5.100 million support design of installation of HVAC equipment in explosive wings of Buildings 1 and 3 at Lake City Army Ammunition Plant. This effort will provide reliable, efficient systems by providing temperature and humidity control for quality manufacturing of explosives. It will also provide for a safer environment in energetic areas.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Building 85 Kill Tanks, Design **Project Number:** 5185064 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Lake City Army Ammunition Plant Facility Location: Independence, Missouri Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Jan 2019 Initial/Final Project Award: Mar 2018 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	0.524	-	0.524							
Total Project Cost	-	-	0.524	-	0.524		Related Projects					
							Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$0.524 million support design of new Kill Tanks in Building 85 at Lake City Army Ammunition Plant. There are ten explosives kill tanks below building 85. These tanks chemically neutralize tetrazene, lead styphnate, magnesium styphnate and PETN. The existing tanks are aging and hazardous to personnel. The new system will provide increased protection and improve containment functions.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Powder Elevator Replacement, Bldgs 1 & **Project Number:** 5185333 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Lake City Army Ammunition Plant Facility Location: Independence, Missouri Facility Type (GOGO, GOCO, COCO): GOCO							
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: May 2018 Construction Complete: Equipment Installation Complete: Jun 2019 Prove Out Begins: Prove Out Complete:	Related Projects						
B. Equipment Cost	-	-	1.250	-	1.250		Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date
C. Equipment Installation Cost	-	-	0.750	-	0.750								
D. Contractor Support Cost	-	-	-	-	-								
E. Corps of Engineers Support Cost	-	-	-	-	-								
F. Other In-House Support Cost	-	-	-	-	-								
G. Total Facility Project Cost	-	-	-	-	-								
H. Other Costs	-	-	0.080	-	0.080								
Total Project Cost	-	-	2.080	-	2.080								

Narrative Explanation:
 FY2018 Base procurement dollars in the amount of \$2.080 million supports rehabilitation of elevators that carry explosives in Buildings 1 and 3 at Lake City Army Ammunition Plant. This effort is required to maintain production continuity.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: New Emergency Fire Doors (PW) **Project Number:** 5185000 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Lake City Army Ammunition Plant Facility Location: Independence, Missouri Facility Type (GOGO, GOCO, COCO): GOCO							
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Jun 2018 Construction Complete: Equipment Installation Complete: Jun 2019 Prove Out Begins: Prove Out Complete:	Related Projects						
B. Equipment Cost	-	-	0.375	-	0.375		Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date
C. Equipment Installation Cost	-	-	0.430	-	0.430								
D. Contractor Support Cost	-	-	-	-	-								
E. Corps of Engineers Support Cost	-	-	-	-	-								
F. Other In-House Support Cost	-	-	-	-	-								
G. Total Facility Project Cost	-	-	-	-	-								
H. Other Costs	-	-	-	-	-								
Total Project Cost	-	-	0.805	-	0.805								

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$0.805 million will support replacement of emergency fire doors that will be code compliant in Buildings 1, 2 and 3 at Lake City Army Ammunition Plant. Effort will improve safety for personnel in Buildings 1, 2 and 3.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Bldgs 12B, 93 Roof Replacement **Project Number:** 5185007 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Lake City Army Ammunition Plant Facility Location: Independence, Missouri Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	0.975	-	0.975	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Mar 2018 Construction Complete: Jul 2019 Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	0.162	-	0.162							
Total Project Cost	-	-	1.137	-	1.137							
							Related Projects					
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$1.137 million supports roof replacement of buildings 12B and 93 at Lake City Army Ammunition Plant. The existing roofs are at the end of their service life and experience frequent leaks. Several leaks are in close proximity to electrical infrastructure, posing a safety risk to personnel.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Protective Structure Design for Site Plan Compliance **Project Number:** 5183797 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Lake City Army Ammunition Plant Facility Location: Independence, Missouri Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Feb 2019 Initial/Final Project Award: Apr 2018 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	0.617	-	0.617							
Total Project Cost	-	-	0.617	-	0.617							
							Related Projects					
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$0.617 million supports design effort for protective structural improvements at the Lake City Army Ammunition Plant. Effort will evaluate production building explosive areas to ensure compliance with current site safety plans.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Building 6 Electrical Upgrades **Project Number:** 5185109 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Lake City Army Ammunition Plant Facility Location: Independence, Missouri Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	1.118	-	1.118	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Apr 2018 Construction Complete: Oct 2019 Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	0.100	-	0.100							
Total Project Cost	-	-	1.218	-	1.218	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$1.218 million support electrical upgrades to Building 6 at Lake City Army Ammunition Plant. Building 6 functions have expanded and the current electrical load requirement is inadequate. The electrical service and branch circuits will be upgraded as well as rerouting sections of the system to maximize efficiencies.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Communication Lines, System Analysis & Design **Project Number:** 5185003 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Lake City Army Ammunition Plant Facility Location: Independence, Missouri Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Apr 2019 Initial/Final Project Award: Apr 2018 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	0.612	-	0.612							
Total Project Cost	-	-	0.612	-	0.612							
							Related Projects					
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$0.612 million supports design phase for upgrade of the communication infrastructure of telephone, fiber, and Information Technology devices at Lake City Army Ammunition Plant.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Boiler Optimization (MACT Compliance) **Project Number:** 5165073 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Lake City Army Ammunition Plant Facility Location: Independence, Missouri Facility Type (GOGO, GOCO, COCO): GOCO					
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Nov 2015 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:					
B. Equipment Cost	-	-	-	-	-						
C. Equipment Installation Cost	-	-	-	-	-						
D. Contractor Support Cost	-	-	-	-	-						
E. Corps of Engineers Support Cost	-	-	-	-	-						
F. Other In-House Support Cost	-	-	-	-	-						
G. Total Facility Project Cost	-	-	-	-	-						
H. Other Costs	0.107	-	-	-	-						
Total Project Cost	0.107	-	-	-	-						
Related Projects											
	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date				

Narrative Explanation:
 Procurement dollars in the amount of \$0.107 million supports modernization tune up of the natural gas boiler at Lake City Army Ammunition Plant. The tune up will manage air to fuel levels for 54 process heaters and eight industrial package boilers. Effort will also include an energy assessment to avoid potential environmental violation or fines.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: IWTP Lagoon Liners **Project Number:** 5183792 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Lake City Army Ammunition Plant Facility Location: Independence, Missouri Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	1.850	-	1.850	Principal Milestones Concept Design Complete: Final Design Complete: Initial/Final Project Award: May 2018 Construction Complete: Jul 2019 Equipment Installation Complete: Prove Out Begins: Prove Out Complete:	Month & Year					
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	0.325	-	0.325							
H. Other Costs	-	-	0.064	-	0.064							
Total Project Cost	-	-	2.239	-	2.239							
							Related Projects					
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$2.239 million support replacement of the industrial waste water treatment plant (IWTP) lagoon liners at Lake City Army Ammunition Plant. The liners prevent groundwater contamination from the IWTP. The existing liners were installed in the 1988 and have been repaired multiple times. Replacement is required to ensure environmental compliance.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Construct New Nitrocellulose (NC) Facility **Project Number:** 5XX2736 **Project Category:** Production Support

