Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Army											Date: May 2017	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0607134A / *Long Range Precision Fires (LRPF)*							
COST ($ in Millions)	**Prior Years**	**FY 2016**	**FY 2017**	**FY 2018 Base**	**FY 2018 OCO**	**FY 2018 Total**	**FY 2019**	**FY 2020**	**FY 2021**	**FY 2022**	**Cost To Complete**	**Total Cost**
Total Program Element	-	0.000	67.006	102.014	-	102.014	111.505	91.086	125.185	107.175	Continuing	Continuing
ES1: *Long Range Precision Fires (LRPF)*	-	0.000	67.006	102.014	-	102.014	111.505	91.086	125.185	107.175	Continuing	Continuing

A. Mission Description and Budget Item Justification

Long Range Precision Fires (LRPF) is being developed as a cluster and insensitive munition compliant system that replaces and improves upon Army Tactical Missile System (ATACMS) capabilities. The mission of the LRPF System will be to attack/neutralize/suppress/destroy targets using missile delivered indirect precision fires. LRPF will provide Joint Force Commanders with a 24/7, all-weather capability to attack critical and time sensitive area and point targets including threat air defense, missile launchers, command and control centers, assembly/staging areas and high payoff targets at all depths of the multi-domain battlefield. The LRPF will counter the enemy's ability to conduct combat maneuver and air defense operations. LRPF requirements include: max range of greater than 400km, specified lethality against the designated target set, a Launch Pod Missile Container (LPMC) that holds a minimum of one missile, and compatibility with the existing launcher platforms (M270A1 Multiple Launch Rocket System (MLRS) and M142 High Mobility Artillery Rocket System (HIMARS)). LRPF is being designed with an open system architecture that provides the capability for future growth to counter new and emerging threats. Milestone A; Technology Maturation and Risk Reduction (TMRR) was approved on 31 March 2017.

B. Program Change Summary ($ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	0.000	39.275	64.808	-	64.808
Current President's Budget	0.000	67.006	102.014	-	102.014
Total Adjustments	0.000	27.731	37.206	-	37.206
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	0.000	0.000	37.206	-	37.206
• Amended FY2017	0.000	27.731	0.000	-	0.000

Change Summary Explanation

FY 2017 funding reflects an increase of $27.731M to ensure funding is available to purchase materials for component level testing and materials required to begin integration of full-up missiles required to support prototype flight test.

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Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0607134A *I Long Range Precision Fires (LRPF)*

FY 2018 funding reflects an increase of $22.206M to PB17 Budget to fully fund the LRPF program to the DCAPE Independent Cost Estimate as directed during the LRPF MS A Defense Acquisition Board (DAB) and as documented in the Acquisition Decision Memorandum (ADM). FY18 also includes $15.000M additional funding to purchase materials in preparation for prototype flight test.

Exhibit R-2A, RDT&E Project Justification: FY 2018 Army			Date: May 2017
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607134A / *Long Range Precision Fires (LRPF)*	Project (Number/Name) ES1 / *Long Range Precision Fires (LRPF)*	

COST ($ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
ES1: *Long Range Precision Fires (LRPF)*	-	0.000	67.006	102.014	-	102.014	111.505	91.086	125.185	107.175	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	8	-	8	-	-	-	7		

A. Mission Description and Budget Item Justification

Long Range Precision Fires (LRPF) is being developed as a cluster and insensitive munition compliant system that replaces and improves upon Army Tactical Missile System (ATACMS) capabilities. The mission of the LRPF System will be to attack/neutralize/suppress/destroy targets using missile delivered indirect precision fires. LRPF will provide Joint Force Commanders with a 24/7, all-weather capability to attack critical and time sensitive area and point targets including threat air defense, missile launchers, command and control centers, assembly/staging areas and high payoff targets at all depths of the multi-domain battlefield. LRPF will counter the enemy's ability to conduct combat maneuver and air defense operations. LRPF requirements include: max range of greater than 400km, specified lethality against the designated target set, a Launch Pod Missile Container (LPMC) that holds a minimum of one missile, and compatibility with the existing launcher platforms (M270A1 Multiple Launch Rocket System (MLRS) and M142 High Mobility Artillery Rocket System (HIMARS)). LRPF is being designed with an open system architecture that provides the capability for future growth to counter new and emerging threats. Milestone A; Technology Maturation and Risk Reduction (TMRR) was approved on 31 March 2017.