End Item Supported Model: Propellants for Large, Medium, and Small Cal Munitions **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Radford Army Ammunition Plant Facility Location: Radford, Virginia Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	7.580	81.285	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Aug 2015 Initial/Final Project Award: Dec 2013 / Jan 2017 Construction Complete: Apr 2018 Equipment Installation Complete: Apr 2018 Prove Out Begins: Jun 2018 Prove Out Complete: Dec 2018						
B. Equipment Cost	5.267	41.212	-	-	-							
C. Equipment Installation Cost	-	26.678	-	-	-							
D. Contractor Support Cost	0.255	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	0.745	0.825	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	0.880	-	-	-							
Total Project Cost	13.847	150.880	-	-	-							
Related Projects						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 Base procurement dollars in the amount of \$150.880 million supports the effort to continue the modernization and construction of a new, right-sized facility to produce high quality Nitrocellulose (NC) at Radford Army Ammunition Plant. The current NC facility has exceeded its useful life and experienced as many as 70 failures in 12 months. The new facility efficiently address safety, environmental and production requirements. This phase includes design and construction of the deep foundations required for the new NC facility and construction of NC production train # 2.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Solvent Propellant Manufacturing Facility (Preliminary Design) **Project Number:** 5173816 **Project Category:** Production Support

End Item Supported Model: Propellants for Large, Medium, and Small Cal Munitions **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Radford Army Ammunition Plant Facility Location: Radford, Virginia Facility Type (GOGO, GOCO, COCO): GOCO						
						Principal Milestones					Month & Year	
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date
A. Construction Cost	-	-	-	-	-	Concept Design Complete:					Mar 2018	
B. Equipment Cost	-	-	-	-	-	Final Design Complete:						
C. Equipment Installation Cost	-	-	-	-	-	Initial/Final Project Award:						
D. Contractor Support Cost	-	0.560	-	-	-	Construction Complete:						
E. Corps of Engineers Support Cost	-	-	-	-	-	Equipment Installation Complete:						
F. Other In-House Support Cost	-	-	-	-	-	Prove Out Begins:						
G. Total Facility Project Cost	-	-	-	-	-	Prove Out Complete:						
H. Other Costs	-	5.096	-	-	-							
Total Project Cost	-	5.656	-	-	-							

Narrative Explanation:
 Base procurement dollars in the amount of \$5.656 million supports the preliminary design of a new solvent propellant manufacturing facility at Radford Army Ammunition Plant. Facility will be capable of producing single and multi-base solvent propellants. The implementation of this project will allow for uninterrupted manufacturing and replace the antiquated facility currently used to support solvent propellants production.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Acid Area Improvements, Ph 3 **Project Number:** 5XX3735 **Project Category:** Production Support

End Item Supported Model: Propellants for Large, Medium, and Small Cal Munitions **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Radford Army Ammunition Plant Facility Location: Radford, Virginia Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	2.205	-	2.250	-	2.250	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Sep 2016 / Jul 2018 Construction Complete: Jul 2020 Equipment Installation Complete: Jul 2020 Prove Out Begins: Aug 2020 Prove Out Complete: Sep 2020						
B. Equipment Cost	2.575	-	1.750	-	1.750							
C. Equipment Installation Cost	1.232	-	1.600	-	1.600							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	0.130	-	0.130							
Total Project Cost	6.012	-	5.730	-	5.730							
Related Projects											Project Number	Title

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$5.730 million supports phase three of repair of critical bulk storage tanks and containment dikes in the acid area at Radford Army Ammunition Plant. Bulk storage tanks vary in age and several existing tanks were installed in the 1940s. Acid bulk storage capacity is required to handle sulfuric acid, oleum, strong nitric acid, weak nitric acid, and processed (pyro) acid. The safe and reliable storage of acids is critical for nitrocellulose manufacturing operations. Containment dikes surrounding these bulk storage tanks have deteriorated and repairs are required to contain an acid release in the event of a catastrophic failure.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Near-Term Ethyl Cellulose (EC) Line Upgrade **Project Number:** 5175054 **Project Category:** Production Support

End Item Supported Model: Anti-Personnel Obstacle Breaching System (APOBS), Hydra **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Radford Army Ammunition Plant Facility Location: Radford, Virginia Facility Type (GOGO, GOCO, COCO): GOCO						
						Principal Milestones						Month & Year
A. Construction Cost	-	-	-	-	-	Concept Design Complete:						
B. Equipment Cost	-	1.413	-	-	-	Final Design Complete:						
C. Equipment Installation Cost	-	0.830	-	-	-	Initial/Final Project Award:						Aug 2017
D. Contractor Support Cost	-	0.092	-	-	-	Construction Complete:						
E. Corps of Engineers Support Cost	-	-	-	-	-	Equipment Installation Complete:						Jul 2018
F. Other In-House Support Cost	-	-	-	-	-	Prove Out Begins:						Jul 2018
G. Total Facility Project Cost	-	-	-	-	-	Prove Out Complete:						Jul 2018
H. Other Costs	-	-	-	-	-	Related Projects						
Total Project Cost	-	2.335	-	-	-	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 Base procurement dollars in the amount of \$2.335 million supports replacement of existing mixers, air conveyer system, and dust collection system associated with EC manufacturing projects at Radford Army Ammunition Plant (AAP). Equipment is in poor condition, obsolete, or difficult to find. Project will maintain rocket manufacturing at Radford AAP and reduce the likelihood of unscheduled production shutdowns.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Acid Sewer Upgrades, Ph 3 **Project Number:** 5173439 **Project Category:** Production Support

End Item Supported Model: Propellants for Large, Medium, and Small Cal Munitions **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Radford Army Ammunition Plant						
						Facility Location: Radford, Virginia						
A. Construction Cost	-	4.680	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Dec 2017 Construction Complete: Jun 2018 Equipment Installation Complete: Prove Out Begins: Jun 2018 Prove Out Complete: Jun 2018						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	0.813	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	2.706	-	-	-							
Total Project Cost	-	8.199	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 Base procurement dollars in the amount of \$8.199 million supports modernization upgrades to the main acid sewer lines located in the acid production area at Radford Army Ammunition Plant. The existing system was installed over 50 years ago and experiences frequent leaks and failures. The system is no longer economically viable. Upgrades are required to ensure adequate acidic wastewater processing capabilities to support production operations and to comply with environmental regulations.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Sanitary Sewer Collection & Treatment (Assessment & Design) **Project Number:** 5173570 **Project Category:** Production Support

End Item Supported Model: Propellants for Large, Medium, and Small Cal Munitions **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Radford Army Ammunition Plant Facility Location: Radford, Virginia Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Aug 2018 Initial/Final Project Award: Aug 2017 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	0.353	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	3.204	-	-	-							
Total Project Cost	-	3.557	-	-	-							
							Related Projects					
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 Base procurement dollars in the amount of \$3.557 million supports the assessment and design for a sanitary wastewater treatment plant and collection system at Radford Army Ammunition Plant (AAP). The safe and sustainable operation of this plant is crucial to maintaining the health and hygiene of installation employees and maintaining Radford AAP's mission. A rehabilitated system will ensure continued compliance with Federal and State wastewater regulations.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Water Intake Pump Upgrade (Building 407) **Project Number:** 5173741 **Project Category:** Production Support

End Item Supported Model: Propellants for Large, Medium, and Small Cal Munitions **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Radford Army Ammunition Plant Facility Location: Radford, Virginia Facility Type (GOGO, GOCO, COCO): GOCO							
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Jul 2017 Initial/Final Project Award: Jul 2017 Construction Complete: Equipment Installation Complete: Jan 2018 Prove Out Begins: Jan 2018 Prove Out Complete: Jan 2019	Related Projects						
B. Equipment Cost	-	0.363	-	-	-		Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date
C. Equipment Installation Cost	-	0.169	-	-	-								
D. Contractor Support Cost	-	0.019	-	-	-								
E. Corps of Engineers Support Cost	-	-	-	-	-								
F. Other In-House Support Cost	-	-	-	-	-								
G. Total Facility Project Cost	-	-	-	-	-								
H. Other Costs	-	-	-	-	-								
Total Project Cost	-	0.551	-	-	-								

Narrative Explanation:
 Base procurement dollars in the amount of \$0.551 million supports upgrades to three intake pumps in Building 407 at Radford Army Ammunition Plant (AAP). These pumps provide a viable backup and continuous source of water for fire suppression, process water, drinking water and steam which greatly impact operations at Radford AAP.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Nitric Acid Concentrator/Sulfuric Acid Concentrator (NAC/SAC) Improvements **Project Number:** 5173120 **Project Category:** Production Support

End Item Supported Model: Propellants for Large, Medium, and Small Cal Munitions **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Radford Army Ammunition Plant Facility Location: Radford, Virginia Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Dec 2017 Initial/Final Project Award: Sep 2017 Construction Complete: Equipment Installation Complete: Jun 2019 Prove Out Begins: Jun 2019 Prove Out Complete: Aug 2019						
B. Equipment Cost	-	4.750	-	-	-							
C. Equipment Installation Cost	-	3.275	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	1.625	-	-	-							
Total Project Cost	-	9.650	-	-	-							
						Related Projects						
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 Base procurement dollars in the amount of \$9.650 million supports design and process improvements to the NAC/SAC at Radford Army Ammunition Plant. Bottlenecks in the current NAC/SAC configuration are negatively impacting throughput. Project will allow flexibility in processing acids, increase the consumption of pyro acid, and enhance production of strong nitric acid.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Water Distribution Replacement, Design **Project Number:** 5173734 **Project Category:** Production Support

End Item Supported Model: Propellants for Large, Medium, and Small Cal Munitions **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Radford Army Ammunition Plant Facility Location: Radford, Virginia Facility Type (GOGO, GOCO, COCO): GOCO					
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Sep 2017 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:					
B. Equipment Cost	-	-	-	-	-						
C. Equipment Installation Cost	-	-	-	-	-						
D. Contractor Support Cost	-	-	-	-	-						
E. Corps of Engineers Support Cost	-	-	-	-	-						
F. Other In-House Support Cost	-	-	-	-	-						
G. Total Facility Project Cost	-	-	-	-	-						
H. Other Costs	-	5.000	-	-	-						
Total Project Cost	-	5.000	-	-	-						
Related Projects											
	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date				

Narrative Explanation:
 Base procurement dollars in the amount of \$5.000 million supports design of a new water distribution system at Radford Army Ammunition Plant (AAP). This project initiates the effort for the replacement of water lines for raw, drinking, and fire suppression water throughout the 4,000 acres at Radford AAP. Many of the water distribution lines date to the original construction of the plant in the 1940s.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Plant Operations, Major Maintenance **Project Number:** 5XX3407 **Project Category:** Production Support

End Item Supported Model: Propellants for Large, Medium, and Small Cal Munitions **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Radford Army Ammunition Plant Facility Location: Radford, Virginia Facility Type (GOGO, GOCO, COCO): GOCO														
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Jan 2017 / Feb 2018 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:														
B. Equipment Cost	-	-	-	-	-															
C. Equipment Installation Cost	-	-	-	-	-															
D. Contractor Support Cost	-	-	-	-	-															
E. Corps of Engineers Support Cost	-	-	-	-	-															
F. Other In-House Support Cost	-	-	-	-	-															
G. Total Facility Project Cost	-	-	-	-	-															
H. Other Costs	-	8.600	28.686	-	28.686															
Total Project Cost	-	8.600	28.686	-	28.686															
						Related Projects														
						<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Project Number</th> <th style="width: 40%;">Title</th> <th style="width: 10%;">FY & Appn</th> <th style="width: 10%;">Value (\$ M)</th> <th style="width: 10%;">Facing</th> <th style="width: 10%;">Start Date</th> <th style="width: 10%;">Compl Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date							
Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date														

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$28.686 million supports major maintenance activities at Radford Army Ammunition Plant (AAP). Effort includes substantial purchases, repairs, and upgrades that are high priority and critical to Radford's mission. Major maintenance is beyond normal maintenance and can generally be attributed to end of life, unforeseeable failures, or changes in laws, regulations, codes, or standards. This includes building and infrastructure sustainment/refurbishment. Effort will also fund preventive, scheduled and unscheduled maintenance of production equipment and facilities that would prevent serious injury to personnel or effects to the environment. Funding is also provided for cyber security requirements, fire and emergency services and to execute an environmental program to ensure compliance with existing Federal, State, and local environmental laws.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Alternate Nitrate Ester Manufacturing Facility, Design **Project Number:** 5185090 **Project Category:** Production Support

End Item Supported Model: Propellants for Large, Medium, and Small Cal Munitions **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Radford Army Ammunition Plant						
						Facility Location: Radford, Virginia						
A. Construction Cost	-	-	-	-	-	Facility Type (GOGO, GOCO, COCO): GOCO						
B. Equipment Cost	-	-	-	-	-	Principal Milestones			Month & Year			
C. Equipment Installation Cost	-	-	-	-	-	Concept Design Complete:			Oct 2019			
D. Contractor Support Cost	-	-	-	-	-	Final Design Complete:			Jun 2018			
E. Corps of Engineers Support Cost	-	-	-	-	-	Initial/Final Project Award:			Construction Complete:			
F. Other In-House Support Cost	-	-	-	-	-	Equipment Installation Complete:			Prove Out Begins:			
G. Total Facility Project Cost	-	-	-	-	-	Prove Out Complete:			Related Projects			
H. Other Costs	-	-	4.205	-	4.205	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date
Total Project Cost	-	-	4.205	-	4.205							