FY 2018 Base funding in the amount of $102.014 million continues risk reduction activities through the execution of Technology Maturation and Risk Reduction (TMRR) system demonstration agreements. LRPF will be developed using competitive prototyping, carrying two contractors through the TMRR Phase. The FY18 funding will be used to continue execution of two TMRR prototyping and flight demonstration agreements, which include a System Requirements Review (SRR), functional reviews, prototype design activities, assessment of future growth capabilities, and initiates the building of eight (8) prototype missiles required to support flight demonstrations. Funding also supports Government management and Government systems engineering and test support activities.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2016	FY 2017	FY 2018
Title: TMRR	-	67.006	102.014
Description: Develop and prototype an insensitive munition compliant missile that provides increased range, improved lethality for both point and area targets, meets cluster munition policy requirements, and provides increased firepower with a multiple missile per launch pod solution. Long Range Precision Fires (LRPF) provides field artillery units with a deep-strike capability while supporting Brigade, Division, Corps, Army, Theater, Joint and Coalition forces in full, limited or expeditionary operations.			
FY 2017 Plans: Continue execution of two TMRR prototyping and flight demonstration contracts. Conduct System Requirements Reviews (SRRs), functional reviews, and prototype design activities. Develop a robust test program, including modeling and simulation, that			

Exhibit R-2A, RDT&E Project Justification: FY 2018 Army		Date: May 2017
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0607134A / *Long Range Precision Fires (LRPF)*	**Project (Number/Name)** ES1 / *Long Range Precision Fires (LRPF)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2016	FY 2017	FY 2018
provides early insight into component/system level performance that can be leveraged to support Development and Operational Test requirements. ***FY 2018 Plans:*** Continue execution of two TMRR prototyping and flight demonstration agreements. Complete Launch Pod Missile Container (LPMC), static motor, warhead arena and insensitive munition component level testing and flight termination system development. Conduct Hardware in the Loop (HWIL), Software in the Loop (SWIL) and 6 degrees of freedom analysis of test data. Develop system level designs that incorporate technologies required to defeat an emerging threat. Initiate fabrication of prototype missiles required to support prototype flight demonstration. Conduct missile and launcher software development. Conduct early assessment and implementation of software cyber security requirements.			
Accomplishments/Planned Programs Subtotals	-	67.006	102.014

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

LRPF is being developed as a cluster and insensitive munition compliant system that replaces and improves upon ATACMS capabilities to provide Joint Force Commanders with a 24/7, all-weather, area target, long-range fires capability without placing aircraft and crews at risk. An AoA supporting the MS A decision has been completed by U.S. Army Training and Doctrine Command (TRADOC) Analysis Center-White Sands Missile Range (TRAC-WSMR), with the OSD letter of sufficiency issued in September 2015. Two DoD Ordnance Technology Consortium (DOTC) agreements were awarded to support efforts under the Material Solution Analysis (MSA) Phase. TMRR will include two DOTC award agreements for competitive prototyping leading to flight demonstrations and PDRs in FY19. Data from the TMRR phase to include results from the flight demonstrations will support the FY21 Engineering and Manufacturing Development (EMD) contract award. EMD will be a competitive award to a single contractor. The EMD phase will complete product development, qualification, production readiness assessment, and limited user test.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Army			Date: May 2017
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607134A / *Long Range Precision Fires (LRPF)*	Project (Number/Name) ES1 / *Long Range Precision Fires (LRPF)*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2016 Cost	FY 2016 Award Date	FY 2017 Cost	FY 2017 Award Date	FY 2018 Base Cost	FY 2018 Base Award Date	FY 2018 OCO Cost	FY 2018 OCO Award Date	FY 2018 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Program Management	MIPR	PFRMS Project Office : RSA	0.000	-		7.231	Nov 2016	8.659	Nov 2017	-		8.659	62.902	78.792	0.000
		Subtotal	0.000	-		7.231		8.659		-		8.659	62.902	78.792	0.000