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$4.205 million supports modernization effort to design of a new alternate nitrate ester facility at Radford Army Ammunition Plant. This facility will be able to produce nitroglycerin (NG), Diethylene glycol dinitrate (DEDGN), and other nitrate esters. This will expand Radford's ability to produce new propellant formulations, as well as produce DEDGN to support legacy propellants.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Replace Chemical Grind, Design **Project Number:** 5183140 **Project Category:** Production Support

End Item Supported Model: Propellants for Large, Medium, and Small Cal Munitions **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Radford Army Ammunition Plant Facility Location: Radford, Virginia Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Dec 2019 Initial/Final Project Award: Jul 2018 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	0.125	-	0.125							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	3.110	-	3.110							
Total Project Cost	-	-	3.235	-	3.235							
							Related Projects					
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$3.235 million supports modernization effort to upgrade the current chemical grind facility at Radford Army Ammunition Facility. The existing facility was constructed in the 1940s and utilizes antiquated equipment. The chemical grind facility is required to prepare chemicals for propellant production.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Industrial Sewer Upgrades & Rehabilitation, Ph 2 **Project Number:** 5183445 **Project Category:** Production Support

End Item Supported Model: Propellants for Large, Medium, and Small Cal Munitions **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Radford Army Ammunition Plant Facility Location: Radford, Virginia Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	8.250	-	8.250	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Jul 2018 Construction Complete: Jul 2020 Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	0.175	-	0.175							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	1.559	-	1.559							
Total Project Cost	-	-	9.984	-	9.984	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$9.984 million supports modernization effort to upgrade the industrial sewer system at Radford Army Ammunition Plant. The industrial sewer system has been in operation for over 30 years and consists of approximately 95,560 linear feet of sewer, 649 structures (manholes & catch basins), 8 pump stations, 12 monitoring stations, and a treatment plant. The industrial sewer system must be upgraded in order for the plant to continue to comply with its Virginia Pollutant Discharge Elimination System (VPDES) discharge permit. The Government and the Operating Contractor are jointly liable for failure in meeting the VPDES discharge permit.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:**
EP1000 / Provision of Industrial Facilities

Project Title: Lightning Protection, Production Areas, Ph 1 **Project Number:** 5183672 **Project Category:** Production Support

End Item Supported Model: Propellants for Large, Medium, and Small Cal Munitions **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Radford Army Ammunition Plant						
						Facility Location: Radford, Virginia						
A. Construction Cost	-	3.895	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Sep 2017 Construction Complete: May 2019 Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	0.405	-	-	-							
Total Project Cost	-	4.300	-	-	-							
						Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 Base procurement dollars in the amount of \$4.300 million supports upgrades to the lightning protection systems within the Production Area at Radford Army Ammunition Plant (AAP.) This phase will upgrade the lightning protection systems on 33 out of 45 energetics production buildings at Radford AAP that are planned to support current and future production operations. The upgrades will cover production buildings in various areas of the plant that lack lightning protection systems, and have lightning protection systems that do not meet current standards. This project will bring production buildings into NFPA-780, Department of the Army Pamphlet 385-64, Ammunition and Explosive Safety Standards, and UL96, UL96A compliant and certifiable condition. The project will reduce safety risk and prevent production interruptions due to lightning strikes.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Plant-Wide Road Upgrades **Project Number:** 5183434 **Project Category:** Production Support

End Item Supported Model: Propellants for Large, Medium, and Small Cal Munitions **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Radford Army Ammunition Plant						
						Facility Location: Radford, Virginia						
A. Construction Cost	-	-	1.750	-	1.750	Facility Type (GOGO, GOCO, COCO): GOCO						
B. Equipment Cost	-	-	-	-	-	Principal Milestones Month & Year						
C. Equipment Installation Cost	-	-	-	-	-	Concept Design Complete:						
D. Contractor Support Cost	-	-	0.185	-	0.185	Final Design Complete:						
E. Corps of Engineers Support Cost	-	-	-	-	-	Initial/Final Project Award: Jun 2018						
F. Other In-House Support Cost	-	-	-	-	-	Construction Complete: Sep 2020						
G. Total Facility Project Cost	-	-	-	-	-	Equipment Installation Complete:						
H. Other Costs	-	-	0.061	-	0.061	Prove Out Begins:						
Total Project Cost	-	-	1.996	-	1.996	Prove Out Complete:						
						Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$1.996 million supports road upgrades within production areas at Radford Army Ammunition Plant. The production area roadways are heavily used and exhibit significant deterioration. Routine maintenance is no longer economically feasible. This effort will ensure safe transportation of energetic material throughout the installation.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Energetic Waste Incinerator Upgrades **Project Number:** 5163723 **Project Category:** Production Support

End Item Supported Model: Propellants for Large, Medium, and Small Cal Munitions **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Radford Army Ammunition Plant Facility Location: Radford, Virginia Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	3.580	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Apr 2016 Construction Complete: Dec 2017 Equipment Installation Complete: Dec 2017 Prove Out Begins: Dec 2017 Prove Out Complete: Mar 2018						
B. Equipment Cost	1.860	-	-	-	-							
C. Equipment Installation Cost	1.475	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	6.915	-	-	-	-	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 Base procurement dollars in the amount of \$6.915 million supports the design of a new combined Energetic Waste Incinerator (EWI)/Contaminated Waste Processor (CWP) at Radford Army Ammunition Plant. The current configuration of the EWI does not allow certain materials to be processed through the EWI. The EWI/CWP facility once constructed will be capable of handling all energetic material produced at RFAAP, eliminate the use of the open burning ground and meet existing environmental regulations.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Package Boiler Facility **Project Number:** 5163724 **Project Category:** Production Support

End Item Supported Model: Propellants for Large, Medium, and Small Cal Munitions **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Radford Army Ammunition Plant Facility Location: Radford, Virginia Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	5.923	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Jan 2017 Equipment Installation Complete: Jan 2017 Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	4.235	-	-	-	-							
C. Equipment Installation Cost	1.249	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	2.459	-	-	-							
Total Project Cost	11.407	2.459	-	-	-							
							Related Projects					
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 Procurement dollars in the amount of \$13.866 million supports construction of a package boiler facility at Radford Army Ammunition Plant. The new natural gas facility will supply plant steam demands and maintain Maximum Achievable Compliance Technology (MACT) standards.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Solventless Propellant Mfg Fac, Preliminary Design **Project Number:** 5173447 **Project Category:** Production Support

End Item Supported Model: Solventless propellant formulations **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Radford Army Ammunition Plant Facility Location: Radford, Virginia Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Mar 2019 Initial/Final Project Award: Sep 2017 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:	Related Projects					
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	4.000	-	-	-							
Total Project Cost	-	4.000	-	-	-							
												Project Number

Narrative Explanation:
 Base procurement dollars in the amount of \$4.000 million supports preliminary design of a new solventless facility at Radford Army Ammunition Plant (AAP). Existing production operations have remained relatively unchanged since 1940s. Equipment automation at a consolidated facility will allow for consolidated footprint and a reduction in the costs of manufacturing solventless propellant at Radford AAP.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Modernize Nitroglycerin (NG) Facility, Design **Project Number:** 5173449 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Radford Army Ammunition Plant Facility Location: Radford, Virginia Facility Type (GOGO, GOCO, COCO): GOCO							
						Principal Milestones					Month & Year		Related Projects
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date	
A. Construction Cost	-	3.109	-	-	-	Concept Design Complete: Final Design Complete: Initial/Final Project Award: Jul 2017 Construction Complete: Apr 2019 Equipment Installation Complete:							
B. Equipment Cost	-	-	-	-	-	Prove Out Begins:							
C. Equipment Installation Cost	-	-	-	-	-	Prove Out Complete:							
D. Contractor Support Cost	-	-	-	-	-								
E. Corps of Engineers Support Cost	-	-	-	-	-								
F. Other In-House Support Cost	-	-	-	-	-								
G. Total Facility Project Cost	-	-	-	-	-								
H. Other Costs	-	1.691	-	-	-								
Total Project Cost	-	4.800	-	-	-								

Narrative Explanation:
 Base procurement dollars in the amount of \$4.800 million supports upgrade of the control system software and hardware (including panel and field instrumentation) at the Radford Army Ammunition Plant (AAP) Nitroglycerin manufacturing (NG-2) area. The existing control system is deteriorating and poses a production continuity risk and safety hazard to personnel. The upgraded control system shall be capable of being integrated into Radford AAP's overall control system's platform to ensure availability of parts, accessibility to technical support, improve overall reliability, and minimize interruptions to production.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Upgrade Settling Basins, Bldg 409 **Project Number:** 5173572 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Radford Army Ammunition Plant Facility Location: Radford, Virginia Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	7.955	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Aug 2017 Construction Complete: Mar 2019 Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	0.750	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	0.895	-	-	-							
Total Project Cost	-	9.600	-	-	-							
							Related Projects					
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 Procurement dollars in the amount of \$9.600 million support repair of settling basins at Building 409 at Radford Army Ammunition Plant (AAP). This project will upgrade the main central water filtration plant at RFAAP, Building 409. This includes repairs and upgrades to the two settling basins, such as replacing clarifier rakes, rehabilitating the flocculators, replacing wooden baffles, and sealing and repairing the concrete basins. Electrical upgrades will include breakers, switches, panels, motor starters, drive motors and wiring to bring the electrical supply and control system to modern standards.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Acid Sewer Treatment Upgrades (Lime Slaker) **Project Number:** 5173738 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Radford Army Ammunition Plant Facility Location: Radford, Virginia Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	1.985	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Aug 2017 Construction Complete: Dec 2018 Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	1.250	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	0.665	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	3.900	-	-	-							
							Related Projects					
						Project Number	Title	FY & Appn	Value <i>(\$ M)</i>	Facing	Start Date	Compl Date

Narrative Explanation:
 Procurement dollars in the amount of \$3.900 million support repair and upgrade of acid sewer treatment facility (lime slaker) at Radford Army Ammunition Plant (AAP). This project will upgrade the single point failure main acid sewer treatment facility at Radford AAP. This includes repairs and installation of new equipment for the removal of grit located between the slaker and the lime slurry tanks.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Barricade Replacement **Project Number:** 5183567 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Radford Army Ammunition Plant Facility Location: Radford, Virginia Facility Type (GOGO, GOCO, COCO): GOCO				
A. Construction Cost	-	-	4.850	-	4.850	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: May 2018 Construction Complete: May 2020 Equipment Installation Complete: Prove Out Begins: Prove Out Complete:				
B. Equipment Cost	-	-	-	-	-					
C. Equipment Installation Cost	-	-	-	-	-					
D. Contractor Support Cost	-	-	-	-	-					
E. Corps of Engineers Support Cost	-	-	-	-	-					
F. Other In-House Support Cost	-	-	-	-	-					
G. Total Facility Project Cost	-	-	-	-	-					
H. Other Costs	-	-	0.320	-	0.320					
Total Project Cost	-	-	5.170	-	5.170					
Related Projects										
	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date			

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$5.170 million supports replacement of barricades at Radford Army Ammunition Plant. This project will support the demolition and replacement of wooden barricades identified to support production at Radford Army Ammunition Plant (AAP). Project will properly dispose of the wood, metal, fill dirt, and obsolete electrical components from each barricade demolished. Install foundations as needed and rebuild wooden barricades to current Corp of Engineers specifications.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Structural Repair, Assessment & Study **Project Number:** 5185088 **Project Category:** Production Support

End Item Supported Model: Propellants for Large, Medium, and Small Cal Munitions **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Radford Army Ammunition Plant Facility Location: Radford, Virginia Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Sep 2018 Initial/Final Project Award: Jan 2018 Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:	Related Projects					
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	0.260	-	0.260							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	0.244	-	0.244							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	-	0.504	-	0.504							
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$0.504 million supports study and assessment of structural repair requirements at Radford Army Ammunition Plant. Effort will assess production facilities that may have structural integrity or safety risk and identify repairs required to maintain production continuity.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Upgrade Facility Change Houses **Project Number:** 5183613 **Project Category:** Production Support

End Item Supported Model: Propellants for Large, Medium, and Small Cal Munitions **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Radford Army Ammunition Plant Facility Location: Radford, Virginia Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	3.000	-	3.000	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Apr 2018 Construction Complete: May 2019 Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	0.750	-	0.750							
Total Project Cost	-	-	3.750	-	3.750							
Related Projects												
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$3.750 million supports upgrades to facility changes houses at Radford Army Ammunition. Change houses are an integral part of employees' quality of life at work. To help promote a quality work environment, restrooms, latrines and change houses should be kept in a sanitary and safe condition. This project will renovate and upgrade two change houses near the new Nitrocellulose (NC) area to support daily operation of the new NC facility

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Electrical Distribution System Upgrades, Ph 2 – CAST Circuit Replacement **Project Number:** 5183557 **Project Category:** Production Support

End Item Supported Model: **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Radford Army Ammunition Plant Facility Location: Radford, Virginia Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	9.884	-	9.884	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Jun 2018 Construction Complete: Apr 2020 Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	0.790	-	0.790							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	1.250	-	1.250							
Total Project Cost	-	-	11.924	-	11.924	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$11.924 million supports upgrades to the electrical distribution system at Radford Army Ammunition Plant. Modernization effort will replace electrical poles, cable connections, 480V substations, old switches, cross arms, insulators, and surge arresters. The CAST area electrical circuits are a safety risk, unreliable and susceptible to catastrophic failure during adverse weather events.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Rehab Forge Shop Casting Platform **Project Number:** 5185342 **Project Category:** Production Support