Remarks

PFRMS - Precision Fires Rocket and Missile Systems; RSA - Redstone Arsenal, Alabama;

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2016 Cost	FY 2016 Award Date	FY 2017 Cost	FY 2017 Award Date	FY 2018 Base Cost	FY 2018 Base Award Date	FY 2018 OCO Cost	FY 2018 OCO Award Date	FY 2018 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
LRPF Risk Reduction - 2 Vendors (DOTC OTA)	C/CPIF	DOTC : Picatinny, NJ	0.000	-		50.550	May 2017	81.723	Oct 2017	-		81.723	473.161	605.434	0.000
Development Engineering Support	MIPR	AMCOM/AMRDEC : RSA	0.000	-		5.424	Nov 2016	5.971	Nov 2017	-		5.971	35.662	47.057	0.000
		Subtotal	0.000	-		55.974		87.694		-		87.694	508.823	652.491	0.000

Remarks

LRPF - Long Range Precision Fires; AMCOM - Aviation and Missile Command; AMRDEC - U.S. Army Research, Development and Engineering Command; DOTC - DoD Ordnance Technology Consortium; OTA - Other Transaction Agreements

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2016 Cost	FY 2016 Award Date	FY 2017 Cost	FY 2017 Award Date	FY 2018 Base Cost	FY 2018 Base Award Date	FY 2018 OCO Cost	FY 2018 OCO Award Date	FY 2018 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering, Testing, and Analysis	SS/T&M	ACC : RSA	0.000	-		3.351	Nov 2016	3.461	Nov 2017	-		3.461	16.658	23.470	0.000
		Subtotal	0.000	-		3.351		3.461		-		3.461	16.658	23.470	0.000

Remarks

ACC - Army Contracting Command; RSA - Redstone Arsenal, AL

Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Army			Date: May 2017
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Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2016 Cost	FY 2016 Award Date	FY 2017 Cost	FY 2017 Award Date	FY 2018 Base Cost	FY 2018 Base Award Date	FY 2018 OCO Cost	FY 2018 OCO Award Date	FY 2018 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Support	MIPR	WSMR; RTC : WSMR,NM; RSA, AL	0.000	-		0.450	Nov 2016	2.200	Nov 2017	-		2.200	93.131	95.781	0.000
		Subtotal	0.000	-		0.450		2.200		-		2.200	93.131	95.781	0.000

Remarks

WSMR,NM - White Sands Missile Range, New Mexico; RTC - Redstone Test Center; RSA - Redstone Arsenal, Alabama

	Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		67.006		102.014		-		102.014	681.514	850.534	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: FY 2018 Army		Date: May 2017
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0607134A / *Long Range Precision Fires (LRPF)*	**Project (Number/Name)** ES1 / *Long Range Precision Fires (LRPF)*