End Item Supported Model: : M795, 120mm Mortar, M1 HE, 5"/54 **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Scranton Army Ammunition Plant Facility Location: Scranton, Pennsylvania Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	0.850	-	0.850	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: May 2019 Equipment Installation Complete: Prove Out Begins: Jun 2019 Prove Out Complete: Jun 2019						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	0.183	-	0.183							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	-	-	-	-	-							
Total Project Cost	-	-	1.033	-	1.033							
						Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$1.033 million supports the rehabilitation of the Casting Platform located in the Forge Shop at Scranton Army Ammunition Plant. Given the age of the casting platform, deterioration to the surface areas and joints is allowing water to penetrate into the subway areas below. This is causing further damage to concrete surfaces and supports and eroding the rebar, creating an unsafe working environment and can eventually lead to structural instability or failure. This effort will address the problems with the casting platform, reducing or eliminating the amount of water penetrating into the subway area.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Engineering in Support of Provision of Industrial Facilities **Project Number:** 5XX3046 **Project Category:** Production Support

End Item Supported Model: Multiple **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Various Army Ammunition Plants Facility Location: Multiple Facility Type (GOGO, GOCO, COCO): GOCO														
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:														
B. Equipment Cost	-	-	-	-	-															
C. Equipment Installation Cost	-	-	-	-	-															
D. Contractor Support Cost	-	-	-	-	-															
E. Corps of Engineers Support Cost	-	-	-	-	-															
F. Other In-House Support Cost	-	-	-	-	-															
G. Total Facility Project Cost	-	-	-	-	-															
H. Other Costs	8.992	3.795	8.750	-	8.750															
Total Project Cost	8.992	3.795	8.750	-	8.750															
							Related Projects													
						<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Project Number</th> <th style="width: 30%;">Title</th> <th style="width: 10%;">FY & Appn</th> <th style="width: 10%;">Value (\$ M)</th> <th style="width: 10%;">Facing</th> <th style="width: 10%;">Start Date</th> <th style="width: 10%;">Compl Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date							
Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date														

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$8.750 million supports the procurement of processing and engineering support efforts, including technical and pre-design analyses of future modernization investments for Production Base Support program execution.

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Exhibit P-25, Production Support and Industrial Facilities Cost Analysis: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10 **P-1 Line Item Number / Title:** EP1000 / Provision of Industrial Facilities

Project Title: Replace Test Instrumentation in Production Acceptance Testing (Ammunition) **Project Number:** 5XX5060 **Project Category:** Production Support

End Item Supported Model: Initial Production Acceptance & Product Improvements for Ammunition **Annual Capacity Before / After (1-8-5):** /

Cost Elements <i>(\$ in Millions)</i>	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Facility Name: Yuma Proving Ground / Aberdeen Test Center Facility Location: Yuma, Arizona / Aberdeen, Maryland Facility Type (GOGO, GOCO, COCO): GOCO						
A. Construction Cost	-	-	-	-	-	Principal Milestones Month & Year Concept Design Complete: Final Design Complete: Initial/Final Project Award: Construction Complete: Equipment Installation Complete: Prove Out Begins: Prove Out Complete:						
B. Equipment Cost	-	-	-	-	-							
C. Equipment Installation Cost	-	-	-	-	-							
D. Contractor Support Cost	-	-	-	-	-							
E. Corps of Engineers Support Cost	-	-	-	-	-							
F. Other In-House Support Cost	-	-	-	-	-							
G. Total Facility Project Cost	-	-	-	-	-							
H. Other Costs	1.482	1.102	1.529	-	1.529							
Total Project Cost	1.482	1.102	1.529	-	1.529	Related Projects						
						Project Number	Title	FY & Appn	Value (\$ M)	Facing	Start Date	Compl Date

Narrative Explanation:
 FY 2018 Base procurement dollars in the amount of \$1.529 million supports replacement of analog video scoring and data collection equipment with a digital capability at the multipurpose impact firing range, which is used for testing munitions; acquires precision, high-dynamic, rugged sensors to include displacement, pyro-shock/acceleration, infrared flash detector, and pressure transducers; and procures high speed digital imaging cameras for ammunition testing that will follow a direct fire projectile's flight path in lieu of using many cameras lined along the flight path. The majority of the instrumentation being upgraded or replaced is obsolete and has met or exceeded its economic life. This instrumentation is required to ensure complete and accurate test data is collected and safety and environmental hazards are minimized. Benefits of this project include increased test efficiencies and decreased costs and risks to Army Program Managers

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 2034A: Procurement of Ammunition, Army / BA 02: Ammunition Production Base Support / BSA 10: Production Base Support	P-1 Line Item Number / Title: EP1700 / Conventional Munitions Demilitarization
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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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	2,644.615	148.048	157.383	197.825	-	197.825	81.549	98.471	120.534	129.595	-	3,578.020
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	2,644.615	148.048	157.383	197.825	-	197.825	81.549	98.471	120.534	129.595	-	3,578.020
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	2,644.615	148.048	157.383	197.825	-	197.825	81.549	98.471	120.534	129.595	-	3,578.020

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

Description:

The Conventional Munitions Demilitarization Program provides for the demilitarization (demil) and disposal of Single Manager for Conventional Ammunition (SMCA) managed conventional ammunition and missiles for all Military Services per DoD Directive 5160.65 and DoD Instruction 5160.68 that is unserviceable, obsolete, or unsafe. The program accomplishes demil using open burning/open detonation (OB/OD) processes or closed disposal technologies (CDT) with primary emphasis on resource recovery and recycling (R3). This program also provides for operations, technical support and services; packaging, crating, handling, and transportation (PCHT) of ammunition for demil projects at United States Army depots, plants and activities; commercial contracts that provide CDT demil support and services and associated PCHT; and international operations, which include the European and Pacific Theatres.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
 2034A: Procurement of Ammunition, Army / BA 02: Ammunition Production Base Support / BSA 10: Production Base Support

P-1 Line Item Number / Title:
 EP1700 / Conventional Munitions Demilitarization

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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 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	EP1800 / CONVENTIONAL AMMUNITION DEMILITARIZATION (SMCA)				- / 2,221.810	- / 105.337	- / 106.047	- / 139.215	- / -	- / 139.215
P-5	EP1801 / Other Non-Army Service Demil Items (non-SMCA)				- / 30.643	- / -	- / 8.647	- / 13.724	- / -	- / 13.724
P-5	EP1802 / Army Missile Demilitarization				- / 367.339	- / 40.183	- / 39.743	- / 42.024	- / -	- / 42.024
P-5	EP1803 / Non-Army Missile Demilitarization				- / 24.823	- / 2.528	- / 2.946	- / 2.862	- / -	- / 2.862
P-40	Total Gross/Weapon System Cost				- / 2,644.615	- / 148.048	- / 157.383	- / 197.825	- / -	- / 197.825

*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 2018 Base procurement dollars in the amount of \$197.825 million will support the demilitarization of conventional ammunition as well as missile and missile components (msl/comp) for all Military Services.

FY 2018 funds will support the United States demil operations of conventional ammunition in both Continental United States (CONUS) and Outside the Continental United States (OCONUS). CONUS demil operations are performed by a combination of Government Owned, Government Operated (GOGO) depots, Government Owned, Contractor Operated (GOCO) depots as well as commercial contractors. OCONUS demil operations are performed at Demilitarization Facilities (DEFACs) in the Republic of Korea and Japan as well as commercial contractors in the European Union.

As of the end of FY 2016, the SMCA Resource, Recovery and Disposition Account (B5A) contained 471,767 tons of ammunition in CONUS wholesale storage locations: 440,916 tons of conventional ammunition and 30,851 tons of msl/comp. In FY 2016, 56,864 tons of conventional ammunition and 11,968 tons of msl/comp were demilitarized. For FY 2017, 46,063 tons of conventional ammunition and 10,449 msl/comp are planned. The planned procurement of demilitarization using FY18 funds is 78,441 tons of conventional ammunition and 15,083 tons of msl/comp.

Stockpile growth and generations: An estimated 38,725 tons of conventional ammunition and an estimated 7,122 tons of msl/comp will enter the B5A in FY 2017, and an estimated 57,419 tons of conventional ammunition and 8,140 Tons of msl/comp will enter the B5A in FY 2018. During FY 2019 through FY 2022, 179,581 tons of conventional ammunition and 40,736 tons of msl/comp are forecasted to be added into the B5A.

Stockpile growth factors: The demil stockpile is expected to grow as a result of Military Services generations as well as other factors such as cluster munitions and land mine policies as well as the disestablishment of War Reserve Stocks Allies (WRSA) accounts at OCONUS locations. Currently, there are approximately 163,318 tons of cluster munitions in the demil stockpile. An additional 117,443 tons remaining in CONUS outside the B5A and another 137,261 OCONUS.

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10	P-1 Line Item Number / Title: EP1700 / Conventional Munitions Demilitarization	Item Number / Title [DODIC]: EP1800 / CONVENTIONAL AMMUNITION DEMILITARIZATION (SMCA)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	2,221.810	105.337	106.047	139.215	-	139.215
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	2,221.810	105.337	106.047	139.215	-	139.215
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	2,221.810	105.337	106.047	139.215	-	139.215

(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 Dollars)	-	-	-	-	-	-

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Support - Demilitarization Cost																		
WHITE PHOSPHORUS	-	-	77.504	-	-	1.153	-	-	1.000	-	-	0.308	-	-	-	-	-	0.308
DEMOLITION MATERIAL	-	-	0.802	-	-	-	-	-	-	-	-	0.094	-	-	-	-	-	0.094
HE DETONATORS/ BOOSTERS	-	-	2.155	-	-	0.829	-	-	-	-	-	1.506	-	-	-	-	-	1.506
HE BOMBS	-	-	44.944	-	-	1.200	-	-	1.000	-	-	0.974	-	-	-	-	-	0.974
HE CARTRIDGES	-	-	131.035	-	-	6.755	-	-	8.000	-	-	5.235	-	-	-	-	-	5.235
GRENADES	-	-	1.992	-	-	0.058	-	-	0.031	-	-	0.022	-	-	-	-	-	0.022
HE DEPTH CHARGES	-	-	17.391	-	-	-	-	-	0.181	-	-	0.613	-	-	-	-	-	0.613
CLUSTER BOMBS/ ICM; ANTI-TANK & PERSONNEL	-	-	304.094	-	-	12.200	-	-	20.000	-	-	23.188	-	-	-	-	-	23.188
HE LAND MINES	-	-	85.046	-	-	0.467	-	-	0.045	-	-	0.025	-	-	-	-	-	0.025
INERT	-	-	32.688	-	-	0.994	-	-	1.000	-	-	0.844	-	-	-	-	-	0.844
MULTIPLE FAMILY	-	-	486.730	-	-	2.309	-	-	3.000	-	-	6.637	-	-	-	-	-	6.637
BULK HIGH EXPLOSIVES	-	-	35.985	-	-	1.550	-	-	-	-	-	0.003	-	-	-	-	-	0.003
PROPELLANT CHARGES/INCREMENT CHARGES	-	-	124.162	-	-	4.685	-	-	5.000	-	-	8.265	-	-	-	-	-	8.265
TARGET PRACTICES/ 40MM ANTI-AIRCRAFT	-	-	31.912	-	-	0.054	-	-	6.000	-	-	7.673	-	-	-	-	-	7.673

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10	P-1 Line Item Number / Title: EP1700 / Conventional Munitions Demilitarization	Item Number / Title [DODIC]: EP1800 / CONVENTIONAL AMMUNITION DEMILITARIZATION (SMCA)

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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
SMALL ARMS AMMO THRU 20MM	-	-	12.621	-	-	0.303	-	-	1.000	-	-	2.796	-	-	-	-	-	2.796
INCINERABLE MUNITIONS/ MISCELLANEOUS	-	-	55.765	-	-	4.500	-	-	7.000	-	-	7.006	-	-	-	-	-	7.006
FUZES	-	-	46.996	-	-	1.252	-	-	1.000	-	-	1.723	-	-	-	-	-	1.723
TRANSPORTATION	-	-	133.765	-	-	6.433	-	-	5.790	-	-	18.335	-	-	-	-	-	18.335
MUNITIONS CHARACTERIZATION	-	-	70.311	-	-	3.200	-	-	2.500	-	-	1.718	-	-	-	-	-	1.718
OCONUS DEMIL - EUCOM	-	-	41.632	-	-	2.000	-	-	2.000	-	-	2.040	-	-	-	-	-	2.040
OCONUS DEMIL - PACOM	-	-	4.968	-	-	3.711	-	-	1.000	-	-	1.500	-	-	-	-	-	1.500
CONTRACT - CONUS DEMIL	-	-	438.693	-	-	51.040	-	-	40.000	-	-	47.945	-	-	-	-	-	47.945
<i>Subtotal: Support - Demilitarization Cost</i>	-	-	2,181.191	-	-	104.693	-	-	105.547	-	-	138.450	-	-	-	-	-	138.450
Support - Program Management Cost																		
Government Management	-	-	40.619	-	-	0.644	-	-	0.500	-	-	0.765	-	-	-	-	-	0.765
<i>Subtotal: Support - Program Management Cost</i>	-	-	40.619	-	-	0.644	-	-	0.500	-	-	0.765	-	-	-	-	-	0.765
Gross/Weapon System Cost	-	-	2,221.810	-	-	105.337	-	-	106.047	-	-	139.215	-	-	-	-	-	139.215

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10	P-1 Line Item Number / Title: EP1700 / Conventional Munitions Demilitarization	Item Number / Title [DODIC]: EP1801 / Other Non-Army Service Demil Items (non-SMCA)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	30.643	-	8.647	13.724	-	13.724
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	30.643	-	8.647	13.724	-	13.724
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	30.643	-	8.647	13.724	-	13.724