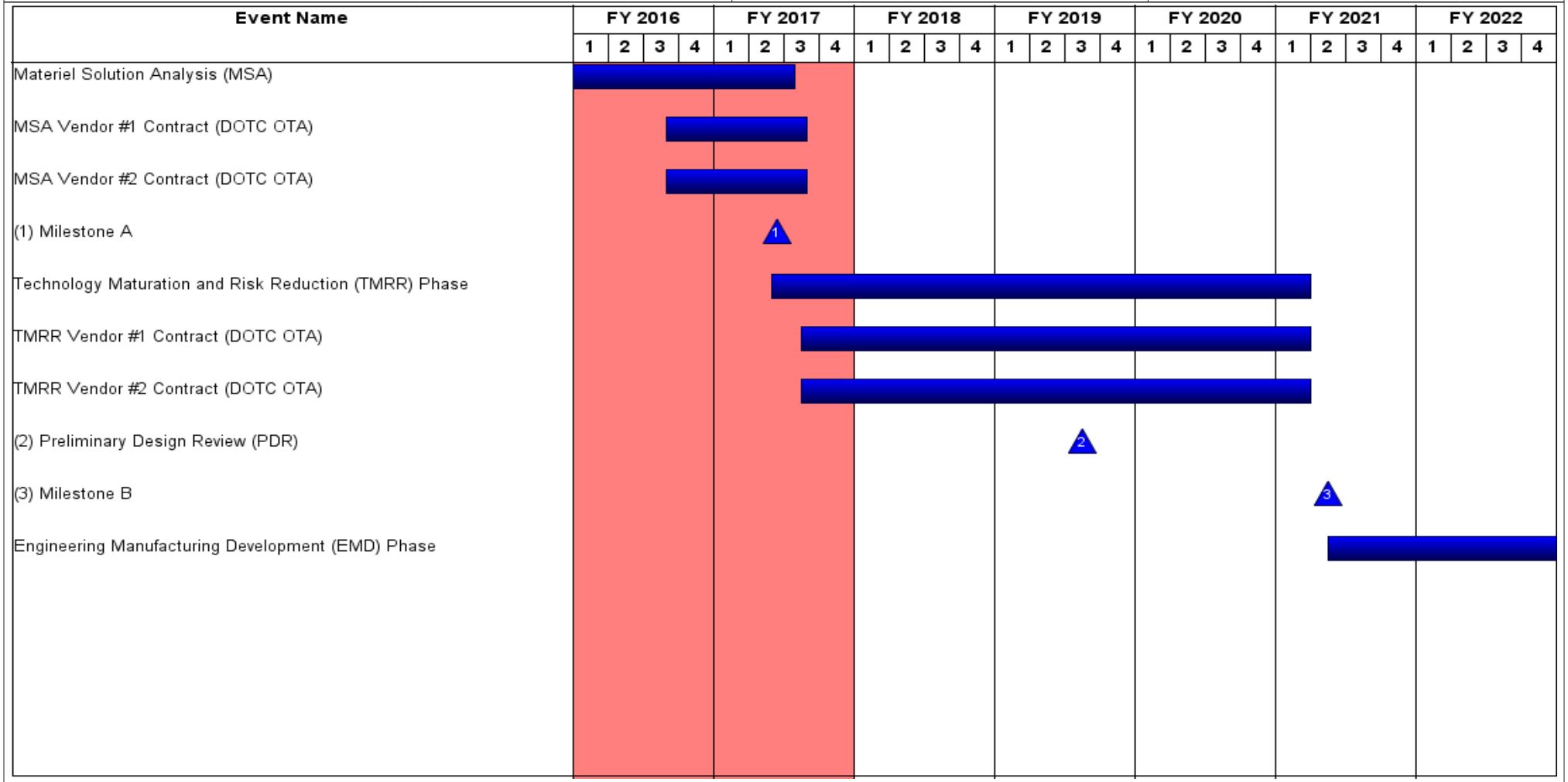

Exhibit R-4A, RDT&E Schedule Details: FY 2018 Army		Date: May 2017
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0607134A / *Long Range Precision Fires (LRPF)*	**Project (Number/Name)** ES1 / *Long Range Precision Fires (LRPF)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Materiel Solution Analysis (MSA)	1	2014	3	2017
MSA Vendor #1 Contract (DOTC OTA)	3	2016	3	2017
MSA Vendor #2 Contract (DOTC OTA)	3	2016	3	2017
Milestone A	2	2017	2	2017
Technology Maturation and Risk Reduction (TMRR) Phase	2	2017	1	2021
TMRR Vendor #1 Contract (DOTC OTA)	3	2017	1	2021
TMRR Vendor #2 Contract (DOTC OTA)	3	2017	1	2021
Preliminary Design Review (PDR)	3	2019	3	2019
Milestone B	2	2021	2	2021
Engineering Manufacturing Development (EMD) Phase	2	2021	2	2025