(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 Dollars</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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Support - Demilitarization Cost																		
TORPEDOES	-	-	28.913	-	-	-	-	-	8.647	-	-	1.514	-	-	-	-	-	1.514
SONOBUOYS	1,730K	1	1.730	-	-	-	-	-	-	-	-	0.455	-	-	-	-	-	0.455
MULTIPLE FAMILY	-	-	-	-	-	-	-	-	-	-	-	11.755	-	-	-	-	-	11.755
<i>Subtotal: Support - Demilitarization Cost</i>	-	-	30.643	-	-	-	-	-	8.647	-	-	13.724	-	-	-	-	-	13.724
Gross/Weapon System Cost	-	-	30.643	-	-	-	-	-	8.647	-	-	13.724	-	-	-	-	-	13.724

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Exhibit P-5, Cost Analysis: FY 2018 Army					Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10			P-1 Line Item Number / Title: EP1700 / Conventional Munitions Demilitarization			Item Number / Title [DODIC]: EP1802 / Army Missile Demilitarization		
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:				
Resource Summary			Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (Units in Each)			-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)			367.339	40.183	39.743	42.024	-	42.024
Less PY Advance Procurement (\$ in Millions)			-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)			367.339	40.183	39.743	42.024	-	42.024
Plus CY Advance Procurement (\$ in Millions)			-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)			367.339	40.183	39.743	42.024	-	42.024
<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 Dollars)			-	-	-	-	-	-

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

Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Support - Demilitarization Cost																		
MULTIPLE LAUNCH ROCKET SYSTEM	-	-	163.417	-	-	24.683	-	-	24.683	-	-	29.164	-	-	-	-	-	29.164
LANCE	-	-	2.275	-	-	1.540	-	-	-	-	-	-	-	-	-	-	-	-
TOW CD/R3	-	-	39.786	-	-	0.474	-	-	0.750	-	-	0.570	-	-	-	-	-	0.570
HELLFIRE	-	-	0.438	-	-	0.012	-	-	0.074	-	-	0.030	-	-	-	-	-	0.030
STINGER	-	-	2.183	-	-	0.060	-	-	0.143	-	-	0.150	-	-	-	-	-	0.150
PATRIOT	-	-	0.448	-	-	0.666	-	-	0.332	-	-	0.380	-	-	-	-	-	0.380
HONEST JOHN	-	-	0.206	-	-	0.500	-	-	0.470	-	-	0.300	-	-	-	-	-	0.300
MISSILE COMPONENTS	-	-	52.245	-	-	3.041	-	-	6.766	-	-	3.960	-	-	-	-	-	3.960
HAWK MOTORS	-	-	2.526	-	-	-	-	-	0.172	-	-	0.235	-	-	-	-	-	0.235
DEMIL PROCESS IMPROVEMENTS	-	-	74.155	-	-	2.266	-	-	-	-	-	0.450	-	-	-	-	-	0.450
TRANSPORTATION	-	-	4.516	-	-	5.275	-	-	4.244	-	-	4.875	-	-	-	-	-	4.875
<i>Subtotal: Support - Demilitarization Cost</i>	<i>-</i>	<i>-</i>	<i>342.195</i>	<i>-</i>	<i>-</i>	<i>38.517</i>	<i>-</i>	<i>-</i>	<i>37.634</i>	<i>-</i>	<i>-</i>	<i>40.114</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>40.114</i>
Support - Program Management Cost																		
Government Management	-	-	25.144	-	-	1.666	-	-	2.109	-	-	1.910	-	-	-	-	-	1.910
<i>Subtotal: Support - Program Management Cost</i>	<i>-</i>	<i>-</i>	<i>25.144</i>	<i>-</i>	<i>-</i>	<i>1.666</i>	<i>-</i>	<i>-</i>	<i>2.109</i>	<i>-</i>	<i>-</i>	<i>1.910</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>1.910</i>
Gross/Weapon System Cost	-	-	367.339	-	-	40.183	-	-	39.743	-	-	42.024	-	-	-	-	-	42.024

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Exhibit P-5, Cost Analysis: FY 2018 Army		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 2034A / 02 / 10	P-1 Line Item Number / Title: EP1700 / Conventional Munitions Demilitarization	Item Number / Title [DODIC]: EP1803 / Non-Army Missile Demilitarization

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	24.823	2.528	2.946	2.862	-	2.862
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	24.823	2.528	2.946	2.862	-	2.862
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	24.823	2.528	2.946	2.862	-	2.862

(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 Dollars</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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Support - Demilitarization Cost																		
HE MISSILES	-	-	24.823	-	-	2.528	-	-	2.946	-	-	2.112	-	-	-	-	-	2.112
ROCKET MOTORS	-	-	-	-	-	-	-	-	-	-	-	0.750	-	-	-	-	-	0.750
<i>Subtotal: Support - Demilitarization Cost</i>	-	-	24.823	-	-	2.528	-	-	2.946	-	-	2.862	-	-	-	-	-	2.862
Gross/Weapon System Cost	-	-	24.823	-	-	2.528	-	-	2.946	-	-	2.862	-	-	-	-	-	2.862

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Exhibit P-40, Budget Line Item Justification: FY 2018 Army **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity:
 2034A: Procurement of Ammunition, Army / BA 02: Ammunition Production Base **P-1 Line Item Number / Title:**
 EP2500 / ARMS Initiative
 Support / BSA 10: 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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	353.378	3.575	3.646	3.719	-	3.719	3.797	3.861	3.935	3.942	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	353.378	3.575	3.646	3.719	-	3.719	3.797	3.861	3.935	3.942	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	353.378	3.575	3.646	3.719	-	3.719	3.797	3.861	3.935	3.942	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 Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Armament Retooling and Manufacturing Support (ARMS) program reuses idle capacity at active and inactive Government-Owned, Contractor-Operated (GOCO) Army Ammunition Plants and the GOCO Hawthorne Army Depot through commercialization. Congress enacted this program in the FY 1993 Defense Authorization Act (Public Law (PL) 102-484) and codified in FY 2000 (10 U.S.C. 4551-4555). ARMS resources are used for facility strategic reuse plans, marketing plans, building renovation and recapitalization, equipment purchase, relocation, or consolidation, as well as environmental baseline studies and site surveys to encourage commercial use of underutilized Army assets. The ARMS objectives include sustaining critical manufacturing capabilities and critical skills; reducing facility operating and maintenance costs; decreasing product cost; providing opportunities for small business; and accelerating private sector economic development, employment and investment. The ARMS program allows the Army to manage portions of the ammunition infrastructure as a commercial business. This management concept has allowed the Army to apply overhead costs across multiple commercial contracts to reduce operating costs.

Justification:

FY 2018 Base procurement dollars in the amount of \$3.719 million support financial and marketing investments to attract revenue-producing tenants to locate on GOCO Army Ammunition Plants and the GOCO Hawthorne Army Depot. The ARMS program reduces Army cost of ownership and maintains critical munitions industrial base skills. Revenues collected will be utilized to reduce overhead and total annual operating costs, improve and maintain existing buildings for current tenants, and perform improvements to other vacant buildings to entice potential tenants.